

Appendix 2

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Appendix 2.A

R Script for human miRNA analysis

title: "Human miRNA R analysis"

output:

html_document:

toc: yes

Remove previous files and set up working directory

```
rm(list = ls())
```

```
require("knitr")
```

```
knitr::opts_chunk$set(echo = FALSE)
```

```
opts_knit$set(root.dir = "/Users/laura/Desktop/Luigi/human")
```

Load required R libraries

For colour palettes

```
if(!require(RColorBrewer)){
```

```
  install.packages("RColorBrewer")
```

```
  library(RColorBrewer)
```

```
}
```

For Heatmaps

```
if(!require(gplots)){
```

```
  install.packages("gplots")
```

```
  library(gplots)
```

```
}
```

For Statistics on counts

```
if(!require(DESeq2)){
```

```
  install.packages("DESeq2")
```

```
  library(DESeq2)
```

```
}
```

Load data

```
setwd("/Users/laura/Desktop/Luigi/human")
```

```
mircounts = read.table("human.counts",header=TRUE,row.names=1)
```

Load sample data and set column headers of count table to rownames of sample data

```
pdata = read.table("pdata.txt",header=TRUE,row.names=1)
```

```
colnames(mircounts)=pdata$Name
```

```
mircounts = mircounts[,c(1,6,11,16,2,7,12,17,4,22,14,19,5,10,24,20,3,23,25)]
```

```
pdata= pdata[c(1,6,11,16,2,7,12,17,4,22,14,19,5,10,24,20,3,23,25),]
```

Load groups and conditions into factors

```

groups = as.factor(pdata$Type)
conds = as.factor(pdata$Type)
## Create a DESeq object from the counts table

coldata = as.data.frame(t(t(conds)))
rownames(coldata)=colnames(mircounts)
colnames(coldata)='treatment'
dds <- DESeqDataSetFromMatrix(countData = mircounts, colData = coldata, design = ~
treatment)

## Set colours and conditions objects

cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]
names(cond_colours)=conds

group_colours = brewer.pal (3,"Set1")[as.factor(pdata$group)]
names(group_colours)=pdata$group

hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)

## Estimate the dispersion of the data

dds <- estimateSizeFactors(dds)
dds <- estimateDispersions(dds)

plotDispEsts(dds)

## Post Normalisation QC: normalise and plot the counts

normcounts <- counts(dds,normalized=TRUE)
rawcounts=counts(dds,normalized=FALSE)
log2counts=log2(normcounts+1)

## Plot the Normalised counts

barplot(apply(normcounts,2,sum),las=2,col=cond_colours,main="Normalised Counts")
legend ("topright",levels((conds)),cex=0.6,fill=cond_colours[levels(conds)])

## Variance stabilising the Counts

vsd <- varianceStabilizingTransformation(dds)
vstcounts <- assay(vsd)
vstcounts <- vstcounts[order(apply(vstcounts,1,sum),decreasing=TRUE),]

## Principal Component Analysis (PCA) to see if the miRNA overexpression explains a
significant fraction of the variance.

pca <- princomp(vstcounts)

```

```
plot(pca$loadings, col=cond_colours, pch=19, cex=2, main= "Sample to Sample PCA(VST)")
text(pca$loadings, as.vector(colnames(mircounts)), pos=3,cex=0.4)
legend("bottomright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)
```

```
## Statistical analysis
```

```
## Contrast different times
```

```
p_threshold=0.05
```

```
lfc_threshold=1
```

```
cds <- nbinomWaldTest(dds)
```

```
res1=results(cds,contrast = c("treatment","T0", "T1"))
```

```
res2=results(cds,contrast = c("treatment","T0", "T3"))
```

```
res3=results(cds,contrast = c("treatment","T0", "T5"))
```

```
res4=results(cds,contrast = c("treatment","T0", "T10"))
```

```
res1.1 <- res1[order(res1$padj),]
sig1=rownames(res1[(abs(res1$log2FoldChange) > lfc_threshold) & (res1$padj <
p_threshold) & !is.na(res1$padj),])
```

```
res2.1 <- res2[order(res2$padj),]
sig2=rownames(res2[(abs(res2$log2FoldChange) > lfc_threshold) & (res2$padj <
p_threshold) & !is.na(res2$padj),])
```

```
res3.1 <- res3[order(res3$padj),]
sig3=rownames(res3[(abs(res3$log2FoldChange) > lfc_threshold) & (res3$padj <
p_threshold) & !is.na(res3$padj),])
```

```
res4.1 <- res4[order(res4$padj),]
sig4=rownames(res4[(abs(res4$log2FoldChange) > lfc_threshold) & (res4$padj <
p_threshold) & !is.na(res4$padj),])
```

```
result_list=list(res1,res2,res3,res4)
```

```
contrast_names=c("human t0 vs t1", "human t0 vs t3", "human t0 vs t5", "human t0 vs 10")
```

```
## Loop over the 4 contrasts to visualize results data
```

```
combined_siglist=c()
```

```
for (i in 1:length(result_list)){
  print(paste("contrast:",i," ",contrast_names[i]))
```

```
res=result_list[[i]]
res <- res[order(res$padj),]
sig=rownames(res[(abs(res$log2FoldChange) > lfc_threshold) & (res$padj < p_threshold) &
!is.na(res$padj),])
```

```

combined_siglist=c(combined_siglist,sig)

plot(res$log2FoldChange,-log(res$padj,10),ylab="-log10(Adjusted P)",xlab="Log2
Foldchange",main=paste("Volcano Plot",contrast_names[i]), pch=19,cex=0.4)
if (length(sig)>0){
  text (res[sig,]$log2FoldChange,-log(res[sig,]$padj,10),labels =NULL,pos=3,cex=0.4)
  points(res[sig,"log2FoldChange"],-log(res[sig,"padj"],10),pch=21, cex=1.5, col="black", bg=
"deepskyblue2")
}
abline(h=-log10(p_threshold),lty=3)
abline(v=-lfc_threshold,lty=3)
abline(v=lfc_threshold,lty=3)

if (length(sig)>0){

  heatmap.2(vstcounts[sig,],trace="none",col=hmcol,main=paste("significant in volcano:
",contrast_names[i]), Colv = FALSE,cexRow=0.7,cexCol=0.9, ColSideColors =
cond_colours,margins = c(9,7), dendrogram = "row")
} else {
  plot(0,xaxt='n',yaxt='n',bty='n',pch="",ylab="",xlab="",main=paste("No Sig.
mirs",contrast_names[i]))
}
}

combined_siglist=unique(combined_siglist)

```

Appendix 2.B

R Script for rat miRNA analysis

```
---  
title: "Rat Luigi's project"  
output:  
  html_document:  
    toc: yes  
---  
## Remove previous files and set up working directory  
  
rm(list = ls())  
require("knitr")  
knitr::opts_chunk$set(echo = FALSE)  
opts_knit$set(root.dir = "/Users/laura/Desktop/Luigi/rat")  
  
## Load required R libraries  
  
## For colour palettes  
if(!require(RColorBrewer)){  
  install.packages("RColorBrewer")  
  library(RColorBrewer)  
}  
## For Heatmaps  
if(!require(gplots)){  
  install.packages("gplots")  
  library(gplots)  
}  
## For Statistics on counts  
if(!require(DESeq2)){  
  install.packages("DESeq2")  
  library(DESeq2)  
}  
  
## Load data  
  
setwd("/Users/laura/Desktop/Luigi/rat")  
mircounts = read.table("rat.counts",header=TRUE,row.names=1)  
  
## Load sample data and set column headers of count table to rownames of sample data  
  
pdata = read.table("pdata.txt",header=TRUE,row.names=1)  
colnames(mircounts)=pdata$Name  
  
## Remove sample R2_T5 due to low counts  
mircounts = mircounts[,c(1,6,11,16,21,7,12,17,22,4,9,14,19,24,5,26,15,20,25,3,8,13,18,23)]  
  
pdata = pdata [c(1,6,11,16,21,7,12,17,22,4,9,14,19,24,5,26,15,20,25,3,8,13,18,23),]
```

Load groups and conditions into factors

```
groups = as.factor(pdata$Type)
conds = as.factor(pdata$Type)
```

Create a DESeq object from the counts table

```
coldata = as.data.frame(t(t(conds)))
rownames(coldata)=colnames(mircounts)
colnames(coldata)='treatment'
dds <- DESeqDataSetFromMatrix(countData = mircounts, colData = coldata, design = ~
treatment)
```

Set colours and conditions objects

```
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]
names(cond_colours)=conds
```

```
group_colours = brewer.pal (3,"Set1")[as.factor(pdata$group)]
names(group_colours)=pdata$group
hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)
```

Estimate the dispersion of the data

```
dds <- estimateSizeFactors(dds)
dds <- estimateDispersions(dds)
```

```
plotDispEsts(dds)
```

Post Normalisation QC: normalise and plot the counts

```
normcounts <- counts(dds,normalized=TRUE)
rawcounts=counts(dds,normalized=FALSE)
log2counts=log2(normcounts+1)
```

Plot the Normalised counts

```
barplot(apply(normcounts,2,sum),las=2,col=cond_colours,main="Normalised Counts")
legend ("topright",levels((conds)),cex=0.6,fill=cond_colours[levels(conds)])
```

Variance stabilising the Counts

```
vsd <- varianceStabilizingTransformation(dds)
vstcounts <- assay(vsd)
vstcounts <- vstcounts[order(apply(vstcounts,1,sum),decreasing=TRUE),]
```

Principal Component Analysis (PCA) to see if the miRNA overexpression explains a significant fraction of the variance.

```
pca <- princomp(vstcounts)
plot(pca$loadings, col=cond_colours, pch=19, cex=2, main= "Sample to Sample PCA(VST)")
text(pca$loadings, as.vector(colnames(mircounts)), pos=3,cex=0.4)
legend("bottomright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)
```

```
## Statistical analysis
```

```
## Contrast different times
```

```
p_threshold=0.05
lfc_threshold=1
```

```
cds <- nbinomWaldTest(dds)
```

```
res1=results(cds,contrast = c("treatment","T0", "T1"))
res2=results(cds,contrast = c("treatment","T0", "T3"))
res3=results(cds,contrast = c("treatment","T0", "T5"))
res4=results(cds,contrast = c("treatment","T0", "T10"))
```

```
res1.1 <- res1[order(res1$padj),]
sig1=rownames(res1[(abs(res1$log2FoldChange) > lfc_threshold) & (res1$padj <
p_threshold) & !is.na(res1$padj),])
```

```
res2.1 <- res2[order(res2$padj),]
sig2=rownames(res2[(abs(res2$log2FoldChange) > lfc_threshold) & (res2$padj <
p_threshold) & !is.na(res2$padj),])
```

```
res3.1 <- res3[order(res3$padj),]
sig3=rownames(res3[(abs(res3$log2FoldChange) > lfc_threshold) & (res3$padj <
p_threshold) & !is.na(res3$padj),])
```

```
res4.1 <- res4[order(res4$padj),]
sig4=rownames(res4[(abs(res4$log2FoldChange) > lfc_threshold) & (res4$padj <
p_threshold) & !is.na(res4$padj),])
```

```
result_list=list(res1,res2,res3,res4)
contrast_names=c("rat t0 vs t1", "rat t0 vs t3", "rat t0 vs t5", "rat t0 vs 10")
```

```
## Loop over the 4 contrasts to visualize results data
```

```
combined_siglist=c()
for (i in 1:length(result_list)){
  print(paste("contrast:",i, " ",contrast_names[i]))

  res=result_list[[i]]
```



```

res <- res[order(res$padj),]
sig=rownames(res[(abs(res$log2FoldChange) > lfc_threshold) & (res$padj < p_threshold) &
!is.na(res$padj),])
combined_siglist=c(combined_siglist,sig)

plot(res$log2FoldChange,-log(res$padj,10),ylab="-log10(Adjusted P)",xlab="Log2
Foldchange",main=paste("Volcano Plot",contrast_names[i]), pch=19,cex=0.4)
if (length(sig)>0){
  text (res[sig,]$log2FoldChange,-log(res[sig,]$padj,10),labels = NULL ,pos=3,cex=0.4)
  points(res[sig,"log2FoldChange"],-log(res[sig,"padj"],10),pch=21, cex=1.5, col="black",
bg="deepskyblue2")
}
abline(h=-log10(p_threshold),lty=3)
abline(v=-lfc_threshold,lty=3)
abline(v=lfc_threshold,lty=3)

if (length(sig)>0){

  heatmap.2(vstcounts[sig,],trace="none",col=hmcol,main=paste("significant in volcano non-
clustered: ",contrast_names[i]), cexRow=0.7,cexCol=0.9, ColSideColors =
cond_colours,margins = c(9,7),Colv=FALSE, dendrogram = "row")
} else {
  plot(0,xaxt='n',yaxt='n',bty='n',pch="",ylab="",xlab="",main=paste("No Sig.
mirs",contrast_names[i]))
}

}

combined_siglist=unique(combined_siglist)

```

Appendix 2.C

Script for RNA sequences QC with fastQC

```
#!/bin/bash
```

```
# Create new directories to save the log output and the QC output
```

```
mkdir logs  
mkdir QC  
mkdir QC/raw
```

```
# request resources from rocket
```

```
#SBATCH -A jmts  
#SBATCH -n 2  
#SBATCH --mem-per-cpu=2000  
#SBATCH -o logs/%x.%j.out  
#SBATCH --mail-type=ALL  
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Run fastqc
```

```
module load FastQC
```

```
for i in fastq/raw/*.gz  
do  
echo "Running fastqc on $i"  
fastqc $i -o QC/raw  
done
```

Appendix 2.D

Script for RNA sequences trimming with trimmomatic

```
#!/bin/bash
```

```
# Run trimmomatic on raw fastq files (in fastq/raw)
```

```
# Create a directory for the output
```

```
mkdir fastq/trimmed
```

```
# request resources from cluster
```

```
#SBATCH -A jmmts
```

```
#SBATCH -n 22
```

```
#SBATCH --mem-per-cpu=2500
```

```
#SBATCH -o logs/%x.%j.out
```

```
#SBATCH --mail-type=ALL
```

```
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Run trimmomatic
```

```
# Load Java because Trimmomatic needs it to run
```

```
module load Java/1.8.0_144
```

```
# Create a loop to run trimmomatic for every fasta file in fastq/raw
```

```
for i in fastq/raw/*.fastq.gz
```

```
do
```

```
fname=$(basename $i)
```

```
echo "Trimming $i"
```

```
java -jar /nobackup/proj/jmmts/software/Trimmomatic/Trimmomatic-0.39/trimmomatic-
```

```
0.39.jar SE -threads 22 -phred33 $i fastq/trimmed/$fname.trimmed.gz \
```

```
ILLUMINACLIP:/nobackup/proj/jmmts/software/Trimmomatic/Trimmomatic-
```

```
0.39/adapters/TruSeq3-SE.fa:1:30:10 MINLEN:30 AVGQUAL:36
```

```
Done
```

```
# First argument is calling java as it is necessary to run trimmomatic
```

```
# Second argument is to call the trimmomatic function
```

```
# SE: Single End
```

```
#-phred33: Illumina quality score
```

```
#-threads: number of threads to be used
```

```
#$i is the input file
```

```
#$fname.trimmed.gz is the output file
```

```
#ILLUMINACLIP: path to the file with the adaptors sequence: number of mismatches:  
palindrome clip threshold (in this case it is not necessary as it is SE, but a number must be  
given): single clip threshold
```

#MINLEN: minimum length necessary to keep a read. Reads shorter than the minimum length would be discarded.

#AVGQUAL: the minimum quality value to keep a read. Reads with values below this threshold would be discarded.

Appendix 2.E

Script for salmon index creation and pseudo-alignment with salmon

```
#!/bin/bash
```

```
# Create a new directory to save the output
```

```
mkdir salmon.idx2
```

```
# request resources from the cluster
```

```
#SBATCH -A jmts
```

```
#SBATCH -n 10
```

```
#SBATCH --mem-per-cpu=2500
```

```
#SBATCH -o logs/%x.%j.out
```

```
#SBATCH --mail-type=ALL
```

```
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Download the reference transcriptome
```

```
wget
```

```
ftp://ftp.ebi.ac.uk/pub/databases/gencode/Gencode_human/release_31/gencode.v31.pc_transcripts.fa.gz
```

```
# Decompress the file
```

```
gunzip gencode.v31.pc_transcripts.fa.gz
```

```
# Load Salmon software to be used
```

```
module load Salmon
```

```
salmon index -i salmon.idx2 -t gencode.v31.pc_transcripts.fa
```

```
# salmon index to call the function
```

```
# -i to indicate the folder directory where to create the index
```

```
# -t to indicate the transcript reference to be used
```

```
#!/bin/bash
```

```
# Create a new directory to save the output
```

```
mkdir counts
```

```
# request resources from the cluster
```

```
#SBATCH -A jmts
```

```
#SBATCH -n 20
#SBATCH --mem-per-cpu=25000
#SBATCH -o logs/%x.%j.out
#SBATCH --mail-type=ALL
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Load Salmon software to be used
```

```
module load Salmon
```

```
# Create a loop to run salmon in all trimmed samples from fastq/trimmed/
```

```
for i in fastq/trimmed/*.gz
do
fname=$(basename $i)
echo "salmon quant on $fname"
salmon quant -i salmon.idx/ -l A \
-r /nobackup/proj/jmts/fastq/trimmed/$fname \
-o /nobackup/proj/jmts/counts/$fname -p 10
echo finished
done
```

```
# First argument is salmon quant option to use the quantification mapped-based function.
This will do the pseudo-mapping and quantification
# -i to indicate the index to be used for the pseudo-mapping
# -l to indicate the type of library. Giving A as an argument allows Salmon to infer automatically
the type of library used
# -r input reverse file
# -o output
# -p number of threads
```

Appendix 2.F

R Script for Differential Expression analysis for PCLs

```
---  
title: "RNA_sequencing"  
author: "Laura Sabater"  
output:  
  pdf_document: default  
  html_document: default  
---  
## Load required libraries  
  
if(!require(knitr)){  
  install.packages("knitr")  
  library(knitr)  
}  
if(!require(dplyr)){  
  install.packages("dplyr")  
  library(dplyr)  
}  
if(!require(devtools)){  
  install.packages("devtools")  
  library(devtools)  
}  
if(!require(gplots)){  
  install.packages("gplots")  
  library(gplots)  
}  
if(!require(RColorBrewer)){  
  install.packages("RColorBrewer")  
  library(RColorBrewer)  
}  
if (!requireNamespace("BiocManager", quietly=TRUE)){  
  install.packages("BiocManager")  
  BiocManager::install("tidyverse")  
  library("tidyverse")  
}  
library("tidyverse")  
  
if (!requireNamespace("BiocManager", quietly=TRUE)){  
  install.packages("BiocManager")  
  BiocManager::install("tximport")  
  library("tximport")  
}  
library("tximport")  
  
if (!requireNamespace("BiocManager", quietly=TRUE)){  
  install.packages("BiocManager")
```

```

    BiocManager::install("DESeq2")
    library("DESeq2")
}
library("DESeq2")

if (!requireNamespace("BiocManager", quietly=TRUE)){
  install.packages("BiocManager")
  BiocManager::install("remotes")
  library("remotes")
}
library("remotes")

if (!requireNamespace("annotables")){
  devtools::install_github("stephenturner/annotables")
  library("annotables")
}

if (!requireNamespace("BiocManager", quietly=TRUE)){
  install.packages("BiocManager")
  BiocManager::install("stephenturner/annotables")
  library("stephenturner/annotables")
}
library(annotables)

if (!requireNamespace("BiocManager", quietly = TRUE))
  install.packages("BiocManager")

BiocManager::install("tximportData")
library(tximportData)

if (!requireNamespace("BiocManager", quietly = TRUE))
  install.packages("BiocManager")

BiocManager::install("GenomicFeatures")
library(GenomicFeatures)

## First of all, I set up the conditions for the output, the root directory and eliminate
everything that may be on the environment from previous sessions.

rm(list =ls())

knitr::opts_chunk$set(echo = TRUE,
  fig.align = 'center',
  tidy = TRUE)
opts_knit$set(root.dir = "/Users/laura/Desktop/TFM/RNA_seq")

## Create the human gene map for annotation purposes

txdb <- makeTxDbFromGFF(file="gencode.v31.annotation.gff3.gz")

```



```

txdb
saveDb(x=txdb, file = "gencode.v31.annotation.TxDB")

k <- keys(txdb, keytype = "TXNAME")
tx2gene <- select(txdb, k, "GENEID", "TXNAME")
head(k)
head(tx2gene)
dim(tx2gene)
length(k)
write.table(tx2gene, "tx2gene.gencode.v31.txt", sep = "\t", row.names = FALSE)

## Load Sample information

sample_table= read_tsv("sample_table.txt")
sample_table=
sample_table[c(7,8,13,14,19,20,23,24,27,28,31,32,9,10,15,16,21,22,25,26,29,30,33,34,5,6,1
1,12,17,18,35,36), ]
colnames(sample_table)= c("ID", "treatment", "sample")

## Pull RNA counts from Salmon and Gene map annotations

sample_table= mutate(sample_table, files=
paste0("/Users/laura/Desktop/TFM/RNA_seq/counts/", ID, "/quant.sf") )

count_files= pull (sample_table, files)
names(count_files) = pull (sample_table, ID)

quant_table= tximport(count_files, type= "salmon", tx2gene= gene_map, ignoreTxVersion=
TRUE)

## Counts normalization

deseq_data= DESeqDataSetFromTximport(txi=quant_table, colData = sample_table, design=
~treatment)

deseq_data= estimateSizeFactors(deseq_data)

normalizationFactors(deseq_data)

deseq_data= estimateDispersions(deseq_data)

deseq_data= nbinomWaldTest(deseq_data)

rlog_data= rlogTransformation(deseq_data, blind= TRUE)

vst_data= varianceStabilizingTransformation(deseq_data, blind = TRUE)

## Plot a PCA

```

```
plotPCA (rlog_data, intgroup= c("treatment"))
```

```
## Plot a labeled PCA
```

```
plotPCA (rlog_data, intgroup= c("treatment")) + geom_label(aes(label =  
sample_table$sample))
```

```
## Comparison Profibrogenic treatment vs Inhibitor treatment
```

```
result_table= results(deseq_data, contrast = c("treatment", "Combo", "Alk"))
```

```
result_table_sig= result_table [ result_table$padj< 0.05 & !is.na(result_table$padj== "NA"), ]
```

```
result_df= as.data.frame(result_table)
```

```
result_df= rownames_to_column(result_df, var = "ensembl_geneid")
```

```
sorted_results= arrange(result_df, padj)
```

```
## Plot MA with p-value < 0.001
```

```
plotMA(result_table, alpha=0.001, main= "Combo vs Alk p-val<0.001")
```

```
## Create results objects from the comparison: foldchange>2 & p-adjust<0.001
```

```
results= left_join(sorted_results, grch38, by=c("ensembl_geneid"="ensgene"))
```

```
final= dplyr::filter(results, abs(log2FoldChange)>2 & padj<0.001)
```

```
final_outlier=dplyr::filter(results, abs(log2FoldChange)>2 & abs(log2FoldChange)<15 &  
padj<0.05 & padj>1e-10)
```

```
outliers= dplyr::filter(results, abs(log2FoldChange)>15 | padj<1e-10)
```

```
results_outlier= results[!(results$ensembl_geneid %in% outliers$ensembl_geneid), ]
```

```
## Plot Heatmap of significant hits
```

```
hmc = colorRampPalette(brewer.pal(9,"GnBu"))(100)
```

```
conds= sample_table$treatment
```

```
conds= as.factor(conds)
```

```
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]
```

```
count_deseq= counts(deseq_data)
```

```
count_deseq_norm = counts(deseq_data, normalized= TRUE)
```

```
count_norm_sig= counts(deseq_data[final$ensembl_geneid, ], normalized= TRUE)
```

```
colnames(count_norm_sig)= sample_table$sample
```

```
heatmap(count_norm_sig, col=hmc, cexRow = 0.5, cexCol = 0.5, ColSideColors =  
cond_colours, Colv = NA, main = "Combo vs Alk fc>2 & padj<0.001")
```

```
## Save table with significant hits
```

```
write.table(final,"figures_thesis/RNASig_Combo_Alk_noLS2.txt",sep="\t")
```

```
## Comparison Profibrogenic treatment vs Control
```

```
result_table= results(deseq_data, contrast = c("treatment", "Combo", "Control"))
```

```
result_table_sig= result_table [ result_table$padj< 0.05 & !is.na(result_table$padj== "NA"), ]
```

```
result_df= as.data.frame(result_table)
```

```
result_df= rownames_to_column(result_df, var = "ensembl_geneid")
```

```
sorted_results= arrange(result_df, padj)
```

```
## Plot MA with p-value < 0.001
```

```
plotMA(result_table, alpha=0.001, main= "Combo vs Control p-val<0.001")
```

```
## Create results objects from the comparison: foldchange>2 & p-adjust<0.001
```

```
results= left_join(sorted_results, grch38, by=c("ensembl_geneid"="ensgene"))
```

```
final= dplyr::filter(results, abs(log2FoldChange)>2 & padj<0.001)
```

```
final_outlier=dplyr::filter(results, abs(log2FoldChange)>2 & abs(log2FoldChange)<15 & padj<0.05 & padj>1e-10)
```

```
outliers= dplyr::filter(results, abs(log2FoldChange)>15 | padj<1e-10)
```

```
results_outlier= results[!(results$ensembl_geneid %in% outliers$ensembl_geneid), ]
```

```
## Plot Heatmap of significant hits
```

```
count_deseq= counts(deseq_data)
```

```
count_deseq_norm = counts(deseq_data, normalized= TRUE)
```

```
count_norm_sig= counts(deseq_data[final$ensembl_geneid, ], normalized= TRUE)
```

```
colnames(count_norm_sig)= sample_table$sample
```

```
heatmap(count_norm_sig, col=hmcol,cexRow = 0.5,cexCol = 0.5,ColSideColors = cond_colours, Colv = NA, main = "Combo vs Control fc>2 & padj<0.001")
```

```
## Save table with significant hits
```

```
write.table(final,"figures_thesis/RNASig_Combo_Control_noLS2.txt",sep="\t")
```

```
## Comparison Control vs Inhibitor treatment
```

```

result_table= results(deseq_data, contrast = c("treatment", "Control", "Alk"))

result_table_sig= result_table [ result_table$padj< 0.05 & !is.na(result_table$padj== "NA"), ]

result_df= as.data.frame(result_table)
result_df= rownames_to_column(result_df, var = "ensembl_geneid")
sorted_results= arrange(result_df, padj)

## Plot MA with p-value < 0.001

plotMA(result_table, alpha=0.001, main= "Control vs Alk p-val<0.001")

## Create results objects from the comparison: foldchange>2 & p-adjust<0.001

results= left_join(sorted_results, grch38, by=c("ensembl_geneid"="ensgene"))

final= dplyr::filter(results, abs(log2FoldChange)>2 & padj<0.001)

final_outlier=dplyr::filter(results, abs(log2FoldChange)>2 & abs(log2FoldChange)<15 &
padj<0.05 & padj>1e-10)

outliers= dplyr::filter(results, abs(log2FoldChange)>15 | padj<1e-10)

results_outlier= results[!(results$ensembl_geneid %in% outliers$ensembl_geneid), ]

## Plot Heatmap of significant hits

count_deseq= counts(deseq_data)
count_deseq_norm = counts(deseq_data, normalized= TRUE)

count_norm_sig= counts(deseq_data[final$ensembl_geneid, ], normalized= TRUE)
colnames(count_norm_sig)= sample_table$sample

heatmap(count_norm_sig, col=hmcol,cexRow = 0.5,cexCol = 0.5,ColSideColors =
cond_colours, Colv = NA, main = "Control vs Alk fc>2 & padj<0.001")

## Save table with significant hits

write.table(final,"figures_thesis/RNAsig_Control_Alk_noLS2.txt",sep="\t")

```

Appendix 2.G

R Script for proteome analysis from PCLs.

```
---  
title: "Proteomics from tissue"  
author: "Laura Sabater"  
output:  
  pdf_document: default  
  html_document: default  
---  
## Load necessary libraries  
  
if(!require(knitr)){  
  install.packages("knitr")  
  library(knitr)  
}  
if(!require(dplyr)){  
  install.packages("dplyr")  
  library(dplyr)  
}  
if(!require(matrixStats)){  
  install.packages("matrixStats")  
  library(matrixStats)  
}  
if(!require(limma)){  
  install.packages("limma")  
  library(limma)  
}  
if(!require(DEqMS)){  
  install.packages("DEqMS")  
  library(DEqMS)  
}  
if(!require(gplots)){  
  install.packages("gplots")  
  library(gplots)  
}  
if(!require(RColorBrewer)){  
  install.packages("RColorBrewer")  
  library(RColorBrewer)  
}  
if(!require(ggrepel)){  
  install.packages("ggrepel")  
  library(ggrepel)  
}  
  
if (!requireNamespace("BiocManager", quietly = TRUE)){  
  install.packages("BiocManager")  
  BiocManager::install("edgeR")  
}
```

```

}
library(edgeR)

if (!requireNamespace("BiocManager", quietly = TRUE)){
  install.packages("BiocManager")
  BiocManager::install("sva")
}
library(sva)

## First of all, I set up the conditions for the output, the root directory and eliminate
everything that may be on the environment from previous sessions

rm(list =ls())

knitr::opts_chunk$set(echo = TRUE,
  fig.align = 'center',
  tidy = TRUE)
opts_knit$set(root.dir = "/Users/laura/Desktop /TFM/proteomics")

## Upload MS data: proteinGroups.txt

df.prot = read.table("proteinGroups.txt",stringsAsFactors = FALSE, header = TRUE,sep = "\t")

## Filter the proteins which are not Reverse nor contaminants

df.prot = df.prot[!df.prot$Reverse=="+",]
df.prot = df.prot[!df.prot$Potential.contaminant=="+",]

## Extract the columns with the intensity information (LFQ)

df.LFQ = df.prot %>% dplyr:: select(starts_with("LFQ"))

## Order the rows by group: Control, Profibrogenic treatment (combo) and Inhibitor
treatment (Alk).

df.LFQ = df.LFQ[,c(3,9,11,13,15,2,8,10,12,14,1,4,7)]

## Load file with the information about the experiment design, and give the same order as
the intensities.

experimental_design= read.table("exp.design.txt",stringsAsFactors = FALSE, header =
TRUE,sep = "\t")
experimental_design= experimental_design[c(3,9,11,13,15,2,8,10,12,14,1,4,7),1:3 ]

## Plot PCA of the data

pca <- princomp(df.LFQ)
conds = as.factor(experimental_design$condition)
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]

```

```
names(cond_colours)=conds
```

```
plot(pca$loadings, col=cond_colours, pch=19, cex=2, main= "PCA")  
text(pca$loadings, as.vector(colnames(df.LFQ)), pos=3,cex=0.4)  
legend("bottomright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)
```

```
## Remove all the rows containing a 0, so we can do batch effect correction
```

```
df.LFQ[df.LFQ==0] <- NA  
df.LFQ=na.omit(df.LFQ)
```

```
## Calculate the matrix model to be used in the batch correction, and create an object with  
the batch effect variable
```

```
mod = model.matrix(~condition, data= experimental_design)  
batch= experimental_design$replicate
```

```
## Batch effect correction using ComBat
```

```
df.combat= ComBat(dat= as.matrix(df.LFQ), batch = batch, mod=mod, par.prior = TRUE)  
df.combat=as.data.frame(df.combat)  
df.combat= df.combat[apply(df.combat, 1, function(x) all(x>=0)), ]
```

```
## Plot Boxplot and Densities for corrected data
```

```
par(mfrow=c(2,2))  
boxplot(log2(df.combat), col = rep(c("red", "blue", "green"), each=5), main= "post-  
correction")  
plotDensities(log2(df.combat), col = rep(c("red", "blue", "green"), each=5), legend = FALSE,  
main= "post-correction")
```

```
boxplot(log2(df.LFQ), col = rep(c("red", "blue", "green"), each=5), main= "pre-correction")  
plotDensities(log2(df.LFQ), col = rep(c("red", "blue", "green"), each=5), legend = FALSE, main=  
"pre-correction")
```

```
## Normalization of the corrected values
```

```
combat_tmm=calcNormFactors(df.combat)  
df.combat_tmm=sweep(df.combat, 2, combat_tmm, FUN = "/")
```

```
## Plot corrected and normalized values
```

```
boxplot(log2(df.combat_tmm), col = rep(c("red", "blue", "green"), each=5), main= "post-  
correction-normalized")  
plotMDS(log2(df.combat_tmm), col = rep(c("red", "blue", "green"), each=5), main= "post-  
correction-normalized")
```

```
## PCA of normalized and corrected values
```

```

pca=princomp(df.combat_tmm)

plot(pca$loadings, col=cond_colours, pch=19, cex=2, main= "PCA", ylim=c(-0.5, 0.5))
text(pca$loadings, as.vector(colnames(df.combat)), pos=1,cex=0.4)
legend("bottomright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)

## Change rownames for the protein ID

df.prot=df.prot[rownames(df.combat_tmm), ]
rownames(df.combat_tmm) = df.prot$Majority.protein.IDs

## Count the razor + unique peptides used for the quantification. Because some of the counts
may be 0, we add a constant (constant=1) to all the peptides values

df.razor = df.prot %>% dplyr:: select(starts_with("Razor")[-1])
pep.count.table = data.frame(count = rowMins(as.matrix(df.razor)),row.names =
df.prot$Majority.protein.IDs)

pep.count.table$count = pep.count.table$count+1

## Logarithm transformation of the data

protein.matrix = log2(as.matrix(df.combat_tmm))

## Boxplot of the log2 transformed data

boxplot(protein.matrix, col = rep(c("red", "blue", "green"), each=5), main= "log2 transformed
data", cex=0.5 )
legend("bottomright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)

## Calculation of the model matrix for the comparisons

class= as.factor(c(rep("Control", 5), rep("Combo", 5), rep("Alk", 3)))
design = model.matrix(~0+class) # ~0 to remove intercept

# Profibrogenic treatment vs Inhibitor treatment

## Fit the model and make contrast

fit1 = lmFit(protein.matrix,design = design)

cont <- makeContrasts(classCombo-classAlk, levels = design)

## Fit the model with the contrast and compute the empirical Bayes estimation

fit2 = contrasts.fit(fit1,contrasts = cont)
fit3 <- eBayes(fit2)

```



```
## Add a column with the number of Peptide to Spectrum Matches (PSM) that have been
quantified for each protein, as in this model PSM are used for the p-val calculations
```

```
fit3$count = pep.count.table[rownames(fit3$coefficients),"count"]
```

```
## Check that the minimum value of PMS counts is not 0 or NA, otherwise have a look at the
previous steps as there has been an error
```

```
min(fit3$count)
```

```
## Apply the function spectraCountBayes, which adjusts the t-statistic and p-values based on
the number of peptides/PSM
```

```
fit4 = spectraCountBayes(fit3)
```

```
## Visualization of the variance curve for the PSM quantified. Only plotted the proteins that
have been quantified by 20 PSMs (n=20)
```

```
VarianceBoxplot(fit4, n=20, main = "Combo vs Alk",xlab="peptide count + 1")
```

```
## Create an object with the comparison results
```

```
DEqMS.results = outputResult(fit4,coef_col = 1)
```

```
## Add gene names to the results lists and save them
```

```
rownames(df.prot) = df.prot$Majority.protein.IDs
DEqMS.results$Gene.name = df.prot[DEqMS.results$gene,]$Gene.names
```

```
write.table(DEqMS.results,"DEqMS.results_Combo_Alk_noLS2.txt",sep = "\t", row.names =
F,quote=F)
```

```
## Volcanos and heatmap of the significant hits (fold change>1 and p-val>0.05)
```

```
DEqMS.results$log.sca.pval = -log10(DEqMS.results$sca.P.Value)
ggplot(DEqMS.results, aes(x = logFC, y =log.sca.pval )) +
  geom_point(size=0.5)+
  theme_bw(base_size = 16) + # change theme
  xlab(expression("Fold change")) + # x-axis label
  ylab(expression(" -log10(P-value)")) + # y-axis label
  geom_vline(xintercept = c(-1,1), colour = "red") + # Add fold change cutoffs
  geom_hline(yintercept = 1.5, colour = "red") + # Add significance cutoffs
  geom_vline(xintercept = 0, colour = "black") + # Add 0 lines
  scale_colour_gradient(low = "black", high = "black", guide = FALSE)+
  geom_text_repel(data=subset(DEqMS.results, abs(logFC)>1&log.sca.pval > 1.5),
    aes( logFC, log.sca.pval ,label=Gene.name)) # add gene label
```

```

sig=rownames(DEqMS.results[ (abs(DEqMS.results$logFC)>1) &
(DEqMS.results$sca.P.Value<0.05) , ])

plot(DEqMS.results$logFC,(DEqMS.results$log.sca.pval), ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Combo vs Alk"), pch=19,cex=0.4)
points(DEqMS.results[sig,"logFC"], DEqMS.results[sig,"log.sca.pval"],pch=21, cex=1,
col="black", bg="red")
abline(h=-log10(0.05),lty=3)
abline(v=-1,lty=3)
abline(v=1,lty=3)

hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)

heatmap.2(protein.matrix[sig,],trace="none",col=hmcol,main=paste("Combo vs
Alk"),cexRow=0.7,cexCol=0.9,margins = c(9,7), dendrogram = "row", Colv=FALSE)

## Extract and save significant results

sig_results= DEqMS.results[sig, ]

write.table(sig_results, "sig_Combo vs Alk_noLS2.txt", sep="\t", row.names = F,quote=F)

# Profibrogenic treatment vs Control

## Fit the model and make contrast

fit1 = lmFit(protein.matrix,design = design)

cont <- makeContrasts(classCombo-classControl, levels = design)

## Fit the model with the contrast and compute the empirical Bayes estimation

fit2 = contrasts.fit(fit1,contrasts = cont)
fit3 <- eBayes(fit2)

## Add a column with the number of Peptide to Spectrum Matches (PSM) that have been
quantified for each protein, as in this model PSM are used for the p-val calculations

fit3$count = pep.count.table[rownames(fit3$coefficients),"count"]

## Check that the minimum value of PMS counts is not 0 or NA, otherwise have a look at the
previous steps as there has been an error

min(fit3$count)

## Apply the function spectraCountBayes, which adjusts the t-statistic and p-values based on
the number of peptides/PSM

fit4 = spectraCountBayes(fit3)

```

```
## Visualization of the variance curve for the PSM quantified. Only plotted the proteins that
have been quantified by 20 PSMs (n=20)
```

```
VarianceBoxplot(fit4, n=20, main = "Combo vs Control", xlab="peptide count + 1")
```

```
## Create ann object with the comparison results
```

```
DEqMS.results = outputResult(fit4, coef_col = 1)
```

```
## Add gene names to the results lists and save them
```

```
rownames(df.prot) = df.prot$Majority.protein.IDs
```

```
DEqMS.results$Gene.name = df.prot[DEqMS.results$gene,]$Gene.names
```

```
write.table(DEqMS.results, "DEqMS.results_combo_control_noLS2.txt", sep = "\t", row.names
= F, quote=F)
```

```
## Volcanos and heatmap of the significant hits (fold change>1 and p-val>0.05)
```

```
DEqMS.results$log.sca.pval = -log10(DEqMS.results$sca.P.Value)
```

```
ggplot(DEqMS.results, aes(x = logFC, y = log.sca.pval )) +
```

```
  geom_point(size=0.5 )+
```

```
  theme_bw(base_size = 16) + # change theme
```

```
  xlab(expression("Fold change")) + # x-axis label
```

```
  ylab(expression(" -log10(P-value)")) + # y-axis label
```

```
  geom_vline(xintercept = c(-1,1), colour = "red") + # Add fold change cutoffs
```

```
  geom_hline(yintercept = 1.5, colour = "red") + # Add significance cutoffs
```

```
  geom_vline(xintercept = 0, colour = "black") + # Add 0 lines
```

```
  scale_colour_gradient(low = "black", high = "black", guide = FALSE)+
```

```
  geom_text_repel(data=subset(DEqMS.results, abs(logFC)>1&log.sca.pval > 1.5),
    aes( logFC, log.sca.pval ,label=Gene.name)) # add gene label
```

```
sig=rownames(DEqMS.results[      (abs(DEqMS.results$logFC)>1)      &
(DEqMS.results$sca.P.Value<0.05) , ])
```

```
plot(DEqMS.results$logFC,(DEqMS.results$log.sca.pval),      ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Combo vs Control"), pch=19,cex=0.4)
```

```
points(DEqMS.results[sig,"logFC"],      DEqMS.results[sig,"log.sca.pval"],pch=21,      cex=1,
col="black", bg="red")
```

```
abline(h=-log10(0.05),lty=3)
```

```
abline(v=-1,lty=3)
```

```
abline(v=1,lty=3)
```

```
hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)
```

```

heatmap.2(protein.matrix[sig,],trace="none",col=hmcol,main=paste("Combo vs
Control"),cexRow=0.7,cexCol=0.9,margins = c(9,7), dendrogram = "row", Colv=FALSE)

## Extract significant results

sig_results= DEqMS.results[sig, ]

write.table(sig_results, "sig_Combo_vs_Control_noLS2.txt", sep = "\t", row.names =
F,quote=F)

# Inhibitor treatment vs Control

## Fit the model and make contrast

fit1 = lmFit(protein.matrix,design = design)

cont <- makeContrasts(classAlk-classControl, levels = design)

## Fit the model with the contrast and compute the empirical Bayes estimation

fit2 = contrasts.fit(fit1,contrasts = cont)
fit3 <- eBayes(fit2)

## Add a column with the number of Peptide to Spectrum Matches (PSM) that have been
quantified for each protein, as in this model PSM are used for the p-val calculations

fit3$count = pep.count.table[rownames(fit3$coefficients),"count"]

## Check that the minimum value of PMS counts is not 0 or NA, otherwise have a look at the
previous steps as there has been an error

min(fit3$count)
## Apply the function spectraCountBayes, which adjusts the t-statistic and p-values based on
the number of peptides/PSM

fit4 = spectraCountBayes(fit3)

## Visualization of the variance curve for the PSM quantified. Only plotted the proteins that
have been quantified by 20 PSMs (n=20)

VarianceBoxplot(fit4, n=20, main = "Alk vs Control",xlab="peptide count + 1")

## Create an object with the comparison results

DEqMS.results = outputResult(fit4,coef_col = 1)

## Add gene names to the results lists and save them

rownames(df.prot) = df.prot$Majority.protein.IDs

```

```

DEqMS.results$Gene.name = df.prot[DEqMS.results$gene,]$Gene.names

write.table(DEqMS.results,"DEqMS.results_alk_control_noLS2.txt",sep = "\t", row.names =
F,quote=F)

## Volcanos and heatmap of the significant hits (fold change>1 and p-val>0.05)

DEqMS.results$log.sca.pval = -log10(DEqMS.results$sca.P.Value)
ggplot(DEqMS.results, aes(x = logFC, y =log.sca.pval )) +
  geom_point(size=0.5 )+
  theme_bw(base_size = 16) + # change theme
  xlab(expression("Fold change")) + # x-axis label
  ylab(expression(" -log10(P-value)")) + # y-axis label
  geom_vline(xintercept = c(-1,1), colour = "red") + # Add fold change cutoffs
  geom_hline(yintercept = 1.5, colour = "red") + # Add significance cutoffs
  geom_vline(xintercept = 0, colour = "black") + # Add 0 lines
  scale_colour_gradient(low = "black", high = "black", guide = FALSE)+
  geom_text_repel(data=subset(DEqMS.results, abs(logFC)>1&log.sca.pval > 1.5),
    aes( logFC, log.sca.pval ,label=Gene.name)) # add gene label

sig=rownames(DEqMS.results[
  (abs(DEqMS.results$logFC)>1)
  (DEqMS.results$sca.P.Value<0.05) , ])

plot(DEqMS.results$logFC,(DEqMS.results$log.sca.pval),
  ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Alk vs Control"), pch=19,cex=0.4)
points(DEqMS.results[sig,"logFC"],
  DEqMS.results[sig,"log.sca.pval"],pch=21, cex=1,
col="black", bg="red")
abline(h=-log10(0.05),lty=3)
abline(v=-1,lty=3)
abline(v=1,lty=3)

hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)

heatmap.2(protein.matrix[sig,],trace="none",col=hmcol,main=paste("Alk
Control"),cexRow=0.7,cexCol=0.9,margins = c(9,7), dendrogram = "row", Colv = FALSE)

## Extract significant results

sig_results= DEqMS.results[sig, ]

write.table(sig_results, "sig_Alk_vs_Control_noLS2.txt", sep = "\t", row.names = F,quote=F)

```

Appendix 2.H

R Script for secretome analysis from PCLs.

```
---  
title: "Proteomics from secretome"  
author: "Laura Sabater"  
output:  
  pdf_document: default  
  html_document: default  
---  
## Load necessary libraries  
  
if(!require(knitr)){  
  install.packages("knitr")  
  library(knitr)  
}  
if(!require(dplyr)){  
  install.packages("dplyr")  
  library(dplyr)  
}  
if(!require(matrixStats)){  
  install.packages("matrixStats")  
  library(matrixStats)  
}  
if(!require(limma)){  
  install.packages("limma")  
  library(limma)  
}  
if(!require(DEqMS)){  
  install.packages("DEqMS")  
  library(DEqMS)  
}  
if(!require(gplots)){  
  install.packages("gplots")  
  library(gplots)  
}  
if(!require(RColorBrewer)){  
  install.packages("RColorBrewer")  
  library(RColorBrewer)  
}  
if(!require(ggrepel)){  
  install.packages("ggrepel")  
  library(ggrepel)  
}  
  
if (!requireNamespace("BiocManager", quietly = TRUE)){  
  install.packages("BiocManager")  
  BiocManager::install("edgeR")  
}
```

```

}
library(edgeR)

if (!requireNamespace("BiocManager", quietly = TRUE)){
  install.packages("BiocManager")
  BiocManager::install("sva")
}
library(sva)

## First of all, I set up the conditions for the output, the root directori and eliminate everything
that may be on the environment from previous sessions

rm(list =ls())

knitr::opts_chunk$set(echo = TRUE,
  fig.align = 'center',
  tidy = TRUE)
opts_knit$set(root.dir = "/Users/laura/Desktop/TFM/secretome")

## Upload MS data: proteinGroups.txt

df.prot = read.table("proteinGroups.txt",stringsAsFactors = FALSE, header = TRUE,sep = "\t")

## Filter the proteins which are not Reverse nor contaminants

df.prot = df.prot[!df.prot$Reverse=="+",]
df.prot = df.prot[!df.prot$Potential.contaminant=="+",]

## Extract the columns with the intensity information (LFQ)

df.LFQ = df.prot %>% dplyr:: select(starts_with("LFQ"))

## Order the rows by group: Control, Combo and Alk

df.LFQ = df.LFQ[,c(1,2,8,10,13,3,5,7,9,12,4,6,11)]

## Load file with the information about the experiment design, and give the same order as
the intensities

experimental_design= read.table("exp.design.txt",stringsAsFactors = FALSE, header =
TRUE,sep = "\t")
experimental_design= experimental_design[c(1,2,8,10,13,3,5,7,9,12,4,6,11), 1:3 ]

## Plot PCA of the data
pca <- princomp(df.LFQ)
conds = as.factor(experimental_design$condition)
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]
names(cond_colours)=conds

```

```
plot(pca$loadings, col=cond_colours, pch=19, cex=2, main= "PCA")
text(pca$loadings, as.vector(colnames(df.LFQ)), pos=3,cex=0.4)
legend("topright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)
```

```
plot(pca$loadings[, 3:4],col=cond_colours, pch=19, cex=2, main= "PCA", ylim=c(-0.55, 0.5))
text(pca$loadings[, 3:4], as.vector(colnames(df.LFQ)), pos=1,cex=0.4)
legend("bottomright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)
```

Remove all the rows containing a 0, so we can do batch effect correction

```
df.LFQ[df.LFQ==0] <- NA
df.LFQ=na.omit(df.LFQ)
```

Calculate the matrix model to be used in the batch correction, and create an object with the batch effect variable

```
mod = model.matrix(~condition, data= experimental_design)
batch= experimental_design$replicate
```

Batch effect correction using ComBat

```
df.combat= ComBat(dat= as.matrix(df.LFQ), batch = batch, mod=mod, par.prior = TRUE)
df.combat=as.data.frame(df.combat)
df.combat= df.combat[apply(df.combat, 1, function(x) all(x>=0)), ]
```

Plot Boxplot and Densities for corrected data

```
par(mfrow=c(2,2))
boxplot(log2(df.combat), col = rep(c("red", "blue", "green"), each=5), main= "post-
correction")
plotDensities(log2(df.combat), col = rep(c("red", "blue", "green"), each=5), legend = FALSE,
main= "post-correction")
```

```
boxplot(log2(df.LFQ), col = rep(c("red", "blue", "green"), each=5), main= "pre-correction")
plotDensities(log2(df.LFQ), col = rep(c("red", "blue", "green"), each=5), legend = FALSE, main=
"pre-correction")
```

Normalization of the corrected values

```
combat_tmm=calcNormFactors(df.combat)
df.combat_tmm=sweep(df.combat, 2, combat_tmm, FUN = "/")
```

Plot corrected and normalized values

```
boxplot(log2(df.combat_tmm), col = rep(c("red", "blue", "green"), each=5), main= "post-
correction-normalized")
plotMDS(log2(df.combat_tmm), col = rep(c("red", "blue", "green"), each=5), main= "post-
correction-normalized")
```


PCA of normalized and corrected values

```
pca=princomp(df.combat_tmm)

plot(pca$loadings, col=cond_colours, pch=19, cex=2, main= "PCA")
text(pca$loadings, as.vector(colnames(df.combat)), pos=3,cex=0.4)
legend("topright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)
```

Change rownames for the protein ID

```
df.prot=df.prot[rownames(df.combat_tmm), ]
rownames(df.combat_tmm) = df.prot$Majority.protein.IDs
```

Count the razor + unique peptides used for the quantification. Because some of the counts may be 0, we add a constant (constant=1) to all the peptides values

```
df.razor = df.prot %>% dplyr:: select(starts_with("Razor")[-1])
pep.count.table = data.frame(count = rowMins(as.matrix(df.razor)),row.names =
df.prot$Majority.protein.IDs)
```

```
pep.count.table$count = pep.count.table$count+1
```

Logarithm transformation of the data

```
protein.matrix = log2(as.matrix(df.combat_tmm))
```

Boxplot of the log2 transformed data

```
boxplot(protein.matrix, col = rep(c("red", "blue", "green"), each=6), main= "log2 transformed
data", cex=0.5 )
legend("bottomright",levels(conds),fill=cond_colours[levels(conds)],cex=0.4)
```

Calculation of the model matrix for the comparisons

```
class= as.factor(c(rep("Control", 5), rep("Combo", 5), rep("Alk", 3)))
design = model.matrix(~0+class) # ~0 to remove intercept
```

Profibrogenic treatment vs Inhibitor treatment

Fit the model and make contrast

```
fit1 = lmFit(protein.matrix,design = design)
```

```
cont <- makeContrasts(classCombo-classAlk, levels = design)
```

Fit the model with the contrast and compute the empirical Bayes estimation

```
fit2 = contrasts.fit(fit1,contrasts = cont)
fit3 <- eBayes(fit2)
```

```
## Add a column with the number of Peptide to Spectrum Matches (PSM) that have been
quantified for each protein, as in this model PSM are used for the p-val calculations
```

```
fit3$count = pep.count.table[rownames(fit3$coefficients),"count"]
```

```
## Check that the minimum value of PMS counts is not 0 or NA, otherwise have a look at the
previous steps as there has been an error
```

```
min(fit3$count)
```

```
## Apply the function spectraCountBayes, which adjusts the t-statistic and p-values based on
the number of peptides/PSM
```

```
fit4 = spectraCountBayes(fit3)
```

```
## Visualization of the variance curve for the PSM quantified. Only plotted the proteins that
have been quantified by 20 PSMs (n=20)
```

```
VarianceBoxplot(fit4, n=20, main = "Combo vs Alk",xlab="peptide count + 1")
```

```
## Create an object with the comparison results
```

```
DEqMS.results = outputResult(fit4,coef_col = 1)
```

```
## Add gene names to the results lists and save them
```

```
rownames(df.prot) = df.prot$Majority.protein.IDs
```

```
DEqMS.results$Gene.name = df.prot[DEqMS.results$gene,]$Gene.names
```

```
write.table(DEqMS.results,"DEqMS.results_Sec_Combo_Alk.txt",sep = "\t", row.names =
F,quote=F)
```

```
## Volcanos and heatmap of the significant hits (fold change>1 and p-val>0.05)
```

```
DEqMS.results$log.sca.pval = -log10(DEqMS.results$sca.P.Value)
```

```
ggplot(DEqMS.results, aes(x = logFC, y =log.sca.pval )) +
```

```
  geom_point(size=0.5 )+
```

```
  theme_bw(base_size = 16) + # change theme
```

```
  xlab(expression("Fold change")) + # x-axis label
```

```
  ylab(expression(" -log10(P-value)")) + # y-axis label
```

```
  geom_vline(xintercept = c(-1,1), colour = "red") + # Add fold change cutoffs
```

```
  geom_hline(yintercept = 1.5, colour = "red") + # Add significance cutoffs
```

```
  geom_vline(xintercept = 0, colour = "black") + # Add 0 lines
```

```
  scale_colour_gradient(low = "black", high = "black", guide = FALSE)+
```

```
  geom_text_repel(data=subset(DEqMS.results, abs(logFC)>1&log.sca.pval > 1.5),
```

```
    aes( logFC, log.sca.pval ,label=Gene.name)) # add gene label
```

```
sig=rownames(DEqMS.results[ (abs(DEqMS.results$logFC)>1) &
(DEqMS.results$sca.P.Value<0.05) , ])
```

```
plot(DEqMS.results$logFC,(DEqMS.results$log.sca.pval), ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Combo vs Alk"), pch=19,cex=0.4)
points(DEqMS.results[sig,"logFC"], DEqMS.results[sig,"log.sca.pval"],pch=21, cex=1,
col="black", bg="red")
abline(h=-log10(0.05),lty=3)
abline(v=-1,lty=3)
abline(v=1,lty=3)
```

```
hmc col = colorRampPalette(brewer.pal(9,"GnBu"))(100)
```

```
heatmap.2(protein.matrix[sig,],trace="none",col=hmc col,main=paste("Combo vs Alk"),cexRow=0.7,cexCol=0.9,margins = c(9,7), dendrogram = "row", Colv = FALSE)
```

```
## Extract significant results
```

```
sig_results= DEqMS.results[sig, ]
```

```
write.table(sig_results, "sig_Sec_Combo_vs_Alk.txt", sep="\t", row.names = F,quote=F)
```

```
# Profibrogenic treatment vs Control
```

```
## Fit the model and make contrast
```

```
fit1 = lmFit(protein.matrix,design = design)
```

```
cont <- makeContrasts(classCombo-classControl, levels = design)
```

```
## Fit the model with the contrast and compute the empirical Bayes estimation
```

```
fit2 = contrasts.fit(fit1,contrasts = cont)
```

```
fit3 <- eBayes(fit2)
```

```
## Add a column with the number of Peptide to Spectrum Matches (PSM) that have been
quantified for each protein, as in this model PSM are used for the p-val calculations
```

```
fit3$count = pep.count.table[rownames(fit3$coefficients),"count"]
```

```
## Check that the minimum value of PMS counts is not 0 or NA, otherwise have a look at the
previous steps as there has been an error
```

```
min(fit3$count)
```

```
## Apply the function spectraCountBayes, which adjusts the t-statistic and p-values based on
the number of peptides/PSM
```

```

fit4 = spectraCounteBayes(fit3)

## Visualization of the variance curve for the PSM quantified. Only plotted the proteins that
## have been quantified by 20 PSMs (n=20)

VarianceBoxplot(fit4, n=20, main = "Combo vs Control",xlab="peptide count + 1")

## Create an object with the comparison results

DEqMS.results = outputResult(fit4,coef_col = 1)

## Add gene names to the results lists and save them

rownames(df.prot) = df.prot$Majority.protein.IDs
DEqMS.results$Gene.name = df.prot[DEqMS.results$gene,]$Gene.names

write.table(DEqMS.results,"DEqMS.results_Sec_combo_control.txt",sep = "\t", row.names =
F,quote=F)

## Volcanos and heatmap of the significant hits (fold change>1 and p-val>0.05)

DEqMS.results$log.sca.pval = -log10(DEqMS.results$sca.P.Value)
ggplot(DEqMS.results, aes(x = logFC, y =log.sca.pval )) +
  geom_point(size=0.5)+
  theme_bw(base_size = 16) + # change theme
  xlab(expression("Fold change")) + # x-axis label
  ylab(expression(" -log10(P-value)")) + # y-axis label
  geom_vline(xintercept = c(-1,1), colour = "red") + # Add fold change cutoffs
  geom_hline(yintercept = 1.5, colour = "red") + # Add significance cutoffs
  geom_vline(xintercept = 0, colour = "black") + # Add 0 lines
  scale_colour_gradient(low = "black", high = "black", guide = FALSE)+
  geom_text_repel(data=subset(DEqMS.results, abs(logFC)>1&log.sca.pval > 1.5),
    aes( logFC, log.sca.pval ,label=Gene.name)) # add gene label

sig=rownames(DEqMS.results[
  (abs(DEqMS.results$logFC)>1)
  (DEqMS.results$sca.P.Value<0.05) , ])

plot(DEqMS.results$logFC,(DEqMS.results$log.sca.pval),
      ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Combo vs Control"), pch=19,cex=0.4)
points(DEqMS.results[sig,"logFC"],
      DEqMS.results[sig,"log.sca.pval"],pch=21,
      cex=1,
      col="black", bg="red")
abline(h=-log10(0.05),lty=3)
abline(v=-1,lty=3)
abline(v=1,lty=3)

hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)

```

```
heatmap.2(protein.matrix[sig,],trace="none",col=hmcol,main=paste("Combo vs Control"),cexRow=0.7,cexCol=0.9,margins = c(9,7), dendrogram = "row", Colv = FALSE)
```

```
## Extract significant results
```

```
sig_results= DEqMS.results[sig, ]
```

```
write.table(sig_results, "sig_Sec_Combo_vs_Control.txt", sep = "\t", row.names = F,quote=F)
```

```
# Inhibitor treatment vs Control
```

```
## Fit the model and make contrast
```

```
fit1 = lmFit(protein.matrix,design = design)
```

```
cont <- makeContrasts(classAlk-classControl, levels = design)
```

```
## Fit the model with the contrast and compute the empirical Bayes estimation
```

```
fit2 = contrasts.fit(fit1,contrasts = cont)
```

```
fit3 <- eBayes(fit2)
```

```
## Add a column with the number of Peptide to Spectrum Matches (PSM) that have been quantified for each protein, as in this model PSM are used for the p-val calculations
```

```
fit3$count = pep.count.table[rownames(fit3$coefficients),"count"]
```

```
## Check that the minimum value of PMS counts is not 0 or NA, otherwise have a look at the previous steps as there has been an error
```

```
min(fit3$count)
```

```
## Apply the function spectraCountBayes, which adjusts the t-statistic and p-values based on the number of peptides/PSM
```

```
fit4 = spectraCountBayes(fit3)
```

```
## Visualization of the variance curve for the PSM quantified. Only plotted the proteins that have been quantified by 20 PSMs (n=20)
```

```
VarianceBoxplot(fit4, n=20, main = "Alk vs Control",xlab="peptide count + 1")
```

```
## Create an object with the comparison results
```

```
DEqMS.results = outputResult(fit4,coef_col = 1)
```

```
## Add gene names to the results lists and save them
```

```

rownames(df.prot) = df.prot$Majority.protein.IDs
DEqMS.results$Gene.name = df.prot[DEqMS.results$gene,]$Gene.names

write.table(DEqMS.results,"DEqMS.results_Sec_alk_control.txt",sep = "\t", row.names =
F,quote=F)

## Volcanos and heatmap of the significant hits (fold change>1 and p-val>0.05)

DEqMS.results$log.sca.pval = -log10(DEqMS.results$sca.P.Value)
ggplot(DEqMS.results, aes(x = logFC, y =log.sca.pval )) +
  geom_point(size=0.5)+
  theme_bw(base_size = 16) + # change theme
  xlab(expression("Fold change")) + # x-axis label
  ylab(expression(" -log10(P-value)")) + # y-axis label
  geom_vline(xintercept = c(-1,1), colour = "red") + # Add fold change cutoffs
  geom_hline(yintercept = 1.5, colour = "red") + # Add significance cutoffs
  geom_vline(xintercept = 0, colour = "black") + # Add 0 lines
  scale_colour_gradient(low = "black", high = "black", guide = FALSE)+
  geom_text_repel(data=subset(DEqMS.results, abs(logFC)>1&log.sca.pval > 1.5),
    aes( logFC, log.sca.pval ,label=Gene.name)) # add gene label

sig=rownames(DEqMS.results[
                                (abs(DEqMS.results$logFC)>1)
                                &
                                (DEqMS.results$sca.P.Value<0.05) , ])

plot(DEqMS.results$logFC,(DEqMS.results$log.sca.pval),
      ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Alk vs Control"), pch=19,cex=0.4)
points(DEqMS.results[sig,"logFC"],
      DEqMS.results[sig,"log.sca.pval"],pch=21,
      cex=1,
      col="black", bg="red")
abline(h=-log10(0.05),lty=3)
abline(v=-1,lty=3)
abline(v=1,lty=3)

hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)

heatmap.2(protein.matrix[sig,],trace="none",col=hmcol,main=paste("Alk
Control"),cexRow=0.7,cexCol=0.9,margins = c(9,7), dendrogram = "row", Colv = FALSE)

## Extract significant results

sig_results= DEqMS.results[sig, ]

write.table(sig_results, "sig_Sec_Alk_vs_Control.txt", sep = "\t", row.names = F,quote=F)

```

Appendix 2.1

R Script for integrative analysis of RNA sequencing, proteome and secreome.

```
---  
title: "Integrative analysis RNA sequencing proteome and secreome "  
author: "Laura Sabater"  
output:  
  pdf_document: default  
  html_document: default  
---
```

```
## Load required libraries
```

```
if(!require(knitr)){  
  install.packages("knitr")  
  library(knitr)  
}  
if(!require(dplyr)){  
  install.packages("dplyr")  
  library(dplyr)  
}  
if(!require(gplots)){  
  install.packages("gplots")  
  library(gplots)  
}  
if(!require(UpSetR)){  
  install.packages("UpSetR")  
  library(UpSetR)  
}  
if(!require(RColorBrewer)){  
  install.packages("RColorBrewer")  
  library(RColorBrewer)  
}  
if(!require(VennDiagram)){  
  install.packages("VennDiagram")  
  library(VennDiagram)  
}  
if(!requireNamespace("BiocManager", quietly = TRUE)){  
  install.packages("BiocManager")  
  BiocManager::install("mixOmics")  
}  
  
if(!require(tidyverse)){  
  install.packages("tidyverse")  
  library(tidyverse)  
}
```

```
## First of all, I set up the conditions for the output, the root directory and eliminate everything that may be on the environment from previous sessions
```

```
rm(list =ls())
```

```
knitr::opts_chunk$set(echo = TRUE,  
                      fig.align = 'center',  
                      tidy = TRUE)
```

```
opts_knit$set(root.dir = "/Users/laura/Desktop/TFM/Integrative_analysis")
```

```
## Comparison Profibrogenic treatment vs Inhibitor treatment
```

```
## Load RNA sequencing data from the comparison Profibrogenic treatment vs Inhibitor treatment
```

```
RNA_Combo_Alk= read.table("RNAsig_Combo_Alk_noLS2.csv", header = TRUE, sep = ",")  
RNA_Combo_Alk_Gen= RNA_Combo_Alk$symbol
```

```
## Load proteomics data from the comparison Profibrogenic treatment vs Inhibitor treatment
```

```
Prot_Combo_Alk= read.table("sig_Combo_vs_Alk_noLS2.csv", header = TRUE, sep=",")  
Prot_Combo_Alk_Prot= Prot_Combo_Alk$Gene.name
```

```
## Plot the venn diagram and see overlapping features
```

```
myCol = brewer.pal(3, "Pastel2")
```

```
myCol= myCol[1:2]
```

```
RNA_Combo_Alk= RNA_Combo_Alk[!is.na(RNA_Combo_Alk$symbol), ]
```

```
venn.diagram({
```

```
  x = list(Prot=Prot_Combo_Alk$Gene.name, RNA=RNA_Combo_Alk$symbol),  
  category.names = c("Prot" , "RNA"),  
  filename = 'VD_Prot_RNA_Combo_alk.png',  
  output=TRUE,
```

```
  # Output features
```

```
  imagetype="png" ,
```

```
  height = 480 ,
```

```
  width = 480 ,
```

```
  resolution = 300,
```

```
  compression = "lzw",
```

```
  # Circles
```

```
  lwd = 2,
```

```
  lty = 'blank',
```

```
  fill = myCol,
```

```
  # Numbers
```

```
  cex = .6,
```



```

fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.6,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-15, 140),
cat.dist = c(0.055, 0.055),
cat.fontfamily = "sans",

# External numbers
ext.line.lwd=0.5
)

## Plot the UpSet plot

input=list(Prot=Prot_Combo_Alk$Gene.name, RNA=RNA_Combo_Alk$symbol)

upset(fromList(input), order.by = "freq")

## Comparison Profibrogenic treatment vs control

## Load RNA sequencing data from the comparison Profibrogenic treatment vs control

RNA_Combo_Control= read.table("RNAsig_Combo_Control_noLS2.csv", header = TRUE, sep =
",")
RNA_Combo_Control_Gen= RNA_Combo_Control$symbol

## Load proteomics data from the comparison Profibrogenic treatment vs control

Prot_Combo_Control= read.table("sig_Combo_vs_Control_noLS2.csv", header = TRUE,
sep=",")
Prot_Combo_Control_Prot= Prot_Combo_Control$Gene.name

## Plot the venn diagram and see overlapping features

venn.diagram(
  x = list(Prot=Prot_Combo_Control$Gene.name, RNA=RNA_Combo_Control$symbol),
  category.names = c("Prot" , "RNA"),
  filename = 'VD_Prot_RNA_Combo_control.png',
  output=TRUE,

  # Output features
  imagetype="png" ,
  height = 480 ,
  width = 480 ,
  resolution = 300,
  compression = "lzw",

```

```

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.6,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-15, 140),
cat.dist = c(0.055, 0.055),
cat.fontfamily = "sans",
# External numbers
ext.line.lwd=0

)

## Plot the UpSet plot

input=list(Prot=Prot_Combo_Control$Gene.name, RNA=RNA_Combo_Control$symbol)

upset(fromList(input), order.by = "freq")

## Comparison of Inhibitor treatment and control

## Load the RNA counts from the comparison of Inhibitor treatment and control

RNA_Alk_Control= read.table("RNAsig_Control_Alk_noLS2.csv", header = TRUE, sep = ",")
RNA_Alk_Control_Gen= RNA_Alk_Control$symbol

## Load proteomics data from the comparison of Inhibitor treatment and control

Prot_Alk_Control= read.table("sig_Alk_vs_Control_noLS2.csv", header = TRUE, sep=",")
Prot_Alk_Control_Prot= Prot_Alk_Control$Gene.name

## Plot the venn diagram and see overlapping features

venn.diagram(
  x = list(Prot=Prot_Alk_Control$Gene.name, RNA=RNA_Alk_Control$symbol),
  category.names = c("Prot" , "RNA"),
  filename = 'VD_Prot_RNA_alk_control.png',
  output=TRUE,

```

```

# Output features
imagetype="png" ,
height = 480 ,
width = 480 ,
resolution = 300,
compression = "lzw",

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.6,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-15, 140),
cat.dist = c(0.020, 0.035),
cat.fontfamily = "sans",

# External numbers
ext.line.lwd=0.5

)

## Plot the UpSet plot

input=list(Prot=Prot_Alk_Control$Gene.name, RNA=RNA_Alk_Control$symbol)

upset(fromList(input), order.by = "freq")

## Comparison between RNA comparisons

## Venn diagram to analyse overlapping between the RNA sequencing comparison
Profibrogenic treatment vs Inhibitor treatment and Profibrogenic treatment vs control

venn.diagram(
  x = list(RNA_Combo_Alk=RNA_Combo_Alk$symbol,
  RNA_Combo_Control=RNA_Combo_Control$symbol),
  category.names = c("RNA Combo vs Alk" , "RNA Combo vs Control"),
  filename = 'VD_RNA_RNA_Com_alk_Com_control.png',
  output=TRUE,

```

```

# Output features
imagetype="png" ,
height = 480 ,
width = 480 ,
resolution = 300,
compression = "lzw",

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.4,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-23, 168),
cat.dist = c(0.035, 0.045),
cat.fontfamily = "sans",

# External numbers
ext.line.lwd=0.5
)

```

Plot the UpSet plot

```

input=list(RNA_Combo_Alk=RNA_Combo_Alk$symbol,
RNA_Combo_Control=RNA_Combo_Control$symbol)

```

```

upset(fromList(input), order.by = "freq")

```

Comparison between proteomic comparisons

Venn diagram to analyse overlapping between the Proteomics comparison Profibrogenic treatment vs Inhibitor treatment and Profibrogenic treatment vs control

```

venn.diagram(
  x = list(Prot_Combo_Alk=Prot_Combo_Alk$Gene.name ,
Prot_Combo_Control=Prot_Combo_Control$Gene.name),
  category.names = c("Prot Combo vs Alk" , "Prot Combo vs Control"),
  filename = 'VD_Prot_Prot_Com_alk_Com_control.png',
  output=TRUE,

```

```

# Output features

```

```

    imagetype="png" ,
    height = 480 ,
    width = 480 ,
    resolution = 300,
    compression = "lzw",

    # Circles
    lwd = 2,
    lty = 'blank',
    fill = myCol,

    # Numbers
    cex = .6,
    fontface = "bold",
    fontfamily = "sans",

    # Set names
    cat.cex = 0.4,
    cat.fontface = "bold",
    cat.default.pos = "outer",
    cat.pos = c(-23, 163),
    cat.dist = c(0.035, 0.050),
    cat.fontfamily = "sans",

    # External numbers
    ext.line.lwd=0.5

)

## Plot UpSet plot

input=list(Prot_Combo_Alk=Prot_Combo_Alk$Gene.name
Prot_Combo_Control=Prot_Combo_Control$Gene.name )

upset(fromList(input), order.by = "freq")

## Comparison with the secretome

## Load secretome data

Sec_Combo_Control= read.table("sig_Sec_Combo_vs_Control.txt", header = TRUE, sep="\t")
Sec_Combo_Control_Prot= Sec_Combo_Control$Gene.name

Sec_Alk_Control= read.table("sig_Sec_Alk_vs_Control.txt", header = TRUE, sep="\t")
Sec_Alk_Control_Prot= Sec_Alk_Control$Gene.name

Sec_Combo_Alk= read.table("sig_Sec_Combo_vs_Alk.txt", header = TRUE, sep="\t")
Sec_Combo_Alk_Prot= Sec_Combo_Alk$Gene.name

```

RNA vs secretome Profibrogenic combo vs control

```
input=list(Prot=Sec_Combo_Control$Gene.name, RNA=RNA_Combo_Control$symbol)
```

```
venn.diagram(  
  x = list(Prot=Sec_Combo_Control$Gene.name, RNA=RNA_Combo_Control$symbol),  
  category.names = c("Sec" , "RNA"),  
  filename = 'VD_Sec_RNA_Combo_control.png',  
  output=TRUE,  
  
  # Output features  
  imagetype="png" ,  
  height = 480 ,  
  width = 480 ,  
  resolution = 300,  
  compression = "lzw",  
  
  # Circles  
  lwd = 2,  
  lty = 'blank',  
  fill = myCol,  
  
  # Numbers  
  cex = .6,  
  fontface = "bold",  
  fontfamily = "sans",  
  
  # Set names  
  cat.cex = 0.4,  
  cat.fontface = "bold",  
  cat.default.pos = "outer",  
  cat.pos = c(-2, 150),  
  cat.dist = c(0.015, 0.035),  
  cat.fontfamily = "sans",  
  
  # External numbers  
  ext.line.lwd=0.5  
)
```

RNA vs secretome Profibrogenic combo vs alk

```
input=list(Prot=Sec_Combo_Alk$Gene.name, RNA=RNA_Combo_Alk$symbol)
```

```
venn.diagram(  
  x = list(Prot=Sec_Combo_Alk$Gene.name, RNA=RNA_Combo_Alk$symbol),  
  category.names = c("Sec" , "RNA"),  
  filename = 'VD_Sec_RNA_Combo_alk.png',  
  output=TRUE,
```

```

# Output features
imagetype="png" ,
height = 480 ,
width = 480 ,
resolution = 300,
compression = "lzw",

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.4,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-2, 150),
cat.dist = c(0.015, 0.035),
cat.fontfamily = "sans",

# External numbers
ext.line.lwd=0.5

)

## RNA vs secretome Alk vs control

input=list(Prot=Sec_Alk_Control$Gene.name, RNA=RNA_Alk_Control$symbol)

venn.diagram(
  x = list(Prot=Sec_Alk_Control$Gene.name, RNA=RNA_Alk_Control$symbol),
  category.names = c("Sec" , "RNA"),
  filename = 'VD_Sec_RNA_alk_control.png',
  output=TRUE,

# Output features
imagetype="png" ,
height = 480 ,
width = 480 ,
resolution = 300,
compression = "lzw",

# Circles

```

```

lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.4,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-2, 150),
cat.dist = c(0.015, 0.035),
cat.fontfamily = "sans",

# External numbers
ext.line.lwd=0.5

)

## Proteome vs secretome Profibrogenic combo vs control

input=list(Sec=Sec_Combo_Control$Gene.name, Prot=Prot_Combo_Control$Gene.name)

venn.diagram(
  x = list(Sec=Sec_Combo_Control$Gene.name, Prot=Prot_Combo_Control$Gene.name),
  category.names = c("Sec" , "Prot"),
  filename = 'VD_Sec_Prot_Combo_control.png',
  output=TRUE,

# Output features
imagetype="png" ,
height = 480 ,
width = 480 ,
resolution = 300,
compression = "lzw",

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

```



```

# Set names
cat.cex = 0.4,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-2, 150),
cat.dist = c(0.015, 0.035),
cat.fontfamily = "sans",

# External numbers
ext.line.lwd=0.5

)

## Proteome vs secretome Profibrogenic combo vs alk

input=list(Sec=Sec_Combo_Alk$Gene.name, Prot=Prot_Combo_Alk$Gene.name)

venn.diagram(
  x = list(Sec=Sec_Combo_Alk$Gene.name, Prot=Prot_Combo_Alk$Gene.name),
  category.names = c("Sec" , "Prot"),
  filename = 'VD_Sec_Prot_Combo_alk.png',
  output=TRUE,

# Output features
imagetype="png" ,
height = 480 ,
width = 480 ,
resolution = 300,
compression = "lzw",

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.4,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-2, 150),
cat.dist = c(0.015, 0.035),
cat.fontfamily = "sans",

```

```

# External numbers
ext.line.lwd=0.5

)

## Proteome vs secretome alk vs control

input=list(Sec=Sec_Alk_Control$Gene.name, Prot=Prot_Alk_Control$Gene.name)

venn.diagram(
  x = list(Sec=Sec_Alk_Control$Gene.name, Prot=Prot_Alk_Control$Gene.name),
  category.names = c("Sec" , "Prot"),
  filename = 'VD_Sec_Prot_alk_control.png',
  output=TRUE,

  # Output features
  imagetype="png" ,
  height = 480 ,
  width = 480 ,
  resolution = 300,
  compression = "lzw",

  # Circles
  lwd = 2,
  lty = 'blank',
  fill = myCol,

  # Numbers
  cex = .6,
  fontface = "bold",
  fontfamily = "sans",

  # Set names
  cat.cex = 0.4,
  cat.fontface = "bold",
  cat.default.pos = "outer",
  cat.pos = c(-2, 150),
  cat.dist = c(0.015, 0.035),
  cat.fontfamily = "sans",
  # External numbers
  ext.line.lwd=0.5

)

```

Secretome Profibrogenic treatment and secretome profibrogenic treatment and control

```

venn.diagram(
  x = list(Sec=Sec_Combo_Alk$Gene.name, Prot=Sec_Combo_Control$Gene.name),

```

```
category.names = c("Sec_Combo_alk" , "Sec_combo_control"),
filename = 'VD_Sec_Sec_Combo_alk_combo_control.png',
output=TRUE,
```

```
# Output features
imagetype="png" ,
height = 480 ,
width = 480 ,
resolution = 300,
compression = "lzw",
```

```
# Circles
lwd = 2,
lty = 'blank',
fill = myCol,
```

```
# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",
```

```
# Set names
cat.cex = 0.4,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-2, 150),
cat.dist = c(0.015, 0.035),
cat.fontfamily = "sans",
# External numbers
ext.line.lwd=0.5
```

```
)
```

Secretome profibrogenic treatment and inhibitor and protein profibrogenic treatment and inhibitor

```
myCol <- brewer.pal(3, "Pastel2")
myCol= myCol[1:2]
```

```
venn.diagram(
  x = list(Sec= Sec_Combo_Alk$Gene.name, Prot= Prot_Combo_Alk$Gene.name),
  category.names = c("Sec" , "Prot"),
  filename = 'venn_diagramm4.png',
  output=TRUE,
```

```
# Output features
imagetype="png" ,
height = 480 ,
```

```

width = 480 ,
resolution = 300,
compression = "lzw",

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .6,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.6,
cat.fontface = "bold",
cat.default.pos = "outer",
cat.pos = c(-25, 140),
cat.dist = c(0.055, 0.055),
cat.fontfamily = "sans",
# External numbers
ext.line.lwd=0.5

)

```

MixOmics analysis

First of all, I set up the conditions for the output, the root directory and eliminate everything that may be on the environment from previous sessions

```

rm(list =ls())

knitr::opts_chunk$set(echo = TRUE,
  fig.align = 'center',
  tidy = TRUE)
opts_knit$set(root.dir = "/Users/laura/Desktop/TFM/mixOmics/")

```

Load, transform and filter RNA data

```

RNA= read.table("ENSnorm_counts_noLS2.txt", header = TRUE, sep="\t")
RNA_data= RNA %>% distinct(RNA$X, .keep_all = TRUE)

RNA_data= RNA_data[!is.na(RNA_data$X), ]
rownames(RNA_data)= RNA_data$X
sample_table= read_tsv("sample_table.txt")
colnames(sample_table)= c("ID", "treatment", "sample")
RNA_data= RNA_data[, c(12,2,6,8,10,24,14,18,20,22,32,26,28)]
sample_table= sample_table[ c(11,1,5,7,9,23,13,17,19,21,31,25,27), ]

```

```

colnames(RNA_data)= sample_table$sample

RNA_data.filtered= RNA_data

RNA_data.filtered[RNA_data.filtered==0]<-NA

RNA_data.filtered$na.control= apply(RNA_data.filtered, 1, function(x) sum (is.na(x[c(1:5)])))
RNA_data.filtered$na.combo= apply(RNA_data.filtered, 1, function(x) sum (is.na(x[c(6:10)])))
RNA_data.filtered$na.alk= apply(RNA_data.filtered, 1, function(x) sum (is.na(x[c(11:13)])))

RNA_data.filtered2=          RNA_data.filtered[RNA_data.filtered$na.control<1          &
RNA_data.filtered$na.combo<1 & RNA_data.filtered$na.alk<1, 1:13]

RNA_data= RNA_data.filtered2

## Load, transform and filter protein data

Prot_data= read.table("proteinGroups.txt", header = TRUE, sep = "\t" )

Prot_data = Prot_data[!Prot_data$Reverse=="+",]
Prot_data = Prot_data[!Prot_data$Potential.contaminant=="+",]
Prot_data = Prot_data[!Prot_data$Only.identified.by.site=="+", ]
Prot_data = Prot_data[!Prot_data$Unique.peptides<=1,]

Prot_data= Prot_data %>% distinct(Prot_data$Gene.names, .keep_all = TRUE)

Prot = Prot_data %>% dplyr:: select(starts_with("LFQ"))
rownames(Prot)= Prot_data$Protein.IDs
Prot= Prot[, c(3,9,11,13,15,2,8,10,12,14,1,4,7)]

colnames(Prot)= sample_table$sample

Prot_data.filtered= Prot

Prot_data.filtered[Prot_data.filtered==0]<-NA

Prot_data.filtered$na.control= apply(Prot_data.filtered, 1, function(x) sum (is.na(x[c(1:5)])))
Prot_data.filtered$na.combo= apply(Prot_data.filtered, 1, function(x) sum (is.na(x[c(6:10)])))
Prot_data.filtered$na.alk= apply(Prot_data.filtered, 1, function(x) sum (is.na(x[c(11:13)])))

Prot_data.filtered2=          Prot_data.filtered[Prot_data.filtered$na.control<3          &
Prot_data.filtered$na.combo<3 & Prot_data.filtered$na.alk<1, 1:13]

Prot= Prot_data.filtered2
Prot= Prot[2:2664, ]
class= as.factor(c(rep("Control", 5), rep("Combo", 5), rep("Alk", 3)))

gene.names= as.data.frame(rownames(Prot))

```

```

colnames(gene.names)= "gene_name"
gene.names %>% separate(gene_name, c("first", "2", "3", "4"), sep = "([\\:;])")

gene.names= gene.names %>% separate(gene_name, c("first", "2", "3", "4"), sep = "([\\:;])")
gene.names

Prot$gene.name= gene.names$first

Prot= Prot %>% distinct(Prot$gene.name, .keep_all = TRUE)

rownames(Prot)= Prot$gene.name

Prot= Prot[, 1:13]

## Load, transform and filter secretome data

Sec_data= read.table("proteinGroups_secretome.txt", header = TRUE, sep = "\t" )

Sec_data = Sec_data[!Sec_data$Reverse=="+",]
Sec_data = Sec_data[!Sec_data$Potential.contaminant=="+",]
Sec_data= Sec_data[!Sec_data$Only.identified.by.site=="+", ]
Sec_data= Sec_data[!Sec_data$Unique.peptides <=1, ]

Sec_data= Sec_data %>% distinct(Sec_data$Gene.names, .keep_all = TRUE)

Sec = Sec_data %>% dplyr:: select(starts_with("LFQ"))
rownames(Sec)= Sec_data$Gene.names

Sec= Sec[, c(1,2,8,10,13,3,5,7,9,12,4,6,11)]

Sec2= Sec[-2, ]

Sec_data.filtered= Sec

Sec_data.filtered[Sec_data.filtered==0]<-NA

Sec_data.filtered$na.control= apply(Sec_data.filtered, 1, function(x) sum (is.na(x[c(1:5)])))
Sec_data.filtered$na.combo= apply(Sec_data.filtered, 1, function(x) sum (is.na(x[c(6:10)])))
Sec_data.filtered$na.alk= apply(Sec_data.filtered, 1, function(x) sum (is.na(x[c(11:13)])))

Sec_data.filtered2= Sec_data.filtered[Sec_data.filtered$na.control<3 &
Sec_data.filtered$na.combo<3 & Sec_data.filtered$na.alk<1, 1:13]

Sec= Sec_data.filtered2

colnames(Sec)= sample_table$sample
class= as.factor(c(rep("Control", 5), rep("Combo", 5), rep("Alk", 3)))

```

```

gene.names= as.data.frame(rownames(Sec))
colnames(gene.names)= "gene_name"
gene.names %>% separate(gene_name, c("first", "2", "3", "4"), sep = "([\\;])")

gene.names= gene.names %>% separate(gene_name, c("first", "2", "3", "4"), sep = "([\\;])")

Sec$gene.name= gene.names$first

Sec= Sec %>% distinct(Sec$gene.name, .keep_all = TRUE)

rownames(Sec)= Sec$gene.name

Sec= Sec[-1 , 1:13]

```

Create data matrix with all three datasets

```

RNA_data=t(RNA_data)
Prot=t(Prot)
Sec=t(Sec)
X= list(mRNA=RNA_data, Proteome=Prot, Secretome=Sec)
Y=as.factor(class)

list.keepX=list(mRNA= c(5,5), Protein=c(5,5), secretome=c(5,5))

lapply(X, dim)

```

Determine design of the model

```

design= matrix(0.1, ncol = length(X), nrow = length(X), dimnames = list(names(X), names(X)))
diag(design)=0

```

Create objects to select data

```

list.keepX2= list(mRNA= c(100, 100,100,100,100), Proteome= c(100,100,100,100, 100),
Secretome= c(100,100,100,100,100))
list.keepX3= list(mRNA= c(50, 50,50,50,50), Proteome= c(50, 50,50,50,50), Secretome= c(50,
50,50,50,50))

```

Apply DIABLO method in all data and create visualization plots

```

sgccda.res= block.splsda(X=X, Y=Y, ncomp = 5, design = design)

plotDiablo(sgccda.res)

plotIndiv(sgccda.res, ind.names = FALSE, legend = TRUE, title = "DIABLO")

plotArrow(sgccda.res, ind.names = FALSE, legend = TRUE)

```

```
## Apply DIABLO method keeping 100 features from each dataset and create visualization plots
```

```
sgccda.res2= block.splsda(X=X, Y=Y, ncomp = 5, design = design, keepX = list.keepX2)
```

```
plotDiablo(sgccda.res2, ncomp = 1)
```

```
plotDiablo(sgccda.res2, ncomp = 2)
```

```
plotIndiv(sgccda.res2, comp = c(1, 2), ind.names = FALSE, legend = TRUE, title = "DIABLO")
```

```
plotArrow(sgccda.res2, ind.names = FALSE, legend = TRUE)
```

```
plotVar(sgccda.res2, comp=c(1,2), style = 'graphics', legend = TRUE, pch = c(16, 17,18), cex = c(1,1,1), col = c('darkorchid', 'lightgreen', 'orange'))
```

```
network(sgccda.res2, blocks = c(1, 2), row.names = FALSE, col.names = FALSE, cutoff = 0.9, save="jpeg", name.save="network100")
```

```
cimDiablo(sgccda.res2, comp = 1, legend.position = "bottomright", size.legend = 1)
```

```
cimDiablo(sgccda.res2, comp = 2, legend.position = "bottomright", size.legend = 1)
```

```
circosPlot(sgccda.res2, cutoff = 0.9, comp = 1, size.variables = 0.20)
```

```
circosPlot(sgccda.res2, cutoff = 0.9, comp = 2, size.variables = 0.20)
```

```
plotLoadings(sgccda.res2,block = c(1,2,3), comp = 1 ,contrib = 'max', method = 'mean', size.name = 0.1, ndisplay = 50)
```

```
plotLoadings(sgccda.res2,block = c(1,2,3), comp = 2 ,contrib = 'max', method = 'mean', size.name = 0.1, ndisplay = 50)
```


Appendix 2.J

Script for RNA sequences QC with FastQC

```
#!/bin/bash
```

```
# Create new directories to save the log output and the QC output
```

```
mkdir logs  
mkdir QC  
mkdir QC/raw
```

```
# request resources from rocket
```

```
#SBATCH -A jmts  
#SBATCH -n 2  
#SBATCH --mem-per-cpu=2000  
#SBATCH -o logs/%x.%j.out  
#SBATCH --mail-type=ALL  
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Run fastqc
```

```
module load FastQC
```

```
for i in fastq/raw/*.gz  
do  
echo "Running fastqc on $i"  
fastqc $i -o QC/raw  
done
```

Appendix 2.K

Script for RNA sequences trimming with Trimmomatic

```
#!/bin/bash
```

```
# Run trimmomatic on raw fastq files (in fastq/raw)
```

```
# Create a directory for the output
```

```
mkdir fastq/trimmed
```

```
# request resources from cluster
```

```
#SBATCH -A jmmts
```

```
#SBATCH -n 22
```

```
#SBATCH --mem-per-cpu=2500
```

```
#SBATCH -o logs/%x.%j.out
```

```
#SBATCH --mail-type=ALL
```

```
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Run trimmomatic
```

```
module load Java/1.8.0_144
```

```
# Create a loop to run trimmomatic for every fasta file in fastq/raw
```

```
for i in fastq/raw/*.fastq.gz
```

```
do
```

```
fname=$(basename $i)
```

```
echo "Trimming $i"
```

```
java -jar /nobackup/proj/jmmts/software/Trimmomatic/Trimmomatic-0.39/trimmomatic-0.39.jar SE -threads 22 -phred33 $i fastq/trimmed/$fname.trimmed.gz \ ILLUMINACLIP:/nobackup/proj/jmmts/software/Trimmomatic/Trimmomatic-0.39/adapters/TruSeq3-SE.fa:1:30:10 MINLEN:30 AVGQUAL:36
```

```
done
```

Appendix 2.L

Script for salmon index creation and salmon alignment.

```
#!/bin/bash
```

```
# Create a new directory to save the output
```

```
mkdir salmon.rat.idx
```

```
# request resources from the cluster
```

```
#SBATCH -A jmts
```

```
#SBATCH -n 10
```

```
#SBATCH --mem-per-cpu=2500
```

```
#SBATCH -o logs/%x.%j.out
```

```
#SBATCH --mail-type=ALL
```

```
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Download the reference transcriptome
```

```
wget
```

```
http://ftp.ensembl.org/pub/release-
```

```
99/fasta/rattus_norvegicus/dna/Rattus_norvegicus.Rnor_6.0.dna.toplevel.fa.gz
```

```
# Decompress the file
```

```
gunzip Rattus_norvegicus.Rnor_6.0.dna.toplevel.fa.gz
```

```
# Load Salmon software to be used
```

```
module load Salmon
```

```
salmon index -i salmon.rat.idx -t Rattus_norvegicus.Rnor_6.0.dna.toplevel.fa
```

```
#!/bin/bash
```

```
# Create a new directory to save the output
```

```
mkdir counts
```

```
# request resources from the cluster
```

```
#SBATCH -A jmts
```

```
#SBATCH -n 20
```

```
#SBATCH --mem-per-cpu=25000
```

```
#SBATCH -o logs/%x.%j.out
```

```
#SBATCH --mail-type=ALL
```

```
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Load Salmon software to be used
```

```
module load Salmon
```

```
# Create a loop to run salmon in all trimmed samples from fastq/trimmed/
```

```
for i in fastq/trimmed/*.gz
```

```
do
```

```
fname=$(basename $i)
```

```
echo "salmon quant on $fname"
```

```
salmon quant -i salmon.rat.idx/ -l A \
```

```
-r /nobackup/proj/jmts/fastq/trimmed/$fname \
```

```
-o /nobackup/proj/jmts/counts/$fname -p 10
```

```
echo finished
```

```
done
```

Appendix 2.M

R Script of Differential expression analysis.

```
---  
title: "Transgenerational Study RNA sequencing."  
author: "Laura Sabater"  
output:  
  pdf_document:  
    toc: true  
---  
  
## Load required libraries  
  
if(!require(knitr)){  
  install.packages("knitr")  
  library(knitr)  
}  
if(!require(dplyr)){  
  install.packages("dplyr")  
  library(dplyr)  
}  
if(!require(devtools)){  
  install.packages("devtools")  
  library(devtools)  
}  
if(!require(gplots)){  
  install.packages("gplots")  
  library(gplots)  
}  
if(!require(RColorBrewer)){  
  install.packages("RColorBrewer")  
  library(RColorBrewer)  
}  
if (!requireNamespace("BiocManager", quietly=TRUE)){  
  install.packages("BiocManager")  
  BiocManager::install("tidyverse")  
  library("tidyverse")  
}  
library("tidyverse")  
  
if (!requireNamespace("BiocManager", quietly=TRUE)){  
  install.packages("BiocManager")  
  BiocManager::install("tximport")  
  library("tximport")  
}  
library("tximport")  
  
if (!requireNamespace("BiocManager", quietly=TRUE)){
```

```

    install.packages("BiocManager")
    BiocManager::install("DESeq2")
    library("DESeq2")
}
library("DESeq2")

if (!requireNamespace("BiocManager", quietly=TRUE)){
  install.packages("BiocManager")
  BiocManager::install("remotes")
  library("remotes")
}
library("remotes")

if (!requireNamespace("annotables")){
  devtools::install_github("stephenturner/annotables")
  library("annotables")
}

if (!requireNamespace("BiocManager", quietly=TRUE)){
  install.packages("BiocManager")
  BiocManager::install("stephenturner/annotables")
  library("stephenturner/annotables")
}
library(annotables)

if(!require(VennDiagram)){
  install.packages("VennDiagram")
  library(VennDiagram)
}

if(!require(UpSetR)){
  install.packages("UpSetR")
  library(UpSetR)
}

if (!requireNamespace("BiocManager", quietly = TRUE))
  install.packages("BiocManager")

BiocManager::install("tximportData")
library(tximportData)

if (!requireNamespace("BiocManager", quietly = TRUE))
  install.packages("BiocManager")

BiocManager::install("GenomicFeatures")
library(GenomicFeatures)

```

First of all, I set up the conditions for the output, the root directory and eliminate everything that may be on the environment from previous sessions

```

rm(list =ls())

knitr::opts_chunk$set(echo = FALSE,
  fig.align = 'center',
  tidy = TRUE,
  warning = FALSE,
  message = FALSE)#,
  #cache = TRUE)
opts_knit$set(root.dir = "/Users/laura/Desktop/RNA_Novartis_repeated/")

## Create the rat gene map for annotation purposes

txdb <- makeTxDbFromGFF(file="Rattus_norvegicus.Rnor_6.0.99.gtf.gz")
txdb
saveDb(x=txdb, file = "Rattus_norvegicus.Rnor_6.0.99.gtf.TxDB")
columns(txdb)
k <- keys(txdb, keytype = "TXNAME")
tx2gene <- select(txdb, k, "GENEID", "TXNAME")
head(k)
tail(tx2gene)
dim(tx2gene)
length(k)
write.table(tx2gene, "tx2gene.gencode.Rattus_norvegicus.Rnor_6.0.99.gtf.txt", sep = "\t",
row.names = FALSE)

## Load Sample information

sample_table= read_tsv("sample_table_rep.txt")
colnames(sample_table)= c("ID", "treatment", "sample")

## Pull RNA counts from Salmon and Gene_map annotations

sample_table= mutate(sample_table, files=
paste0("/Users/laura/Desktop/RNA_Novartis_repeated/counts_rep/", ID, "/quant.sf") )

count_files= pull (sample_table, files)
names(count_files) = pull (sample_table, ID)

gene_map= read.table("tx2gene.gencode.Rattus_norvegicus.Rnor_6.0.99.gtf.txt",
header=TRUE)

quant_table= tximport(count_files, type= "salmon", tx2gene= gene_map, ignoreTxVersion=
TRUE, ignoreAfterBar = TRUE)

## Counts normalization

deseq_data= DESeqDataSetFromTximport(txi=quant_table, colData = sample_table, design=
~treatment)

```

```

deseq_data= estimateSizeFactors(deseq_data)

normalizationFactors(deseq_data)

deseq_data= estimateDispersions(deseq_data)

deseq_data= nbinomWaldTest(deseq_data)

rlog_data= rlogTransformation(deseq_data, blind= TRUE)

vst_data= varianceStabilizingTransformation(deseq_data, blind = TRUE)

## Plot a PCA

plotPCA (rlog_data, intgroup= c("treatment"))

## Plot a labelled PCA

plotPCA (rlog_data, intgroup= c("treatment")) + geom_label(aes(label =
sample_table$sample))

## Comparison Control vs F0F1F2 (no ancestral damage) (A)

result_table= results(deseq_data, contrast = c("treatment", "A", "Control_OO"))

result_table_sig= result_table [ result_table$padj< 0.05 & !is.na(result_table$padj), ]

result_df= as.data.frame(result_table)
result_df= rownames_to_column(result_df, var = "ensembl_geneid")
sorted_results= arrange(result_df, padj)

## Plot MA with p-value < 0.05

plotMA(result_table, alpha=0.05, main= "Group A vs Control")

results= left_join(sorted_results, rnor6, by=c("ensembl_geneid"="ensgene"))

final= dplyr::filter(results, abs(log2FoldChange)>1 & padj<0.05)

final_outlier=dplyr::filter(results, abs(log2FoldChange)>2 & abs(log2FoldChange)<15 &
padj<0.05 & padj>1e-10)

outliers= dplyr::filter(results, abs(log2FoldChange)>15 | padj<1e-10)

results_outlier= results[!(results$ensembl_geneid %in% outliers$ensembl_geneid), ]
A_Control_fc1_pv0.05= final

```


Plot Heatmap of significant hits: foldchange>1 & p-adjust<0.05

```
hmc col = colorRampPalette(brewer.pal(9,"GnBu"))(100)
conds= as.factor(sample_table$treatment)
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]

count_deseq= counts(deseq_data)
count_deseq_norm = counts(deseq_data, normalized= TRUE)

count_norm_sig= counts(deseq_data[final$ensembl_geneid, ], normalized= TRUE)
colnames(count_norm_sig)= sample_table$sample

heatmap(count_norm_sig, col=hmc col,cexRow = 0.5,cexCol = 0.5,ColSideColors =
cond_colours, Colv = NA, main = "Group A vs Control fc>1 & padj<0.05")
```

Comparison Control vs F0F1F2 (ancestral damage in fathers) (B)

```
result_table= results(deseq_data, contrast = c("treatment", "B", "Control_OO"))

result_table_sig= result_table [ result_table$padj< 0.05 & !is.na(result_table$padj== "NA"), ]

result_df= as.data.frame(result_table)
result_df= rownames_to_column(result_df, var = "ensembl_geneid")
sorted_results= arrange(result_df, padj)
```

Plot MA with p-value < 0.05

```
plotMA(result_table, alpha=0.05, main= "Group B vs Control")

results= left_join(sorted_results, rnor6, by=c("ensembl_geneid"="ensgene"))

final= dplyr::filter(results, abs(log2FoldChange)>1 & padj<0.05)

final_outlier=dplyr::filter(results, abs(log2FoldChange)>2 & abs(log2FoldChange)<15 &
padj<0.05 & padj>1e-10)

outliers= dplyr::filter(results, abs(log2FoldChange)>15 | padj<1e-10)

results_outlier= results[!(results$ensembl_geneid %in% outliers$ensembl_geneid), ]
B_Control_fc1_pv0.05= final
```

Plot Heatmap of significant hits: foldchange>1 & p-adjust<0.05

```
hmc col = colorRampPalette(brewer.pal(9,"GnBu"))(100)
conds= as.factor(sample_table$treatment)
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]

count_deseq= counts(deseq_data)
```

```

count_deseq_norm = counts(deseq_data, normalized= TRUE)

count_norm_sig= counts(deseq_data[final$ensembl_geneid, ], normalized= TRUE)
colnames(count_norm_sig)= sample_table$sample

heatmap(count_norm_sig, col=hmcol,cexRow = 0.5,cexCol = 0.5,ColSideColors =
cond_colours, Colv = NA, main = "Group B vs Control fc>1 & padj<0.05")

## Comparison Control vs F0F1F2 (ancestral damage in grandfathers) (C)

result_table= results(deseq_data, contrast = c("treatment", "C", "Control_OO"))

result_table_sig= result_table [ result_table$padj< 0.05 & !is.na(result_table$padj== "NA"), ]

result_df= as.data.frame(result_table)
result_df= rownames_to_column(result_df, var = "ensembl_geneid")
sorted_results= arrange(result_df, padj)

## Plot MA with p-value < 0.05

plotMA(result_table, alpha=0.05, main= "Group C vs Control")

results= left_join(sorted_results, rnor6, by=c("ensembl_geneid"="ensgene"))

final= dplyr::filter(results, abs(log2FoldChange)>1 & padj<0.05)

final_outlier=dplyr::filter(results, abs(log2FoldChange)>2 & abs(log2FoldChange)<15 &
padj<0.05 & padj>1e-10)

outliers= dplyr::filter(results, abs(log2FoldChange)>15 | padj<1e-10)

results_outlier= results[!(results$ensembl_geneid %in% outliers$ensembl_geneid), ]
C_Control_fc1_pv0.05= final
## Plot Heatmap of significant hits: foldchange>1 & p-adjust<0.05

hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)
conds= as.factor(sample_table$treatment)
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]

count_deseq= counts(deseq_data)
count_deseq_norm = counts(deseq_data, normalized= TRUE)

count_norm_sig= counts(deseq_data[final$ensembl_geneid, ], normalized= TRUE)
colnames(count_norm_sig)= sample_table$sample

heatmap(count_norm_sig, col=hmcol,cexRow = 0.5,cexCol = 0.5,ColSideColors =
cond_colours, Colv = NA, main = "Group C vs Control fc>1 & padj<0.05")

```

```
count_norm_sig= as.data.frame(count_norm_sig)
count_norm_sig2= rownames_to_column(count_norm_sig, var = "ensembl_geneid")
sig_C_Control= left_join(count_norm_sig2, final, by= "ensembl_geneid")
```

Comparison Control vs FOF1F2 (ancestral damage in both fathers and grandfathers) (D)

```
result_table= results(deseq_data, contrast = c("treatment", "D", "Control_OO"))

result_table_sig= result_table [ result_table$padj< 0.05 & !is.na(result_table$padj== "NA"), ]

result_df= as.data.frame(result_table)
result_df= rownames_to_column(result_df, var = "ensembl_geneid")
sorted_results= arrange(result_df, padj)
```

Plot MA with p-value < 0.05

```
plotMA(result_table, alpha=0.05, main= "Group D vs Control")

results= left_join(sorted_results, rnor6, by=c("ensembl_geneid"="ensgene"))

final= dplyr::filter(results, abs(log2FoldChange)>1 & padj<0.05)

final_outlier=dplyr::filter(results, abs(log2FoldChange)>2 & abs(log2FoldChange)<15 &
padj<0.05 & padj>1e-10)
```

```
outliers= dplyr::filter(results, abs(log2FoldChange)>15 | padj<1e-10)
```

```
results_outlier= results[!(results$ensembl_geneid %in% outliers$ensembl_geneid), ]
D_Control_fc1_pv0.05= final
```

Plot Heatmap of significant hits: foldchange>1 & p-adjust<0.05

```
hmcol = colorRampPalette(brewer.pal(9,"GnBu"))(100)
conds= as.factor(sample_table$treatment)
cond_colours = brewer.pal(length(unique(conds)),"Set1")[as.factor(conds)]
```

```
count_deseq= counts(deseq_data)
count_deseq_norm = counts(deseq_data, normalized= TRUE)
```

```
count_norm_sig= counts(deseq_data[final$ensembl_geneid, ], normalized= TRUE)
colnames(count_norm_sig)= sample_table$sample
```

```
heatmap(count_norm_sig, col=hmcol,cexRow = 0.5,cexCol = 0.5,ColSideColors =
cond_colours, Colv = NA, main = "Group D vs Control fc>1 & padj<0.05")
```

Comparison of significant hits in Control - A, Control - B and Control - C

```
myCol = brewer.pal(9, "Pastel2")
```

```

myCol= myCol[c(2,3,1)]
venn.diagram(
  x = list(Control_B= B_Control_fc1_pv0.05$ensembl_geneid, Control_C=
C_Control_fc1_pv0.05$ensembl_geneid, Control_A=
A_Control_fc1_pv0.05$ensembl_geneid),
  category.names = c("Control_B", "Control_C", "Control_A"),
  filename = 'VD_Cnt_B_Cnt_C_Cnt_A.png',
  output=TRUE,

  # Output features
  imagetype="png" ,
  height = 480 ,
  width = 480 ,
  resolution = 300,
  compression = "lzw",

  # Circles
  lwd = 2,
  lty = 'blank',
  fill = myCol,

  # Numbers
  cex = .4,
  fontface = "bold",
  fontfamily = "sans",

  # Set names
  cat.cex = 0.3,
  cat.fontface = "bold",
  cat.default.pos = "outer"
)

```

```

x = list(B_vs_Control= B_Control_fc1_pv0.05$ensembl_geneid, C_vs_Control=
C_Control_fc1_pv0.05$ensembl_geneid, A_vs_Control=
A_Control_fc1_pv0.05$ensembl_geneid)

upset(fromList(x), order.by = "freq")

```

```

myCol = brewer.pal(9, "Pastel2")
myCol= myCol[c(2,3,1)]
venn.diagram(
  x = list(Control_B= B_Control_fc1_pv0.05$ensembl_geneid, Control_C=
C_Control_fc1_pv0.05$ensembl_geneid, Control_A=
A_Control_fc1_pv0.05$ensembl_geneid, Control_D=
D_Control_fc1_pv0.05$ensembl_geneid),
  category.names = c("Control_B", "Control_C", "Control_A", "Control_D"),
  filename = 'VD_Cnt_B_Cnt_C_Cnt_A.png',

```

```

output=TRUE,

# Output features
imagetype="png",
height = 480,
width = 480,
resolution = 300,
compression = "lzw",

# Circles
lwd = 2,
lty = 'blank',
fill = myCol,

# Numbers
cex = .4,
fontface = "bold",
fontfamily = "sans",

# Set names
cat.cex = 0.3,
cat.fontface = "bold",
cat.default.pos = "outer"

)

x = list(B_vs_Control= B_Control_fc1_pv0.05$ensembl_geneid, C_vs_Control=
C_Control_fc1_pv0.05$ensembl_geneid, A_vs_Control=
A_Control_fc1_pv0.05$ensembl_geneid, Control_D=
D_Control_fc1_pv0.05$ensembl_geneid)

upset(fromList(x), order.by = "freq")

## Save results

write.table(A_Control_fc1_pv0.05, "result_tables/A_Control_fc1_pv0.05.txt", sep="\t")

write.table(B_Control_fc1_pv0.05, "result_tables/B_Control_fc1_pv0.05.txt", sep="\t")

write.table(C_Control_fc1_pv0.05, "result_tables/C_Control_fc1_pv0.05.txt", sep="\t")

write.table(D_Control_fc1_pv0.05, "result_tables/D_Control_fc1_pv0.05.txt", sep="\t")

```


Appendix 2.N

Script for WGBS Qc with FastQ

```
#!/bin/bash
```

```
# Create new directories to save the log output and the QC output
```

```
mkdir logs  
mkdir QC  
mkdir QC/raw
```

```
# request resources from rocket
```

```
#SBATCH -A jmts  
#SBATCH -n 2  
#SBATCH --mem-per-cpu=2000  
#SBATCH -o logs/%x.%j.out  
#SBATCH --mail-type=ALL  
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Run fastqc
```

```
module load FastQC
```

```
for i in fastq/raw/*.gz  
do  
echo "Running fastqc on $i"  
fastqc $i -o QC/raw  
done
```

Appendix 2.O

Script for WGBS alignment with Bismark.

```
#!/bin/bash
```

```
#SBATCH -o Gen_prep.txt  
#SBATCH -A jmts  
#SBATCH -n 1  
#SBATCH --time=12:00:00  
#SBATCH --mem-per-cpu=128000  
#SBATCH --mail-type=ALL  
#SBATCH --mail-user=laura.sabater@ncl.ac.uk
```

```
# Load Bismark module
```

```
module use ~/privatemodules  
module load Bismark
```

```
# Run Bismark
```

```
srunch bismark_genome_preparation --verbose
```

```
#!/bin/bash
```

```
#SBATCH -o Alignment_%a.txt  
#SBATCH -A jmts  
#SBATCH -n 1  
#SBATCH --cpus-per-task=5  
#SBATCH --time=48:00:00  
#SBATCH --mem-per-cpu=25600  
#SBATCH --mail-type=ALL  
#SBATCH --exclusive  
#SBATCH --mail-user=laura.sabater@ncl.ac.uk  
#SBATCH --array=0-11
```

```
# Files location
```

```
FILES=(/nobackup/nas299/Raw_Sequence_Files/Trimmed/*fq.gz)
```

```
# Load Bismark module
```

```
module use ~/privatemodules  
module load Bismark
```

```
# Run Bismark
```



```
srun bismark --genome /nobackup/nas299/Bismark/Gen_prep/ --output_dir
/nobackup/nas299/Bismark/Alignment/ --single_end ${FILES[$SLURM_ARRAY_TASK_ID]}
```

```
#!/bin/bash
```

```
#SBATCH -o Deduplication_%a.txt
#SBATCH -A jmts
#SBATCH -n 1
#SBATCH --cpus-per-task=1
#SBATCH --time=10:00:00
#SBATCH --mem-per-cpu=32000
#SBATCH --mail-type=ALL
#SBATCH --mail-user= laura.sabater@ncl.ac.uk
#SBATCH --array=0-11
```

```
# Files location
```

```
FILES=(/nobackup/nas299/Bismark/Alignment/*_bismark_bt2.bam)
```

```
# Load Bismark module
```

```
module use ~/privatemodules
module load Bismark
```

```
# Run Bismark
```

```
srun deduplicate_bismark -s --bam ${FILES[$SLURM_ARRAY_TASK_ID]}
```

```
#!/bin/bash
```

```
#SBATCH -o Methylation_Extractor_%a.txt
#SBATCH -A jmts
#SBATCH -n 1
#SBATCH --cpus-per-task=4
#SBATCH --time=10:00:00
#SBATCH --mem-per-cpu=32000
#SBATCH --mail-type=ALL
#SBATCH --mail-user= laura.sabater@ncl.ac.uk
#SBATCH --array=0-11
```

```
# Files location
```

```
FILES=(/nobackup/nas299/Bismark/Alignment/*_bismark_bt2.deduplicated.bam)
```

```
# Load Bismark module
```

```
module use ~/privatemodules
```

```
module load Bismark
```

```
# Run Bismark
```

```
srun bismark_methylation_extractor -s --output /nobackup/nas299/Bismark/Alignment --  
bedGraph ${FILES[$SLURM_ARRAY_TASK_ID]}
```

Appendix 2.P

R Script for Differential methylation analysis from rat sperm.

```
---
title: "WGBS analysis"
author: "Laura Sabater"
output: html_document
---

## Load required libraries

if(!require(tidyverse)){
  install.packages("tidyverse")
  library(tidyverse)
}
if (!requireNamespace("BiocManager", quietly = TRUE))
  install.packages("BiocManager")

BiocManager::install("bsseq")
library(bsseq)

if (!requireNamespace("BiocManager", quietly = TRUE))
  install.packages("BiocManager")

BiocManager::install("BiocParallel")
library(BiocParallel)

if (!requireNamespace("BiocManager", quietly = TRUE))
  install.packages("BiocManager")

BiocManager::install("HDF5Array")
library(HDF5Array)

## First of all, I set up the conditions for the output, the root directori and eliminate everything
that may be on the environment from previous sessions

rm(list =ls())

knitr::opts_chunk$set(echo = TRUE,
  fig.align = 'center',
  tidy = TRUE,
  warning = FALSE)
opts_knit$set(root.dir = "/Users/laura/Desktop/WGBS/Sperm/")

## Load sequencing data

BiocParallel::register(BiocParallel::MulticoreParam(workers = 10, progressbar = TRUE))
```

```

read_coverage_files = function(path, key) {

  namelist = list.files(path = path, pattern = "bismark.cov.gz")
  files = tibble(Sample = str_split_fixed(namelist, "-", n = 2)[, 1],
                Filepath = paste(path, namelist, sep = "/"))
  groupkey = read_csv(paste(path, key, sep = "/"),
                    col_types = cols(
                      Sample = col_character(),
                      Group = col_character()))
  index = left_join(files, groupkey, by = "Sample")
}

read_coverage_files("Coverage_Files", "groupkey.csv")

sampull = function(x) {
  index %>% filter(Group == x) %>% pull(Sample)
}

BSseq = read.bismark(index$Filepath,
                    colData = DataFrame(row.names = index$Sample),
                    strandCollapse = FALSE)

seqlevels(BSseq, pruning.mode = "coarse") <- c(1:20, "X", "Y")

BSseq = BSmooth(BSseq, ns = 70, h = 1000)

x = 1
n = 2

BSseq_cov = getCoverage(BSseq)

keep_loci = which(rowSums(BSseq_cov[, sampull("A")] >= x)
                 >= n
                 &
                 rowSums(BSseq_cov[, sampull("B")] >= x)
                 >= n
                 &
                 rowSums(BSseq_cov[, sampull("C")] >= x)
                 >= n
                 &
                 rowSums(BSseq_cov[, sampull("D")] >= x)
                 >= n
                 )

BSseq = BSseq[keep_loci,]

saveRDS(BSseq, "BSseq_AA568.rds")

```

```
saveHDF5SummarizedExperiment(BSseq, "BSseq_HDF5_AA568")
```

Statistical comparison

```
DMR_extract = function(grp1, grp2) {  
  BSseq_tstat = BSmooth.tstat(BSseq,  
    group1 = sampull(grp1),  
    group2 = sampull(grp2),  
    estimate.var = "same",  
    local.correct = TRUE,  
    verbose = TRUE)
```

##Find DMRs

```
BSseq_dmr = dmrFinder(BSseq_tstat, qcutoff = c(0.0025, 0.9975))
```

##filter out DMRs that do not have at least 3 CpGs in them and at least a mean difference (across the DMR) in methylation between FP and SR of at least 0.3

```
BSseq_final = subset(BSseq_dmr, n >= 3 & abs(meanDiff) >= 0.3)
```

```
write_tsv(BSseq_final, paste("DMR_BSmooth", grp1, "vs", grp2, "AA568.txt", sep = "_"))  
}
```

```
DMR_extract(grp1 = "A", grp2 = "D")
```

```
DMR_extract(grp1 = "A", grp2 = "B")
```

```
DMR_extract(grp1 = "B", grp2 = "C")
```

```
DMR_extract(grp1 = "C", grp2 = "D")
```

```
DMR_extract(grp1 = "A", grp2 = "C")
```

```
DMR_extract(grp1 = "B", grp2 = "D")
```

Appendix 2.Q

R Script for Proteome analysis from rat sperm.

```
---  
title: "Sperm proteomics"  
author: "Laura Sabater"  
output: pdf_document  
---  
  
## Load required libraries  
  
if(!require(ggplot2)){  
  install.packages("ggplot2")  
  library(ggplot2)  
}  
if(!require(limma)){  
  install.packages("limma")  
  library(limma)  
}  
if(!require(corrplot)){  
  install.packages("corrplot")  
  library(corrplot)  
}  
if(!require(data.table)){  
  install.packages("data.table")  
  library(data.table)  
}  
if(!require(gplots)){  
  install.packages("gplots")  
  library(gplots)  
}  
if(!require(plotrix)){  
  install.packages("plotrix")  
  library(plotrix)  
}  
if(!require(dplyr)){  
  install.packages("dplyr")  
  library(dplyr)  
}  
if(!require(knitr)){  
  install.packages("knitr")  
  library(knitr)  
}  
if(!require(RColorBrewer)){  
  install.packages("RColorBrewer")  
  library(RColorBrewer)  
}
```

```
## First of all, I set up the conditions for the output, the root directori and eliminate everything that may be on the environment from previous sessions
```

```
rm(list =ls())
```

```
knitr::opts_chunk$set(echo = TRUE,  
  fig.align = 'center',  
  tidy = TRUE,  
  warning = FALSE)  
opts_knit$set(root.dir = "/Users/laura/Desktop/proteomics/Sperm/")
```

```
## Load proteome data
```

```
df.prot = read.table("proteinGroups.txt",header=T,sep="\t",stringsAsFactors = F,  
  comment.char = "",quote = "")
```

```
## Filter MaxQuant data
```

```
df.prot = df.prot[!df.prot$Reverse=="+",]  
df.prot = df.prot[!df.prot$Potential.contaminant=="+",]  
df.prot = df.prot[!df.prot$Only.identified.by.site=="+",]  
df.prot = df.prot[!df.prot$Unique.peptides<=1,]
```

```
df.prot.all = df.prot[,163:182]  
rownames(df.prot.all) = df.prot$Fasta.headers  
df.prot.all[df.prot.all==0] <- NA  
protein.matrix_all = log2(as.matrix(df.prot.all))  
log2all.df <- as.data.frame(protein.matrix_all)
```

```
## Plot QC plots
```

```
## Boxplot
```

```
boxplot(protein.matrix_all, las=2, cex.axis=.3)
```

```
## Pearson correlation plot
```

```
m_all=cor(protein.matrix_all, use="pairwise.complete.obs")  
corrplot(m_all, type="upper", method="color", cl.lim=c(0.7,1), is.corr=FALSE, tl.col="black",  
  tl.cex=0.5, addCoef.col = "white", number.cex=0.5)
```

```
## PCA plot
```

```
experimental_design = read.table("Sample_info.txt", stringsAsFactors = FALSE,  
  header = TRUE, sep = "\t")  
conds = as.factor(experimental_design$Condition)  
cond_colours = brewer.pal(length(unique(conds)), "Set1")[as.factor(conds)]  
names(cond_colours) = conds
```

```
pca <- princomp(na.omit(protein.matrix_all))
plot(pca$loadings, col=cond_colours, pch = 19, cex = 2, main = "PCA")
legend("bottomleft", levels(conds), fill = cond_colours[levels(conds)], cex = 0.6)
```

Statistical comparisons

Group A (FOF1, no liver damage) versus Group B (FOF1, liver damage F1)

```
df.prot.AB = df.prot[,c(163,164,165,181,182,176,177,178,179,180)]
rownames(df.prot.AB) = df.prot$Fasta.headers
df.prot.AB[df.prot.AB==0] <- NA
protein.matrix_AB = log2(as.matrix(df.prot.AB))
log2AB.df <- as.data.frame(protein.matrix_AB)
```

Count number of NaNs for each protein

```
log2AB.df$na_count_groupA = apply(log2AB.df,1,function(x) sum(is.na(x[6:10])))
log2AB.df$na_count_groupB = apply(log2AB.df,1,function(x) sum(is.na(x[1:5])))
```

Filter protein table. DEqMS require minimum two values for each group

```
log2AB.df.filter = log2AB.df[log2AB.df$na_count_groupA<3 &
log2AB.df$na_count_groupB<3,1:10]
```

Plot QC plots

Boxplot

```
boxplot(log2AB.df.filter, las=2, cex.axis=.5)
```

Pearson correlation plot

```
m_AB=cor(log2AB.df.filter, use="pairwise.complete.obs")
corrplot(m_AB, type="upper", method="color", cl.lim=c(0.7,1), is.corr=FALSE, tl.col="black",
tl.cex=0.6, addCoef.col = "white", number.cex=0.55)
```

Set experimental design

```
class = as.factor(c(rep("groupB",5),rep("groupA",5)))
design = model.matrix(~0+class) # fitting without intercept
```

Differential analysis with Limma

```
fit1AB = lmFit(log2AB.df.filter,design = design)
cont <- makeContrasts(classgroupB-classgroupA, levels = design)
fit2AB = contrasts.fit(fit1AB,contrasts = cont)
```



```

fit3AB <- eBayes(fit2AB)

finalresult_AB <- topTable(fit3AB, adjust.method = "BH", number = Inf)

sig=finalresult_AB[finalresult_AB$P.Value<threshold, ]

write.table(finalresult_AB,"BAresult.txt",sep = "\t",
            row.names = F,quote=F)

setDT(finalresult_AB, keep.rownames = TRUE)
names(finalresult_AB)[1]<-"Fasta.headers"
merged_BA <- merge(finalresult_BA,df.prot,by="Fasta.headers")

write.table(merged_AB,"merged.results.AB.txt",sep = "\t",
            row.names = F,quote=F)

## Data visualization

hmc col = colorRampPalette(c("blue", "white", "orange"))(64)

finalresultABheatmap=finalresult_AB[finalresult_AB$P.Value<threshold, ]

setDT(finalresultABheatmap, keep.rownames = TRUE)
names(finalresultABheatmap)[1]<-"Fasta.headers"
setDT(log2all.df, keep.rownames = TRUE)
names(log2all.df)[1]<-"Fasta.headers"
merged_heatmapAB <- merge(finalresultABheatmap,log2all.df,by="Fasta.headers")
colnames(merged_heatmapAB)
heatmapdataAB <-merged_heatmapAB[,c(8,9,10,26,27,21,22,23,24,25)]
colnames(heatmapdataAB)= c(rep("groupB", 5), rep("groupA", 5))
heatmapdataAB <- as.matrix(heatmapdataAB)

heatmap(heatmapdataAB, scale="row", Colv = NA, col = hmc col)

heatmap(heatmapdataAB, scale="row", col =hmc col)

p_threshold= 0.05
lfc_threshold=0.5

finalresult_AB= as.data.frame(finalresult_AB)
rownames(finalresult_AB)= finalresult_AB$Fasta.headers

sig_AB= rownames(finalresult_AB)[(finalresult_AB$logFC) > 0.5 & (finalresult_AB$P.Value<
p_threshold) & !is.na(finalresult_AB$P.Value), ]
sig_AB2= rownames(finalresult_AB)[(finalresult_AB$logFC) < -0.5 & (finalresult_AB$P.Value<
p_threshold) & !is.na(finalresult_AB$P.Value), ]

```

```

plot(finalresult_AB$logFC,-log(finalresult_AB$P.Value,10),ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Volcano Plot"), pch=19,cex=0.4)
if (length(sig_AB)>0){
  text      (finalresult_AB[sig_AB,]$logFC,-log(finalresult_AB[sig_AB,]$P.Value,10),labels
=NULL,pos=3,cex=0.4)
  points(finalresult_AB[sig_AB2,"logFC"],-log(finalresult_AB[sig_AB2,"P.Value"],10),pch=21,
cex=1.5, col="black", bg= "#0000FF") &
  points(finalresult_AB[sig_AB,"logFC"],-log(finalresult_AB[sig_AB,"P.Value"],10),pch=21,
cex=1.5, col="black", bg= "#FF9900")
}
abline(h=-log10(p_threshold),lty=3)
abline(v=-lfc_threshold,lty=3)
abline(v=lfc_threshold,lty=3)

```

Group A (FOF1, no liver damage) versus Group D (FOF1, liver damage F0 and F1)

```

df.prot.AD = df.prot[,c(166,167,168,169,170,176,177,178,179,180)]
rownames(df.prot.AD) = df.prot$Fasta.headers
df.prot.AD[df.prot.AD==0] <- NA
protein.matrix_AD = log2(as.matrix(df.prot.AD))
log2AD.df <- as.data.frame(protein.matrix_AD)

```

Count number of NaNs for each protein

```

log2AD.df$na_count_groupA = apply(log2AD.df,1,function(x) sum(is.na(x[6:10])))
log2AD.df$na_count_groupD = apply(log2AD.df,1,function(x) sum(is.na(x[1:5])))

```

Filter protein table. DEqMS require minimum two values for each group

```

log2AD.df.filter      =      log2AD.df[log2AD.df$na_count_groupA<3      &
log2AD.df$na_count_groupD<3,1:10]

```

Plot QC plots

Boxplot

```

boxplot(log2AD.df.filter, las=2, cex.axis=.5)

```

Pearson correlation plot

```

m_AD=cor(log2AD.df.filter, use="pairwise.complete.obs")
corrplot(m_AD, type="upper", method="color", cl.lim=c(0.7,1), is.corr=FALSE, tl.col="black",
tl.cex=0.6, addCoef.col = "white", number.cex=0.55)

```

Set experimental design

```

class = as.factor(c(rep("groupD",5), rep("groupA",5)))
design = model.matrix(~0+class) # fitting without intercept

```

Differential analysis with Limma

```
fit1AD = lmFit(log2AD.df.filter,design = design)
cont <- makeContrasts(classgroupD-classgroupA, levels = design)
fit2AD = contrasts.fit(fit1AD,contrasts = cont)
fit3AD <- eBayes(fit2AD)

finalresult_AD <- topTable(fit3AD, adjust.method = "BH", number = Inf)

write.table(finalresult_AD,"DAresult.txt",sep = "\t",
            row.names = F,quote=F)

setDT(finalresult_AD, keep.rownames = TRUE)
names(finalresult_AD)[1]<-"Fasta.headers"
merged_AD <- merge(finalresult_AD,df.prot,by="Fasta.headers")

write.table(merged_AD,"merged.results.DA.txt",sep = "\t",
            row.names = F,quote=F)
```

Data visualization

```
finalresultADheatmap=finalresult_AD[finalresult_AD$P.Value<threshold, ]
finalresultADheatmap <- topTable(fit3AD, adjust.method = "BH", number = 112)
setDT(finalresultADheatmap, keep.rownames = TRUE)
names(finalresultADheatmap)[1]<-"Fasta.headers"
setDT(log2all.df, keep.rownames = TRUE)
names(log2all.df)[1]<-"Fasta.headers"
merged_heatmapAD <- merge(finalresultADheatmap,log2all.df,by="Fasta.headers")
heatmapdataAD <-merged_heatmapAD[,c(11,12,13,14,15,21,22,23,24,25)]
colnames(heatmapdataAD)= c(rep("groupD", 5), rep("groupA", 5))
heatmapdataAD <- as.matrix(heatmapdataAD)

heatmap(heatmapdataAD, scale="row", Colv = NA, col = hmccl)

heatmap(heatmapdataAD, scale="row", col = hmccl)
finalresult_AD= as.data.frame(finalresult_AD)
rownames(finalresult_AD)= finalresult_AD$Fasta.headers

sig_AD= rownames(finalresult_AD[(finalresult_AD$logFC) > 0.5 & (finalresult_AD$P.Value<
p_threshold) & !is.na(finalresult_AD$P.Value), ])
sig_AD2= rownames(finalresult_AD[(finalresult_AD$logFC) < -0.5 & (finalresult_AD$P.Value<
p_threshold) & !is.na(finalresult_AD$P.Value), ])

plot(finalresult_AD$logFC,-log(finalresult_AD$P.Value,10),ylab="-log10(Adjusted
P)",xlab="Log2 Foldchange",main=paste("Volcano Plot"), pch=19,cex=0.4)
if (length(sig_AD)>0){
  text      (finalresult_AD[sig_AD,]$logFC,-log(finalresult_AD[sig_AD,]$P.Value,10),labels
=NULL,pos=3,cex=0.4)
```

```

  points(finalresult_AD[sig_AD2,"logFC"],-log(finalresult_AD[sig_AD2,"P.Value"],10),pch=21,
cex=1.5, col="black", bg= "#0000FF") &
  points(finalresult_AD[sig_AD,"logFC"],-log(finalresult_AD[sig_AD,"P.Value"],10),pch=21,
cex=1.5, col="black", bg= "#FF9900")
}
abline(h=-log10(p_threshold),lty=3)
abline(v=-lfc_threshold,lty=3)
abline(v=lfc_threshold,lty=3)

```

Group A (FOF1, no liver damage) versus Group C (FOF1, liver damage in F0)

```

df.prot.AC = df.prot[,c(171,172,173,174,175,176,177,178,179,180)]
rownames(df.prot.AC) = df.prot$Fasta.headers
df.prot.AC[df.prot.AC==0] <- NA
protein.matrix_AC = log2(as.matrix(df.prot.AC))
log2AC.df <- as.data.frame(protein.matrix_AC)

```

Count number of NaNs for each protein

```

log2AC.df$na_count_groupA = apply(log2AC.df,1,function(x) sum(is.na(x[6:10])))
log2AC.df$na_count_groupC = apply(log2AC.df,1,function(x) sum(is.na(x[1:5])))

```

Filter protein table. DEqMS require minimum two values for each group

```

log2AC.df.filter = log2AC.df[log2AC.df$na_count_groupA<3 &
log2AC.df$na_count_groupC<3,1:10]

```

Plot QC plots
Boxplot

```

boxplot(log2AC.df.filter, las=2, cex.axis=.5)

```

Pearson correlation plot

```

m_AC=cor(log2AC.df.filter, use="pairwise.complete.obs")
corrplot(m_AC, type="upper", method="color", cl.lim=c(0.7,1), is.corr=FALSE, tl.col="black",
tl.cex=0.6, addCoef.col = "white", number.cex=0.55)

```

Set experimental design

```

class = as.factor(c(rep("groupC",5), rep("groupA",5)))
design = model.matrix(~0+class) # fitting without intercept

```

Differential analysis with Limma

```

fit1AC = lmFit(log2AC.df.filter,design = design)
cont <- makeContrasts(classgroupC-classgroupA, levels = design)
fit2AC = contrasts.fit(fit1AC,contrasts = cont)

```

```
fit3AC <- eBayes(fit2AC)
```

```
finalresult_AC <- topTable(fit3AC, adjust.method = "BH", number = Inf)
```

```
write.table(finalresult_AC,"CAresult.txt",sep = "\t",  
            row.names = F,quote=F)
```

```
setDT(finalresult_AC, keep.rownames = TRUE)  
names(finalresult_AC)[1]<-"Fasta.headers"  
merged_AC <- merge(finalresult_AC,df.prot,by="Fasta.headers")
```

```
write.table(merged_AC,"merged.results.CA.txt",sep = "\t",  
            row.names = F,quote=F)
```

Data visualization

```
finalresultheatmapAC<- finalresult_AC[finalresult_AC$P.Value<threshold, ]
```

```
setDT(finalresultheatmapAC, keep.rownames = TRUE)  
names(finalresultheatmapAC)[1]<-"Fasta.headers"  
setDT(log2all.df, keep.rownames = TRUE)  
names(log2all.df)[1]<-"Fasta.headers"  
merged_heatmapAC <- merge(finalresultheatmapAC,log2all.df,by="Fasta.headers")  
heatmapdataAC <-merged_heatmapAC[,c(20,16,17,18,19,21,22,23,24,25)]  
colnames(heatmapdataAC)  
colnames(heatmapdataAC)= c(rep("groupC", 5), rep("groupA", 5))  
heatmapdataAC <- as.matrix(heatmapdataAC)
```

```
heatmap(heatmapdataAC, scale="row", Colv = NA, col = hmccl)
```

```
finalresult_AC= as.data.frame(finalresult_AC)  
rownames(finalresult_AC)= finalresult_AC$Fasta.headers
```

```
sig_AC= rownames(finalresult_AC[(finalresult_AC$logFC) > 0.5 & (finalresult_AC$P.Value<  
p_threshold) & !is.na(finalresult_AC$P.Value), ])  
sig_AC2= rownames(finalresult_AC[(finalresult_AC$logFC) < -0.5 & (finalresult_AC$P.Value<  
p_threshold) & !is.na(finalresult_AC$P.Value), ])
```

```
plot(finalresult_AC$logFC,-log(finalresult_AC$P.Value,10),ylab="-log10(Adjusted  
P)",xlab="Log2 Foldchange",main=paste("Volcano Plot"), pch=19,cex=0.4)  
if (length(sig_AC)>0){  
  text      (finalresult_AC[sig_AC,]$logFC,-log(finalresult_AC[sig_AC,]$P.Value,10),labels  
=NULL,pos=3,cex=0.4)  
  points(finalresult_AC[sig_AC2,"logFC"],-log(finalresult_AC[sig_AC2,"P.Value"],10),pch=21,  
cex=1.5, col="black", bg= "#0000FF") &  
  points(finalresult_AC[sig_AC,"logFC"],-log(finalresult_AC[sig_AC,"P.Value"],10),pch=21,  
cex=1.5, col="black", bg= "#FF9900")  
}
```

```
abline(h=-log10(p_threshold),lty=3)
abline(v=-lfc_threshold,lty=3)
abline(v=lfc_threshold,lty=3)
```

Appendix 3

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Appendix 3.A

miRNA differently expressed in early activation of human HSCs (day 0 to 3)

miRNA downregulated in early activation:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
hsa-mir-4521	-3.093665956	1.10842222	0.00525368	0.02777805
hsa-mir-98-5p	-1.712408307	0.66729761	0.01028243	0.04683088
hsa-mir-501-3p	-1.581409525	0.61738464	0.01042316	0.04700639
hsa-mir-511-5p	-2.493714167	0.89861543	0.00551911	0.02884988
hsa-mir-34a-5p	-2.296631888	0.7325486	0.00171781	0.01000241
hsa-mir-132-3p	-2.77065521	0.76329665	0.00028358	0.0024157
hsa-mir-151a-5p	-2.491799295	0.9617711	0.00957408	0.04448561
hsa-mir-148b-3p	-1.383914077	0.54178156	0.01063782	0.04750869
hsa-mir-532-5p	-1.581818503	0.42430286	0.00019297	0.00170708
hsa-mir-222-3p	-2.214546926	0.53485399	3.47E-05	0.00038886
hsa-mir-221-3p	-1.508757406	0.53221723	0.00458468	0.02452272
hsa-mir-146b-5p	-2.291837685	0.65557037	0.00047239	0.00356906
hsa-let-7i-5p	-1.680077045	0.38470528	1.26E-05	0.00018093
hsa-mir-24-3p	-1.118726348	0.339062	0.00096866	0.00645774
hsa-mir-22-3p	-2.441742349	0.48892328	5.91E-07	1.13E-05
hsa-mir-146a-5p	-2.806629844	0.58278187	1.47E-06	2.70E-05
hsa-mir-155-5p	-3.338306564	0.4251777	4.11E-15	6.30E-13
hsa-mir-21-5p	-3.270012077	0.56503736	7.15E-09	2.19E-07
hsa-let-7g-5p	-1.145965761	0.30629287	0.00018299	0.00165054
hsa-let-7f-5p	-1.31837284	0.44570038	0.00309662	0.01695769

miRNA upregulated in early activation:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
hsa-mir-27a-5p	4.927912773	1.9402573	0.01109081	0.04905553
hsa-mir-3938	4.580566318	1.7619624	0.00933064	0.04432434
hsa-mir-5585-3p	4.943326329	1.81330514	0.00640795	0.03239185
hsa-mir-1273g-3p	2.921192717	0.68967871	2.28E-05	0.00028607
hsa-mir-466	5.670071825	1.7465658	0.0011687	0.00746667
hsa-mir-3916	5.13863224	1.98851907	0.00976192	0.04490485
hsa-mir-1972	5.052428399	1.67827265	0.00260824	0.01445529
hsa-mir-433-3p	4.894555857	1.88316804	0.00934665	0.04432434
hsa-mir-6516-3p	5.259789355	1.66248781	0.0015572	0.00930278
hsa-mir-1285-3p	4.618994712	1.5261208	0.00247301	0.01387298
hsa-mir-1290	4.745242374	1.74408883	0.00651326	0.03256628
hsa-mir-5708	4.881029375	1.57129356	0.00189395	0.01089024
hsa-mir-3135b	4.802068811	1.4320667	0.0007987	0.00556672
hsa-mir-3135a	5.956721432	1.54582873	0.00011648	0.00107163
hsa-mir-4512	5.890172877	1.64089444	0.00033117	0.00267261
hsa-mir-6073	5.651257456	1.56814753	0.00031362	0.00257619

hsa-mir-134-5p	3.946789236	1.50197269	0.00859549	0.04162029
hsa-mir-1244	4.637643221	1.69109818	0.00609947	0.03152535
hsa-mir-4485-5p	6.26026085	1.81728182	0.00057138	0.00423927
hsa-mir-1254	3.865340287	1.08759483	0.00037938	0.00300889
hsa-mir-6131	3.115724024	1.02750734	0.00242687	0.01378224
hsa-mir-663b	5.622493849	1.44316614	9.78E-05	0.00093741
hsa-mir-5684	6.427333807	1.55132326	3.43E-05	0.00038886
hsa-mir-1268a	3.456401133	1.02722442	0.000766	0.00542093
hsa-mir-4516	5.627277501	1.44323689	9.66E-05	0.00093741
hsa-mir-3665	4.242007579	1.21358478	0.00047329	0.00356906
hsa-mir-4466	6.595338744	1.64486523	6.08E-05	0.00063572
hsa-mir-620	4.364035891	1.30489104	0.0008247	0.00566214
hsa-mir-3196	6.728749894	1.58324694	2.14E-05	0.00028099
hsa-mir-1273h-5p	3.869696321	1.18461195	0.00108833	0.00705118
hsa-mir-194-5p	2.096201418	0.80803176	0.00948095	0.04448561
hsa-mir-503-5p	3.3685338	1.07217238	0.00167922	0.00990309
hsa-mir-3656	3.653776641	1.1302531	0.00122623	0.00772696
hsa-mir-3609	4.296809631	1.25632415	0.00062588	0.00456992
hsa-mir-1273c	4.61190671	1.15364337	6.40E-05	0.00065385
hsa-mir-4459	3.898721265	0.89661574	1.37E-05	0.00019128
hsa-mir-3651	3.531860415	0.91322927	0.00010998	0.0010325
hsa-mir-1324	2.622034726	0.79592968	0.00098666	0.00648374
hsa-mir-3159	4.663938815	1.09704913	2.12E-05	0.00028099
hsa-mir-8065	4.830925554	1.174602	3.91E-05	0.00041813
hsa-mir-3687	5.779282903	1.20915367	1.76E-06	3.11E-05
hsa-mir-3182	2.523345367	0.79210733	0.00144449	0.00885954
hsa-mir-3195	2.980999403	1.11707862	0.00761755	0.03767822
hsa-mir-3648	4.915717868	0.93291271	1.37E-07	3.00E-06
hsa-mir-5095	4.474421847	0.96064893	3.20E-06	5.07E-05
hsa-mir-663a	4.147654839	1.00321237	3.56E-05	0.00038982
hsa-mir-1273d	4.937200371	0.85938643	9.19E-09	2.64E-07
hsa-mir-4508	3.066511607	0.95661186	0.00134783	0.00837839
hsa-mir-3929	4.363879095	0.75077366	6.15E-09	2.02E-07
hsa-mir-1273f	4.561024318	0.96184835	2.12E-06	3.48E-05
hsa-mir-1248	5.844167904	1.22654183	1.89E-06	3.22E-05
hsa-mir-566	4.968170163	0.91999426	6.66E-08	1.80E-06
hsa-mir-139-3p	3.796008397	0.89666258	2.30E-05	0.00028607
hsa-mir-7851-3p	5.534751787	1.03940847	1.01E-07	2.45E-06
hsa-mir-874-3p	2.904417211	0.69983333	3.32E-05	0.00038886
hsa-mir-4472	5.907184194	0.92020216	1.37E-10	6.29E-09
hsa-mir-214-3p	2.816678459	0.88824739	0.00151888	0.00919322
hsa-mir-7704	1.791531369	0.62740765	0.00429758	0.02325752
hsa-mir-370-3p	4.245796718	1.07999957	8.45E-05	0.0008449
hsa-mir-486-5p	4.283353015	0.66092582	9.12E-11	4.66E-09
hsa-mir-1273e	4.609534244	0.68933721	2.28E-11	1.75E-09
hsa-mir-3908	5.587417263	1.04395552	8.69E-08	2.22E-06
hsa-mir-4488	7.173070799	1.0315383	3.56E-12	3.27E-10
hsa-mir-127-3p	2.962777458	1.08440502	0.00629189	0.03215856

hsa-mir-8485	3.752937319	0.74304056	4.40E-07	8.80E-06
hsa-mir-4792	3.643587548	1.07410788	0.00069334	0.00498339
hsa-mir-619-5p	5.689610026	0.90884548	3.84E-10	1.61E-08
hsa-mir-4419a	3.139784959	0.68898735	5.19E-06	7.95E-05
hsa-mir-1285-5p	5.213091064	0.8922125	5.13E-09	1.82E-07
hsa-mir-4485-3p	6.390877291	1.07848854	3.11E-09	1.19E-07
hsa-mir-5588-5p	5.962099902	0.91678455	7.86E-11	4.52E-09
hsa-mir-6087	3.333967067	0.92053131	0.00029258	0.002447
hsa-mir-8086	5.905112165	0.90650923	7.31E-11	4.52E-09
hsa-mir-1303	2.14617108	0.64512565	0.00087866	0.00594384
hsa-mir-5096	5.253503137	0.71995622	2.94E-13	3.38E-11
hsa-mir-3960	6.43711702	0.77886407	1.40E-16	3.22E-14
hsa-mir-7110-3p	7.391385067	0.72973737	4.12E-24	1.89E-21
hsa-mir-1273g-5p	5.039410363	1.89525308	0.00783813	0.03835679
hsa-mir-139-5p	3.260452817	0.87755008	0.00020288	0.00176084
hsa-mir-1273a	3.929675481	0.73932009	1.07E-07	2.45E-06
hsa-mir-7641	4.0301839	0.90364609	8.20E-06	0.00012167
hsa-mir-1246	2.556101169	0.61554299	3.29E-05	0.00038886
hsa-mir-4791	3.54812285	0.67617777	1.54E-07	3.23E-06
hsa-mir-320a	2.411148014	0.68363384	0.00042036	0.00327741

Appendix 3.B

miRNA differently expressed in fully activated human HSCs (day 0 to 10)

miRNA downregulated in fully activated HSCs:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
hsa-mir-340-3p	-3.601571086	1.31776359	0.00627425	0.02475164
hsa-mir-133a-3p	-3.441861055	1.21704088	0.00468315	0.01936301
hsa-mir-340-5p	-2.619855145	1.02135308	0.01031512	0.03791027
hsa-mir-4521	-3.049608677	1.14911491	0.0079573	0.03001439
hsa-mir-21-3p	-2.155375494	0.74605405	0.00386427	0.01661638
hsa-mir-98-5p	-2.009084435	0.68512191	0.00336301	0.01475607
hsa-mir-378d	-2.449568459	0.87348635	0.00504169	0.02045213
hsa-mir-132-5p	-3.65147776	1.03739749	0.0004318	0.00241135
hsa-mir-378a-5p	-4.271339771	1.19553896	0.00035328	0.00201273
hsa-mir-34a-5p	-3.760660708	0.76602358	9.14E-07	1.19E-05
hsa-mir-1249-3p	-2.745379447	0.95411971	0.00400973	0.01707113
hsa-mir-132-3p	-3.260912844	0.80067194	4.65E-05	0.00036329
hsa-mir-128-3p	-1.816963439	0.65171054	0.00530359	0.02131351
hsa-mir-148b-3p	-2.61547283	0.56985875	4.44E-06	4.34E-05
hsa-mir-100-5p	-5.165626523	0.95317187	5.98E-08	1.19E-06
hsa-mir-27a-3p	-1.257499156	0.50601038	0.01295059	0.04559109
hsa-mir-99b-5p	-1.759420475	0.59302363	0.00300854	0.01371143
hsa-mir-532-5p	-1.228350116	0.45160567	0.00652895	0.02525348
hsa-mir-23a-3p	-1.736766828	0.52158204	0.00086907	0.00461356
hsa-mir-222-3p	-2.754278638	0.57106608	1.41E-06	1.52E-05
hsa-mir-221-3p	-2.474904608	0.57049053	1.44E-05	0.00012606
hsa-mir-146b-5p	-2.776877912	0.70505605	8.20E-05	0.00056861
hsa-mir-191-5p	-1.105065215	0.43500972	0.01107501	0.0403581
hsa-let-7f-5p	-1.285417013	0.48002429	0.00741038	0.02819879
hsa-mir-24-3p	-1.969307213	0.36375205	6.17E-08	1.19E-06
hsa-mir-22-3p	-2.924146451	0.5257828	2.67E-08	6.05E-07
hsa-mir-146a-5p	-3.357794276	0.6273702	8.69E-08	1.49E-06
hsa-mir-155-5p	-3.056418175	0.45668747	2.19E-11	1.05E-09
hsa-mir-378a-3p	-2.618769456	0.67416496	0.00010256	0.00067845
hsa-mir-21-5p	-4.648869207	0.60865198	2.21E-14	3.16E-12
hsa-let-7g-5p	-1.017066526	0.33025369	0.00207242	0.01024302
hsa-let-7i-5p	-1.793266087	0.41516224	1.56E-05	0.00013189

miRNAs upregulated in fully activated HSCs:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
hsa-mir-451a	6.629754956	2.71178354	0.01449345	0.04985746
hsa-mir-1273g-5p	4.991088809	1.92495256	0.00951878	0.03528513
hsa-mir-3916	6.318695226	2.15943794	0.00343259	0.01490923
hsa-mir-1972	5.482435832	1.72017417	0.00143687	0.00726888

hsa-mir-3149	3.874221701	1.56052311	0.01304117	0.04559109
hsa-mir-3658	5.098676505	1.71132585	0.0028884	0.01335496
hsa-mir-3133	4.471722135	1.80830453	0.01340287	0.0464777
hsa-mir-6516-3p	4.885476	1.62319929	0.00261435	0.0124908
hsa-mir-1285-3p	4.358047812	1.42338505	0.00220048	0.01075234
hsa-mir-1290	4.653685435	1.71248571	0.00657765	0.02525348
hsa-mir-5708	4.314091766	1.45570237	0.00304082	0.01371143
hsa-mir-1302	5.444568539	1.94138785	0.0050399	0.02045213
hsa-mir-23a-5p	3.219848336	1.17295637	0.00604978	0.0240871
hsa-mir-150-3p	4.979144741	1.37344253	0.00028862	0.00172372
hsa-mir-4532	5.658028751	1.74779296	0.00120691	0.00617823
hsa-mir-3135b	3.441374751	1.21230625	0.00452976	0.01891065
hsa-mir-3135a	5.944541996	1.51775312	8.98E-05	0.00060321
hsa-mir-4512	4.473741561	1.51061882	0.00306116	0.01371143
hsa-mir-6073	6.735399212	1.69379047	6.99E-05	0.00049295
hsa-mir-4492	6.794255107	1.57078856	1.52E-05	0.00013095
hsa-mir-1244	4.266073568	1.69031871	0.01160847	0.04159703
hsa-mir-4485-5p	6.772787632	1.89245153	0.00034512	0.00200542
hsa-mir-1254	4.15697675	1.09449851	0.00014583	0.00092855
hsa-mir-6131	4.38292473	1.11617811	8.61E-05	0.00058774
hsa-mir-663b	5.310749105	1.31581316	5.43E-05	0.00041731
hsa-mir-320c	2.621218215	1.00796179	0.00930844	0.03480546
hsa-mir-5684	5.301871404	1.42071128	0.00019008	0.00116766
hsa-mir-1268a	4.313652122	1.08203058	6.70E-05	0.00048223
hsa-mir-4516	8.463199998	1.6352076	2.27E-07	3.49E-06
hsa-mir-3665	6.141942622	1.38469456	9.18E-06	8.58E-05
hsa-mir-4466	7.672762293	1.77824865	1.60E-05	0.00013211
hsa-mir-620	3.606718178	1.25533976	0.00406464	0.01713524
hsa-mir-3196	7.089551839	1.60780444	1.04E-05	9.30E-05
hsa-mir-1273h-5p	4.237081508	1.2280943	0.00056032	0.00308437
hsa-mir-194-5p	2.513186138	0.84004186	0.00277393	0.0130481
hsa-mir-3656	7.487343625	1.55156194	1.40E-06	1.52E-05
hsa-mir-3609	4.759189383	1.30804883	0.00027435	0.00166155
hsa-mir-1273c	4.275876387	1.12631199	0.00014684	0.00092855
hsa-mir-4459	4.497945238	0.93005333	1.32E-06	1.50E-05
hsa-mir-3651	3.241159869	0.90765559	0.00035574	0.00201273
hsa-mir-1324	2.803661088	0.81334173	0.00056666	0.00308437
hsa-mir-3159	3.805802599	1.06063718	0.00033294	0.00196115
hsa-mir-8065	5.39277989	1.22310679	1.04E-05	9.30E-05
hsa-mir-4497	3.738443859	1.13587627	0.00099746	0.00523058
hsa-mir-3687	5.789616706	1.18674687	1.07E-06	1.28E-05
hsa-mir-4443	1.696225943	0.67110968	0.01148797	0.04151114
hsa-mir-3182	2.051684651	0.82048503	0.01239918	0.04406319
hsa-mir-3195	6.357976512	1.34215125	2.17E-06	2.27E-05
hsa-mir-3648	4.983272207	0.92898671	8.13E-08	1.46E-06
hsa-mir-5095	4.897751149	1.00148299	1.01E-06	1.24E-05
hsa-mir-223-3p	2.950505524	0.94377577	0.00177034	0.0088517
hsa-mir-663a	4.16796229	1.04573527	6.73E-05	0.00048223

hsa-mir-1273d	5.134668888	0.86038776	2.40E-09	6.89E-08
hsa-mir-4508	4.915802905	1.06285399	3.74E-06	3.74E-05
hsa-mir-3929	4.703097195	0.76670472	8.56E-10	3.07E-08
hsa-mir-1273f	5.621943787	1.03946645	6.36E-08	1.19E-06
hsa-mir-1275	2.684751081	0.79698078	0.00075537	0.0040601
hsa-mir-1248	6.931573082	1.32420684	1.65E-07	2.63E-06
hsa-mir-566	6.266096117	1.00761819	5.01E-10	1.96E-08
hsa-mir-139-3p	3.764457324	0.93712661	5.89E-05	0.00043696
hsa-mir-7851-3p	5.642842513	1.06314908	1.11E-07	1.84E-06
hsa-mir-874-3p	1.961424132	0.71859767	0.00634273	0.02479431
hsa-mir-4472	5.260226746	0.86722226	1.31E-09	4.35E-08
hsa-mir-7704	2.761206329	0.67528152	4.33E-05	0.00034503
hsa-mir-486-5p	4.696591722	0.68670393	7.96E-12	4.89E-10
hsa-mir-1273e	5.394096141	0.73140402	1.64E-13	1.77E-11
hsa-mir-3908	5.419655604	1.07813176	4.98E-07	6.70E-06
hsa-mir-4488	10.05682518	1.37828509	2.95E-13	2.54E-11
hsa-mir-8485	3.833456212	0.78243891	9.61E-07	1.22E-05
hsa-mir-4792	4.366253949	1.1571984	0.00016122	0.00100468
hsa-mir-619-5p	5.09315768	0.91454721	2.56E-08	6.05E-07
hsa-mir-4419a	4.193381492	0.74533016	1.84E-08	4.66E-07
hsa-mir-1285-5p	5.632494665	0.94334189	2.36E-09	6.89E-08
hsa-mir-106b-3p	1.743361255	0.53670843	0.00116119	0.00601579
hsa-mir-4485-3p	6.711689265	1.13815177	3.70E-09	9.95E-08
hsa-mir-5588-5p	6.424129887	0.97303578	4.05E-11	1.74E-09
hsa-mir-6087	5.112499245	1.00266964	3.42E-07	4.90E-06
hsa-mir-8086	6.49444848	0.9685076	2.01E-11	1.05E-09
hsa-mir-1303	2.673185531	0.69466084	0.00011899	0.00077527
hsa-mir-5096	5.553304694	0.76827918	4.89E-13	3.51E-11
hsa-mir-3960	9.20842295	0.93829785	9.80E-23	2.11E-20
hsa-mir-7110-3p	8.343799603	0.78430473	1.97E-26	8.49E-24
hsa-let-7c-5p	2.601618188	0.85874501	0.00244912	0.0118328
hsa-mir-1273g-3p	3.489203732	0.74406565	2.74E-06	2.81E-05
hsa-mir-150-5p	2.406259991	0.53280176	6.29E-06	6.02E-05
hsa-mir-139-5p	2.779974447	0.94506343	0.00326548	0.01447585
hsa-mir-1273a	4.079851735	0.79659769	3.03E-07	4.49E-06
hsa-mir-7641	4.740840667	0.97570317	1.18E-06	1.37E-05
hsa-mir-1246	2.673694045	0.66393243	5.65E-05	0.00042607
hsa-mir-4791	4.038416091	0.72985478	3.14E-08	6.76E-07
hsa-mir-320a	3.029366244	0.73822413	4.07E-05	0.00033004
hsa-mir-122-5p	5.406460563	1.07048877	4.41E-07	6.11E-06
hsa-let-7b-5p	1.346829069	0.45047602	0.00279169	0.0130481

Appendix 3.C

miRNA differently expressed in early activation of rat HSCs (day 0 to 3)

miRNA downregulated in early activation:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
rno-mir-142-3p	-3.556145632	1.11242457	0.00138984	0.00678148
rno-mir-18a-3p	-3.071852997	0.99473146	0.00201425	0.00950055
rno-mir-221-5p	-2.416554071	0.95516627	0.01140682	0.04362337
rno-mir-29b-3p	-4.366207502	1.19455553	0.00025709	0.00161682
rno-mir-330-3p	-2.395137907	0.8978615	0.00763945	0.03060809
rno-mir-147	-2.277161938	0.77180634	0.0031733	0.01425467
rno-mir-877	-2.642185985	0.65831926	5.98E-05	0.00043405
rno-mir-24-2-5p	-1.489974273	0.50708402	0.00329998	0.0145921
rno-mir-125b-1-3p	-3.590641396	1.16562147	0.00206686	0.00958889
rno-mir-20a-5p	-1.38664249	0.56164263	0.01355271	0.0498106
rno-mir-99b-3p	-1.820009414	0.39954453	5.23E-06	4.36E-05
rno-mir-185-5p	-1.492254981	0.41635008	0.0003382	0.00199395
rno-mir-17-5p	-2.117253674	0.58094406	0.00026791	0.00164821
rno-mir-34a-5p	-3.91919794	0.56733386	4.91E-12	1.07E-10
rno-mir-1839-5p	-1.955191932	0.39541761	7.63E-07	6.96E-06
rno-mir-466b-5p	-1.241536118	0.33024679	0.00017031	0.00112033
rno-mir-181b-5p	-2.327619409	0.27277519	1.42E-17	5.04E-16
rno-mir-222-3p	-3.642152891	0.47725873	2.32E-14	6.57E-13
rno-mir-155-5p	-5.008190197	0.50785845	6.12E-23	2.89E-21
rno-mir-466c-5p	-1.649265034	0.30768494	8.31E-08	9.41E-07
rno-mir-221-3p	-2.388146496	0.47037399	3.83E-07	3.74E-06
rno-mir-146b-5p	-4.137153652	0.36524025	9.62E-30	1.36E-27
rno-mir-24-3p	-1.253626323	0.23464355	9.16E-08	9.97E-07
rno-mir-21-5p	-1.622988083	0.30850635	1.43E-07	1.50E-06
rno-mir-146a-5p	-1.796355245	0.32983278	5.14E-08	6.62E-07
rno-let-7i-5p	-2.125127562	0.20832843	1.97E-24	1.11E-22

miRNA upregulated in early activation:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
rno-mir-497-5p	3.938305767	1.32953189	0.00305474	0.01394343
rno-mir-150-3p	3.830748017	1.34870014	0.00450675	0.01932438
rno-mir-3559-3p	3.889959012	1.09995108	0.00040549	0.00234192
rno-mir-192-3p	3.436412505	1.27326077	0.00695676	0.0289524
rno-mir-126a-5p	5.2844019	1.11098752	1.97E-06	1.69E-05
rno-mir-195-3p	4.106314218	1.08315616	0.00015	0.00103539
rno-mir-874-3p	2.904655526	0.86485226	0.00078351	0.00418363
rno-mir-200a-3p	1.972109602	0.70752809	0.00531454	0.02244799
rno-mir-194-3p	6.248034956	1.04296216	2.09E-09	2.96E-08
rno-mir-10b-5p	1.858796989	0.6972586	0.00767906	0.03060809

rno-mir-375-3p	5.365167349	0.98883741	5.77E-08	7.10E-07
rno-mir-139-3p	4.156017551	0.81266825	3.15E-07	3.19E-06
rno-mir-199a-5p	4.554112308	1.17773869	0.00011026	0.00078009
rno-mir-322-3p	2.781796435	0.73976903	0.00016967	0.00112033
rno-mir-1843a-3p	1.746201357	0.54453014	0.00134218	0.00666383
rno-mir-125b-2-3p	2.083433696	0.59977003	0.00051329	0.00284828
rno-mir-145-5p	2.371464996	0.91983312	0.00993317	0.03904289
rno-mir-101b-3p	1.695373079	0.59687418	0.00450542	0.01932438
rno-mir-194-5p	4.810992367	0.70671866	9.93E-12	2.01E-10
rno-mir-122-3p	5.00391986	0.80710434	5.65E-10	8.42E-09
rno-mir-200b-3p	3.168003554	0.47046122	1.65E-11	3.12E-10
rno-mir-505-3p	1.50680401	0.42733995	0.00042187	0.00238781
rno-mir-455-3p	4.097011193	0.64418898	2.02E-10	3.17E-09
rno-mir-30e-5p	1.032882149	0.32009411	0.0012518	0.00632604
rno-mir-30c-2-3p	1.43028656	0.4327786	0.00095013	0.00488885
rno-mir-100-5p	2.514896091	0.59892156	2.68E-05	0.00021072
rno-mir-26b-5p	1.804649082	0.33610409	7.90E-08	9.32E-07
rno-mir-148a-3p	2.01528925	0.40010279	4.73E-07	4.46E-06
rno-mir-31a-5p	2.174310441	0.59867803	0.00028139	0.00169435
rno-mir-199a-3p	3.053475666	0.75737457	5.54E-05	0.00041247
rno-mir-150-5p	2.484915536	0.44129667	1.79E-08	2.42E-07
rno-mir-29a-3p	1.188716242	0.35960418	0.00094765	0.00488885
rno-mir-23b-3p	3.686734222	0.43154486	1.31E-17	5.04E-16
rno-mir-192-5p	6.426735128	0.61950554	3.26E-25	2.30E-23
rno-mir-10a-5p	3.099392857	0.39785762	6.69E-15	2.10E-13
rno-let-7d-3p	1.059175361	0.30978218	0.00062829	0.00341936
rno-mir-139-5p	3.436204005	0.45312433	3.37E-14	8.66E-13
rno-mir-27b-3p	2.819929586	0.37876345	9.69E-14	2.28E-12
rno-mir-126a-3p	7.146214151	0.49421219	2.17E-47	6.15E-45
rno-mir-99a-5p	1.902442857	0.29205813	7.32E-11	1.22E-09
rno-let-7b-5p	1.742634794	0.40041057	1.35E-05	0.00010902
rno-let-7c-5p	1.379356592	0.32988378	2.90E-05	0.00022165
rno-mir-26a-5p	2.290980833	0.21919238	1.44E-25	1.35E-23
rno-mir-125b-5p	1.698022386	0.45234952	0.00017418	0.00112033
rno-mir-122-5p	5.181809071	0.77471924	2.25E-11	3.98E-10

Appendix 3.D

miRNA differently expressed in fully activated rat HSCs (day 0 to 10)

miRNA downregulated in fully activated HSCs:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
rno-mir-344a-3p	-3.793983515	1.320604	0.00406703	0.01646378
rno-mir-224-5p	-3.413848783	1.28043455	0.00767222	0.0271763
rno-mir-149-5p	-3.134069163	1.0027914	0.00177597	0.00855957
rno-mir-504	-5.328054699	1.88762841	0.00476332	0.01867223
rno-mir-212-3p	-3.384961347	1.37143755	0.01358002	0.04436139
rno-mir-183-5p	-2.414428202	0.99337087	0.01507632	0.04817867
rno-mir-18a-3p	-2.691192454	0.98408405	0.00624337	0.02353271
rno-mir-221-5p	-2.350031542	0.93214466	0.0116988	0.03864548
rno-mir-760-3p	-3.445816119	1.02704293	0.00079341	0.00424112
rno-mir-296-3p	-5.779121389	1.33430888	1.48E-05	0.00011785
rno-mir-29b-3p	-3.237991308	1.19885373	0.00691509	0.02541294
rno-mir-298-5p	-6.310416854	1.33647874	2.34E-06	2.02E-05
rno-mir-132-3p	-3.139088834	0.8770025	0.00034446	0.00191081
rno-mir-218a-5p	-2.163696839	0.78192083	0.00565477	0.02159094
rno-mir-702-3p	-3.342008364	0.85291368	8.92E-05	0.00055772
rno-mir-877	-2.361853956	0.64858028	0.00027097	0.00156209
rno-mir-3102	-4.215539873	0.91741997	4.33E-06	3.64E-05
rno-mir-24-2-5p	-1.305474203	0.49436672	0.00827349	0.02895723
rno-mir-484	-1.784071659	0.56633838	0.00163166	0.00799514
rno-mir-615	-6.58352348	1.19520395	3.62E-08	3.55E-07
rno-mir-145-5p	-1.963672391	0.75088265	0.00891877	0.03048975
rno-mir-324-3p	-1.163462499	0.38748652	0.00267694	0.01210802
rno-mir-214-3p	-2.85062594	0.70133203	4.81E-05	0.00032151
rno-mir-125b-1-3p	-7.593472154	1.10139784	5.41E-12	9.94E-11
rno-mir-99b-3p	-2.349106763	0.38289359	8.51E-10	1.14E-08
rno-mir-185-5p	-2.314610464	0.39719859	5.63E-09	6.90E-08
rno-mir-17-5p	-1.513768055	0.57861379	0.00889151	0.03048975
rno-mir-34a-5p	-4.028363097	0.56115884	7.04E-13	1.48E-11
rno-mir-1839-5p	-2.184304872	0.38630342	1.56E-08	1.77E-07
rno-mir-210-3p	-2.743857031	0.47951387	1.05E-08	1.24E-07
rno-mir-1249	-1.531838788	0.45859251	0.00083686	0.00431646
rno-mir-31a-5p	-1.496485173	0.55806552	0.00732802	0.02659799
rno-mir-199a-3p	-1.925243515	0.68644647	0.00503709	0.01948559
rno-mir-181b-5p	-1.868422591	0.27078284	5.20E-12	9.94E-11
rno-mir-143-3p	-3.06722427	0.72068213	2.08E-05	0.00015296
rno-mir-222-3p	-4.099500485	0.47396367	5.18E-18	1.52E-16
rno-mir-155-5p	-2.854106981	0.51178647	2.45E-08	2.57E-07
rno-mir-221-3p	-3.118809262	0.46736749	2.50E-11	3.87E-10
rno-mir-146b-5p	-3.636591273	0.36429637	1.82E-23	1.07E-21
rno-let-7e-5p	-1.705317443	0.19332102	1.13E-18	3.70E-17
rno-mir-24-3p	-1.379986885	0.2332727	3.30E-09	4.22E-08

rno-mir-21-5p	-1.521790683	0.30789824	7.71E-07	6.87E-06
rno-mir-146a-5p	-1.424975816	0.32952676	1.53E-05	0.00011838
rno-let-7i-5p	-1.936527401	0.20794617	1.25E-20	4.58E-19

miRNA upregulated in fully activated HSCs:

miRNA	log2FoldChange	lfcSE	p-value	p-adjust
rno-mir-335	4.498857247	1.30528787	0.0005676	0.00309029
rno-mir-6215	3.839781351	1.32774348	0.00382846	0.01607955
rno-mir-6320	2.775544257	1.14568882	0.01540994	0.04819704
rno-mir-203a-3p	3.482850777	1.12383673	0.00194128	0.00920542
rno-mir-497-5p	3.095947885	1.2164429	0.01092518	0.03650004
rno-mir-150-3p	5.100472916	1.35737198	0.00017154	0.00100868
rno-mir-3559-3p	3.248982272	0.96994322	0.0008091	0.00424778
rno-mir-192-3p	5.943394771	1.39437937	2.02E-05	0.00015246
rno-mir-126a-5p	5.963238724	1.11098752	7.98E-08	7.57E-07
rno-mir-195-3p	4.425752823	1.08395761	4.45E-05	0.00030402
rno-mir-148a-5p	2.326531482	0.73383203	0.00152236	0.007586
rno-mir-30b-3p	1.722478232	0.66769273	0.00988728	0.03341217
rno-mir-200a-3p	3.210230727	0.77354594	3.32E-05	0.00023839
rno-mir-194-3p	6.92687182	1.04296216	3.10E-11	4.56E-10
rno-mir-30e-3p	1.631666969	0.55202096	0.00311853	0.01348306
rno-mir-375-3p	7.132135957	1.06081491	1.78E-11	2.90E-10
rno-mir-139-3p	5.129640904	0.90914607	1.68E-08	1.83E-07
rno-mir-1843a-3p	1.470064507	0.49973843	0.0032645	0.0139096
rno-mir-101b-3p	1.646214528	0.57333531	0.00408794	0.01646378
rno-mir-194-5p	5.345133771	0.700049	2.25E-14	5.09E-13
rno-mir-122-3p	8.84798885	1.11370638	1.95E-15	4.77E-14
rno-mir-532-3p	1.39213834	0.4889499	0.00441056	0.01752303
rno-mir-320-5p	1.379656022	0.47817391	0.00391091	0.01619446
rno-mir-200b-3p	4.019265169	0.48113859	6.62E-17	1.77E-15
rno-mir-505-3p	1.706336957	0.41292118	3.59E-05	0.00025135
rno-mir-455-3p	1.981187129	0.5466664	0.00028994	0.00163929
rno-mir-30c-2-3p	1.663518148	0.4220059	8.08E-05	0.0005166
rno-mir-30a-3p	1.447351954	0.3729392	0.00010406	0.00063735
rno-mir-26b-5p	2.276257573	0.33119769	6.30E-12	1.09E-10
rno-mir-148a-3p	2.160846398	0.39053886	3.15E-08	3.19E-07
rno-mir-150-5p	4.756016827	0.47496771	1.33E-23	9.79E-22
rno-mir-29a-3p	1.066129721	0.35318518	0.00253934	0.01166509
rno-mir-23b-3p	1.275657192	0.39567794	0.00126423	0.00640833
rno-mir-27a-3p	1.389263014	0.30383009	4.82E-06	3.94E-05
rno-mir-192-5p	8.482964793	0.72813939	2.29E-31	3.37E-29
rno-mir-10a-5p	2.503339037	0.38551637	8.39E-11	1.17E-09
rno-mir-139-5p	5.302658502	0.46385312	2.90E-30	2.84E-28
rno-mir-126a-3p	8.239730125	0.52015203	1.62E-56	4.77E-54
rno-mir-99a-5p	1.516216558	0.28863543	1.50E-07	1.37E-06
rno-mir-26a-5p	2.092000928	0.2161814	3.77E-22	1.85E-20

rno-mir-122-5p	7.382613566	0.77540318	1.72E-21	7.20E-20
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Appendix 3.E

Hsa-miR-150-5p targeted genes:

Target genes	Function
MYB	v-myb avian myeloblastosis viral oncogene homolog
TADA1	transcriptional adaptor 1
ABCB9	ATP-binding cassette, sub-family B (MDR/TAP), member 9
FTO	fat mass and obesity associated
TMEM41A	transmembrane protein 41A
KLHL12	kelch-like family member 12
HILPDA	hypoxia inducible lipid droplet-associated
NKX2-4	NK2 homeobox 4
MBD6	methyl-CpG binding domain protein 6
GRIPAP1	GRIP1 associated protein 1
SP1	Sp1 transcription factor
NR2F2	nuclear receptor subfamily 2, group F, member 2
FOXD3	forkhead box D3
DYRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A
MTCH2	mitochondrial carrier 2
PAX5	paired box 5
IGF2BP1	insulin-like growth factor 2 mRNA binding protein 1
PIK3AP1	phosphoinositide-3-kinase adaptor protein 1
CDKN1B	cyclin-dependent kinase inhibitor 1B (p27, Kip1)
EGR2	early growth response 2
PTP4A1	protein tyrosine phosphatase type IVA, member 1
ADIPOR2	adiponectin receptor 2
AGO1	argonaute RISC catalytic component 1
DDB2	damage-specific DNA binding protein 2, 48kDa
PKP4	plakophilin 4
PSEN1	presenilin 1
ZEB1	zinc finger E-box binding homeobox 1
TLR5	toll-like receptor 5
H1FO	H1 histone family, member 0
UBR1	ubiquitin protein ligase E3 component n-recognin 1
AKT3	v-akt murine thymoma viral oncogene homolog 3
EIF4E	eukaryotic translation initiation factor 4E
UST	uronyl-2-sulfotransferase
SIM1	single-minded homolog 1 (Drosophila)
FOXP1	forkhead box P1
RSF1	remodeling and spacing factor 1
EP300	E1A binding protein p300
PPP2CB	protein phosphatase 2, catalytic subunit, beta isozyme
CALU	calumenin
HNRNPH3	heterogeneous nuclear ribonucleoprotein H3 (2H9)

GABRG2	gamma-aminobutyric acid (GABA) A receptor, gamma 2
CC2D1B	coiled-coil and C2 domain containing 1B
NCOA1	nuclear receptor coactivator 1
KIAA0087	KIAA0087
KIAA1549L	KIAA1549-like
ZBTB4	zinc finger and BTB domain containing 4
GTF3C2	general transcription factor III C, polypeptide 2, beta
LETMD1	LETM1 domain containing 1
MMP14	matrix metalloproteinase 14 (membrane-inserted)
LMO4	LIM domain only 4
CELSR3	cadherin, EGF LAG seven-pass G-type receptor 3
SRCIN1	SRC kinase signaling inhibitor 1
UBFD1	ubiquitin family domain containing 1
ETF1	eukaryotic translation termination factor 1
ITSN1	intersectin 1 (SH3 domain protein)
NR1D2	nuclear receptor subfamily 1, group D, member 2
USP13	ubiquitin specific peptidase 13 (isopeptidase T-3)
ROCK1	Rho-associated, coiled-coil containing protein kinase 1
EPHB2	EPH receptor B2
APC	adenomatous polyposis coli
PAPD5	PAP associated domain containing 5
ACVR1C	activin A receptor, type IC
UPF1	UPF1 regulator of nonsense transcripts homolog (yeast)
GSTO2	glutathione S-transferase omega 2
TAF1	TAF1 RNA polymerase II, TATA box binding protein
CHD2	chromodomain helicase DNA binding protein 2
FOXO4	forkhead box O4
IL1RAPL1	interleukin 1 receptor accessory protein-like 1
PFN2	profilin 2
RC3H1	ring finger and CCCH-type domains 1
FGFR3	fibroblast growth factor receptor 3
EDA	ectodysplasin A
FZD4	frizzled family receptor 4
TET3	tet methylcytosine dioxygenase 3
CAPN6	calpain 6
CPEB4	cytoplasmic polyadenylation element binding protein 4
GLIS3	GLIS family zinc finger 3
PRKCA	protein kinase C, alpha
MAP3K9	mitogen-activated protein kinase kinase kinase 9
NFASC	neurofascin
COL4A4	collagen, type IV, alpha 4
MMP16	matrix metalloproteinase 16 (membrane-inserted)
STEAP3	STEAP family member 3, metalloproteinase
PARVA	parvin, alpha
PAPPA	pregnancy-associated plasma protein A, pappalysin 1
CPD	carboxypeptidase D
CMIP	c-Maf inducing protein
DST	dystonin

FBXW11	F-box and WD repeat domain containing 11
UBE3B	ubiquitin protein ligase E3B
MAP3K12	mitogen-activated protein kinase kinase kinase 12
ZDHHC3	zinc finger, DHHC-type containing 3
GLG1	golgi glycoprotein 1
PA2G4	proliferation-associated 2G4, 38kDa
PLXNC1	plexin C1
RARG	retinoic acid receptor, gamma
GSK3B	glycogen synthase kinase 3 beta
GID4	GID complex subunit 4
MGA	MGA, MAX dimerization protein
CBX8	chromobox homolog 8
ATP8A2	ATPase, aminophospholipid transporter, class I, type 8A, member 2
PLXNB1	plexin B1
USP49	ubiquitin specific peptidase 49
BCL9L	B-cell CLL/lymphoma 9-like
HIF1A	hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)
THBS2	thrombospondin 2
ABI2	abl-interactor 2
FNDC5	fibronectin type III domain containing 5
PLRG1	pleiotropic regulator 1
GHSR	growth hormone secretagogue receptor
IRF2BP2	interferon regulatory factor 2 binding protein 2
NOTCH3	Notch Receptor 3; receptor for membrane-bound ligands Jagged1, Jagged2 and Delta1 to regulate cell-fate determination
MUC4	Major constituent of mucus, may play a role in tumour progression
VEGFA	Vascular Endothelial Growth Factor A, member of the PDGF/VEGF growth factor family
P2RX7	Purinergic Receptor P2X 7, a member of purinoceptors for ATP; functions as a ligand-gated ion channel
IGF2	Insulin-like growth factor 2
CXCR4	C-X-C Motif Chemokine Receptor 4; chemokine receptor specific for stromal cell-derived factor-1

Appendix 3.F

ALD patient characteristics:

Gender	Age	Bilirubin	Platelets	ALT	PT	Creatinine	Sodium
M	48	49	79	18	16	68	140
M	63	39	215	21	17	74	132
M	56	168	130	67	12	73	138
M	62	20	72	22	14	92	139
M	60	11	179	25	11	76	144
M	64	25	155	35	11	208	131
M	55	70	65	23	23	49	143
M	47	26	133	33	14	83	135
M	61	11	245	51	11	83	138
M	58	23	103	17	13	145	129
F	65	7	167	50	13	71	141
M	59	36	115	24	14	49	139
M	63	25	123	14	13	107	142
M	75	3	221	13	11	124	140
F	64	4	588	19	12	47	140
M	58	14	259	28	15	55	136
F	69	12	174	30	12	77	142
M	47	22	113	39	12	62	141
M	34	15	127	70	11	109	145
M	68	11	116	17	14	66	141

Appendix 4

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Appendix 4.A

Genes differently expressed in the comparison between profibrogenic treatment and healthy PCLSs

Gene	log2FoldChange	lfcSE	p-value	p-adjust
TIMP1	2.30649621	0.1150344	2.00E-89	5.12E-85
AL033397.1	-2.7225648	0.1807361	2.80E-51	8.97E-48
CYP2B7P	-4.4374985	0.29745371	2.51E-50	7.13E-47
TNFSF4	2.80302136	0.19188	2.49E-48	5.79E-45
ISLR	3.09453293	0.21341458	1.21E-47	2.58E-44
CTHRC1	2.54387328	0.17741196	1.25E-46	2.29E-43
COL1A1	2.54923859	0.18255078	2.57E-44	3.65E-41
ALDH1L2	2.04517692	0.14895879	6.73E-43	8.20E-40
SPOCD1	2.53202246	0.1850208	1.25E-42	1.45E-39
CAVIN4	2.53910522	0.18666032	3.85E-42	4.29E-39
FBN1	2.21465802	0.16344073	7.90E-42	8.42E-39
MAP1A	2.73945988	0.20722392	6.74E-40	5.95E-37
DKK3	2.87914965	0.21952869	2.70E-39	2.09E-36
LINC01614	3.08264682	0.23763371	1.76E-38	1.32E-35
CYP1A2	-3.8543406	0.30082795	1.40E-37	9.41E-35
SYT1	2.97278181	0.23643986	2.97E-36	1.81E-33
LINC01485	-2.7772277	0.22173603	5.45E-36	3.17E-33
LRRC17	3.24369791	0.2644761	1.40E-34	7.28E-32
LOXL2	2.39637873	0.19555379	1.59E-34	7.99E-32
CD248	2.26656756	0.18541845	2.31E-34	1.12E-31
TGFBI	2.17678287	0.17820455	2.58E-34	1.22E-31
PCOLCE	2.02804833	0.16628488	3.26E-34	1.52E-31
HTRA3	2.64206507	0.2169475	4.05E-34	1.85E-31
UGT2B10	-4.2206881	0.35153042	3.28E-33	1.42E-30
MLLT11	2.28723599	0.19055093	3.41E-33	1.46E-30
COL6A3	2.08459795	0.1739812	4.43E-33	1.77E-30
GSTA1	-3.8780752	0.3246639	6.90E-33	2.72E-30
CYP2A6	-4.9459471	0.4166912	1.70E-32	6.61E-30
APCDD1L	4.46685728	0.37659652	1.88E-32	7.20E-30
ITGBL1	2.33849354	0.20064864	2.17E-31	7.72E-29
CREB3L1	2.68136292	0.23177002	5.91E-31	1.99E-28
NALCN	2.41830073	0.21008704	1.16E-30	3.86E-28
CYP2C9	-2.7741079	0.2410705	1.21E-30	3.97E-28
UCN2	2.87802864	0.25185219	3.05E-30	9.76E-28
ARSI	2.74045757	0.24017717	3.72E-30	1.18E-27
WNT5B	2.10763146	0.1850059	4.57E-30	1.43E-27
LINC02015	-2.5231362	0.22160368	4.92E-30	1.52E-27
CYP2A7	-6.8043926	0.59929791	7.09E-30	2.16E-27
WNT5A	2.71241833	0.23990021	1.22E-29	3.63E-27
NXPH4	2.35569713	0.20864858	1.47E-29	4.22E-27
NREP	2.01659902	0.17872627	1.59E-29	4.52E-27
HAS2	2.54438027	0.22607397	2.20E-29	6.11E-27

ADAMTS14	2.43002345	0.21654736	3.19E-29	8.60E-27
MSRB3	2.13541214	0.19101373	5.15E-29	1.36E-26
COL5A3	2.2346133	0.20018078	6.19E-29	1.62E-26
GSTA2	-4.7603375	0.42929219	1.42E-28	3.64E-26
AGMAT	-2.3399345	0.21235168	3.09E-28	7.60E-26
ACTA2	2.22543907	0.20432928	1.27E-27	3.00E-25
ZP1	3.43463545	0.31981125	6.64E-27	1.54E-24
KCNG1	2.54030217	0.23680558	7.57E-27	1.75E-24
SLC22A1	-3.0383525	0.28415885	1.10E-26	2.48E-24
CASP16P	-3.7627783	0.3520781	1.17E-26	2.60E-24
AC112721.1	3.45933237	0.32611171	2.74E-26	5.70E-24
FAP	2.20827255	0.20903424	4.37E-26	8.87E-24
GFPT2	2.02461213	0.19256795	7.47E-26	1.48E-23
LEF1	2.25056581	0.21452636	9.52E-26	1.83E-23
GAL	2.78140591	0.26549984	1.11E-25	2.11E-23
AKR1C4	-3.5201143	0.33747102	1.79E-25	3.28E-23
AC112721.2	3.7878425	0.36482142	2.97E-25	5.39E-23
NR2F1-AS1	2.34080849	0.225956	3.79E-25	6.83E-23
VCAN	2.00938214	0.19414717	4.19E-25	7.51E-23
ANO4	4.86220781	0.4699837	4.39E-25	7.80E-23
RBP4	-2.6105036	0.25262678	4.97E-25	8.78E-23
STEAP4	-3.0782877	0.30056571	1.29E-24	2.22E-22
SULT1A2	-2.2276604	0.21852672	2.11E-24	3.55E-22
HPGD	-2.4260895	0.23834292	2.46E-24	4.09E-22
ADH1B	-2.9945106	0.29526799	3.61E-24	5.96E-22
MYL9	2.12724916	0.21100778	6.68E-24	1.07E-21
UPB1	-2.0629632	0.20531165	9.38E-24	1.47E-21
LINC01711	3.3635614	0.3352188	1.08E-23	1.67E-21
GPAT3	-2.0312627	0.20278963	1.29E-23	1.96E-21
STRA6	3.67546111	0.36751205	1.51E-23	2.27E-21
SCARA3	2.19620219	0.22004523	1.85E-23	2.76E-21
GPD1	-3.4503228	0.34900821	4.78E-23	6.88E-21
GLYAT	-3.7484102	0.38214657	1.03E-22	1.42E-20
TPM2	2.2375312	0.22822111	1.08E-22	1.48E-20
ADAMTS16	6.32423538	0.64594222	1.23E-22	1.67E-20
SLC25A47	-3.5185376	0.35966429	1.33E-22	1.80E-20
MRC2	2.31119299	0.23686104	1.71E-22	2.29E-20
OTC	-5.4193934	0.56081714	4.31E-22	5.58E-20
SLC2A2	-2.8935232	0.30157844	8.42E-22	1.06E-19
UROC1	-4.1773788	0.43947098	1.99E-21	2.40E-19
MEG8	2.53628057	0.26762291	2.62E-21	3.10E-19
GLDC	-2.9367674	0.31120353	3.84E-21	4.49E-19
FIBIN	2.12020299	0.22471007	3.90E-21	4.54E-19
ASPDH	-2.8821463	0.30620103	4.84E-21	5.53E-19
NROB2	-2.581917	0.27574081	7.71E-21	8.54E-19
THRSP	-3.7530758	0.40261737	1.14E-20	1.26E-18
NPPC	4.49758545	0.4842218	1.57E-20	1.69E-18
ADAM12	2.81527917	0.30366601	1.84E-20	1.97E-18

FLNC	2.29114487	0.24782491	2.35E-20	2.50E-18
RAB3B	-2.0379173	0.22141347	3.44E-20	3.60E-18
TDO2	-2.81846	0.30651204	3.74E-20	3.89E-18
BHMT	-2.653086	0.2892862	4.68E-20	4.79E-18
AC241584.2	-3.6590656	0.40062584	6.64E-20	6.74E-18
DRP2	3.24631274	0.35552855	6.79E-20	6.87E-18
THY1	2.01786883	0.22140946	7.96E-20	7.96E-18
CHST6	2.01361942	0.22127065	9.01E-20	8.94E-18
SULT2A1	-3.2109063	0.35344719	1.04E-19	1.02E-17
AL031651.2	2.42943797	0.26791316	1.21E-19	1.18E-17
ZNF365	2.54065205	0.28021043	1.22E-19	1.19E-17
IYD	-2.7018189	0.29801509	1.23E-19	1.19E-17
APOA5	-3.3056468	0.36473426	1.27E-19	1.21E-17
INHBA	2.46947733	0.2726312	1.33E-19	1.26E-17
COL7A1	2.73732597	0.30249197	1.44E-19	1.36E-17
DPYSL3	2.1892867	0.24233369	1.65E-19	1.55E-17
CPS1	-2.7805328	0.3078067	1.66E-19	1.56E-17
SLC51B	-2.1762043	0.24220111	2.58E-19	2.41E-17
PAH	-3.0507045	0.34207568	4.74E-19	4.27E-17
AGXT	-2.6655655	0.2993476	5.36E-19	4.78E-17
PKNOX2	2.04224193	0.22975448	6.18E-19	5.45E-17
ADH1A	-2.9713239	0.33435037	6.29E-19	5.53E-17
IGSF23	-3.247698	0.36814807	1.13E-18	9.71E-17
UGT1A1	-2.0120315	0.22858616	1.34E-18	1.15E-16
FABP1	-3.4108597	0.38853269	1.65E-18	1.40E-16
SLC30A3	2.96539081	0.33866127	2.02E-18	1.71E-16
PTGS1	2.06664297	0.23618156	2.13E-18	1.79E-16
CCDC80	2.24166721	0.25627371	2.19E-18	1.84E-16
PKLR	-3.3170567	0.38103551	3.17E-18	2.59E-16
DAO	-2.697964	0.31053654	3.69E-18	2.98E-16
GLI2	2.50405988	0.28892889	4.45E-18	3.50E-16
HRG	-2.9797059	0.34425938	4.91E-18	3.81E-16
BAAT	-2.5288346	0.29221487	4.97E-18	3.84E-16
MYRIP	-2.0322566	0.23496173	5.18E-18	3.99E-16
SLC22A10	-3.9744889	0.45996973	5.58E-18	4.29E-16
CDH11	2.31472715	0.26806178	5.87E-18	4.50E-16
BNC2	2.37700643	0.27595135	7.06E-18	5.40E-16
PDLIM4	2.13736415	0.24849601	7.89E-18	5.97E-16
TAT	-2.768897	0.32479302	1.53E-17	1.13E-15
POSTN	2.18020766	0.25583927	1.57E-17	1.15E-15
RTP3	-2.8466909	0.33464377	1.79E-17	1.30E-15
SAA4	-2.6259613	0.3089313	1.89E-17	1.37E-15
E2F7	2.12925243	0.25068523	2.00E-17	1.44E-15
ALDH3A1	-3.7341387	0.44220298	3.06E-17	2.17E-15
ACOT12	-3.5158941	0.41734992	3.63E-17	2.57E-15
CYP2D6	-2.403962	0.28577342	4.03E-17	2.82E-15
CYP2D6	-2.403962	0.28577342	4.03E-17	2.82E-15
CYP2D6	-2.403962	0.28577342	4.03E-17	2.82E-15

GALNT9	2.73476362	0.32791291	7.43E-17	4.90E-15
PGLYRP2	-2.4402472	0.29291729	8.03E-17	5.27E-15
GABBR2	4.66205169	0.55992032	8.34E-17	5.46E-15
ADGRB2	2.1430174	0.25811506	1.02E-16	6.57E-15
LRCOL1	-2.5342441	0.30552996	1.09E-16	6.99E-15
HLF	-2.9436269	0.35544526	1.22E-16	7.74E-15
SLC25A18	-2.0329926	0.24574512	1.31E-16	8.29E-15
MYO7B	-3.4245864	0.41672823	2.07E-16	1.29E-14
CLSTN2	2.20941059	0.26894888	2.12E-16	1.32E-14
AKR7A3	-2.3312545	0.28378584	2.12E-16	1.32E-14
GBP7	-2.5394584	0.30928801	2.20E-16	1.36E-14
AL135924.2	-2.2554203	0.27548663	2.68E-16	1.63E-14
UGT2B11	-2.5932864	0.31774921	3.31E-16	2.00E-14
DDC	-2.9992478	0.3676636	3.42E-16	2.06E-14
DPYS	-2.2479623	0.27574088	3.57E-16	2.14E-14
HNF4A-AS1	-4.1536946	0.51238803	5.21E-16	3.06E-14
FOLH1B	-3.6235858	0.44758766	5.69E-16	3.34E-14
ADH4	-2.5806392	0.31894763	5.91E-16	3.44E-14
APOA1	-2.6219525	0.32410845	5.98E-16	3.47E-14
GBA3	-3.6008609	0.44674135	7.61E-16	4.38E-14
ALDH1L1	-2.00417	0.24980285	1.03E-15	5.86E-14
HSD17B13	-2.8926844	0.36065048	1.05E-15	5.95E-14
LINC00475	3.24271148	0.4050317	1.18E-15	6.66E-14
MYOSLID	2.80625262	0.35169747	1.47E-15	8.22E-14
CNN1	2.23452412	0.2813576	1.99E-15	1.09E-13
C3orf85	-3.7651775	0.47878892	3.72E-15	1.98E-13
COMP	3.70087619	0.47102678	3.93E-15	2.08E-13
NUGGC	-2.5458528	0.32525273	4.98E-15	2.58E-13
CIDEC	-2.7244717	0.34821454	5.11E-15	2.64E-13
BMP10	-3.5267639	0.45160617	5.75E-15	2.96E-13
AKR1C8P	-3.0034411	0.3848419	5.98E-15	3.07E-13
AC115619.1	-2.065493	0.26492008	6.36E-15	3.25E-13
UGT1A4	-2.0639165	0.26526047	7.21E-15	3.66E-13
SPOCK1	2.9020524	0.3733311	7.64E-15	3.87E-13
PRRX1	2.6010873	0.33503997	8.26E-15	4.14E-13
HHIP	3.0619446	0.3947554	8.73E-15	4.35E-13
PF4	2.15699783	0.27987279	1.29E-14	6.23E-13
CRABP2	2.10490511	0.27373163	1.48E-14	7.08E-13
HFE2	-2.695363	0.35090075	1.58E-14	7.51E-13
ST6GAL2	2.60672028	0.33960612	1.64E-14	7.81E-13
ANGPTL3	-2.8068377	0.36604946	1.75E-14	8.29E-13
HILS1	3.48821144	0.4558136	1.97E-14	9.28E-13
FAM196B	2.85412647	0.37307533	2.01E-14	9.42E-13
RPLPOP2	2.05675993	0.26910449	2.12E-14	9.93E-13
LINC01929	2.87517591	0.37779182	2.73E-14	1.26E-12
AKR1C6P	-4.0146817	0.52756666	2.75E-14	1.26E-12
FCN2	-2.3491225	0.31017323	3.63E-14	1.64E-12
ALB	-2.8621505	0.37797932	3.67E-14	1.66E-12

AL139393.2	2.27310174	0.30022778	3.70E-14	1.67E-12
SSC5D	2.22254579	0.29422807	4.23E-14	1.89E-12
PTPRN	3.04739828	0.40382515	4.48E-14	2.00E-12
ACTG2	2.91393191	0.38645956	4.70E-14	2.09E-12
AFM	-3.3446341	0.44402153	4.97E-14	2.20E-12
PIPOX	-2.1295052	0.28307401	5.36E-14	2.36E-12
XDH	-2.2212186	0.29547053	5.58E-14	2.45E-12
HMGCS2	-3.4068197	0.454336	6.46E-14	2.81E-12
SLCO1B1	-2.01609	0.26886291	6.45E-14	2.81E-12
ADAM23	2.33974083	0.31240098	6.91E-14	2.99E-12
ACSM2A	-2.5959343	0.34698007	7.35E-14	3.16E-12
PCDH9	2.18547733	0.29291149	8.57E-14	3.66E-12
RFX8	2.1430768	0.28805925	1.01E-13	4.24E-12
F11	-2.1870037	0.29566482	1.39E-13	5.77E-12
GNMT	-2.4929535	0.33913596	1.97E-13	8.01E-12
TNFAIP6	2.65648505	0.36219944	2.23E-13	9.00E-12
SLC3A1	-2.6454294	0.36091627	2.31E-13	9.28E-12
ACSM2B	-2.4342916	0.33428738	3.29E-13	1.30E-11
ANXA10	-2.6047278	0.35830032	3.60E-13	1.42E-11
SLC39A5	-2.9481768	0.40713712	4.45E-13	1.73E-11
CSPG4	2.23303586	0.3086847	4.69E-13	1.82E-11
VGLL3	2.27754706	0.31496943	4.79E-13	1.85E-11
CYP2C19	-2.002608	0.27819563	6.09E-13	2.33E-11
CD5L	-3.1000191	0.43066792	6.10E-13	2.33E-11
AL138847.2	-2.8156404	0.39209568	6.92E-13	2.63E-11
SLC22A7	-3.3451027	0.46712297	8.00E-13	3.02E-11
AC020571.1	2.76293058	0.38732104	9.79E-13	3.65E-11
AC080128.1	-2.4836199	0.34832079	1.00E-12	3.73E-11
TRPA1	3.24409386	0.45541956	1.05E-12	3.90E-11
HORMAD2-AS1	-2.4634091	0.34707059	1.27E-12	4.66E-11
MPV17L	-2.1781094	0.30708343	1.31E-12	4.81E-11
LINC01605	3.26882527	0.46097388	1.33E-12	4.86E-11
AC026462.3	-3.4043609	0.4817402	1.59E-12	5.71E-11
TTR	-2.826249	0.40073045	1.75E-12	6.27E-11
TMEM82	-2.0699467	0.29367285	1.81E-12	6.45E-11
MPP4	2.23526426	0.3175528	1.94E-12	6.87E-11
HS1BP3-IT1	-2.0662167	0.29371862	2.00E-12	7.06E-11
AKR1B10	-2.5837998	0.36789374	2.17E-12	7.60E-11
SLC23A1	-2.3712908	0.3376976	2.19E-12	7.65E-11
MFSD2A	-2.011909	0.28776842	2.72E-12	9.35E-11
CBLN1	2.59629496	0.37138894	2.73E-12	9.38E-11
ABCC11	-2.2113337	0.31636949	2.75E-12	9.44E-11
NTM	2.22504257	0.31841218	2.79E-12	9.53E-11
CAMK4	2.99108247	0.42907076	3.15E-12	1.07E-10
NUDT11	2.03034828	0.29160921	3.34E-12	1.13E-10
TMEM56	-2.066376	0.29708381	3.51E-12	1.18E-10
KANK4	2.99440546	0.4309221	3.68E-12	1.23E-10
SYT7	-2.0033733	0.28896008	4.12E-12	1.37E-10

PLA2G12B	-2.1738372	0.31416214	4.53E-12	1.51E-10
APOB	-2.018161	0.29184911	4.68E-12	1.55E-10
TNXB	-2.072358	0.29994611	4.88E-12	1.61E-10
MCHR1	-2.0340097	0.29569802	6.04E-12	1.98E-10
CHRNA9	4.82185041	0.70281402	6.85E-12	2.23E-10
ZG16	-2.627978	0.3836056	7.35E-12	2.39E-10
BDH1	-2.0373345	0.29762643	7.63E-12	2.47E-10
DNASE1L3	-2.107899	0.30826209	8.03E-12	2.59E-10
AC041040.2	2.80628595	0.41130011	8.92E-12	2.85E-10
ISLR2	2.64514482	0.38834767	9.67E-12	3.08E-10
ADAMTS6	2.21407801	0.32527921	9.99E-12	3.16E-10
STAB2	-4.1423955	0.60941176	1.07E-11	3.36E-10
DIO1	-2.8964546	0.42722434	1.20E-11	3.75E-10
ADH6	-2.4585883	0.36303684	1.27E-11	3.93E-10
MOGAT2	-2.1864465	0.32366968	1.43E-11	4.38E-10
AC068506.1	-3.5567103	0.52818486	1.65E-11	5.02E-10
APOM	-2.0759735	0.30875681	1.77E-11	5.33E-10
CRYM	-2.3077593	0.34443009	2.08E-11	6.22E-10
LRRN4	-2.2564751	0.33678406	2.08E-11	6.22E-10
COL8A1	3.3349102	0.49881984	2.30E-11	6.82E-10
SLC17A3	-2.0621111	0.31037449	3.05E-11	8.91E-10
SPP2	-2.341088	0.3528029	3.23E-11	9.38E-10
CCL16	-2.2545247	0.33982305	3.26E-11	9.46E-10
PCDHGC5	2.17889991	0.33004872	4.06E-11	1.16E-09
SERPINC1	-2.4808097	0.37593198	4.14E-11	1.18E-09
SHBG	-2.3674485	0.3588856	4.21E-11	1.19E-09
INMT	-2.2422183	0.34154607	5.21E-11	1.46E-09
CYP24A1	4.1329529	0.6298233	5.31E-11	1.49E-09
LINC00844	-3.2039444	0.48921158	5.78E-11	1.61E-09
ABCC2	-3.3590356	0.51301334	5.84E-11	1.62E-09
FETUB	-2.2693579	0.34735741	6.44E-11	1.77E-09
LRRC15	3.27090121	0.50104638	6.66E-11	1.82E-09
LEFTY1	3.31873113	0.51005897	7.69E-11	2.08E-09
GATM	-2.099451	0.32279813	7.83E-11	2.12E-09
HSD17B6	-2.3144219	0.35767577	9.75E-11	2.60E-09
PNPLA5	3.05664108	0.47379722	1.11E-10	2.93E-09
IGSF6	-2.5711627	0.39855808	1.11E-10	2.94E-09
UGT2B15	-2.0859421	0.32368191	1.16E-10	3.06E-09
AC087164.2	-3.2445752	0.5042072	1.23E-10	3.24E-09
LINC00607	2.51051347	0.39020555	1.24E-10	3.26E-09
AC093583.1	-3.3568282	0.52223798	1.29E-10	3.39E-09
CA5A	-3.0654934	0.47775442	1.39E-10	3.63E-09
AQP7P2	-2.1959847	0.34302132	1.53E-10	3.97E-09
IGF2BP3	2.2031989	0.34622905	1.97E-10	4.98E-09
RNU1-70P	-2.6278318	0.41320839	2.02E-10	5.10E-09
AKR1D1	-3.0801247	0.48538431	2.21E-10	5.55E-09
BCO1	-2.3153492	0.36584796	2.47E-10	6.13E-09
PLEKHG4B	2.54959681	0.40333177	2.59E-10	6.42E-09

PRRX2	3.35844478	0.5328171	2.92E-10	7.14E-09
AC254562.2	-2.5712011	0.40971799	3.48E-10	8.41E-09
F13B	-2.0840497	0.33365112	4.21E-10	1.01E-08
CRLF1	2.23727686	0.35925965	4.74E-10	1.12E-08
IL11	3.15398883	0.50847396	5.54E-10	1.29E-08
SLC10A1	-2.6204228	0.42266702	5.66E-10	1.31E-08
MUC5B	-2.8596038	0.46177968	5.92E-10	1.37E-08
KNG1	-2.0765578	0.33534606	5.93E-10	1.37E-08
SERPINA7	-2.102937	0.34026905	6.40E-10	1.47E-08
BARX1	2.14452401	0.34763924	6.88E-10	1.57E-08
AC016397.2	2.02335312	0.32953149	8.25E-10	1.87E-08
CES5A	-2.40217	0.39143394	8.42E-10	1.90E-08
UGT2B27P	-3.3288991	0.54309123	8.81E-10	1.99E-08
AC148477.2	2.06748429	0.33889853	1.06E-09	2.36E-08
CYP2B6	-2.7434841	0.45034928	1.12E-09	2.48E-08
LINC02257	2.50427626	0.41125898	1.13E-09	2.51E-08
PRODH2	-2.1056759	0.34646666	1.22E-09	2.70E-08
LINC00942	2.60865747	0.43071375	1.39E-09	3.03E-08
CYP4A22	-2.8598721	0.47264334	1.44E-09	3.13E-08
ABCG8	-2.1449823	0.3547552	1.48E-09	3.21E-08
FGF14	-2.6909832	0.44759891	1.83E-09	3.90E-08
APOF	-2.5163346	0.41953695	2.00E-09	4.23E-08
LINC02458	3.38021302	0.56378261	2.03E-09	4.28E-08
CRHBP	-2.1324524	0.35609695	2.12E-09	4.47E-08
LINC02454	2.53194658	0.42299415	2.15E-09	4.54E-08
C9	-2.007834	0.3357047	2.22E-09	4.65E-08
SMLR1	-2.368069	0.39654883	2.35E-09	4.90E-08
AFP	-2.920245	0.48978141	2.49E-09	5.17E-08
GDF2	-4.340526	0.73125422	2.93E-09	5.98E-08
USH2A	-2.5503356	0.42970547	2.94E-09	6.00E-08
KRT79	2.48572326	0.41932808	3.07E-09	6.23E-08
AC104667.2	-2.4754931	0.41780609	3.12E-09	6.34E-08
IGFL1	5.75252408	0.97130532	3.17E-09	6.43E-08
AC134312.5	2.53273937	0.4277279	3.19E-09	6.47E-08
CCL13	-4.7445166	0.80154402	3.23E-09	6.54E-08
LINC01050	2.57764107	0.43548209	3.24E-09	6.54E-08
CDK5R2	3.78179786	0.63898038	3.25E-09	6.56E-08
LPA	-2.3978556	0.40540364	3.32E-09	6.69E-08
UGT3A1	-2.3509674	0.3987153	3.72E-09	7.43E-08
COL9A1	3.53372248	0.60195669	4.35E-09	8.57E-08
MARCH	2.94964169	0.50340335	4.65E-09	9.12E-08
PCDH7	2.60865612	0.44652188	5.15E-09	9.98E-08
COL22A1	2.12175102	0.36324608	5.19E-09	1.00E-07
CSMD2	2.29126994	0.39247023	5.28E-09	1.02E-07
AC137056.2	-2.8469001	0.48814236	5.47E-09	1.05E-07
LINC01702	-3.6841709	0.63624179	7.02E-09	1.32E-07
LINC01615	2.25996855	0.3909605	7.45E-09	1.40E-07
SLC5A9	-2.118355	0.36650246	7.47E-09	1.40E-07

LINC02499	-3.7479757	0.64900163	7.70E-09	1.43E-07
KLHDC8A	2.33574811	0.40477037	7.90E-09	1.47E-07
APOH	-2.1156163	0.36744243	8.53E-09	1.57E-07
PKIA	2.24153277	0.38948166	8.66E-09	1.59E-07
STAC	2.13442722	0.37088672	8.67E-09	1.59E-07
NR1I3	-2.0233023	0.35242393	9.41E-09	1.72E-07
STMN2	2.62190264	0.45691677	9.57E-09	1.74E-07
LINC01146	-2.6139052	0.45827512	1.17E-08	2.10E-07
GDF10	2.96670702	0.5212356	1.26E-08	2.25E-07
WNT2	2.44684159	0.43039187	1.31E-08	2.33E-07
AL024508.2	-2.5510378	0.44907421	1.34E-08	2.38E-07
CYP3A43	-3.0264471	0.53312211	1.37E-08	2.43E-07
LINC02453	-3.4100239	0.60144486	1.43E-08	2.52E-07
GPR1	2.35267567	0.41559517	1.51E-08	2.65E-07
R3HDML	5.71887265	1.02223755	2.21E-08	3.77E-07
VIPR1	-2.0350201	0.36473462	2.41E-08	4.09E-07
TTPA	-2.0280854	0.36359949	2.44E-08	4.12E-07
POPDC3	2.61829382	0.46998994	2.53E-08	4.27E-07
GLYATL1	-2.9086128	0.52216009	2.54E-08	4.28E-07
GLYATL1	-2.9086128	0.52216009	2.54E-08	4.28E-07
PPP1R14C	2.06736036	0.37149038	2.62E-08	4.40E-07
FGF1	2.49219916	0.44797217	2.65E-08	4.44E-07
LINC01638	2.04548366	0.36850465	2.84E-08	4.75E-07
ALDH8A1	-2.065973	0.37317827	3.09E-08	5.13E-07
AHSG	-2.3673091	0.42860133	3.33E-08	5.49E-07
TESC-AS1	-2.2017357	0.39998291	3.70E-08	6.04E-07
HIST2H2BA	2.20313058	0.40133215	4.03E-08	6.54E-07
SCEL	-2.3825724	0.43507504	4.34E-08	7.03E-07
ANKRD22	-2.1462163	0.39258101	4.58E-08	7.36E-07
LINC01639	-2.5375682	0.46473069	4.75E-08	7.60E-07
S100P	-2.2139378	0.40563559	4.82E-08	7.70E-07
CCL23	-2.7360163	0.50163907	4.92E-08	7.84E-07
LINC01705	2.1250341	0.3896927	4.95E-08	7.88E-07
EYS	-2.0641847	0.37863121	4.99E-08	7.94E-07
SOGA3	2.00899353	0.36956684	5.45E-08	8.59E-07
CFHR4	-2.2426025	0.41349569	5.84E-08	9.16E-07
KIAA1755	2.65056589	0.49063014	6.58E-08	1.02E-06
DUSP5P1	2.38791966	0.44326354	7.16E-08	1.11E-06
AC093890.1	2.06558511	0.38389335	7.42E-08	1.15E-06
MYPN	-2.8607011	0.53220461	7.65E-08	1.18E-06
MMP16	2.01051337	0.37511378	8.33E-08	1.28E-06
TENM1	-2.133394	0.39957023	9.33E-08	1.42E-06
C14orf180	-4.4821212	0.84023024	9.59E-08	1.45E-06
ANKRD18B	-3.4580551	0.64874111	9.80E-08	1.48E-06
APOC1P1	-2.0726126	0.38901067	9.94E-08	1.50E-06
CCIN	2.28791353	0.43050182	1.07E-07	1.60E-06
SLC6A20	-2.2337205	0.42085282	1.11E-07	1.66E-06
LINC02027	-4.1115942	0.78309237	1.52E-07	2.20E-06

CTD-3080P12.3	-2.200089	0.41937402	1.55E-07	2.24E-06
SEMA3A	2.44689907	0.46668663	1.58E-07	2.28E-06
MROH2A	-2.2951629	0.43811961	1.62E-07	2.33E-06
AC120498.4	-2.1276035	0.40622822	1.63E-07	2.34E-06
LINC00513	-2.0070226	0.38412647	1.74E-07	2.48E-06
RAB26	-2.1501323	0.41191267	1.79E-07	2.55E-06
KRT17P8	-2.0435147	0.39186918	1.84E-07	2.61E-06
AC079061.1	-3.6318465	0.69653893	1.85E-07	2.61E-06
CBLN2	3.61674685	0.69416255	1.89E-07	2.66E-06
PLGLA	-2.0361649	0.39143193	1.97E-07	2.78E-06
TM4SF19	-2.5141896	0.48451006	2.11E-07	2.96E-06
CPEB1	2.18398203	0.42187276	2.26E-07	3.15E-06
CYP3A4	-3.3242682	0.64300754	2.34E-07	3.26E-06
IGF1R	2.89539774	0.56034276	2.38E-07	3.30E-06
KCNH2	2.34059833	0.45335634	2.43E-07	3.37E-06
AL356056.3	-2.4297398	0.47077222	2.45E-07	3.40E-06
LECT2	-2.0879528	0.40592554	2.69E-07	3.69E-06
DPF1	2.61543089	0.50908667	2.78E-07	3.81E-06
AC010931.2	3.34257959	0.65112127	2.84E-07	3.88E-06
AL445931.1	-2.6714287	0.5218821	3.07E-07	4.17E-06
AL845321.1	-3.804367	0.74506441	3.29E-07	4.44E-06
BX248415.1	-2.260408	0.44379674	3.52E-07	4.71E-06
SLC6A13	-2.0053085	0.39410465	3.61E-07	4.83E-06
AC090150.1	-3.9603903	0.77889272	3.68E-07	4.91E-06
ZNF648	-2.7501258	0.5409809	3.70E-07	4.94E-06
AP001781.2	-2.0908555	0.41166579	3.79E-07	5.04E-06
PHKA2-AS1	2.4824949	0.49361137	4.92E-07	6.38E-06
CST1	4.46629709	0.88821393	4.95E-07	6.40E-06
CYP2C8	-2.3564599	0.46993392	5.32E-07	6.82E-06
ARL4AP3	-2.8020832	0.56296414	6.45E-07	8.09E-06
SLC6A7	2.0885706	0.41978342	6.51E-07	8.17E-06
TNFSF18	2.09560261	0.42205666	6.86E-07	8.57E-06
SERPINB2	-2.9639858	0.59714009	6.92E-07	8.62E-06
HMGB1P10	-3.7882199	0.76534498	7.43E-07	9.20E-06
ALOX15	-4.1906011	0.84693242	7.50E-07	9.28E-06
FCAMR	-2.0940046	0.42344614	7.61E-07	9.40E-06
AKR1C5P	-2.4661435	0.49885574	7.67E-07	9.47E-06
AC073842.1	-2.1093745	0.42762632	8.11E-07	9.98E-06
ESR1	-3.7117971	0.7551803	8.87E-07	1.09E-05
AP001995.2	2.12598826	0.43379012	9.54E-07	1.16E-05
DGKI	2.43742497	0.49767502	9.70E-07	1.18E-05
ADRB1	-2.6462809	0.54127694	1.01E-06	1.22E-05
CAMK2A	2.10067697	0.42987053	1.03E-06	1.23E-05
LINC02535	-2.0776966	0.42693568	1.14E-06	1.35E-05
AL583810.1	-2.1087715	0.43335281	1.14E-06	1.36E-05
CYP3A7	-2.6754101	0.55717935	1.57E-06	1.82E-05
APOA1-AS	-2.9058261	0.60608662	1.63E-06	1.88E-05
GPR88	-2.9008623	0.60533208	1.65E-06	1.90E-05

TMEM244	4.16785956	0.87172781	1.74E-06	1.99E-05
WDR63	3.12433875	0.65351377	1.75E-06	2.00E-05
CLEC1B	-2.184833	0.45885297	1.92E-06	2.18E-05
SERPINA12	-3.3916761	0.71505106	2.10E-06	2.37E-05
AL450003.2	2.41770251	0.51027962	2.16E-06	2.42E-05
RHCG	2.20424735	0.46593407	2.24E-06	2.50E-05
DNAH17	2.63142539	0.55628719	2.24E-06	2.50E-05
RDH8	3.06842856	0.65137309	2.47E-06	2.74E-05
F13A1	-2.0669909	0.43901308	2.50E-06	2.76E-05
KSR2	2.45000753	0.52115812	2.59E-06	2.86E-05
LINC02076	2.38353016	0.50756835	2.65E-06	2.92E-05
TRPC5	-2.2225431	0.47375402	2.71E-06	2.98E-05
AC004160.1	-2.800146	0.59911359	2.96E-06	3.23E-05
RCOR2	2.35123078	0.50721799	3.56E-06	3.82E-05
PCOLCE-AS1	2.44982085	0.52942029	3.70E-06	3.96E-05
ACAN	3.45857191	0.75059802	4.07E-06	4.31E-05
DIO2	2.73692585	0.59645281	4.46E-06	4.67E-05
LEF1-AS1	2.74442176	0.59828499	4.49E-06	4.69E-05
AL133325.3	-2.0016895	0.43704941	4.65E-06	4.84E-05
AC020907.1	-3.7059101	0.81074488	4.85E-06	5.04E-05
ADRA1D	2.03316461	0.44586277	5.11E-06	5.28E-05
ABCC12	-3.8026833	0.83627497	5.44E-06	5.58E-05
AP003108.5	-2.8216378	0.62230172	5.78E-06	5.90E-05
FOXC2-AS1	2.97964736	0.65814497	5.97E-06	6.05E-05
ADH1C	-2.0948235	0.46344439	6.18E-06	6.24E-05
MUC21	-3.298311	0.73059578	6.35E-06	6.39E-05
FAM196A	2.0953343	0.46438046	6.42E-06	6.46E-05
KCNQ5	3.63919692	0.80767874	6.61E-06	6.64E-05
CXCL13	-2.5543721	0.56718671	6.68E-06	6.70E-05
SCGN	-2.2247689	0.49744124	7.73E-06	7.65E-05
DCX	-2.2796431	0.5100851	7.85E-06	7.74E-05
GUCA2B	-2.6477918	0.59287458	7.97E-06	7.84E-05
ATG9B	2.66957432	0.59778794	7.98E-06	7.85E-05
AC120498.8	3.29467474	0.73862449	8.17E-06	8.02E-05
PDZD3	-2.1316133	0.47857155	8.42E-06	8.23E-05
SPIC	-3.5973893	0.80952163	8.84E-06	8.58E-05
WDR11-AS1	-4.9155125	1.10642193	8.88E-06	8.62E-05
TMEM190	3.45229651	0.78061782	9.76E-06	9.38E-05
ARHGDI3	2.05806925	0.46576341	9.93E-06	9.53E-05
AP002852.2	2.61283429	0.59261306	1.04E-05	9.94E-05
SMUG1P1	-4.0748825	0.92992102	1.18E-05	0.0001113
CU634019.2	3.56889762	0.81453832	1.18E-05	0.00011149
AC136601.2	-3.7249805	0.85069852	1.19E-05	0.00011279
HULC	-2.0313006	0.46432239	1.22E-05	0.00011465
AGR2	-2.1240787	0.48707515	1.30E-05	0.00012137
PTCRA	-2.2795478	0.5227625	1.30E-05	0.00012149
FAM9A	-2.4626415	0.56505648	1.31E-05	0.00012267
AP002884.2	-2.4712847	0.57258359	1.59E-05	0.00014536

AC015468.1	-3.6789576	0.85267651	1.60E-05	0.00014607
UNC5B-AS1	2.2819796	0.52902751	1.61E-05	0.00014672
AC015909.1	2.06638068	0.47948159	1.64E-05	0.00014918
AP000897.2	-2.6838985	0.62426524	1.71E-05	0.0001558
CLEC2L	3.00711972	0.70036155	1.76E-05	0.00015924
CEND1	2.22103204	0.51780854	1.79E-05	0.00016235
NODAL	6.62125589	1.54873218	1.91E-05	0.00017152
CHRNA3	3.26098325	0.76398586	1.97E-05	0.00017659
FAM151A	-2.742901	0.64284763	1.98E-05	0.00017766
CHST8	2.30826587	0.5423988	2.08E-05	0.00018596
AC090125.1	4.06347677	0.95926313	2.27E-05	0.00020136
HAS1	2.11892763	0.50128028	2.37E-05	0.00020865
TMEM132D	2.37366913	0.56268694	2.46E-05	0.00021585
SELP	-2.9075579	0.68953512	2.48E-05	0.0002171
NMNAT2	2.17731128	0.51705817	2.54E-05	0.00022215
THRB-AS1	-2.3231402	0.55512235	2.85E-05	0.00024578
AC087045.2	-2.3105852	0.55367624	3.00E-05	0.00025725
CCDC173	-2.7117981	0.65102177	3.11E-05	0.00026513
AL109613.1	-2.1119314	0.50778517	3.19E-05	0.0002717
HCRTR1	2.16031947	0.52043444	3.31E-05	0.00028058
AOC1	-2.5438495	0.61321117	3.35E-05	0.00028321
CADPS	2.05544647	0.49638077	3.46E-05	0.000292
LRRC31	-2.1374865	0.51642477	3.49E-05	0.00029418
UPP2	-2.938655	0.71009587	3.50E-05	0.00029464
LINC01344	-3.7976235	0.92163421	3.78E-05	0.00031537
AC073072.1	2.08362623	0.50580302	3.80E-05	0.00031666
LINC01727	-5.0733305	1.24031368	4.31E-05	0.00035461
ACTN3	2.28470276	0.56000838	4.51E-05	0.0003695
AL354751.1	3.48865354	0.85609017	4.60E-05	0.00037638
ATP2B3	2.27073662	0.55739547	4.62E-05	0.00037819
CYP4A11	-2.793284	0.68763897	4.86E-05	0.00039614
AKR1B15	-2.538284	0.62561993	4.97E-05	0.00040314
CSPG4P13	3.38579366	0.83453415	4.97E-05	0.00040323
LINC00877	-3.3954924	0.8414646	5.46E-05	0.00043814
HMGB3P7	2.20236516	0.54669595	5.61E-05	0.00044888
CD160	-2.5515606	0.63420297	5.74E-05	0.00045785
DRAXINP1	-2.4762207	0.61565694	5.77E-05	0.00045972
GSTA7P	-3.1675906	0.78785881	5.81E-05	0.00046242
AL023881.1	-2.8049357	0.70139664	6.36E-05	0.00050146
AC026904.3	2.00041297	0.50042422	6.40E-05	0.00050448
CCL19	-3.3592174	0.84132658	6.53E-05	0.0005131
RAB3C	-2.9623417	0.74200715	6.54E-05	0.00051387
LINC02158	-2.1191086	0.5308968	6.56E-05	0.00051539
GAS2	-2.192625	0.55132885	6.98E-05	0.00054461
RPSAP52	2.10210381	0.52879179	7.03E-05	0.00054789
TECTB	4.16371169	1.04880072	7.19E-05	0.00055908
Z97200.1	3.29056606	0.82981178	7.33E-05	0.00056913
SLC27A6	2.32536114	0.58902742	7.89E-05	0.00060958

AL035665.1	2.30542044	0.58533881	8.20E-05	0.0006313
ST8SIA6-AS1	2.86077256	0.72931288	8.76E-05	0.00067045
AL807761.4	-2.7443402	0.70133403	9.11E-05	0.00069664
AL928921.1	-3.039193	0.7782582	9.42E-05	0.00071672
TFF2	-3.287997	0.84295989	9.60E-05	0.00072945
LINC01831	-3.2285797	0.83080991	0.00010188	0.00076975
CNGA3	3.21342642	0.82947349	0.00010704	0.00080325
HMSD	3.46982537	0.8982129	0.00011199	0.00083622
AKNAD1	2.51494255	0.65149278	0.00011326	0.00084398
AL358473.1	2.13009977	0.55301449	0.00011725	0.00086996
CTBP1-AS	2.69113423	0.69900301	0.00011814	0.00087574
AC036214.3	-2.090339	0.54304532	0.00011846	0.00087725
HPCAL4	2.35376751	0.61185475	0.0001196	0.00088303
TMEM105	-2.1479254	0.55899898	0.00012181	0.00089719
COL20A1	2.7057522	0.7062443	0.00012753	0.000934
AC148477.1	3.22488723	0.84446388	0.00013407	0.00097717

Appendix 4.B

Genes differently expressed in the comparison between profibrogenic treatment and inhibited PCLs

Gene	log2FoldChange	lfcSE	p-value	p-adjust
FN1	2.58289707	0.10301996	1.01E-138	2.66E-134
ISLR	5.73327232	0.24480777	2.71E-121	3.56E-117
LTBP2	3.59135407	0.16511802	6.87E-105	6.03E-101
BMP1	2.08354798	0.09719454	6.05E-102	3.98E-98
BGN	2.61421082	0.1229972	3.01E-100	1.59E-96
GDA	-2.3015268	0.11654486	8.35E-87	3.66E-83
NES	2.31449661	0.11974401	3.08E-83	1.16E-79
FOXS1	4.53407522	0.23510792	7.17E-83	2.36E-79
TNFSF4	4.22231501	0.22285177	4.70E-80	1.37E-76
RAMP2	2.57059317	0.14020079	4.34E-75	1.14E-71
COL5A1	2.95975232	0.16420327	1.24E-72	2.97E-69
PLVAP	3.30676694	0.19249522	3.85E-66	8.45E-63
UNC5B	2.35920179	0.13960336	4.55E-64	9.22E-61
ITGBL1	3.87401784	0.2313902	6.44E-63	1.13E-59
SULF2	2.08870319	0.12519556	1.73E-62	2.84E-59
TIMP1	2.10925342	0.12861197	1.91E-60	2.79E-57
CAVIN4	3.91667638	0.24081415	1.77E-59	2.33E-56
FHL3	2.17818133	0.13433907	4.01E-59	5.03E-56
COL1A2	2.35085647	0.14542566	8.85E-59	1.01E-55
TRNP1	-2.0064214	0.12508576	6.68E-58	7.03E-55
RASL12	2.56902832	0.16112846	3.14E-57	3.06E-54
FMOD	3.50811002	0.22000512	3.06E-57	3.06E-54
HOXB2	2.29692881	0.14530338	2.75E-56	2.58E-53
LBH	2.44297716	0.15487127	4.68E-56	4.25E-53
LMCD1	3.07984812	0.19621258	1.60E-55	1.36E-52
ADAM19	2.16748665	0.13877931	5.47E-55	4.50E-52
FMNL3	2.10640803	0.13706049	2.66E-53	2.13E-50
MAGED4B	3.03969852	0.19806898	3.73E-53	2.89E-50
COL1A1	3.11829964	0.20410679	1.08E-52	8.09E-50
ACTA2	3.49068	0.22867855	1.32E-52	9.63E-50
RCN3	2.41084212	0.15806414	1.59E-52	1.13E-49
HTRA3	3.69748492	0.24319267	3.33E-52	2.25E-49
CARMN	3.00152356	0.19741936	3.34E-52	2.25E-49
HEYL	3.19831473	0.21264407	3.97E-51	2.55E-48
NALCN	4.10366726	0.27401319	1.05E-50	6.59E-48
CTGF	3.28608905	0.22079041	4.23E-50	2.59E-47
AL033397.1	-2.9788233	0.20022399	4.62E-50	2.76E-47
TSPAN2	7.00445382	0.47581686	4.73E-49	2.77E-46
TRIL	2.92406078	0.19910803	7.95E-49	4.55E-46
FIBIN	3.81178825	0.26020428	1.36E-48	7.63E-46
S100A9	-2.9762578	0.20328908	1.55E-48	8.50E-46
PALLD	2.37220924	0.16286227	4.64E-48	2.49E-45

GPR173	2.12904202	0.14641546	6.65E-48	3.50E-45
LINC02015	-3.5598759	0.24492984	7.35E-48	3.79E-45
LINC01614	8.30685517	0.57302086	1.27E-47	6.45E-45
NRARP	2.01377947	0.14001434	6.65E-47	3.24E-44
LEF1	3.86134731	0.26856812	7.16E-47	3.43E-44
PDGFB	2.32335299	0.16192379	1.09E-46	5.12E-44
FAM26E	2.01117544	0.14118374	4.81E-46	2.22E-43
TGFBI	2.82470699	0.19927485	1.31E-45	5.84E-43
PKNOX2	3.72828953	0.26325036	1.56E-45	6.86E-43
P4HA3	2.64482287	0.18909558	1.88E-44	7.73E-42
WNT5B	3.00091801	0.21466017	2.07E-44	8.38E-42
WNT5A	3.75048724	0.27059488	1.10E-43	4.34E-41
SPOCD1	2.86772002	0.20741253	1.77E-43	6.76E-41
DACT1	3.6081129	0.26169569	3.03E-43	1.14E-40
LRRC32	2.30350392	0.16709749	3.12E-43	1.16E-40
TUBA1A	2.26131345	0.16515302	1.13E-42	4.08E-40
CTHRC1	2.72302679	0.1989079	1.17E-42	4.15E-40
VSTM4	2.05599521	0.1504172	1.56E-42	5.49E-40
TTYH2	3.11747581	0.22835599	1.97E-42	6.73E-40
NXPH4	3.23125429	0.23667623	1.95E-42	6.73E-40
CNN1	4.4991248	0.33265873	1.12E-41	3.72E-39
UCN2	4.05963082	0.30057209	1.43E-41	4.72E-39
PLXDC2	2.07426513	0.15384267	1.97E-41	6.40E-39
ADAMTS14	3.26896286	0.24419076	7.21E-41	2.29E-38
SPARC	2.19379754	0.16404312	8.66E-41	2.68E-38
ADAMTS10	2.82587196	0.21162047	1.13E-40	3.46E-38
TIMP3	2.31878609	0.17428045	2.17E-40	6.56E-38
ADGRA2	2.11008996	0.15989091	9.12E-40	2.70E-37
MRC2	3.46566793	0.26501041	4.43E-39	1.30E-36
C3orf80	3.77303957	0.28901475	5.96E-39	1.73E-36
MEX3B	2.53300776	0.19555632	2.26E-38	6.34E-36
MGP	3.39007988	0.26281121	4.54E-38	1.22E-35
IL1RL1	-3.760873	0.29171054	4.96E-38	1.32E-35
MFAP2	3.97613383	0.30900253	6.85E-38	1.80E-35
TGFB1I1	2.18777179	0.17008125	7.26E-38	1.89E-35
DKK3	3.15706214	0.24568367	8.59E-38	2.22E-35
RAB3B	-3.1647621	0.24688375	1.29E-37	3.29E-35
PMEPA1	3.06784177	0.23935169	1.31E-37	3.32E-35
UGT1A6	-2.3434003	0.18413924	4.23E-37	1.05E-34
CD34	2.23617218	0.17579746	4.57E-37	1.12E-34
CXCR4	2.27865732	0.1795603	6.70E-37	1.61E-34
NREP	2.54124485	0.20025413	6.71E-37	1.61E-34
ATP10A	2.73554743	0.21562967	7.04E-37	1.66E-34
DPP4	-2.2930525	0.18122432	1.08E-36	2.51E-34
LAMC3	2.5408949	0.20231259	3.54E-36	8.17E-34
ADCY4	2.05926714	0.16421772	4.52E-36	1.03E-33
ESM1	3.73618147	0.29800711	4.67E-36	1.06E-33
LTBP1	2.14302254	0.1715309	8.10E-36	1.81E-33

MYL9	2.94161248	0.23620746	1.34E-35	2.96E-33
ALDH1L2	2.07551005	0.16696433	1.78E-35	3.90E-33
ST6GAL2	4.78884982	0.38806678	5.50E-35	1.19E-32
ALDH3A1	-5.7738282	0.46877757	7.36E-35	1.57E-32
NUAK1	2.1913264	0.17823709	9.70E-35	2.06E-32
SCG5	3.13353749	0.25563868	1.53E-34	3.19E-32
FAP	2.86006971	0.23486628	4.10E-34	8.37E-32
PDGFRB	2.1200123	0.17424136	4.65E-34	9.39E-32
CST2	5.90239186	0.48512442	4.67E-34	9.39E-32
KCNG1	3.2737873	0.26922046	5.06E-34	1.01E-31
CDH11	3.66760056	0.3023795	7.40E-34	1.47E-31
GAL	3.65374744	0.30129842	7.63E-34	1.50E-31
COL16A1	2.72032516	0.22483079	1.06E-33	2.07E-31
MXRA8	2.82609933	0.23375994	1.20E-33	2.32E-31
MMP11	3.37606007	0.27952183	1.38E-33	2.65E-31
STEAP4	-4.0396343	0.33470522	1.54E-33	2.93E-31
CYP1A2	-4.0171024	0.33327666	1.86E-33	3.48E-31
PTK7	2.55993239	0.21382218	4.97E-33	8.96E-31
SERPINE2	2.83642092	0.23858868	1.36E-32	2.42E-30
BMF	2.47442106	0.20844587	1.68E-32	2.97E-30
F2RL3	2.31360196	0.19540067	2.42E-32	4.16E-30
NOX4	4.69861809	0.39765575	3.23E-32	5.53E-30
IL13RA2	-5.3393172	0.45271823	4.20E-32	7.08E-30
AL135924.2	-3.2883087	0.27887137	4.32E-32	7.24E-30
PDLIM3	2.18037233	0.18619502	1.13E-31	1.85E-29
SPOCK1	4.9007075	0.41894737	1.31E-31	2.13E-29
KIF26B	3.48202088	0.2985589	1.98E-31	3.13E-29
CREB3L1	3.01934276	0.25964871	2.95E-31	4.65E-29
CYP2B7P	-3.8072111	0.32901447	5.74E-31	9.00E-29
COL7A1	3.87645355	0.33843918	2.25E-30	3.42E-28
STRA6	4.82217044	0.42390088	5.53E-30	8.22E-28
FCN2	-3.9284234	0.34553834	5.97E-30	8.83E-28
PLS1	-2.020941	0.17806386	7.46E-30	1.09E-27
BMP10	-5.5186024	0.48622521	7.43E-30	1.09E-27
AEBP1	2.12596195	0.18736426	7.70E-30	1.10E-27
ADAMTS6	4.31945533	0.38156726	1.04E-29	1.47E-27
TMEM119	3.53301435	0.31307664	1.56E-29	2.16E-27
SLC51B	-2.8526646	0.25314602	1.87E-29	2.58E-27
MUC5B	-5.812275	0.51592968	1.94E-29	2.66E-27
CYP3A5	-2.362565	0.21020749	2.62E-29	3.55E-27
AC112721.2	5.27027524	0.47141	5.12E-29	6.91E-27
ISLR2	5.6303017	0.50374274	5.29E-29	7.10E-27
CYP2C9	-2.999768	0.26923189	7.84E-29	1.05E-26
MPZ	-2.2261812	0.19987719	8.22E-29	1.09E-26
CLSTN2	3.41024826	0.30641786	9.02E-29	1.19E-26
MLLT11	2.36214458	0.21358461	1.97E-28	2.52E-26
TAGLN	2.54310322	0.22998684	2.01E-28	2.56E-26
APCDD1L	4.70605011	0.42670005	2.77E-28	3.46E-26

ARSI	2.97335991	0.26972236	2.93E-28	3.64E-26
NOTCH3	3.05330024	0.27718021	3.21E-28	3.97E-26
SYT1	2.89342456	0.26410504	6.25E-28	7.62E-26
AC112721.1	4.64711211	0.4250717	8.06E-28	9.73E-26
TTC39A	-2.2755174	0.20826319	8.64E-28	1.03E-25
HAS3	-2.0847308	0.19079667	8.62E-28	1.03E-25
CILP	4.33649472	0.39704616	9.06E-28	1.08E-25
DRP2	5.5067709	0.50458974	9.95E-28	1.17E-25
HOXB5	2.07514042	0.19019304	1.02E-27	1.20E-25
COMP	6.41298186	0.58833965	1.15E-27	1.34E-25
VASH1	2.02710752	0.18623001	1.36E-27	1.57E-25
KANK4	5.43382125	0.50020759	1.73E-27	1.96E-25
MSRB3	2.324994	0.21409345	1.79E-27	2.03E-25
ADAM12	3.70015373	0.3408436	1.87E-27	2.10E-25
C5orf46	4.78913919	0.44196452	2.32E-27	2.59E-25
KIT	2.53711743	0.2342979	2.52E-27	2.79E-25
UGT2B10	-4.2283543	0.39173468	3.68E-27	4.05E-25
MUC6	-4.2132459	0.39625215	2.10E-26	2.20E-24
POSTN	3.04336844	0.28642226	2.27E-26	2.36E-24
CRLF1	4.28847661	0.40440697	2.84E-26	2.94E-24
CCDC74A	2.14639239	0.20267341	3.30E-26	3.40E-24
WNT4	3.53944079	0.33435484	3.47E-26	3.55E-24
ALPK2	4.23158062	0.40197105	6.48E-26	6.54E-24
MAP1A	2.4339708	0.23136525	6.98E-26	7.02E-24
SYN1	2.30620707	0.21958619	8.41E-26	8.39E-24
PCSK9	-2.1032927	0.20114166	1.36E-25	1.35E-23
AP000892.3	2.45251736	0.23777843	6.07E-25	5.79E-23
PPP1R14A	3.17466345	0.30867136	8.24E-25	7.78E-23
CA12	-2.9108117	0.28306278	8.38E-25	7.88E-23
VCAN	2.22929834	0.21712179	9.87E-25	9.22E-23
S1PR5	2.83494299	0.27623326	1.04E-24	9.64E-23
BIRC3	-2.7090206	0.26399583	1.05E-24	9.73E-23
COL5A3	2.28991737	0.22383466	1.45E-24	1.33E-22
QPCT	2.03647976	0.19959227	1.92E-24	1.75E-22
GPAT3	-2.2872822	0.22476556	2.53E-24	2.27E-22
ANKRD22	-4.3215941	0.425196	2.88E-24	2.57E-22
LEFTY1	5.88376124	0.58283303	5.81E-24	5.08E-22
IGLON5	2.65980991	0.26362683	6.16E-24	5.37E-22
LAMP5	3.38204848	0.33627754	8.53E-24	7.29E-22
UGT1A1	-2.5555986	0.25550697	1.49E-23	1.26E-21
MDFI	2.60030289	0.26029247	1.69E-23	1.40E-21
FNDC1	3.29927581	0.33109477	2.17E-23	1.78E-21
SLC26A10	2.68219751	0.27127772	4.73E-23	3.81E-21
ARL14	-2.7005031	0.27397897	6.42E-23	5.14E-21
SLC22A17	2.40767899	0.24441457	6.80E-23	5.43E-21
UGT1A4	-2.9078847	0.29627724	9.73E-23	7.69E-21
GDF6	4.54116017	0.46303367	1.05E-22	8.25E-21
NEXN	2.15172331	0.21940599	1.05E-22	8.25E-21

LINGO1	2.32562486	0.23774222	1.34E-22	1.04E-20
UGT2B11	-3.3055511	0.33800922	1.38E-22	1.06E-20
CYP2A6	-4.5296786	0.4643439	1.76E-22	1.34E-20
AL354719.2	-2.1418301	0.21993221	2.06E-22	1.56E-20
IL11	5.59899147	0.57496697	2.08E-22	1.56E-20
SRRM3	2.43588339	0.25086586	2.74E-22	2.05E-20
ZNF469	2.19053455	0.2260637	3.33E-22	2.49E-20
THRSP	-4.3192089	0.44682439	4.19E-22	3.11E-20
ANKRD33	-3.3599257	0.34845929	5.30E-22	3.91E-20
HOXB3	2.06084696	0.21512283	9.72E-22	7.01E-20
FOXQ1	-2.761091	0.28840924	1.03E-21	7.43E-20
NAP1L3	2.05482989	0.21509109	1.26E-21	8.94E-20
KIAA1755	5.26327761	0.55303957	1.78E-21	1.25E-19
COL15A1	2.84367819	0.29924427	2.04E-21	1.43E-19
SEMA7A	2.03584722	0.2148955	2.70E-21	1.88E-19
FBXO32	2.14167505	0.2268124	3.64E-21	2.52E-19
AL031651.2	6.02850041	0.63981343	4.41E-21	3.03E-19
ZNF365	4.88855285	0.51926094	4.76E-21	3.26E-19
PPP1R14C	5.10004625	0.54393574	6.84E-21	4.63E-19
COLEC10	-3.2544893	0.34865203	1.01E-20	6.78E-19
TSPAN8	-2.476018	0.26540112	1.07E-20	7.08E-19
TPM2	2.37677134	0.25521003	1.24E-20	8.20E-19
MRAS	2.35439314	0.25281688	1.25E-20	8.21E-19
LRRN2	2.9590442	0.31797105	1.33E-20	8.71E-19
WNT9A	2.68124856	0.28813633	1.33E-20	8.74E-19
NA	2.71220214	0.29163895	1.41E-20	9.19E-19
ADAMTS7	2.40347349	0.25919797	1.81E-20	1.18E-18
ADGRD1	2.69501415	0.29157602	2.40E-20	1.54E-18
ADAMTS16	8.21309453	0.88898541	2.49E-20	1.59E-18
SOX8	2.35122892	0.25558392	3.60E-20	2.28E-18
ZP1	3.33351128	0.36298696	4.17E-20	2.63E-18
ISL2	2.54165613	0.27680973	4.23E-20	2.67E-18
MMP2	2.10384281	0.22959546	5.04E-20	3.14E-18
GSTA2	-4.3663014	0.47664762	5.17E-20	3.22E-18
NHS	2.86843404	0.31348505	5.69E-20	3.51E-18
COL22A1	3.77182334	0.41247084	5.99E-20	3.70E-18
SGCD	2.35472568	0.2576814	6.35E-20	3.88E-18
CDX1	3.22069913	0.35346163	8.10E-20	4.92E-18
CYP3A4	-6.4913479	0.71301979	8.70E-20	5.27E-18
RBP4	-2.569091	0.28242407	9.32E-20	5.62E-18
EGR2	2.80338883	0.30895434	1.15E-19	6.91E-18
INHBA	2.76799852	0.30516906	1.19E-19	7.10E-18
ANO4	4.40622908	0.4861085	1.25E-19	7.47E-18
BVES	2.17585915	0.24161852	2.15E-19	1.25E-17
AF111169.2	2.02913958	0.22633862	3.10E-19	1.79E-17
AGR2	-4.8236373	0.54197936	5.58E-19	3.17E-17
TC2N	-2.1575999	0.2424839	5.69E-19	3.22E-17
FAT3	4.65269177	0.52406715	6.80E-19	3.84E-17

LINC00607	3.99655976	0.450393	7.09E-19	3.99E-17
LINC01711	4.82817874	0.54420952	7.19E-19	4.04E-17
FAM171A2	3.01494855	0.33997583	7.44E-19	4.17E-17
AGMAT	-2.100846	0.2369459	7.56E-19	4.22E-17
CCDC184	2.38009078	0.26961188	1.07E-18	5.90E-17
DNASE1L3	-3.0231926	0.34266426	1.12E-18	6.16E-17
SLCO4A1	-3.0368612	0.34463891	1.23E-18	6.77E-17
C1QTNF1	-2.2066563	0.25088218	1.42E-18	7.79E-17
TNC	2.31826336	0.26390286	1.57E-18	8.58E-17
LINC01485	-2.1553558	0.24536863	1.58E-18	8.59E-17
MYO7B	-4.0687922	0.46410179	1.83E-18	9.90E-17
GPM6A	-2.3979003	0.27388191	2.04E-18	1.09E-16
COL4A2	2.20109226	0.25271869	3.05E-18	1.61E-16
AL139393.2	3.00668818	0.345831	3.50E-18	1.84E-16
HOXB-AS1	2.51172106	0.28954078	4.14E-18	2.16E-16
HCN2	2.40382041	0.27719862	4.25E-18	2.21E-16
XYLT1	2.18588033	0.25212835	4.33E-18	2.25E-16
AC080038.1	2.44448591	0.28210967	4.51E-18	2.34E-16
ITGA10	2.1372924	0.24669842	4.57E-18	2.36E-16
AP000695.2	2.06663855	0.23878974	4.94E-18	2.54E-16
GSTA1	-3.1316307	0.36225436	5.39E-18	2.74E-16
AC026462.3	-4.3924244	0.50818702	5.46E-18	2.78E-16
FABP1	-3.7507832	0.43430929	5.81E-18	2.95E-16
HRG	-3.3219392	0.38471206	5.88E-18	2.98E-16
NR2F1-AS1	2.17942036	0.25240712	5.90E-18	2.98E-16
BMP8A	2.30247906	0.26705313	6.59E-18	3.32E-16
C2orf27A	2.66729426	0.30970601	7.16E-18	3.58E-16
AC145098.2	2.14017097	0.24877652	7.78E-18	3.87E-16
STAB2	-5.7592032	0.67017837	8.43E-18	4.18E-16
FZD2	2.04902338	0.23887869	9.68E-18	4.78E-16
AC013275.1	3.42782895	0.39975345	9.92E-18	4.87E-16
AC092868.1	-2.0059128	0.23412961	1.06E-17	5.18E-16
CCL23	-4.5004816	0.52713951	1.37E-17	6.64E-16
AIRE	2.48818459	0.291859	1.52E-17	7.36E-16
MYOSLID	3.54416427	0.41708552	1.94E-17	9.29E-16
GLI1	2.75319514	0.32533319	2.61E-17	1.23E-15
SH2D5	-2.1265237	0.25160165	2.86E-17	1.34E-15
GCH1	-2.0117269	0.23862985	3.45E-17	1.59E-15
CNDP1	-2.8264411	0.33712631	5.12E-17	2.33E-15
CHAC1	2.52161153	0.3009708	5.37E-17	2.43E-15
CCDC80	2.40169128	0.28684676	5.63E-17	2.54E-15
PNPLA5	4.50323817	0.53826934	5.95E-17	2.67E-15
EREG	-2.4589334	0.29622652	1.03E-16	4.57E-15
FA2H	-2.9125542	0.35103413	1.07E-16	4.71E-15
F13A1	-4.0154094	0.48420654	1.11E-16	4.87E-15
SSC5D	2.7276957	0.32985467	1.35E-16	5.89E-15
OIT3	-3.78277	0.45777135	1.42E-16	6.18E-15
NKD1	3.11902271	0.37826078	1.64E-16	7.11E-15

CCL11	4.78095122	0.57987964	1.66E-16	7.16E-15
SAA4	-2.8446342	0.34531731	1.75E-16	7.56E-15
FLNC	2.28183051	0.2771742	1.83E-16	7.88E-15
AKR7A3	-2.6020915	0.31678445	2.14E-16	9.11E-15
AZIN2	2.78322561	0.33904254	2.23E-16	9.45E-15
CASC15	3.83220951	0.46731582	2.39E-16	1.01E-14
KSR2	5.01655317	0.61219975	2.52E-16	1.06E-14
CD200	2.3357522	0.2855891	2.87E-16	1.20E-14
ADAM23	2.90465323	0.35560268	3.13E-16	1.30E-14
CYP2A7	-5.3170103	0.65104716	3.17E-16	1.31E-14
C9orf152	-2.9420654	0.36038121	3.25E-16	1.35E-14
LMOD1	2.58991151	0.3172681	3.26E-16	1.35E-14
LINC01943	2.40085546	0.29425645	3.38E-16	1.39E-14
ACE	2.40522882	0.29523486	3.74E-16	1.54E-14
PDLIM4	2.26946203	0.27875649	3.91E-16	1.61E-14
GCNT3	-2.7094195	0.33316576	4.21E-16	1.73E-14
NR0B2	-2.4975753	0.30754442	4.62E-16	1.89E-14
MYRIP	-2.0966008	0.25968899	6.83E-16	2.75E-14
CHST6	2.0149606	0.24957216	6.82E-16	2.75E-14
DCSTAMP	2.93134074	0.36445045	8.75E-16	3.50E-14
MFAP4	2.59048043	0.32213833	8.87E-16	3.54E-14
NAV1	2.04427249	0.25459612	9.79E-16	3.88E-14
TRIM15	-2.0897272	0.26068825	1.09E-15	4.29E-14
BCO1	-3.0696131	0.38331437	1.17E-15	4.56E-14
AC006058.1	-2.7216423	0.33996179	1.19E-15	4.64E-14
AP001043.1	-2.4298383	0.30382287	1.27E-15	4.94E-14
NKILA	3.10648189	0.3884391	1.27E-15	4.94E-14
RAB9B	2.42179263	0.30360642	1.50E-15	5.83E-14
PLA1A	-2.3532398	0.2956546	1.73E-15	6.66E-14
VGLL3	2.79913018	0.35414945	2.71E-15	1.02E-13
HLF	-3.1180137	0.39639468	3.66E-15	1.37E-13
AC008035.1	-2.256196	0.28716272	3.94E-15	1.47E-13
GLI2	2.54435944	0.3240605	4.11E-15	1.53E-13
SNAP25	2.99972598	0.38304789	4.83E-15	1.78E-13
CLEC1B	-3.8737215	0.49468	4.85E-15	1.79E-13
GJA1	2.04313838	0.26168586	5.83E-15	2.13E-13
MCHR1	-2.5256333	0.32527899	8.20E-15	2.97E-13
HPGD	-2.0611623	0.26608823	9.47E-15	3.41E-13
GDF2	-5.9346397	0.77118789	1.41E-14	4.99E-13
LINC01638	4.83147262	0.62845518	1.50E-14	5.28E-13
NPPC	4.21653145	0.54938129	1.65E-14	5.77E-13
MT3	-3.0351104	0.39648623	1.93E-14	6.72E-13
AKR1B10	-3.1463917	0.41117614	1.98E-14	6.86E-13
BPI	5.37811854	0.70391923	2.17E-14	7.50E-13
CCDC144NL-AS1	4.48106048	0.5887407	2.71E-14	9.31E-13
CCDC144NL-AS1	4.48106048	0.5887407	2.71E-14	9.31E-13
CCDC144NL-AS1	4.48106048	0.5887407	2.71E-14	9.31E-13
MUC2	-4.7111778	0.61937214	2.82E-14	9.65E-13

DOCK10	2.28606861	0.30075735	2.94E-14	1.00E-12
LRP4	2.07084743	0.27253514	3.00E-14	1.02E-12
SV2B	2.3134424	0.30460076	3.08E-14	1.05E-12
PTHLH	3.20875271	0.42322296	3.41E-14	1.15E-12
SULT2A1	-2.9889723	0.39471985	3.66E-14	1.23E-12
RPLP0P2	2.31265193	0.30551468	3.74E-14	1.25E-12
VIL1	-2.020689	0.26879371	5.58E-14	1.85E-12
CYP3A43	-4.2760882	0.57000478	6.29E-14	2.07E-12
EPHB2	2.15836272	0.28778152	6.38E-14	2.10E-12
MPP4	2.85838223	0.38329172	8.82E-14	2.87E-12
FP700125.1	-2.0734044	0.27862583	9.95E-14	3.22E-12
MUC21	-5.4325879	0.73008027	9.99E-14	3.22E-12
AC020571.1	4.09413359	0.55062683	1.04E-13	3.36E-12
CRHBP	-2.9299141	0.39489108	1.18E-13	3.78E-12
AC093583.1	-4.1036179	0.55361478	1.24E-13	3.98E-12
DPYSL3	2.00618356	0.27091476	1.31E-13	4.19E-12
SLC2A2	-2.489026	0.33680108	1.47E-13	4.67E-12
PTX3	-2.5662519	0.34784186	1.61E-13	5.09E-12
FAM9A	-4.2237009	0.57395315	1.85E-13	5.82E-12
HHIP	3.26470914	0.44426688	2.00E-13	6.28E-12
AKR1C4	-2.7663374	0.37650633	2.02E-13	6.33E-12
SLC17A3	-2.5368599	0.3459512	2.25E-13	7.00E-12
DDC	-2.988118	0.408582	2.60E-13	8.06E-12
HSD17B13	-2.9067363	0.39851045	3.01E-13	9.20E-12
SCEL	-3.5167525	0.48318136	3.38E-13	1.03E-11
MAPK15	2.45858911	0.33808225	3.54E-13	1.07E-11
TFF3	-3.2819522	0.4515179	3.63E-13	1.10E-11
TESC-AS1	-3.0721647	0.42339859	3.99E-13	1.20E-11
FGF7	-3.1151707	0.42983286	4.25E-13	1.27E-11
ITGB6	2.23469225	0.30899874	4.76E-13	1.42E-11
ITGB6	2.23469225	0.30899874	4.76E-13	1.42E-11
GPD1	-2.8091971	0.38953392	5.53E-13	1.63E-11
RCOR2	4.14828682	0.57583348	5.85E-13	1.72E-11
AL117378.1	-3.5102454	0.48746941	5.98E-13	1.76E-11
ACKR1	-4.3996536	0.61139286	6.20E-13	1.81E-11
CSPG4	2.48403573	0.345671	6.67E-13	1.94E-11
APOA2	-2.4403333	0.33960607	6.68E-13	1.94E-11
HMCN2	2.57966071	0.35998634	7.72E-13	2.23E-11
LRRN4	-2.6439115	0.3693877	8.21E-13	2.37E-11
KLHDC8A	3.94929297	0.5517927	8.23E-13	2.37E-11
CYP24A1	5.050007	0.70598032	8.48E-13	2.43E-11
SCTR	4.04619653	0.56702833	9.62E-13	2.74E-11
TRIM40	-3.7555214	0.52649155	9.81E-13	2.79E-11
PODXL	2.0889487	0.29294136	9.97E-13	2.83E-11
CHRNA9	6.1966734	0.87149697	1.16E-12	3.28E-11
AP000550.1	2.06783064	0.29090925	1.18E-12	3.33E-11
GOLT1A	-2.0440078	0.28759017	1.18E-12	3.34E-11
PAH	-2.7146312	0.38235937	1.25E-12	3.51E-11

COL8A1	3.97480579	0.56039073	1.31E-12	3.68E-11
AP000525.1	2.78300779	0.39290322	1.41E-12	3.94E-11
MIR181A2HG	2.86256994	0.40447457	1.47E-12	4.10E-11
SLC3A1	-2.8158351	0.3978966	1.48E-12	4.11E-11
SLC51A	-2.0153489	0.28507553	1.55E-12	4.32E-11
DUXAP8	2.7499245	0.38972281	1.71E-12	4.72E-11
BHMT	-2.2778137	0.32336949	1.87E-12	5.12E-11
LRCOL1	-2.3456135	0.33315464	1.91E-12	5.24E-11
AL445931.1	-3.6632171	0.5218875	2.23E-12	6.05E-11
RASD2	2.26172568	0.32290629	2.48E-12	6.65E-11
ROBO4	2.02455826	0.2900303	2.94E-12	7.81E-11
NCKAP5	-2.94918	0.42257177	2.97E-12	7.88E-11
SFRP4	3.67780965	0.5290747	3.62E-12	9.52E-11
CAPN8	-2.2668313	0.32630696	3.73E-12	9.81E-11
LINC01705	3.13923182	0.45219178	3.86E-12	1.01E-10
ACTG2	2.99861431	0.43228882	4.02E-12	1.05E-10
FAM186B	2.02188692	0.29148758	4.02E-12	1.05E-10
AC009093.1	2.25398078	0.32548181	4.36E-12	1.13E-10
RAB39B	2.60447417	0.37734238	5.12E-12	1.32E-10
SERPINB2	-4.5967676	0.66670028	5.39E-12	1.39E-10
LINC00513	-2.8122736	0.40906426	6.20E-12	1.58E-10
TTR	-3.0678084	0.44711601	6.82E-12	1.73E-10
RFTN2	2.38111535	0.3471103	6.89E-12	1.75E-10
ABCC2	-3.842509	0.56047656	7.09E-12	1.79E-10
CCL13	-5.7376207	0.83754854	7.36E-12	1.85E-10
CRMP1	3.09570074	0.45299317	8.26E-12	2.07E-10
CEP126	2.16934312	0.31771213	8.61E-12	2.15E-10
KCNJ15	3.34000264	0.48939192	8.80E-12	2.20E-10
LEF1-AS1	5.5531375	0.81548316	9.79E-12	2.43E-10
CASP16P	-2.6534601	0.38991005	1.01E-11	2.50E-10
ALOX15	-6.0556798	0.89005551	1.02E-11	2.53E-10
IGFL1	8.4309384	1.24310939	1.18E-11	2.91E-10
S100B	-2.2128711	0.32630151	1.19E-11	2.92E-10
PRRX2	4.191208	0.61898282	1.28E-11	3.12E-10
LINC00565	2.02781445	0.30097868	1.61E-11	3.89E-10
A1BG-AS1	2.90992755	0.43304723	1.82E-11	4.38E-10
CCL18	2.47753265	0.36896714	1.88E-11	4.50E-10
LINC01843	-2.0438803	0.30520448	2.13E-11	5.08E-10
ADH1B	-2.2093875	0.32998849	2.15E-11	5.12E-10
SBSN	-4.973449	0.74338041	2.23E-11	5.30E-10
KCNH2	3.56507827	0.53598714	2.90E-11	6.82E-10
FGF14	-3.3034333	0.49749565	3.13E-11	7.35E-10
CSMD2	2.92722579	0.44222163	3.61E-11	8.42E-10
MUC5AC	-5.1076833	0.77214109	3.72E-11	8.65E-10
SLC2A12	2.23164956	0.33739068	3.73E-11	8.67E-10
SPDEF	-3.1615692	0.47813396	3.78E-11	8.78E-10
TMEM59L	2.37094704	0.35882551	3.91E-11	9.06E-10
DNAH17	4.32771973	0.65691399	4.46E-11	1.02E-09

AC108451.2	-4.5222229	0.68996	5.59E-11	1.26E-09
VIP	2.02952824	0.30995016	5.83E-11	1.32E-09
PTGDR	2.61750881	0.40056798	6.38E-11	1.43E-09
LINC00475	2.89288506	0.4428256	6.46E-11	1.45E-09
ULBP1	2.00342663	0.30680077	6.57E-11	1.47E-09
APOM	-2.2505911	0.34472913	6.64E-11	1.48E-09
NUS1P1	7.23000106	1.10772581	6.72E-11	1.50E-09
CRYM	-2.4851859	0.38122263	7.08E-11	1.58E-09
FETUB	-2.51911	0.38679236	7.38E-11	1.64E-09
SNCAIP	2.04762622	0.31490481	7.91E-11	1.75E-09
AC097634.1	3.61448381	0.55658045	8.35E-11	1.84E-09
SLC22A1	-2.0593705	0.31742449	8.71E-11	1.91E-09
AGXT	-2.1697128	0.33464976	8.96E-11	1.97E-09
MMP16	2.74710549	0.42402417	9.25E-11	2.03E-09
CPHL1P	-2.9005968	0.44856548	1.00E-10	2.20E-09
SELE	-4.2301533	0.65485657	1.05E-10	2.29E-09
CIDEC	-2.5082141	0.38842654	1.07E-10	2.32E-09
FFAR3	-3.2671337	0.50630886	1.10E-10	2.39E-09
LDLRAD4	2.03032679	0.31477168	1.12E-10	2.43E-09
NUGGC	-2.3376087	0.36255702	1.14E-10	2.46E-09
IL1B	-3.3775681	0.52395564	1.15E-10	2.48E-09
LINC02458	4.98274621	0.77305647	1.15E-10	2.49E-09
ENAM	-2.6725899	0.41645178	1.39E-10	2.95E-09
CATSPERB	-2.2148342	0.34522533	1.40E-10	2.98E-09
RAB27B	-2.7178781	0.42391703	1.44E-10	3.06E-09
SCRG1	2.93437146	0.45770337	1.44E-10	3.06E-09
U82695.1	3.27099427	0.51042715	1.47E-10	3.11E-09
AC148477.2	3.05056801	0.47677041	1.57E-10	3.30E-09
GPR1	3.44610236	0.5387298	1.59E-10	3.34E-09
WDR86	2.78918081	0.43609128	1.60E-10	3.35E-09
SULT1E1	2.79409304	0.43691039	1.60E-10	3.36E-09
AC013553.3	3.16076916	0.49428328	1.61E-10	3.37E-09
AC009055.2	-3.5116306	0.54940575	1.64E-10	3.43E-09
GLDC	-2.2224018	0.34782316	1.66E-10	3.46E-09
AC099509.1	-2.3354941	0.3661922	1.80E-10	3.73E-09
DISP3	2.52231734	0.39634027	1.97E-10	4.06E-09
TSPAN1	-2.1635898	0.34067026	2.14E-10	4.39E-09
AL356234.2	2.02835174	0.31976882	2.25E-10	4.62E-09
XDH	-2.0756967	0.3299935	3.17E-10	6.36E-09
AC120498.4	-2.686323	0.42737081	3.26E-10	6.53E-09
ASPDH	-2.1385164	0.34025048	3.28E-10	6.55E-09
CYP2D6	-2.0030012	0.31902342	3.42E-10	6.81E-09
CYP2D6	-2.0030012	0.31902342	3.42E-10	6.81E-09
CYP2D6	-2.0030012	0.31902342	3.42E-10	6.81E-09
CCDC188	2.72335634	0.43377535	3.42E-10	6.82E-09
CLEC3B	-2.545578	0.4056919	3.50E-10	6.96E-09
CDHR2	-2.1427911	0.34174142	3.61E-10	7.12E-09
LPA	-2.8357724	0.45225788	3.60E-10	7.12E-09

BHLHA15	-2.1032287	0.33638614	4.04E-10	7.94E-09
AC139749.1	-2.3272285	0.37244621	4.14E-10	8.12E-09
IRX3	2.9512034	0.47244954	4.19E-10	8.19E-09
LINC02257	4.20039192	0.67502929	4.89E-10	9.49E-09
S100A14	-2.2561854	0.36259368	4.90E-10	9.50E-09
KCNJ16	2.18225912	0.35104294	5.08E-10	9.83E-09
CXCL14	-2.4062871	0.38798548	5.57E-10	1.07E-08
FLJ16779	3.34953424	0.5416653	6.26E-10	1.19E-08
S100A8	-2.0011248	0.32459229	7.05E-10	1.33E-08
GLYCTK-AS1	7.07742212	1.14890421	7.27E-10	1.37E-08
APOA1	-2.2315886	0.36234727	7.33E-10	1.38E-08
AC104667.2	-2.7675247	0.45007295	7.79E-10	1.46E-08
RNF39	-2.5226225	0.41129141	8.60E-10	1.60E-08
SULF1	2.00379045	0.32783304	9.82E-10	1.81E-08
FNDC5	4.00580762	0.65585033	1.01E-09	1.86E-08
TDO2	-2.0923715	0.34258084	1.01E-09	1.86E-08
BATF	-2.3400115	0.38319698	1.02E-09	1.87E-08
OTC	-3.7474083	0.61618026	1.19E-09	2.17E-08
TBX18	2.27753611	0.37511604	1.27E-09	2.30E-08
PTPRN	2.72504602	0.45003788	1.40E-09	2.53E-08
IGSF23	-2.4676022	0.40756058	1.41E-09	2.53E-08
HILS1	3.53833191	0.58674289	1.63E-09	2.90E-08
C3orf85	-3.118884	0.51731161	1.65E-09	2.92E-08
UGT2B7	-2.1413408	0.35611038	1.82E-09	3.20E-08
F13B	-2.237557	0.37242371	1.88E-09	3.29E-08
SHBG	-2.3828197	0.39778537	2.10E-09	3.66E-08
AL024508.2	-2.8177893	0.47138967	2.26E-09	3.92E-08
FGF1	2.99743023	0.50169961	2.31E-09	3.99E-08
COL4A1	2.15856682	0.36156003	2.37E-09	4.09E-08
AC010931.2	5.35944398	0.89903854	2.50E-09	4.30E-08
AMHR2	-3.5568276	0.59682161	2.53E-09	4.35E-08
CD274	-2.5293649	0.42575641	2.84E-09	4.84E-08
CXCL13	-3.6868248	0.62093406	2.89E-09	4.93E-08
CPS1	-2.0429096	0.34410354	2.90E-09	4.95E-08
AREG	-2.3345198	0.39353145	2.99E-09	5.09E-08
HOPX	2.38442587	0.40287523	3.25E-09	5.50E-08
ADH4	-2.106298	0.35621592	3.36E-09	5.67E-08
AL391832.2	-2.2454734	0.38043428	3.58E-09	6.03E-08
CYP39A1	-2.1622089	0.36659298	3.68E-09	6.17E-08
AKR1C8P	-2.5144345	0.42668808	3.79E-09	6.35E-08
ALB	-2.489798	0.42259252	3.82E-09	6.39E-08
CBLN1	2.8163938	0.47830625	3.90E-09	6.52E-08
CXXC4	2.84811912	0.48479485	4.23E-09	7.04E-08
NTM	2.14516597	0.36528337	4.29E-09	7.13E-08
NTNG2	2.59735723	0.44243617	4.34E-09	7.21E-08
NDRG4	2.60624975	0.44418448	4.42E-09	7.34E-08
HFE2	-2.2928705	0.39113722	4.57E-09	7.54E-08
FCRLA	2.208628	0.37708834	4.71E-09	7.76E-08

CYP3A7	-3.5881377	0.61268391	4.73E-09	7.78E-08
IGDCC4	2.11630506	0.36145893	4.77E-09	7.84E-08
LINC01914	2.24933867	0.38459241	4.96E-09	8.14E-08
GRM6	4.85063	0.83019989	5.14E-09	8.42E-08
GPRC5A	-2.3510025	0.40268414	5.27E-09	8.63E-08
NPAS4	4.89707116	0.83966003	5.47E-09	8.93E-08
TMEM145	2.83608809	0.48630384	5.48E-09	8.94E-08
LINC00707	-2.5700432	0.44117018	5.69E-09	9.26E-08
SLC22A10	-2.9480639	0.50616081	5.73E-09	9.32E-08
MARCH4	4.73449714	0.81363145	5.92E-09	9.61E-08
EYS	-2.3989819	0.41244905	6.01E-09	9.75E-08
KCNH4	2.39801007	0.41314281	6.46E-09	1.04E-07
IGF2BP3	2.24582442	0.38730972	6.69E-09	1.08E-07
RAET1G	2.70833398	0.46709494	6.70E-09	1.08E-07
AC025580.1	4.70287364	0.81166651	6.87E-09	1.10E-07
CAMK2A	2.84097759	0.4904259	6.92E-09	1.11E-07
AOX2P	-2.8769208	0.49754123	7.37E-09	1.18E-07
SFN	-2.121145	0.36930419	9.27E-09	1.46E-07
JPH2	2.28967307	0.39874796	9.35E-09	1.47E-07
ADH1A	-2.1412369	0.37297471	9.41E-09	1.48E-07
PCDHGC5	2.11181111	0.36970241	1.12E-08	1.73E-07
UGT2B27P	-3.3291915	0.58347156	1.16E-08	1.79E-07
LINC00942	2.79799229	0.49116719	1.22E-08	1.87E-07
GDF10	4.67355895	0.82165319	1.29E-08	1.97E-07
AP001189.3	2.51312108	0.44185985	1.29E-08	1.97E-07
TENM4	2.84818589	0.50086876	1.30E-08	1.98E-07
DRAXINP1	-3.5896497	0.63198857	1.35E-08	2.05E-07
AC108751.4	-2.8068703	0.49426037	1.36E-08	2.06E-07
AC041040.2	2.54708592	0.44898309	1.40E-08	2.13E-07
AP001107.5	4.59401775	0.81037293	1.44E-08	2.17E-07
MGAT5B	2.45860372	0.43517456	1.61E-08	2.41E-07
CRTAC1	3.27663496	0.58015206	1.62E-08	2.44E-07
STYK1	-3.7830704	0.67066004	1.69E-08	2.52E-07
AC015909.1	3.35824852	0.59563674	1.72E-08	2.56E-07
AL049838.1	3.03515024	0.53856573	1.74E-08	2.59E-07
AC017104.1	2.03691655	0.3615909	1.77E-08	2.62E-07
LINC01559	-2.3084708	0.40997331	1.79E-08	2.66E-07
OLFML2A	2.29096131	0.40700242	1.81E-08	2.69E-07
AL807761.4	-4.0308022	0.71640558	1.84E-08	2.72E-07
EMCN	2.09020627	0.3718501	1.90E-08	2.79E-07
CXCL5	-3.148145	0.56061426	1.96E-08	2.88E-07
ANXA13	-2.5320378	0.45115636	2.00E-08	2.93E-07
DNM1P41	2.1676619	0.38654213	2.05E-08	3.00E-07
LINC00877	-5.3600484	0.95599965	2.06E-08	3.02E-07
CST1	6.52250301	1.16830973	2.37E-08	3.42E-07
KRT79	2.85412646	0.51165205	2.43E-08	3.51E-07
PLEK	-2.3347978	0.41857205	2.43E-08	3.51E-07
SERPINC1	-2.3426091	0.42026137	2.49E-08	3.58E-07

HMGB1P10	-4.4307561	0.79506375	2.51E-08	3.60E-07
UNC5B-AS1	4.75419142	0.85430988	2.62E-08	3.76E-07
TFF1	-4.3213428	0.77699972	2.67E-08	3.83E-07
UGT1A2P	-4.4104613	0.79422947	2.81E-08	4.00E-07
FGFBP1	-3.3866005	0.61062265	2.92E-08	4.15E-07
EXTL1	4.42203336	0.79764899	2.96E-08	4.20E-07
ZNF750	2.42463085	0.43783102	3.06E-08	4.33E-07
FP236240.1	4.36488151	0.79080493	3.40E-08	4.78E-07
CDK5R2	4.58981104	0.83157622	3.40E-08	4.78E-07
SLC6A17	2.44202763	0.4457077	4.28E-08	5.89E-07
MN1	2.22991058	0.40782772	4.56E-08	6.24E-07
C17orf82	2.23753782	0.40953281	4.66E-08	6.38E-07
TNFRSF6B	-2.5891848	0.47398501	4.69E-08	6.41E-07
HMGB3P7	4.53453296	0.83231667	5.09E-08	6.90E-07
GALNT5	-2.5777343	0.47397868	5.37E-08	7.25E-07
AC068506.1	-3.1609595	0.58258405	5.77E-08	7.74E-07
CES5A	-2.2814594	0.42093779	5.96E-08	7.98E-07
AHSG	-2.5957851	0.47917714	6.05E-08	8.09E-07
ACOT12	-2.5109726	0.46526318	6.78E-08	8.99E-07
INMT	-2.0529574	0.38121004	7.23E-08	9.55E-07
AC023449.2	2.18835097	0.40683529	7.49E-08	9.85E-07
VCAM1	-2.3240172	0.4323567	7.65E-08	1.00E-06
LINC00702	3.21398206	0.598019	7.68E-08	1.01E-06
LINC01639	-2.6340082	0.49135079	8.29E-08	1.08E-06
SLC6A14	-6.1629804	1.15010422	8.39E-08	1.09E-06
LINC01344	-5.3613067	1.00472337	9.50E-08	1.23E-06
FOXD1	2.69187494	0.50502179	9.81E-08	1.26E-06
CLEC4G	-2.370507	0.44533659	1.02E-07	1.31E-06
CYP1A1	-2.1883086	0.41119885	1.03E-07	1.32E-06
ALLC	-2.2660042	0.42607473	1.05E-07	1.34E-06
ADRB1	-3.1182131	0.5864474	1.05E-07	1.35E-06
SFTA2	-2.6215747	0.49357004	1.09E-07	1.39E-06
APCDD1L-AS1	4.33784846	0.81901293	1.18E-07	1.50E-06
S100P	-2.3793874	0.4493451	1.19E-07	1.51E-06
AC109479.1	2.05080086	0.38808557	1.26E-07	1.59E-06
OACYLP	2.66848747	0.50506947	1.27E-07	1.60E-06
LINP1	-2.8105084	0.5319908	1.27E-07	1.60E-06
ADGRF1	-2.6542549	0.50319405	1.33E-07	1.67E-06
GBA3	-2.6241645	0.49789583	1.36E-07	1.71E-06
APOF	-2.4675986	0.46853584	1.39E-07	1.74E-06
HOTAIRM1	2.05869959	0.39093315	1.39E-07	1.74E-06
NT5C1A	4.41665586	0.84055056	1.48E-07	1.85E-06
CCIN	2.69979919	0.5142312	1.52E-07	1.89E-06
SLC6A7	2.6726005	0.50932792	1.54E-07	1.92E-06
DYDC2	-2.4096941	0.45949591	1.57E-07	1.95E-06
HAVCR1	-2.111495	0.40343009	1.66E-07	2.05E-06
R3HDML	6.16660636	1.17896992	1.69E-07	2.08E-06
FCAMR	-2.461968	0.47217516	1.85E-07	2.25E-06

AC073621.1	8.04987161	1.54426969	1.86E-07	2.27E-06
TRIM29	-2.1045664	0.40414454	1.91E-07	2.32E-06
PRODH2	-2.012556	0.38695427	1.98E-07	2.40E-06
EIF3EP1	2.28399518	0.44028762	2.13E-07	2.57E-06
AGR3	-4.5075817	0.87052859	2.24E-07	2.70E-06
PIGR	-2.3593443	0.45603432	2.30E-07	2.76E-06
AC241584.2	-2.2915506	0.44300221	2.31E-07	2.77E-06
SHANK1	2.48844921	0.48125759	2.33E-07	2.80E-06
APOA5	-2.1075827	0.40776318	2.36E-07	2.82E-06
CA5A	-2.7140246	0.52677773	2.58E-07	3.06E-06
AC027237.3	3.86220151	0.75035573	2.64E-07	3.14E-06
PKLR	-2.1888744	0.42538881	2.67E-07	3.16E-06
DEC1	3.11211282	0.60568711	2.77E-07	3.28E-06
CCDC141	-2.1810608	0.42493122	2.86E-07	3.36E-06
CPEB1	2.44055537	0.47699937	3.11E-07	3.64E-06
AC073842.1	-2.3097177	0.45187417	3.20E-07	3.73E-06
RAET1L	-2.3372301	0.45803157	3.35E-07	3.88E-06
ANXA10	-2.0334408	0.39923141	3.52E-07	4.06E-06
ETV7	-2.3963865	0.47065165	3.55E-07	4.10E-06
SEMA5B	2.37953686	0.46784373	3.65E-07	4.20E-06
KRT17	2.81592526	0.55375379	3.67E-07	4.22E-06
NKAIN4	4.29529191	0.84601674	3.83E-07	4.38E-06
CSPG4P13	5.67375125	1.11776568	3.86E-07	4.40E-06
ARHGEF15	2.04288795	0.40307583	4.01E-07	4.58E-06
RCVRN	3.61624243	0.71553799	4.33E-07	4.90E-06
CU634019.2	4.82483641	0.95791703	4.73E-07	5.34E-06
MAGED4	3.21018463	0.63827443	4.92E-07	5.53E-06
CSF2	-2.6584286	0.52862857	4.93E-07	5.54E-06
AP002358.2	-3.524013	0.70093342	4.97E-07	5.58E-06
AL845321.1	-3.9670548	0.79004121	5.13E-07	5.74E-06
FAM222A-AS1	-2.1632422	0.43106661	5.21E-07	5.82E-06
COL10A1	3.64988547	0.73152643	6.06E-07	6.70E-06
TM4SF19	-2.6738421	0.53659727	6.26E-07	6.90E-06
TFF2	-4.6836244	0.94074293	6.40E-07	7.05E-06
C5orf49	2.05957026	0.414519	6.74E-07	7.40E-06
LGALS2	-3.3671365	0.67770547	6.75E-07	7.40E-06
GRHL3	-2.3505093	0.47343248	6.88E-07	7.52E-06
AC009014.1	2.34712585	0.47326248	7.07E-07	7.71E-06
DKK2	3.61883045	0.7307943	7.35E-07	7.99E-06
AC008676.2	2.03934851	0.41208332	7.46E-07	8.09E-06
AC124067.2	3.06789032	0.62079381	7.74E-07	8.37E-06
APOH	-2.0284157	0.41079997	7.90E-07	8.55E-06
CX3CR1	-2.7808817	0.56326647	7.93E-07	8.57E-06
CLCNKA	3.22276779	0.65456511	8.50E-07	9.11E-06
AP001189.1	4.14090024	0.84293788	8.99E-07	9.61E-06
PCSK1N	2.37103072	0.48270852	9.02E-07	9.63E-06
CKMT1A	-2.3891831	0.4865296	9.08E-07	9.68E-06
SLC24A2	3.44488293	0.70218547	9.30E-07	9.89E-06

ACAN	4.53886787	0.92714703	9.80E-07	1.04E-05
AC018629.1	-2.1461592	0.43839413	9.81E-07	1.04E-05
PADI2	3.92185688	0.80114399	9.81E-07	1.04E-05
DUXAP10	3.10184354	0.63405883	9.98E-07	1.05E-05
FGF19	-2.6269826	0.53781809	1.04E-06	1.09E-05
RDM1	-3.0150304	0.61754177	1.05E-06	1.10E-05
TMEM190	4.82579254	0.9918358	1.14E-06	1.19E-05
DIO1	-2.3138307	0.47715564	1.24E-06	1.29E-05
AC073862.5	2.703043	0.55786796	1.26E-06	1.31E-05
AC134312.5	2.31331381	0.47762375	1.28E-06	1.32E-05
C9orf84	-3.2714435	0.67548251	1.28E-06	1.32E-05
POPDC3	2.59522179	0.53593885	1.28E-06	1.33E-05
TTC39A-AS1	-2.0566492	0.42473595	1.28E-06	1.33E-05
CHST8	3.0996185	0.64014492	1.29E-06	1.33E-05
CBLN2	3.53681322	0.73070911	1.30E-06	1.34E-05
PKIA	2.09544457	0.43299225	1.30E-06	1.34E-05
LINC00315	3.93899361	0.81616589	1.39E-06	1.43E-05
LINC02086	5.66987947	1.17645168	1.44E-06	1.47E-05
SCG2	2.3641658	0.49107897	1.48E-06	1.51E-05
OLR1	2.13007129	0.44300886	1.52E-06	1.55E-05
BCL2L14	-2.5985411	0.54065893	1.54E-06	1.57E-05
DNAI1	3.61910586	0.75309981	1.54E-06	1.57E-05
LINC00930	5.42842011	1.13147134	1.61E-06	1.63E-05
AKR1C6P	-2.7811723	0.57976106	1.61E-06	1.63E-05
MIR145	2.79410171	0.58351475	1.68E-06	1.70E-05
TUBA4B	2.24076379	0.47034632	1.90E-06	1.89E-05
KRT23	-2.0916849	0.44128056	2.14E-06	2.12E-05
CCL7	-3.1024668	0.65529653	2.20E-06	2.17E-05
AL109613.1	-2.6703124	0.5646464	2.25E-06	2.22E-05
COL9A1	3.10318309	0.65643569	2.27E-06	2.24E-05
LINC02535	-2.2382802	0.4744275	2.38E-06	2.33E-05
TNS4	-2.8705968	0.60935495	2.47E-06	2.41E-05
CLEC2L	4.24389982	0.90117931	2.49E-06	2.42E-05
LINC02027	-3.9534483	0.83960345	2.49E-06	2.43E-05
SLAMF7	-2.0153085	0.42821854	2.52E-06	2.45E-05
LINC01702	-3.1781883	0.67541859	2.53E-06	2.46E-05
CEND1	2.8734342	0.61109167	2.57E-06	2.50E-05
DPEP1	2.17479133	0.46268545	2.60E-06	2.52E-05
WNT2	2.44738652	0.5206962	2.60E-06	2.52E-05
ADCYAP1R1	2.14960269	0.45787534	2.67E-06	2.58E-05
UGT1A5	-3.3667526	0.71944287	2.87E-06	2.76E-05
RDH8	3.77734173	0.80859889	2.99E-06	2.86E-05
IGF1R	2.95716237	0.63342124	3.03E-06	2.89E-05
SLC39A5	-2.118953	0.45485798	3.19E-06	3.03E-05
GAS2	-2.8711047	0.61642895	3.20E-06	3.04E-05
ABALON	-2.1000935	0.45105338	3.22E-06	3.06E-05
DUSP5P1	2.32612371	0.49995279	3.28E-06	3.11E-05
PLEKHG4B	2.10754711	0.45367578	3.39E-06	3.21E-05

GABBR2	2.77456746	0.59834057	3.53E-06	3.33E-05
EDNRA	2.63786022	0.56900681	3.55E-06	3.35E-05
AL360004.1	2.25804644	0.48750912	3.62E-06	3.41E-05
APOC1P1	-2.0052375	0.4343088	3.89E-06	3.64E-05
CDHR1	2.21065754	0.47921076	3.97E-06	3.70E-05
UNC5A	2.08983794	0.45319031	4.00E-06	3.73E-05
CES1P2	-3.4219479	0.74296994	4.11E-06	3.82E-05
AC099494.2	2.16682874	0.47069288	4.15E-06	3.86E-05
AC073429.2	-2.2747985	0.49481204	4.28E-06	3.96E-05
RAB3C	-3.7571433	0.81997123	4.60E-06	4.23E-05
AC012625.1	3.9729574	0.8677938	4.69E-06	4.30E-05
AC129915.3	-3.635491	0.79441334	4.73E-06	4.34E-05
RHCG	2.38842599	0.52200658	4.75E-06	4.35E-05
SPRN	3.64734775	0.79719634	4.76E-06	4.35E-05
UQCRFS1P1	2.77176175	0.60639706	4.86E-06	4.43E-05
HRASLS2	-2.4697278	0.54039746	4.87E-06	4.45E-05
HIST2H2BA	2.01161065	0.44158073	5.23E-06	4.73E-05
CEMIP	-2.8167549	0.61857404	5.27E-06	4.76E-05
AC099684.1	2.50009987	0.54933353	5.34E-06	4.81E-05
SNAP25-AS1	4.25683567	0.94047034	6.00E-06	5.37E-05
AL139125.2	2.90226695	0.64277628	6.33E-06	5.64E-05
SERPINA2	-3.0169323	0.66846037	6.38E-06	5.69E-05
C20orf166-AS1	4.40775563	0.97701386	6.44E-06	5.73E-05
SLC27A6	3.021857	0.67196109	6.89E-06	6.09E-05
AL096865.1	2.01955469	0.44930416	6.96E-06	6.15E-05
CLEC4M	-2.1147577	0.47151605	7.29E-06	6.42E-05
CD5L	-2.15243	0.48018351	7.38E-06	6.49E-05
PSAPL1	-3.7887425	0.84587554	7.50E-06	6.58E-05
RNU1-70P	-2.0313054	0.45352913	7.50E-06	6.58E-05
PTGES3P1	-2.1085761	0.47295281	8.26E-06	7.16E-05
MYH16	2.21161324	0.49629005	8.34E-06	7.22E-05
PVALB	-3.5416799	0.79478264	8.34E-06	7.22E-05
TMEM244	4.49562505	1.01221788	8.94E-06	7.70E-05
AL445487.1	-2.2291712	0.50281065	9.27E-06	7.97E-05
CHRNA3	4.04624765	0.91459152	9.68E-06	8.30E-05
LGALS17A	-5.4974186	1.24408927	9.92E-06	8.48E-05
LINC01146	-2.2461937	0.50852919	1.00E-05	8.54E-05
HHLA2	-2.2002181	0.49830077	1.01E-05	8.59E-05
ABHD14A-ACY1	-2.4475171	0.55516169	1.04E-05	8.83E-05
CYP2B6	-2.2190293	0.50340862	1.04E-05	8.85E-05
SMOC2	-2.0897596	0.47498424	1.08E-05	9.16E-05
FFAR2	-3.4925685	0.79440287	1.10E-05	9.27E-05
FOLR1	2.42802003	0.55230527	1.10E-05	9.28E-05
SPTSSB	-3.8489314	0.87584737	1.11E-05	9.33E-05
DUSP26	2.84893422	0.64924048	1.14E-05	9.58E-05
ARHGDI3	2.42305154	0.55320156	1.19E-05	9.92E-05
KCND2	-2.135534	0.4881348	1.21E-05	0.00010123
GSTA7P	-3.5888822	0.82045731	1.22E-05	0.00010146

SLC6A20	-2.0367312	0.46591816	1.23E-05	0.00010265
DUXAP9	2.2660487	0.51935554	1.28E-05	0.00010619
MT-TW	-2.602045	0.59777128	1.34E-05	0.00011078
CACNB2	2.40904854	0.55403493	1.37E-05	0.00011301
AC034199.1	2.96204034	0.68399575	1.49E-05	0.0001218
HOXB9	3.71506732	0.85906111	1.53E-05	0.00012485
ADGRE1	-3.1017401	0.71757974	1.54E-05	0.00012587
POPDC2	2.26208822	0.52337529	1.55E-05	0.00012605
C2orf91	2.53662798	0.58708386	1.56E-05	0.00012677
DCX	-2.4034923	0.55761042	1.63E-05	0.00013242
SPRR3	-2.5818697	0.59933368	1.65E-05	0.00013372
LINC01050	2.0233532	0.46969073	1.65E-05	0.00013372
AC073288.2	2.6876089	0.62397006	1.65E-05	0.00013394
OVOL2	-2.4362974	0.5689277	1.85E-05	0.00014873
AC015909.4	4.12130958	0.96589037	1.98E-05	0.00015865
APOA1-AS	-2.7667757	0.6488836	2.01E-05	0.00016042
BCAS1	-2.274913	0.53400946	2.04E-05	0.00016291
LRRC19	-2.6808933	0.6299225	2.08E-05	0.00016566
OMG	-3.3680344	0.79165767	2.10E-05	0.00016673
OMG	-3.3680344	0.79165767	2.10E-05	0.00016673
ATP2B3	2.73762805	0.64374159	2.11E-05	0.00016771
UROC1	-2.086776	0.49082961	2.12E-05	0.00016838
RNA5SP333	-2.0058811	0.47252103	2.19E-05	0.00017273
CWH43	3.12465345	0.73646427	2.21E-05	0.00017414
MROH2A	-2.0382972	0.4808887	2.25E-05	0.00017709
DPF1	2.40784585	0.57094619	2.47E-05	0.000193
CCL22	-2.2700252	0.53874036	2.51E-05	0.00019603
FAM66D	3.93838989	0.93548981	2.55E-05	0.00019871
SPATA13	2.78115168	0.66088989	2.57E-05	0.00020005
TMEFF1	4.75060798	1.12892928	2.58E-05	0.0002001
DLX1	2.11724057	0.50407784	2.67E-05	0.00020637
TYRP1	2.88439655	0.68694773	2.68E-05	0.00020743
MYLPF	3.29597466	0.78745448	2.84E-05	0.0002179
APC2	2.25599771	0.54003461	2.95E-05	0.00022525
ZNF730	2.04726327	0.49024499	2.97E-05	0.00022661
AC022816.1	-2.0547434	0.49249718	3.02E-05	0.0002298
HCAR3	-2.3676141	0.56755211	3.02E-05	0.00023021
RGMA	2.11747102	0.50775609	3.04E-05	0.00023146
AL133373.2	-2.2088161	0.53008941	3.09E-05	0.00023478
SLC6A3	-2.8981309	0.69563174	3.10E-05	0.00023532
GACAT2	-2.9478799	0.70757873	3.10E-05	0.00023532
FGF14-IT1	-3.4226414	0.82459846	3.31E-05	0.00025023
AC079061.1	-3.0648127	0.738646	3.34E-05	0.0002516
CLEC18A	2.57590707	0.62102414	3.36E-05	0.00025284
GAREM2	2.4935568	0.60167434	3.41E-05	0.00025627
AC089983.1	-2.2142883	0.53561745	3.56E-05	0.00026671
FAM183DP	-5.0342405	1.2191359	3.64E-05	0.00027188
XPNPEP2	-2.0200048	0.49077605	3.86E-05	0.00028575

AKR1B15	-2.8678634	0.69711569	3.89E-05	0.00028764
AP001995.1	2.41544826	0.58731295	3.91E-05	0.00028904
AF064858.2	-2.8661887	0.69777067	4.00E-05	0.0002948
AL391730.1	-3.4446289	0.83934642	4.06E-05	0.00029905
ZNF648	-2.4064553	0.58788477	4.25E-05	0.00031166
CA4	-2.1252748	0.52064857	4.47E-05	0.00032554
LINC00473	-2.2753712	0.55742295	4.47E-05	0.00032554
MIR583HG	-2.8533674	0.69902102	4.47E-05	0.00032554
PRRG3	2.86062298	0.70110448	4.50E-05	0.00032768
ERICH3	-2.2924506	0.56290997	4.65E-05	0.00033763
AC091940.1	-3.8019356	0.93453969	4.74E-05	0.00034348
FSD1	2.36882962	0.58301552	4.84E-05	0.00035042
CC2D2B	2.668246	0.65742885	4.94E-05	0.00035639
AC011139.1	-2.4730455	0.60952995	4.96E-05	0.0003581
AC103702.1	4.84247207	1.19595853	5.14E-05	0.00036987
FAM90A25P	-2.6746724	0.66069861	5.16E-05	0.00037081
RASGRF1	3.55472613	0.87934601	5.29E-05	0.00037976
MIR3945HG	-3.5924013	0.89114546	5.55E-05	0.00039619
CADPS	2.20606531	0.54804811	5.69E-05	0.00040511
PITX3	3.53020537	0.87751353	5.75E-05	0.00040856
Z82186.1	-2.9733358	0.73909725	5.75E-05	0.00040856
NA	3.38012381	0.84066752	5.80E-05	0.00041213
SYCE1L	2.00803136	0.49945916	5.81E-05	0.00041252
AL049555.1	-4.7129779	1.1722817	5.81E-05	0.00041252
LINC00160	3.78781018	0.94248031	5.85E-05	0.00041459
MYPN	-2.3003004	0.57269727	5.90E-05	0.00041822
AC093915.1	3.72908802	0.92954053	6.03E-05	0.00042622
FER1L6	-3.5581754	0.88700494	6.03E-05	0.00042654
SLAMF1	-2.1431886	0.53440313	6.06E-05	0.00042827
AKNAD1	3.49368651	0.87124164	6.07E-05	0.00042893
AC090164.4	-2.2279094	0.55620906	6.19E-05	0.00043562
TEKT5	2.92328463	0.72982945	6.19E-05	0.00043567
WNT5A-AS1	2.6333853	0.65900215	6.44E-05	0.00045155
ACTBP11	-2.8936577	0.72497375	6.57E-05	0.00045971
SLC10A2	-2.9464246	0.73834984	6.59E-05	0.0004611
TTN	-3.0020694	0.75281039	6.67E-05	0.00046608
PDZD3	-2.096951	0.52602297	6.71E-05	0.00046819
DUSP13	-2.2086956	0.55527862	6.96E-05	0.00048341
AL138789.1	-3.4473387	0.87111566	7.58E-05	0.00052159
AC068446.1	2.07831842	0.52534118	7.62E-05	0.00052365
TMEM105	-2.4431782	0.6181352	7.73E-05	0.00053056
NODAL	6.93507278	1.75574068	7.82E-05	0.00053528
AC010969.1	3.71729329	0.94131416	7.85E-05	0.000537
DKK1	-2.5111283	0.63614569	7.90E-05	0.00054012
CKMT1B	-2.7808199	0.7050649	8.01E-05	0.00054716
CFAP100	-3.2745689	0.83036976	8.03E-05	0.00054814
AOX3P	-2.1562198	0.54776134	8.27E-05	0.00056282
ADGRA1	-3.2148701	0.81737633	8.38E-05	0.00056993

MOV10L1	2.39129168	0.60816509	8.42E-05	0.00057244
DRD1	2.87337677	0.73482195	9.22E-05	0.00061818
KLK6	2.90893919	0.7442657	9.29E-05	0.00062243
NRG4	-2.4614801	0.63028536	9.41E-05	0.00062925
MMP2-AS1	3.16043109	0.81002379	9.55E-05	0.00063779
AL118508.4	2.4314693	0.62537073	0.00010106	0.00067132
PLA2G4F	-2.5847739	0.66733954	0.00010739	0.00070848
PCDHA6	2.18734887	0.56515663	0.00010868	0.00071628
BCL11A	2.31763114	0.59922479	0.00010986	0.00072367
NPPB	3.38023189	0.87450922	0.00011096	0.0007298
RMRP	4.59693181	1.19061219	0.00011293	0.00074187
NMRAL2P	-2.5942224	0.67197269	0.00011311	0.00074282
ZSCAN10	-4.6701179	1.20975114	0.0001132	0.00074313
AL353593.2	2.10647119	0.54691306	0.00011737	0.00076811
AL033527.2	3.48791929	0.90661743	0.00011949	0.00077889
ANKRD18B	-2.7167859	0.70634856	0.00011994	0.00078149
CCDC33	4.43375713	1.15344152	0.00012108	0.0007875
AC002511.1	-2.2146028	0.57643939	0.0001221	0.0007934
SYS1-DBNDD2	3.41070743	0.88897808	0.00012472	0.000808
MEOX1	2.20519495	0.57603244	0.00012906	0.00083304
PPP1R27	-2.7979562	0.73234611	0.00013316	0.000857
AC017002.3	2.03025013	0.53141656	0.00013321	0.0008571
VSIG1	-2.1818194	0.57133596	0.0001341	0.00086221
AC020612.3	2.88773626	0.75674707	0.00013564	0.00087147
AC011352.1	3.58988428	0.94077339	0.00013569	0.0008716
AC124067.4	-2.1267997	0.55736252	0.00013573	0.0008716
PLPPR1	2.27334626	0.59827011	0.00014477	0.00092384
ZDHHC22	2.88967094	0.76069657	0.00014545	0.00092768
RFPL1	-3.4368387	0.90485645	0.00014574	0.00092912
AC010210.1	-4.1065824	1.08158505	0.00014656	0.00093368
GPAA1P1	3.37486565	0.89121052	0.00015258	0.00096825
PTPRQ	3.54889145	0.93861954	0.00015622	0.0009892
GPR78	2.62737944	0.69525274	0.00015744	0.00099622
AL136084.3	3.15925087	0.83606161	0.00015763	0.000997
MT-TH	-2.2033754	0.58323542	0.00015819	0.00099999

Appendix 4.C

Overlapping genes in the comparisons between fibrotic vs healthy PCLSs and fibrotic vs inhibited PCLSs

ABCC2	CRLF1	LRCOL1
AC010931.2	CRYM	LRRN4
AC015909.1	CSMD2	MARCH4
AC020571.1	CSPG4	MAP1A
AC026462.3	CSPG4P13	MCHR1
AC041040.2	CST1	MLLT11
AC068506.1	CTHRC1	MMP16
AC073842.1	CU634019.2	MPP4
AC079061.1	CXCL13	MRC2
AC093583.1	CYP1A2	MROH2A
AC104667.2	CYP24A1	MSRB3
AC112721.1	CYP2A6	MUC21
AC112721.2	CYP2A7	MUC5B
AC120498.4	CYP2B6	MYL9
AC134312.5	CYP2B7P	MYO7B
AC148477.2	CYP2C9	MYOSLID
AC241584.2	CYP2D6	MYPN
ACAN	CYP3A4	MYRIP
ACOT12	CYP3A43	NALCN
ACTA2	CYP3A7	NODAL
ACTG2	DCX	NPPC
ADAM12	DDC	NR0B2
ADAM23	DIO1	NR2F1-AS1
ADAMTS14	DKK3	NREP
ADAMTS16	DNAH17	NTM
ADAMTS6	DNASE1L3	NUGGC
ADH1A	DPF1	NXPH4
ADH1B	DPYSL3	OTC
ADH4	DRAXINP1	PAH
ADRB1	DRP2	PCDHGC5
AGMAT	DUSP5P1	PDLIM4
AGR2	EYS	PDZD3
AGXT	F13A1	PKIA
AHSG	F13B	PKLR
AKNAD1	FABP1	PKNOX2
AKR1B10	FAM9A	PLEKHG4B
AKR1B15	FAP	PNPLA5
AKR1C4	FCAMR	POPDC3
AKR1C6P	FCN2	POSTN
AKR1C8P	FETUB	PPP1R14C
AKR7A3	FGF1	PRODH2
AL024508.2	FGF14	PRRX2

AL031651.2	FIBIN	PTPRN
AL033397.1	FLNC	R3HDML
AL109613.1	GABBR2	RAB3B
AL135924.2	GAL	RAB3C
AL139393.2	GAS2	RBP4
AL445931.1	GBA3	RCOR2
AL807761.4	GDF10	RDH8
AL845321.1	GDF2	RHCG
ALB	GLDC	RNU1-70P
ALDH1L2	GLI2	RPLPOP2
ALDH3A1	GPAT3	S100P
ALOX15	GPD1	SAA4
ANKRD18B	GPR1	SCEL
ANKRD22	GSTA1	SERPINB2
ANO4	GSTA2	SERPINC1
ANXA10	GSTA7P	SHBG
APCDD1L	HFE2	SLC17A3
APOA1	HHIP	SLC22A1
APOA1-AS	HILS1	SLC22A10
APOA5	HIST2H2BA	SLC27A6
APOC1P1	HLF	SLC2A2
APOF	HMGB1P10	SLC39A5
APOH	HMGB3P7	SLC3A1
APOM	HPGD	SLC51B
ARHGDI3	HRG	SLC6A20
ARSI	HSD17B13	SLC6A7
ASPDH	HTRA3	SPOCD1
ATP2B3	IGF1R	SPOCK1
BCO1	IGF2BP3	SSC5D
BHMT	IGFL1	ST6GAL2
BMP10	IGSF23	STAB2
C3orf85	IL11	STEAP4
CA5A	INHBA	STRA6
CADPS	INMT	SULT2A1
CAMK2A	ISLR	SYT1
CASP16P	ISLR2	TDO2
CAVIN4	ITGBL1	TESC-AS1
CBLN1	KANK4	TFF2
CBLN2	KCNG1	TGFB1
CCDC80	KCNH2	THRSP
CCIN	KIAA1755	TIMP1
CCL13	KLHDC8A	TM4SF19
CCL23	KRT79	TMEM105
CD5L	KSR2	TMEM190
CDH11	LEF1	TMEM244
CDK5R2	LEF1-AS1	TNFSF4
CEND1	LEFTY1	TPM2
CES5A	LINC00475	TTR

CHRNA3	LINC00513	UCN2
CHRNA9	LINC00607	UGT1A1
CHST6	LINC00877	UGT1A4
CHST8	LINC00942	UGT2B10
CIDEC	LINC01050	UGT2B11
CLEC1B	LINC01146	UGT2B27P
CLEC2L	LINC01344	UNC5B-AS1
CLSTN2	LINC01485	UROCI
CNN1	LINC01614	VCAN
COL1A1	LINC01638	VGLL3
COL22A1	LINC01639	WNT2
COL5A3	LINC01702	WNT5A
COL7A1	LINC01705	WNT5B
COL8A1	LINC01711	XDH
COL9A1	LINC02015	ZNF365
COMP	LINC02027	ZNF648
CPEB1	LINC02257	ZP1
CPS1	LINC02458	
CREB3L1	LINC02535	
CRHBP	LPA	

Appendix 4.D

Genes differently expressed in the comparison between inhibited and healthy PCLSs

Gene	log2FoldChange	lfcSE	p-value	p-adjust
PLVAP	2.18474027	0.19264938	8.27E-30	9.67E-26
TSPAN2	5.28272196	0.47728607	1.79E-28	1.36E-24
FOXS1	2.63018203	0.2381338	2.32E-28	1.36E-24
ISLR	2.63873939	0.24551316	6.07E-27	2.37E-23
FNDC1	3.51159705	0.3301128	1.99E-26	6.66E-23
TMEM158	-2.0222649	0.19326022	1.26E-25	3.70E-22
IL13RA2	-4.4777715	0.43308034	4.68E-25	9.95E-22
MGP	2.53755559	0.26286676	4.76E-22	7.42E-19
PMEPA1	2.30683027	0.23940952	5.66E-22	8.28E-19
IL33	-2.2272648	0.23237213	9.25E-22	1.14E-18
PTX3	-3.2976163	0.34818567	2.78E-21	3.09E-18
SULT1E1	4.00020543	0.43192193	2.02E-20	1.89E-17
KIT	2.15688238	0.23447646	3.62E-20	3.26E-17
LINC01614	5.22420836	0.57690715	1.36E-19	1.06E-16
TTYH2	2.04711646	0.22919529	4.19E-19	3.07E-16
CCBE1	-2.3459014	0.27339597	9.44E-18	5.66E-15
CILP	3.35995805	0.39710459	2.65E-17	1.41E-14
C3orf80	2.46979824	0.29430104	4.78E-17	2.28E-14
CA12	-2.3606052	0.28252095	6.52E-17	2.99E-14
C5orf46	3.6811769	0.44574978	1.48E-16	6.23E-14
TMEM119	2.57610928	0.31355506	2.11E-16	8.50E-14
FGF7	-3.472331	0.42640296	3.85E-16	1.48E-13
SCG5	2.07135901	0.25853215	1.13E-15	4.06E-13
CST2	3.91330131	0.4887108	1.17E-15	4.15E-13
NOX4	3.16781499	0.39973999	2.29E-15	7.87E-13
MMP11	2.22298611	0.28063061	2.35E-15	7.96E-13
SCTR	4.47050023	0.56679829	3.09E-15	1.02E-12
SNAP25	2.96262102	0.38308767	1.05E-14	3.26E-12
ELN	2.19433605	0.29085098	4.54E-14	1.33E-11
KCNJ16	2.55943744	0.35021015	2.71E-13	7.28E-11
ITGB6	2.2513545	0.30898718	3.19E-13	8.47E-11
ITGB6	2.2513545	0.30898718	3.19E-13	8.47E-11
MFAP4	2.34643476	0.32218249	3.27E-13	8.49E-11
GRM6	5.9597927	0.82915265	6.58E-13	1.59E-10
RTP3	2.64724957	0.37098806	9.63E-13	2.30E-10
SBSN	-5.4640348	0.76740955	1.08E-12	2.52E-10
HAO2	2.88293257	0.41542266	3.93E-12	8.13E-10
TRIM40	-3.6267611	0.52469226	4.77E-12	9.63E-10
CNN1	2.26460068	0.33454893	1.30E-11	2.46E-09
SLCO4A1	-2.3109963	0.34278515	1.56E-11	2.88E-09
TNFRSF6B	-3.1440838	0.47510743	3.65E-11	6.01E-09
MEOX1	3.72410516	0.56335004	3.83E-11	6.26E-09

MUC6	-2.5614143	0.39533092	9.22E-11	1.36E-08
MT3	-2.5439364	0.39391284	1.06E-10	1.55E-08
FFAR3	-3.218412	0.50258503	1.52E-10	2.12E-08
STAR	-2.8324509	0.44966576	3.00E-10	3.81E-08
CLEC3B	-2.5306105	0.40511204	4.19E-10	5.06E-08
NKILA	2.42773052	0.38951703	4.59E-10	5.50E-08
GLI1	2.03366493	0.32667795	4.81E-10	5.71E-08
KCNJ15	3.03012804	0.48929298	5.91E-10	6.78E-08
AC073621.2	-2.1732629	0.35165715	6.41E-10	7.31E-08
CES3	2.19904638	0.35922009	9.26E-10	1.02E-07
REG1A	-3.2225473	0.54129099	2.63E-09	2.57E-07
CD300E	-2.8455469	0.48092108	3.28E-09	3.12E-07
ISLR2	2.98515688	0.50931465	4.60E-09	4.29E-07
FNDC5	3.84269699	0.65673764	4.88E-09	4.48E-07
ALPK2	2.33213012	0.40256046	6.90E-09	6.00E-07
ANK2	-2.0689356	0.35721199	6.96E-09	6.03E-07
GDF6	2.68536377	0.46431621	7.32E-09	6.32E-07
MUC5B	-2.9526712	0.51517235	9.96E-09	8.35E-07
PRRX1	-2.1341326	0.37440287	1.20E-08	9.76E-07
TMPRSS4	-2.3587053	0.41585917	1.41E-08	1.11E-06
KRT17	3.13208089	0.55348646	1.52E-08	1.18E-06
CXXC4	2.74922464	0.48627014	1.57E-08	1.21E-06
ST6GAL2	2.18212954	0.39100271	2.39E-08	1.77E-06
PKP1	2.26068891	0.40591143	2.56E-08	1.86E-06
AL031651.2	3.59906244	0.65249737	3.47E-08	2.41E-06
PPP1R14C	3.03268589	0.55223382	3.98E-08	2.72E-06
BPI	3.93829079	0.71734531	4.02E-08	2.72E-06
ADAMTS6	2.10537732	0.38486959	4.49E-08	2.98E-06
MUC2	-2.6362825	0.48270372	4.72E-08	3.10E-06
CASC15	2.55242279	0.47141566	6.15E-08	3.93E-06
ALDH3A1	-2.0396895	0.37763882	6.62E-08	4.18E-06
AC099684.1	2.95259747	0.54827073	7.23E-08	4.48E-06
FAT3	2.82800323	0.52600603	7.60E-08	4.69E-06
CCDC144NL-1	3.19942477	0.59892727	9.20E-08	5.52E-06
CCDC144NL-2	3.19942477	0.59892727	9.20E-08	5.52E-06
CCDC144NL-3	3.19942477	0.59892727	9.20E-08	5.52E-06
PTGS2	-2.2626629	0.42480933	1.00E-07	5.92E-06
FOLR1	2.89318081	0.54445017	1.07E-07	6.29E-06
ANKRD22	-2.1753779	0.41244182	1.33E-07	7.59E-06
AC013275.1	2.09935077	0.40079194	1.62E-07	8.96E-06
ZPLD1	2.10697232	0.40257644	1.66E-07	9.08E-06
AC073621.1	8.02651505	1.54426461	2.02E-07	1.08E-05
IL1B	-2.7136189	0.52255749	2.07E-07	1.10E-05
IL31RA	-2.1962382	0.42314883	2.10E-07	1.11E-05
CLCNKA	3.39725174	0.65520306	2.16E-07	1.13E-05
SELE	-3.3431898	0.64969485	2.66E-07	1.36E-05
SFRP4	2.73895337	0.53319031	2.79E-07	1.41E-05
IL6	-3.3280761	0.64919424	2.95E-07	1.48E-05

SERPINB3	-4.4192964	0.8642165	3.16E-07	1.56E-05
TNFRSF9	-2.6100831	0.51440728	3.90E-07	1.86E-05
CRLF1	2.05119975	0.40499416	4.09E-07	1.93E-05
AC025580.1	4.10735199	0.81554524	4.75E-07	2.19E-05
AGR2	-2.6995586	0.5384026	5.33E-07	2.44E-05
CCL11	2.96185079	0.59154685	5.53E-07	2.50E-05
DUOXA2	-2.3269343	0.4649458	5.59E-07	2.52E-05
LRRC15	-2.7498122	0.55418217	6.98E-07	3.01E-05
CEMIP	-3.0468656	0.61772392	8.12E-07	3.44E-05
GPR42	-4.8333371	0.98361025	8.93E-07	3.72E-05
OLR1	2.15845605	0.44330388	1.12E-06	4.52E-05
KANK4	2.43941579	0.50268423	1.22E-06	4.86E-05
SLC22A7	2.50893133	0.52144781	1.50E-06	5.86E-05
CCL7	-3.1450817	0.65582571	1.62E-06	6.26E-05
AL391425.1	3.6587575	0.76919641	1.97E-06	7.45E-05
INHBE	2.21689559	0.46634325	2.00E-06	7.53E-05
UQCRFS1P1	2.86179661	0.60594991	2.33E-06	8.52E-05
HMGCS2	2.39209698	0.50659772	2.34E-06	8.54E-05
KIAA1755	2.61271171	0.55363502	2.37E-06	8.63E-05
LECT2	2.13898043	0.4546029	2.54E-06	9.17E-05
ADAMTS8	-2.04401	0.43470341	2.58E-06	9.28E-05
UPP2	3.83946516	0.81858166	2.73E-06	9.80E-05
REG1B	-5.3403061	1.14357221	3.01E-06	0.00010745
HGNC:18790	4.78966568	1.02587199	3.03E-06	0.00010768
ZFH2	2.02266929	0.43417411	3.18E-06	0.00011231
KRT75	4.64119549	0.99934809	3.41E-06	0.00011849
WNT9B	-2.9140349	0.62756994	3.43E-06	0.00011866
SLC6A3	-3.4591742	0.74745888	3.69E-06	0.00012689
CRTAC1	2.68982053	0.58203791	3.81E-06	0.00013019
ACKR1	-2.6856764	0.58123025	3.82E-06	0.00013044
AOC1	3.40822404	0.73934786	4.03E-06	0.0001357
AC073429.2	-2.2364516	0.48778953	4.54E-06	0.00015053
STMN2	-2.3219724	0.50720163	4.69E-06	0.0001549
COMP	2.71210567	0.59319182	4.83E-06	0.00015827
KCNQ5	-4.1038816	0.89992648	5.11E-06	0.00016579
CYP3A4	-3.1670797	0.69759698	5.63E-06	0.00017937
UROC1	2.09060281	0.46783884	7.87E-06	0.0002349
U82695.1	2.33797754	0.52421485	8.20E-06	0.00024302
AC087164.2	2.08630173	0.46780876	8.21E-06	0.00024302
AC099684.2	2.27990018	0.51177228	8.39E-06	0.00024724
HNF4A-AS1	2.06305023	0.46522138	9.23E-06	0.00026642
AL117378.1	-2.0831147	0.47162153	1.00E-05	0.00028529
AC025569.1	2.64467618	0.59892916	1.01E-05	0.00028624
SNAP25-AS1	4.14261423	0.94098428	1.07E-05	0.00030173
LEFTY1	2.5650301	0.58444198	1.14E-05	0.00032003
RCVRN	3.13611667	0.71501674	1.15E-05	0.00032298
AC137056.2	2.37447761	0.54257276	1.21E-05	0.00033495
MUC21	-2.1342769	0.48779667	1.21E-05	0.00033528

ZNF365	2.3479008	0.53725309	1.24E-05	0.00034126
AL049836.1	-2.2941914	0.52639842	1.31E-05	0.00035702
DRP2	2.26045817	0.52036497	1.40E-05	0.00037583
LINC01638	2.78598896	0.64431471	1.53E-05	0.00040331
SEMA3A	-2.2195468	0.51512573	1.64E-05	0.00042781
AC108451.2	-2.2898081	0.53697806	2.01E-05	0.0005062
ICAM4	-2.0625662	0.48428005	2.05E-05	0.00051537
IL11	2.44500264	0.57601946	2.19E-05	0.00054143
NCAM2	-2.9173682	0.69100965	2.42E-05	0.00058672
AL139125.2	2.70562824	0.64406686	2.66E-05	0.00062966
SERPINA2	-2.7690475	0.6594908	2.68E-05	0.00063292
PADI2	3.35643227	0.80461763	3.03E-05	0.00070104
KSR2	2.56654563	0.61549491	3.05E-05	0.0007045
AC008592.1	-2.8736769	0.6897388	3.10E-05	0.00071348
AC010970.1	-2.4553986	0.59016688	3.18E-05	0.00072545
MPPED2	2.36109076	0.57185782	3.65E-05	0.0008195
DLGAP1-AS3	3.95357572	0.96212213	3.97E-05	0.00087776
ATP6V1C2	-2.9771706	0.7291471	4.44E-05	0.00095556

Appendix 4.E

Proteins differently expressed in the comparison between fibrotic and healthy PCLSs

Gene ¹	logFC	P.Value	sca.P.Value ²
TNC	1.0267817	9.82E-08	6.45E-08
CSTB	-1.0064899	1.23E-07	1.10E-07
TGFBI	1.22314236	4.09E-07	2.89E-07
RCN3	1.17495923	4.89E-07	4.09E-07
AKR1C3	-1.1881184	5.91E-07	4.41E-07
C11orf54	-1.1006785	1.80E-06	1.39E-06
GSS	-1.010461	3.23E-06	2.53E-06
DDAH1	-1.0112216	3.48E-06	2.66E-06
RGN	-1.011813	7.97E-06	6.15E-06
PXDN	1.14837972	1.08E-05	9.16E-06
ACY1	-1.1442805	1.57E-05	1.23E-05
ASL	-1.1337238	2.30E-05	1.82E-05
NES	1.24171347	2.78E-05	2.24E-05
SAA2	-1.2925737	2.95E-05	2.49E-05
GNPNAT1	-1.0371135	3.81E-05	3.21E-05
GDA	-1.4312501	4.01E-05	3.30E-05
GOT1	-1.4642001	4.42E-05	3.58E-05
PCBD1	-1.2389817	4.80E-05	4.02E-05
TIMP1	1.49261784	5.48E-05	4.53E-05
ALDH1A1	-1.1149175	6.68E-05	5.41E-05
HGD	-1.1573611	8.36E-05	6.88E-05
MT1X	-1.1313969	9.34E-05	7.93E-05
HPD	-1.1622733	0.00012071	9.96E-05
PEBP1	-1.2338385	0.00014693	0.00012228
FAH	-1.215158	0.00017454	0.00014597
NQO2	-1.2008832	0.00018616	0.00015822
FBP1	-1.0778661	0.00023096	0.00019346
ARG1	-1.1938428	0.00037005	0.0003139
FABP1	-1.1605431	0.00050533	0.00043412
DDT; DDTL	-1.280349	0.00096262	0.00083988
ENO3	-1.1227577	0.00119489	0.00105376
SAA1	-1.9400115	0.00258683	0.00232519
GPT	-1.1957937	0.00267739	0.00238987
CTH	-1.2245515	0.00766434	0.00700769
PTGR1	-1.2553872	0.01349402	0.01244344
SOD1	-1.0620457	0.01548011	0.01431896
MT2A	-1.1791658	0.02725285	0.02562566

1. *Gene*: Protein codifying gene.

2. *Sca.P. Value*: p-value corrected by Peptide to Spectrum Matches (PSM).

Appendix 4.F

Proteins differently expressed in the comparison between fibrotic and inhibited PCLSs

Gene ¹	logFC	P.Value	sca.P.Value ²
HTRA1	1.48701061	7.34E-11	4.54E-11
CPM	-1.3540487	7.37E-10	5.93E-10
SERPINE1	1.28080463	1.16E-09	6.88E-10
ANGPTL4	1.53749598	1.76E-09	1.16E-09
SERPINB1	-1.1631016	2.30E-09	1.38E-09
CAST	-1.0897069	3.74E-09	2.45E-09
ADAMTS4	1.4254934	5.92E-09	4.29E-09
NAMPT	-1.3767675	7.57E-09	4.67E-09
TNC	1.36822708	1.82E-08	1.15E-08
HMGCS1	-1.6669209	4.98E-08	3.98E-08
SQSTM1	-1.0829878	9.43E-08	6.57E-08
TGFBI	1.53159252	1.62E-07	1.12E-07
LDHA	-1.015666	2.63E-07	1.76E-07
AKR1C3	-1.4444867	3.31E-07	2.43E-07
CSTB	-1.0838173	2.75E-07	2.50E-07
ITGB3	1.42155108	1.08E-06	8.97E-07
LRG1	-1.3630721	1.05E-06	9.44E-07
FN1	1.11935985	1.46E-06	1.04E-06
PXDN	1.6099096	1.37E-06	1.11E-06
SLC9A3R1	-1.1551123	2.16E-06	1.65E-06
GSS	-1.2122216	2.14E-06	1.66E-06
SAA2	-1.7972648	4.37E-06	3.55E-06
ACAT2	-1.034044	6.40E-06	4.92E-06
KRT19	-1.1511703	1.06E-05	8.13E-06
RCN3	1.02174233	1.05E-05	9.31E-06
TXNRD1	-1.2441596	1.29E-05	1.03E-05
GLRX	-1.1770345	1.38E-05	1.19E-05
GNPNAT1	-1.2492858	2.51E-05	2.10E-05
NDRG1	-1.4676938	4.11E-05	3.34E-05
CRYAB	1.00294309	4.39E-05	3.76E-05
GOT1	-1.6603704	5.27E-05	4.28E-05
ACY1	-1.1557377	5.87E-05	4.74E-05
GDA	-1.5184842	9.00E-05	7.53E-05
TXN	-1.0622381	0.00011818	9.88E-05
ALDH1A1	-1.2033825	0.00012547	0.0001031
ASL	-1.0869313	0.00013661	0.00011252
KYNU	-1.0783792	0.00013655	0.00012061
NES	1.18450018	0.00016963	0.00014243
TIMP1	1.4920453	0.00020764	0.00017664
HGD	-1.2047674	0.00021535	0.00018099
HPD	-1.2027618	0.00032008	0.00026997
PCBD1	-1.1281393	0.00041396	0.00036197

SAA1	-2.7008461	0.00062346	0.00054422
FAH	-1.1967596	0.00067941	0.00058555
TAGLN	1.30547974	0.00068051	0.00058767
RPS28	-1.4833863	0.00082246	0.00072736
FBP1	-1.0130735	0.00125747	0.00109412
PEBP1	-1.0717938	0.00155626	0.00136471
NQO2	-1.0568824	0.00171683	0.00152858
ARG1	-1.0902895	0.00232501	0.0020545
FABP1	-1.0264769	0.00375271	0.00336698
DDT;DDTL	-1.2116584	0.0040717	0.00366412
MYH11	1.43368797	0.0062529	0.0056936
GPT	-1.1326617	0.00954613	0.00875277
CTH	-1.2526896	0.01525332	0.01414513
PTGR1	-1.3543169	0.01929751	0.01792928

1. *Gene*: Protein codifying gene.
2. *Sca.P. Value*: p-value corrected by Peptide to Spectrum Matches (PSM).

Appendix 4.G

Overlapping proteins in the comparisons between fibrotic vs healthy PCLSs and fibrotic vs inhibited PCLSs

ACY1	GSS
AKR1C3	HGD
ALDH1A1	HPD
ARG1	NES
ASL	NQO2
CSTB	PCBD1
CTH	PEBP1
DDT; DDTL	PTGR1
FABP1	PXDN
FAH	RCN3
FBP1	SAA1
GDA	SAA2
GNPNAT1	TGFBI
GOT1	TIMP1
GPT	TNC

Appendix 4.H

Proteins differently expressed in the comparison between fibrotic and healthy secretomes from PCLs

Gene ¹	logFC	P.Value	sca.P.Value ²
C1S	-1.1156271	9.53E-05	8.89E-05
AGT	-1.6754194	0.00100398	0.00095869
CLU	-1.3912032	0.00112749	0.00103899
C1R	-1.1526384	0.00123007	0.00115945
C4BPA	-1.5708057	0.00150286	0.00143002
SPARC	1.45356418	0.00176129	0.00167637
ORM1	-1.572471	0.00183734	0.00176224
VTN	-1.4660182	0.00217742	0.00224477
SERPINA3	-1.0705918	0.0029552	0.00284519
SERPINA1	-1.1403798	0.00290504	0.00291682
COL6A3	1.41313015	0.00333949	0.00322588
SERPINF1	-1.010151	0.00478477	0.00461715
ITIH2	-1.0799294	0.0051128	0.00491035
CALU	1.21177611	0.00727364	0.00700543
PCOLCE	1.32390938	0.00696073	0.00710605
ORM2	-1.1151527	0.00768383	0.00741092
LBP	-1.5150682	0.00773032	0.0077879
BGN	1.99378889	0.00993188	0.00984167
RNASE4	-1.0522799	0.01330103	0.01288951
PXDN	1.26193191	0.01803208	0.01820899
TIMP1	1.16120453	0.02064728	0.02017957
F2	-2.7282402	0.0209613	0.02061943
FN1	1.12230599	0.02432529	0.02503129
TTR	-1.5137388	0.02586928	0.02513025
TNC	1.59967615	0.02812884	0.02753051
TGFBI	2.54007289	0.0307857	0.03014492

1. *Gene*: Protein codifying gene.

2. *Sca.P.Value*: p-value corrected by Peptide to Spectrum Matches (PSM).

Appendix 4.I

Proteins differently expressed in the comparison between fibrotic and inhibited secretomes from PCLs

Gene ¹	logFC	P.Value	sca.P.Value ²
CD14	-1.2397277	0.00046473	0.00043999
C1S	-1.0298734	0.0007326	0.00069385
CSRP1	1.04992166	0.00096302	0.00116634
CLU	-1.5651248	0.00138659	0.00128069
LBP	-2.1829701	0.00166119	0.00167079
CTSC	1.21778435	0.00177276	0.00167341
C1R	-1.2647802	0.00182944	0.00173046
C4BPA	-1.7520207	0.00196027	0.00186921
SERPINF1	-1.314877	0.00204291	0.00195912
GSTP1	1.13117314	0.00265554	0.00251426
IGFBP1	-1.807593	0.00281699	0.00265748
IGFBP2	-1.3911549	0.00296871	0.0027625
SERPING1	-1.1284095	0.00296526	0.00280753
SOD2	1.12322103	0.00343272	0.00325643
AGT	-1.6419483	0.00347561	0.00334873
HEXB	1.23332883	0.00414091	0.00400486
IGFBP7	1.02833888	0.00419724	0.00403969
CTSD	1.38390043	0.00463465	0.00443239
C3	-1.0503166	0.00403241	0.00449644
QSOX1	-1.0124592	0.00518043	0.00495345
FAHD1	1.33595974	0.00473017	0.00495597
COL4A1	1.113897	0.00294723	0.00542759
ORM1	-1.5420623	0.00581447	0.00562318
ITIH3	-1.1296027	0.00575416	0.00616955
CTSZ	1.47082955	0.00754519	0.00731259
ORM2	-1.2828818	0.00786318	0.00758528
AZGP1	-1.0993133	0.00802048	0.00772453
RNASE4	-1.310692	0.00853899	0.00824601
ACOT13	1.6183478	0.00873724	0.00884196
SERPINA1	-1.093047	0.00985315	0.00990667
SERPINE1	1.1907951	0.01059092	0.0101995
S100A11	1.05119423	0.01041201	0.01105265
TIMM13	2.52758938	0.01099963	0.01155382
DPYSL2	1.02730532	0.01237306	0.01309744
ITIH2	-1.0418054	0.01514115	0.01467008
DPP7	1.48483249	0.01811377	0.01763082
TTR	-1.8588509	0.01900482	0.01841336
SPARC	1.14568887	0.0200214	0.01943694
RBP4	-1.1652825	0.02012814	0.01967081
CRP	-1.0245713	0.02756651	0.02644082
PXDN	1.33019703	0.0284015	0.02866719
F2	-2.9007006	0.03124704	0.03080031

TIMP1 1.12614309 0.04602062 0.04521674

1. *Gene*: Protein codifying gene.
2. *Sca.P.Value*: p-value corrected by Peptide to Spectrum Matches (PSM).

Appendix 4.J

Overlapping proteins in the comparisons between secretomes from fibrotic vs healthy PCLSs and fibrotic vs inhibited PCLSs

AGT	ORM2
C1R	PXDN
C1S	RNASE4
C4BPA	SERPINA1
CLU	SERPINF1
F2	SPARC
ITIH2	TIMP1
LBP	TTR
ORM1	

Appendix 4.K

Proteins differently expressed in the comparison between inhibited and healthy secretomes from PCLSs

Gene ¹	logFC	P.Value	sca.P.Value ²
SOD2	-1.1756799	0.00247339	0.00233924
ACOT13	-1.6448758	0.00790909	0.00800419
CTSD	-1.2543695	0.0086945	0.00836029
PKLR	1.0314344	0.0091792	0.00982725
FAHD1	-1.193734	0.00965039	0.01007051
CTSZ	-1.1557486	0.02814286	0.02752851
COL6A3	1.08354718	0.03469497	0.03404064

1. *Gene*: Protein coding gene.

2. *Sca.P.Value*: p-value corrected by Peptide to Spectrum Matches (PSM).

Appendix 4.L

Component 1 top 50 features that contribute to the explanation of the different outcomes (fibrotic, inhibited and healthy).

Transcriptome	Proteome	Secretome
APC2	HTRA1	DLST
LCN1P1	SLC9A3R1	HEXB
XRN1	PSAP	IGFBP7
RFTN1	ITGA5	ARSA
BMF	ITGAV	DPP7
GPR19	CRYL1	CTSC
RFX8	HSPG2	CD14
TBX21	DSG2	BGN
RNPEPL1	CSTB	FGG
MSI1	DARS	FGB
RLBP1	PTPN11	FGA
AL355607.2	STARD10	APOC2
ESCO1	AHNAK	C4B
IDE	ADAM10	CSRP1
NDUF4F4P4	MCAM	LRG1
AP3D1	COL1A1	APOA4
CYP2D6	ALDH9A1	COL5A2
ZNF546	GALM	HP
PADI2	DBN1	TTR
AC097381.3	CKAP4	ERP29
MPPED2	NAMPT	FBN1
TP53I11	NUP155	SPARC
IL4	SBDS	C1S
JMJD7-PLA2G4B	CARHSP1	APOA1
ZEB2_AS1_4	POSTN	F2
COG7	PLOD1	MANF
LRFN5	LAD1	GALNS
UBR7	LASP1	TGFBI
ATAD3B	NID2	AMBP
IQCA1	DAK	BLMH
VWC2	AHCYL1	PPIB
AL031587.6	MAP2K1	APOB
AP000593.1	SERPINH1	GUSB
OGFRL1	CAST	LDHB
AK4	NES	SERPING1
CLMN	GALE	SERPINC1
A4GNT	LRG1	C1R
TIMD4	IKBIP	ORM2
AC246785.4	DERA	AZGP1
ORAI2	AK1	SPON2
UTP3	P4HA2	LBP

MAPKAPK3	FKBP5	APOH
ARRDC2	TIMP1	CP
TAS2R60	FN1	SAA1
UTS2	VNN1	TPM3
GATA1	TGFBI	ORM1
TMPRSS4	PXDN	VCL
FANCE	LEPRE1	C4BPA
TTC27	RCN3	CLU
MYH7B	GBP1	CALD1

Appendix 4.M

Component 2 top 50 features that contribute to the explanation of the different outcomes (fibrotic, inhibited and healthy).

Transcriptome	Proteome	Secretome
GALNT3	RPS16	PGAM1
SERPINA7	ABCB1	GLO1
STK36	RPL30	ALDH9A1
LILRA1	SRP14	HPRT1
EMC4	APOA1BP	GRHPR
FAM184A	RPL6	DDAH1
KRT79	GBP2	NUDT5
PLAC1	ATP2B4	PRDX6
TRPC2	UBE2L6	PGM1
GAPDHS	F11R	GPI
MYOZ1	YTHDF3	ADH5
COX5B	RPS5	FCGR3A
RECQL4	GLB1	BHMT2
NFAT5	EIF3B	C1QB
C21orf2	ATAD3A	ESD
SYT13	VDAC2	IDI1
PIGA	PHPT1	GALM
DPY19L2P2	CORO1A	ATP6V1A
GGCT	RPL21	PBLD
AC103739.2	PDZK1	ADH1A
CCDC178	RPL34	TXNDC5
ZFX	RPL7	CACYBP
TMEM18	H2AFY	ALDOB
MGP	RPS3A	PCMT1
E2F7	SEPT09	ALDOC
DGKD	AKAP12	UPB1
CLCC1	S10AB	DPYS
TFAP4	RPS24	PTX3
RRP36	TNS1	SHMT1
POPDC3	RAB1A	ENO3
PRKCZ-AS1	SH3BGRL2	SKP1
CCZ1	RPS11	ABHD14B
C11orf44	LIPA	PKLR
SASH1	SEC23B	HAAO
MGLL	PLD3	FASN
ATRAID	RPS2	CMBL
ZFP62	SEC13	PAICS
OR52B1P	RPL35A	ACAT2
GFM1	CTSZ	GPD1
PRICKLE1	SCO2	HMGB1
SMCHD1	CTSD	UROC1

HHAT	AKR1B1	PRDX2
SERINC2	NAA10	TPP2
EMC2	CLTA	ACLY
TAF11	FAM98A	IGFBP4
YY1AP1	RSL1D1	FDPS
REV1	RPS27	ATP5J
DEPDC1B	ABCE1	PYGB
RNF187	GALNT2	GBE1
MAPK8IP3	TUBA1C	AKR7A2

Appendix 5

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Appendix 5.A

RNA sequencing comparison between FOF1F2 and FOF1

Gene	log2FoldChange	lfcSE	p-value	p-adjust
AABR07067267.1	9.636372068	0.49865108	3.32E-83	5.41E-79
AABR07073181.1	5.146994697	0.3068545	3.82E-63	3.11E-59
RGD1559972	3.769853456	0.23378471	1.69E-58	9.20E-55
AABR07004894.1	7.065490298	0.44313719	3.12E-57	1.27E-53
Bcas2	-1.843596581	0.11854823	1.56E-54	5.07E-51
Phgdh	7.169415514	0.4820705	5.00E-50	1.36E-46
Col4a2	4.421066439	0.30309781	3.43E-48	8.00E-45
Creb3l2	2.461099612	0.1700663	1.84E-47	3.74E-44
Eny2	-1.674554777	0.11602404	3.22E-47	5.82E-44
Psma4	-1.636067802	0.11563478	1.91E-45	3.11E-42
Mrps9	-1.834910705	0.1301138	3.67E-45	4.99E-42
Ensa	-1.302990403	0.09236685	3.45E-45	4.99E-42
Dchs1	2.862991293	0.20362362	6.67E-45	8.36E-42
Klf11	2.717517695	0.19491816	3.53E-44	4.11E-41
Cops5	-1.492712192	0.1079037	1.59E-43	1.73E-40
Cmip	2.315913833	0.16769184	2.20E-43	2.24E-40
Ssr1	2.284691978	0.1664898	7.42E-43	7.12E-40
Sdhaf2	-2.104151533	0.15391232	1.51E-42	1.37E-39
Col3a1	3.842283716	0.28313802	6.00E-42	5.15E-39
RGD1304884	2.38034952	0.17572599	8.39E-42	6.84E-39
Tnfrsf21	5.423177724	0.40528502	7.79E-41	6.05E-38
Cox7b	-3.443525155	0.26035959	6.21E-40	4.60E-37
Slc7a1	7.662339216	0.58000476	7.60E-40	5.38E-37
Rab9a	-2.63664359	0.19963939	7.99E-40	5.43E-37
Hid1	5.314264206	0.40304509	1.07E-39	6.95E-37
LOC688815	3.96545674	0.30131926	1.48E-39	9.30E-37
Derl3	6.132323593	0.46854077	3.85E-39	2.32E-36
Myadm	3.691589448	0.2823672	4.65E-39	2.71E-36
Dnajc8	-1.243307115	0.09552065	9.91E-39	5.57E-36
Zmat2	-1.894492417	0.14627557	2.30E-38	1.25E-35
Phf13	1.678214877	0.13006257	4.32E-38	2.27E-35
Col14a1	1.654257954	0.12823535	4.49E-38	2.29E-35
LOC103690018	6.725353631	0.52208048	5.70E-38	2.81E-35
Mrpl18	-2.172946279	0.16884423	6.68E-38	3.20E-35
Selenon	3.03155719	0.23739615	2.41E-37	1.12E-34
Mkks	-1.73799711	0.13616689	2.61E-37	1.18E-34
Pop4	-1.778878866	0.13993942	5.09E-37	2.24E-34
Ckap4	5.200944684	0.41074153	9.56E-37	4.10E-34
Bhlha15	4.274617019	0.33799841	1.16E-36	4.87E-34
Reln	3.063215503	0.24275518	1.67E-36	6.80E-34
Ube2k	-1.626467593	0.12916871	2.34E-36	9.31E-34

Slc6a9	3.283957244	0.26138331	3.34E-36	1.30E-33
RGD1561149	3.204179427	0.25512529	3.54E-36	1.34E-33
Pfkfb3	4.992385643	0.39758629	3.65E-36	1.35E-33
Cdc123	-1.139514032	0.09127864	9.14E-36	3.31E-33
Naca	-1.88552586	0.15129381	1.19E-35	4.23E-33
Col4a1	4.234245866	0.34018754	1.46E-35	5.05E-33
Mesdc1	2.604406383	0.20955848	1.84E-35	6.25E-33
Col5a1	4.175061113	0.33715568	3.22E-35	1.07E-32
Chpf	5.211200798	0.42214419	5.21E-35	1.70E-32
Mafk	3.067061621	0.25009284	1.42E-34	4.53E-32
Adgra2	3.328614576	0.27167834	1.64E-34	5.13E-32
Mnt	3.185047374	0.26071339	2.53E-34	7.79E-32
Ndufa5	-2.266943781	0.18698553	7.92E-34	2.35E-31
Polr2k	-2.835472163	0.23489662	1.50E-33	4.37E-31
Ddost	1.807803033	0.14979102	1.54E-33	4.41E-31
Spag7	-2.392515018	0.19840079	1.74E-33	4.89E-31
Basp1	5.329394973	0.44404533	3.47E-33	9.59E-31
Cnbp	-1.552370065	0.12947864	4.04E-33	1.10E-30
Soat1	4.554851046	0.38063698	5.33E-33	1.42E-30
Ablim3	2.77488967	0.23196445	5.58E-33	1.47E-30
RGD1311745	-2.409001367	0.20148108	6.01E-33	1.55E-30
H3f3c	-2.054658483	0.17200487	6.87E-33	1.75E-30
H3f3c	-2.054658483	0.17200487	6.87E-33	1.75E-30
Mterf4	-2.733006161	0.22952781	1.09E-32	2.73E-30
RGD1565641	-2.885848118	0.2429854	1.57E-32	3.87E-30
Spsb1	3.715728694	0.31329261	1.90E-32	4.63E-30
Soga1	4.784210686	0.40364393	2.09E-32	5.00E-30
Rn60_1_1138.1	3.657790186	0.30902732	2.53E-32	5.97E-30
Slc7a5	4.552565258	0.38506999	2.98E-32	6.88E-30
Impdh1	4.757735145	0.40244002	3.00E-32	6.88E-30
Pin4	-2.079808099	0.17618502	3.69E-32	8.36E-30
Txndc17	-2.470829574	0.2098529	5.31E-32	1.18E-29
Prpf31	-1.50921898	0.12836976	6.51E-32	1.43E-29
Rab11fip5	3.064301132	0.26100032	7.89E-32	1.71E-29
Eif2s3y	-2.609267883	0.22301986	1.28E-31	2.74E-29
Tpmt	-2.612439784	0.22333518	1.31E-31	2.78E-29
Coq3	-1.679180977	0.14361624	1.40E-31	2.92E-29
Sec31a	1.630189708	0.13987463	2.17E-31	4.48E-29
Heg1	1.981175032	0.1701956	2.56E-31	5.22E-29
Loxl2	3.897453336	0.33490486	2.66E-31	5.35E-29
St3gal2	2.919918983	0.25100526	2.80E-31	5.57E-29
Sarnp	-2.61227896	0.22565821	5.44E-31	1.07E-28
Chmp5	-1.025237583	0.08863903	6.10E-31	1.18E-28
Idh3B	-1.805647389	0.15615738	6.35E-31	1.22E-28
Cnksr3	1.66484499	0.14400177	6.47E-31	1.23E-28
Dnajc1	-1.529733081	0.1324177	7.18E-31	1.35E-28

Slc40a1	11.98448435	1.03780957	7.57E-31	1.40E-28
Tgfb1	3.166736735	0.2747281	9.67E-31	1.77E-28
Sdc3	2.15086795	0.18685437	1.16E-30	2.10E-28
Fhl3	3.5873096	0.31184034	1.26E-30	2.26E-28
Svep1	5.271317196	0.45826998	1.28E-30	2.27E-28
Nav1	3.404863524	0.29626177	1.43E-30	2.51E-28
Adamts2	4.069193552	0.35515068	2.15E-30	3.73E-28
Sub1	-1.904422047	0.1663514	2.40E-30	4.12E-28
Mthfd1l	5.748478161	0.50269587	2.79E-30	4.73E-28
Pabpc4	2.507685775	0.21932997	2.85E-30	4.78E-28
Cirbp	-2.416586656	0.21142515	2.96E-30	4.92E-28
Rab7a	-1.547491928	0.1357294	4.12E-30	6.78E-28
Sdk2	3.572064136	0.31340599	4.30E-30	7.01E-28
Serpine1	7.482203253	0.65827837	6.15E-30	9.93E-28
Zfp703	3.238295994	0.2849956	6.42E-30	1.03E-27
Cd276	4.050830414	0.35654967	6.52E-30	1.03E-27
Slc38a7	1.864669326	0.16464768	9.84E-30	1.54E-27
Ssbp1	-2.154234228	0.1906743	1.34E-29	2.06E-27
Nol7	-1.680555835	0.14874191	1.34E-29	2.06E-27
Rhbdf2	3.46850739	0.30790484	1.96E-29	2.98E-27
Cad	2.548302655	0.22698257	3.01E-29	4.54E-27
LOC100364509	-2.994676256	0.26792838	5.28E-29	7.89E-27
LOC100363502	-1.626517508	0.14561676	5.73E-29	8.48E-27
Kdelr3	3.78516755	0.33895856	5.91E-29	8.68E-27
Lcn2	5.935974688	0.53183064	6.30E-29	9.16E-27
Psmc6	-2.510775346	0.22500806	6.50E-29	9.37E-27
Cutc	-1.913253744	0.17175149	8.04E-29	1.15E-26
Csde1	-2.499125732	0.22445351	8.54E-29	1.21E-26
Ybx3	3.169740685	0.28534027	1.14E-28	1.60E-26
Rida	-4.102032476	0.36974541	1.34E-28	1.86E-26
Zdhhc18	2.884163272	0.26041866	1.66E-28	2.29E-26
LOC100911672	11.95925335	1.08045097	1.78E-28	2.44E-26
Tsc22d4	2.974312129	0.26883996	1.89E-28	2.56E-26
Ppp1r9b	2.008320223	0.18168376	2.10E-28	2.83E-26
Grn	2.201839874	0.19923257	2.15E-28	2.88E-26
Synpo	3.299464281	0.29914389	2.75E-28	3.64E-26
Atp5f1	-1.75749011	0.15936175	2.79E-28	3.67E-26
B4galt1	2.703191855	0.24519402	2.90E-28	3.79E-26
Sar1b	-1.869436318	0.16984127	3.54E-28	4.57E-26
Igsf8	3.341704498	0.3037554	3.77E-28	4.83E-26
Ppp1r18	2.217212959	0.20168347	4.11E-28	5.23E-26
Psma2	-1.327728189	0.12087714	4.56E-28	5.76E-26
Serpinh1	3.347854517	0.30507676	5.11E-28	6.40E-26
Wasf2	3.429147151	0.31259415	5.33E-28	6.63E-26
Rbm8a	-1.146647335	0.1045448	5.45E-28	6.72E-26
Slc38a2	1.792487073	0.16356382	6.02E-28	7.38E-26

Zfhx3	2.280851293	0.20847537	7.37E-28	8.96E-26
Hdac1	-1.415147476	0.12941696	7.86E-28	9.49E-26
Arhgef17	2.287139208	0.20930878	8.55E-28	1.02E-25
Ctnna3	-4.369329803	0.39999773	8.91E-28	1.06E-25
Tra2b	-2.00570806	0.18439983	1.48E-27	1.75E-25
Sec61-ps	9.321982197	0.85808247	1.72E-27	2.01E-25
Elf4	3.803084437	0.35018793	1.79E-27	2.08E-25
Unc5b	4.614584387	0.42503485	1.85E-27	2.12E-25
Zfp69	-4.415280562	0.40667149	1.84E-27	2.12E-25
Cops9	-1.935812688	0.17840839	1.98E-27	2.26E-25
Tbca	-1.654559826	0.15264555	2.24E-27	2.54E-25
Axl	2.157570686	0.19944696	2.84E-27	3.19E-25
RGD1311345	-2.163760612	0.20005354	2.89E-27	3.23E-25
Myo1c	3.409517521	0.31552379	3.23E-27	3.58E-25
Gna11	1.753909021	0.16235828	3.34E-27	3.68E-25
Klhl21	2.565518648	0.23751545	3.39E-27	3.70E-25
LOC100910575	11.30248258	1.04672765	3.52E-27	3.82E-25
Thumpd1	-2.478205542	0.22957324	3.64E-27	3.93E-25
Gnai1	3.630439398	0.3367562	4.25E-27	4.56E-25
LOC103689975	1.949341084	0.18084284	4.32E-27	4.60E-25
Rn60_4_0065.1	11.73348975	1.09007657	5.10E-27	5.39E-25
Ehd2	3.080757782	0.28646835	5.66E-27	5.95E-25
Sucla2	-2.586512339	0.24107671	7.44E-27	7.77E-25
Tubb6	5.578575033	0.52075934	8.90E-27	9.24E-25
AABR07044273.1	11.0748566	1.0338984	8.97E-27	9.25E-25
Mtif3	-2.150240479	0.2007956	9.28E-27	9.51E-25
Vasp	2.476311508	0.23185602	1.26E-26	1.26E-24
Nrxn2	2.003275417	0.18755618	1.25E-26	1.26E-24
Pde3a	3.383271886	0.31674842	1.25E-26	1.26E-24
Med6	-1.546408578	0.14495404	1.43E-26	1.43E-24
Dnaja3	-1.460951168	0.13699709	1.50E-26	1.49E-24
Nmnat1	-1.985700199	0.1864619	1.76E-26	1.72E-24
Bccip	-2.164023903	0.20320605	1.75E-26	1.72E-24
Alg11	-1.687766797	0.15851316	1.79E-26	1.75E-24
Maff	6.345885267	0.59627237	1.89E-26	1.83E-24
Cxcl16	2.949182195	0.27768548	2.39E-26	2.31E-24
Ppil2	-1.873988152	0.17661373	2.66E-26	2.55E-24
Dstn	-1.43289808	0.13508609	2.76E-26	2.63E-24
Gemin6	-2.07694229	0.1959717	3.04E-26	2.88E-24
Fbn1	3.886266035	0.36681963	3.16E-26	2.96E-24
AABR07013776.1	4.595678265	0.43377401	3.16E-26	2.96E-24
Lgals3	4.700273177	0.44395108	3.41E-26	3.18E-24
Plod3	1.665601584	0.15737873	3.56E-26	3.29E-24
Ncdn	2.702268395	0.25551197	3.85E-26	3.55E-24
Abcc4	2.811833438	0.26593009	3.95E-26	3.62E-24
Akap8l	-2.888768532	0.27367107	4.78E-26	4.36E-24

Cfap36	-2.596369562	0.24603569	4.93E-26	4.46E-24
Hexdc	-2.560250046	0.24283902	5.47E-26	4.93E-24
Asns	4.758291143	0.45164672	5.93E-26	5.31E-24
Slc3a2	2.96704563	0.28175875	6.25E-26	5.57E-24
Cox6c	-2.368757626	0.22504598	6.58E-26	5.83E-24
Kdelr1	1.508060096	0.14331536	6.79E-26	5.98E-24
Psmc1	-1.320321333	0.12549292	6.91E-26	6.05E-24
Map3k7	11.00898297	1.0465604	7.05E-26	6.14E-24
Hm13	2.047230777	0.19466092	7.22E-26	6.26E-24
AABR07017110.1	7.927856097	0.75413219	7.56E-26	6.52E-24
A3galt2	5.1459418	0.48985188	8.18E-26	7.02E-24
Mex3d	3.495558813	0.33284204	8.44E-26	7.20E-24
Wee1	3.634975884	0.34630887	8.98E-26	7.62E-24
Rere	1.205577953	0.11497477	1.01E-25	8.50E-24
Iqsec1	1.825608677	0.17414024	1.03E-25	8.64E-24
Fh	-2.666273818	0.25435088	1.04E-25	8.67E-24
Cox7c	-1.898083336	0.18111271	1.07E-25	8.86E-24
Cox16	-2.025041833	0.19335038	1.14E-25	9.46E-24
Prpf3	-1.875496902	0.17916327	1.21E-25	9.96E-24
Pcdh10	11.15189364	1.06627971	1.34E-25	1.09E-23
Sh3bp4	2.182810133	0.20878655	1.39E-25	1.14E-23
Rcc2	2.211720649	0.21157605	1.41E-25	1.14E-23
Leng1	-2.925144284	0.28007067	1.56E-25	1.26E-23
Gimd1	-6.257359974	0.59971828	1.74E-25	1.39E-23
Itga9	2.848632449	0.27350454	2.11E-25	1.69E-23
Med4	-2.778548976	0.26695058	2.27E-25	1.80E-23
Psd4	1.145691291	0.11020087	2.58E-25	2.03E-23
Tmem109	1.690466395	0.16260625	2.58E-25	2.03E-23
G0s2	-2.766729256	0.26614842	2.60E-25	2.04E-23
Pcdhgc3	2.259904655	0.21748926	2.73E-25	2.13E-23
Gpnmb	4.797245692	0.46254406	3.34E-25	2.60E-23
Zbtb8os	-1.652543096	0.15939148	3.47E-25	2.68E-23
Tead1	2.940648232	0.28365284	3.50E-25	2.69E-23
Tubb5	3.583761056	0.34581841	3.65E-25	2.79E-23
Magee1	2.679334269	0.25857867	3.70E-25	2.82E-23
Nsfl1c	-1.08073288	0.10437276	3.99E-25	3.02E-23
Cbfa2t3	3.186491044	0.30781887	4.11E-25	3.10E-23
Reep5	2.544241587	0.24587738	4.29E-25	3.22E-23
Vat1	2.248745019	0.21733613	4.32E-25	3.23E-23
Dcbld2	5.13978306	0.49701165	4.58E-25	3.41E-23
Ttc1	-1.390110388	0.13464088	5.46E-25	4.04E-23
Cyp3a9	-3.313023089	0.32099445	5.66E-25	4.17E-23
Hspb8	2.692531821	0.26099322	5.94E-25	4.36E-23
Pex13	-2.082013102	0.20184975	6.05E-25	4.42E-23
Sh3pxd2a	2.322595637	0.22530657	6.44E-25	4.69E-23
Dctn5	-1.384031498	0.13434591	6.90E-25	5.00E-23

Capza2	-2.090759163	0.20308974	7.44E-25	5.36E-23
Nelfcd	-1.599092738	0.15567796	9.44E-25	6.78E-23
Chsy1	3.004678241	0.2925536	9.57E-25	6.84E-23
Zcchc17	-1.448937684	0.14111874	9.87E-25	7.02E-23
Ndufa1	-2.791423263	0.27188244	9.92E-25	7.03E-23
LOC100912042	-1.35672992	0.13218999	1.03E-24	7.26E-23
Atg3	-1.372802913	0.13377853	1.05E-24	7.36E-23
Snrnp35	-1.683433497	0.16433707	1.26E-24	8.83E-23
Trappc13	-1.179259381	0.1152066	1.37E-24	9.52E-23
Itpripl2	3.844326099	0.37566609	1.41E-24	9.75E-23
Sgms2	2.869091115	0.28041009	1.43E-24	9.87E-23
Kirrel	3.217467163	0.31511901	1.78E-24	1.23E-22
LOC100359687	-2.130798899	0.20914065	2.24E-24	1.53E-22
Trim30c	-3.192377376	0.31337109	2.26E-24	1.54E-22
AC128212.1	5.056027237	0.49670828	2.46E-24	1.67E-22
Gatb	-2.281910786	0.22421439	2.50E-24	1.69E-22
Fam129a	5.283330448	0.51948113	2.69E-24	1.81E-22
Fam213a	-2.891070914	0.2848746	3.36E-24	2.25E-22
Tmed3	3.39067251	0.33431598	3.59E-24	2.40E-22
Lpp	3.260702957	0.32196613	4.17E-24	2.78E-22
Hao2	-4.727946854	0.46697727	4.30E-24	2.85E-22
Uqcrc2	-1.852592312	0.18305386	4.48E-24	2.96E-22
Aasdhppt	-1.34397888	0.13286785	4.73E-24	3.11E-22
NEWGENE_621351	5.041362609	0.49872806	5.07E-24	3.32E-22
Aifm1	-2.049916077	0.20315621	6.10E-24	3.96E-22
Pld3	1.925346856	0.19081075	6.10E-24	3.96E-22
Ltbp1	2.765372483	0.27433386	6.75E-24	4.37E-22
Paip2	-1.031669658	0.10236659	6.90E-24	4.44E-22
Narf	-1.946170354	0.19320045	7.25E-24	4.65E-22
Slc15a4	1.614570322	0.16037472	7.69E-24	4.90E-22
Eif2s2	-1.654836043	0.16437084	7.68E-24	4.90E-22
Tmem104	1.81939782	0.18075245	7.83E-24	4.97E-22
Gfm1	-1.855110257	0.1845283	8.89E-24	5.61E-22
Arglu1	-1.350895483	0.1347155	1.15E-23	7.24E-22
Parvb	2.7396354	0.27321454	1.16E-23	7.24E-22
Agpat1	1.949413489	0.19446702	1.19E-23	7.44E-22
Qsox2	2.61721526	0.26150011	1.40E-23	8.70E-22
Wdfy4	1.795403639	0.17946508	1.46E-23	9.05E-22
Tbc1d20	1.634656898	0.16340999	1.47E-23	9.09E-22
Ppp2r3c	-2.203503558	0.22036903	1.54E-23	9.45E-22
Elovl1	1.798369061	0.17986299	1.55E-23	9.47E-22
Dusp8	4.714553742	0.47171513	1.61E-23	9.83E-22
Runx1	5.458663488	0.54633189	1.66E-23	1.01E-21
Tp53inp1	3.164036088	0.31670723	1.68E-23	1.02E-21
Mrpl13	-1.41704657	0.14188025	1.73E-23	1.04E-21
Gas2l1	2.11552446	0.21190029	1.80E-23	1.08E-21

Prrc2b	2.169395712	0.21732499	1.82E-23	1.09E-21
Nomo1	1.577950501	0.15814091	1.90E-23	1.13E-21
Gpr153	4.268802271	0.42796254	1.97E-23	1.17E-21
Klf16	2.373386026	0.23815856	2.16E-23	1.28E-21
Grb10	3.346392073	0.33594481	2.25E-23	1.33E-21
Ercc3	-1.345712471	0.13515198	2.35E-23	1.38E-21
Tap1	2.458029548	0.24705511	2.54E-23	1.49E-21
Mark3	-1.189064237	0.11957824	2.68E-23	1.57E-21
Ndufs5	-2.089618911	0.21024463	2.82E-23	1.64E-21
Itgal	2.546701686	0.25627522	2.86E-23	1.66E-21
Fabp1	-3.652823683	0.3677024	2.96E-23	1.71E-21
RGD735029	-1.931077894	0.1945068	3.14E-23	1.81E-21
Abcg1	2.574342483	0.25944477	3.32E-23	1.90E-21
Gkap1	-2.12387484	0.21404018	3.31E-23	1.90E-21
Antxr1	3.31022878	0.33368022	3.40E-23	1.93E-21
Gsta5	-4.331591403	0.43666479	3.42E-23	1.94E-21
Cwc15	-1.330223476	0.13412324	3.48E-23	1.97E-21
Lap3	-2.031740815	0.20495857	3.66E-23	2.06E-21
Lmf2	1.510111192	0.15246521	3.97E-23	2.23E-21
Desi1	1.89069253	0.1909441	4.09E-23	2.29E-21
Tfb2m	-1.573536817	0.15896713	4.23E-23	2.36E-21
Sdhd	-1.916652155	0.19378273	4.57E-23	2.54E-21
Adm2	6.703958732	0.67816295	4.81E-23	2.67E-21
Gsk3b	1.420946747	0.14378683	4.97E-23	2.74E-21
Ddr1	4.430371329	0.44852029	5.20E-23	2.86E-21
Trpv2	3.858060987	0.3907282	5.40E-23	2.96E-21
C1qbp	1.824512004	0.18483124	5.55E-23	3.03E-21
Fez2	-1.34459647	0.13628973	5.86E-23	3.19E-21
Rwdd2b	-1.865518266	0.18912892	5.98E-23	3.25E-21
Cd59	-2.87479273	0.29151703	6.11E-23	3.31E-21
Arhgap27	2.572826614	0.26100352	6.37E-23	3.43E-21
Ltbp2	4.558771597	0.46264827	6.61E-23	3.55E-21
Rapgef1	2.763728148	0.2807687	7.32E-23	3.92E-21
Bid	-1.559112072	0.15848153	7.74E-23	4.13E-21
AABR07073038.1	2.033250547	0.20679776	8.19E-23	4.36E-21
Limk1	2.342380981	0.23844524	8.91E-23	4.73E-21
Nsmce2	-2.206526332	0.22470905	9.28E-23	4.91E-21
Ccdc58	-1.613485413	0.16447127	1.02E-22	5.37E-21
Ipo4	2.350948446	0.23970128	1.04E-22	5.48E-21
Cyr61	2.71860014	0.27723809	1.06E-22	5.56E-21
Mtrr	-1.859081757	0.18970039	1.12E-22	5.87E-21
Slc30a7	1.789176479	0.18262637	1.16E-22	6.04E-21
Rsad2	5.746170912	0.5875854	1.38E-22	7.15E-21
Ednrb	3.452148487	0.35300639	1.38E-22	7.15E-21
Tmem120a	2.845160354	0.29126219	1.54E-22	7.94E-21
Ppp1r15a	4.270814535	0.43736308	1.59E-22	8.16E-21

Col12a1	4.625503928	0.47367801	1.59E-22	8.16E-21
Gucy1b2	-4.257971436	0.4362035	1.65E-22	8.42E-21
Cln8	2.171719103	0.22248579	1.65E-22	8.42E-21
Slc7a8	2.880735742	0.29522414	1.71E-22	8.67E-21
LOC680875	-3.892145649	0.39915554	1.83E-22	9.25E-21
Fbxl18	1.887093043	0.19357505	1.87E-22	9.43E-21
Tmem186	-1.719379275	0.17638923	1.89E-22	9.50E-21
Rmnd1	-2.845150986	0.29201913	1.98E-22	9.91E-21
Enc1	3.570517841	0.36711042	2.34E-22	1.16E-20
Gmpr2	-1.763818823	0.18134572	2.33E-22	1.16E-20
Ccdc12	-1.382144916	0.14230542	2.67E-22	1.32E-20
Eloc	-1.759234764	0.1813057	2.92E-22	1.45E-20
Klf13	3.089605892	0.31858694	3.08E-22	1.52E-20
Chchd3	-1.419969804	0.14653921	3.32E-22	1.64E-20
Tceanc2	-1.240356462	0.12802206	3.37E-22	1.65E-20
Fam110a	3.402495687	0.35125145	3.43E-22	1.68E-20
Tti1	-1.815018243	0.18747585	3.62E-22	1.77E-20
Fam57a	5.108821462	0.5277342	3.64E-22	1.77E-20
Ptk7	4.16254327	0.43014142	3.77E-22	1.83E-20
Atg13	1.65172889	0.17105236	4.62E-22	2.24E-20
Kif21b	3.299012163	0.34166006	4.64E-22	2.24E-20
Zbtb42	1.650957039	0.17121268	5.28E-22	2.54E-20
Papss1	1.908498557	0.19802378	5.54E-22	2.66E-20
LOC100362980	-1.696827543	0.17624542	6.11E-22	2.92E-20
Rnf8	-2.082696061	0.21636103	6.21E-22	2.96E-20
Plat	5.186507854	0.53906786	6.50E-22	3.09E-20
Commd8	-1.570738194	0.16327071	6.55E-22	3.10E-20
Psmc6	-1.391977818	0.14475018	6.82E-22	3.22E-20
Spata2	1.800945337	0.18729303	6.87E-22	3.23E-20
Rbm5	-1.764240007	0.18357516	7.22E-22	3.39E-20
Mrpl16	-1.502004017	0.15638766	7.66E-22	3.59E-20
Tmem184b	2.426512311	0.25302219	8.80E-22	4.11E-20
Synj2bp	-1.729925142	0.18049641	9.31E-22	4.34E-20
Rtn4	2.570971375	0.26834653	9.63E-22	4.47E-20
Cln6	1.847369038	0.19291078	1.01E-21	4.66E-20
Acadvl	-1.900536775	0.19855115	1.05E-21	4.84E-20
Zfp277	-1.989997899	0.20798506	1.09E-21	5.02E-20
Nup88	-1.029970895	0.1077315	1.17E-21	5.38E-20
Tex9	-3.123396164	0.32674596	1.19E-21	5.44E-20
Gm5471	2.048509788	0.21453072	1.31E-21	5.99E-20
Tgfb1i1	3.380874616	0.3543972	1.43E-21	6.51E-20
Fam193b	-2.650523029	0.2778777	1.45E-21	6.58E-20
Elavl1	-1.518079079	0.159167	1.46E-21	6.61E-20
Tmem43	2.146598446	0.22521668	1.55E-21	7.01E-20
Rars2	-2.045266086	0.21463066	1.58E-21	7.13E-20
Ndufs4	-1.710930516	0.17955889	1.60E-21	7.16E-20

Prrc1	1.398271262	0.14680969	1.66E-21	7.43E-20
Clec2g	-2.429327266	0.25516438	1.72E-21	7.68E-20
Rhob	2.292517703	0.24080543	1.73E-21	7.69E-20
Srd5a3	2.731345139	0.28692638	1.74E-21	7.74E-20
Lias	-2.421104115	0.25476112	2.03E-21	8.99E-20
Uqcc1	-1.365329458	0.14370762	2.08E-21	9.20E-20
Ptpn1	1.826534138	0.19229231	2.12E-21	9.36E-20
Tpbp	1.998744239	0.21078631	2.49E-21	1.09E-19
Nudc	-1.49446955	0.15763564	2.53E-21	1.11E-19
Zdhhc8	2.08074779	0.21969712	2.77E-21	1.21E-19
Pxdn	3.234286433	0.34154419	2.81E-21	1.22E-19
Dmgdh	-2.88367324	0.30467211	2.94E-21	1.28E-19
Anxa5	3.357662142	0.35489225	3.05E-21	1.32E-19
Cerk	1.737318158	0.18368551	3.14E-21	1.36E-19
Fahd1	-2.916259395	0.3085626	3.35E-21	1.44E-19
Uprt	3.915764034	0.41431988	3.35E-21	1.44E-19
Pycr1	3.997429155	0.42324038	3.56E-21	1.53E-19
Timd2	-2.493064563	0.26402958	3.64E-21	1.56E-19
Ttpal	1.951657215	0.20681888	3.85E-21	1.64E-19
Cdyl	2.761553616	0.2926975	3.92E-21	1.67E-19
LOC100911295	2.480165208	0.26306563	4.18E-21	1.77E-19
Tanc2	2.33607879	0.24783414	4.26E-21	1.80E-19
Eva1a	-2.220364045	0.23571146	4.52E-21	1.91E-19
Mrpl32	-1.198936354	0.12729822	4.58E-21	1.93E-19
Iqcg	-3.394115483	0.3604674	4.69E-21	1.97E-19
Uck2	3.171576632	0.33689786	4.77E-21	1.99E-19
Chmp3	-1.349178113	0.14331172	4.76E-21	1.99E-19
Ldah	-1.361554966	0.14463928	4.80E-21	2.00E-19
Fbxw8	1.516798503	0.1611372	4.82E-21	2.00E-19
Fosl2	4.143546202	0.44034047	4.97E-21	2.06E-19
Nrg1	3.597891204	0.38242697	5.05E-21	2.09E-19
Map3k6	4.943581304	0.52560538	5.18E-21	2.14E-19
Eapp	-1.411697802	0.15012	5.26E-21	2.17E-19
Tmem185b	2.369507613	0.25218632	5.68E-21	2.33E-19
Fam220a	1.777415729	0.18925664	5.91E-21	2.41E-19
Chtf8	1.046709381	0.11144923	5.90E-21	2.41E-19
Mad1l1	-1.699188753	0.18099409	6.11E-21	2.49E-19
Clasp1	1.713511364	0.18264872	6.51E-21	2.64E-19
Ddx28	-1.906885123	0.20331536	6.66E-21	2.70E-19
AC135696.1	-1.83882232	0.19623592	7.22E-21	2.92E-19
Mpc2	-2.1759214	0.23224242	7.31E-21	2.95E-19
Atf3	6.367263559	0.6797201	7.43E-21	2.99E-19
C3ar1	2.984560053	0.31867434	7.57E-21	3.04E-19
Frg1	-2.375697521	0.25367451	7.59E-21	3.04E-19
Idi1	-4.136257018	0.44170124	7.65E-21	3.06E-19
Nol3	4.251213075	0.45415805	7.93E-21	3.16E-19

AABR07061902.1	1.923448898	0.20554406	8.14E-21	3.23E-19
Afap1	3.067878119	0.32801351	8.53E-21	3.38E-19
Usmg5	-2.066550366	0.22096242	8.56E-21	3.39E-19
Ctnnbl1	-1.659583602	0.17750175	8.79E-21	3.47E-19
RGD1310127	1.533437104	0.1640499	8.98E-21	3.54E-19
Snrnp70	-1.454972763	0.15570573	9.24E-21	3.63E-19
Ift20	-2.498079368	0.26743703	9.56E-21	3.74E-19
Mfsd12	3.238882567	0.34678571	9.66E-21	3.77E-19
Ppp1r13l	3.561081787	0.38172508	1.07E-20	4.17E-19
Tspan12	-2.208804754	0.23678183	1.07E-20	4.18E-19
Ptpn23	2.485423311	0.26647076	1.09E-20	4.22E-19
Klf6	3.655683482	0.39212821	1.13E-20	4.39E-19
Vwf	2.228231973	0.23904871	1.15E-20	4.44E-19
Vash1	2.846506013	0.30544197	1.17E-20	4.51E-19
Lonp2	-2.417983456	0.25954386	1.20E-20	4.63E-19
Tmem70	-2.133953103	0.22917283	1.26E-20	4.83E-19
Rbm39	-3.272687584	0.35150074	1.27E-20	4.86E-19
Anks4b	-3.653893238	0.39260349	1.32E-20	5.03E-19
Clcn7	1.96833673	0.211505	1.32E-20	5.04E-19
Mrpl40	-1.294537864	0.13913927	1.35E-20	5.14E-19
Zscan21	-2.048376916	0.22018014	1.36E-20	5.17E-19
PVR	4.980839808	0.53544807	1.38E-20	5.20E-19
Uchl5	-1.807697757	0.19438053	1.41E-20	5.31E-19
Tbrg1	2.06789103	0.22246388	1.47E-20	5.52E-19
Mef2d	1.684143332	0.18121602	1.49E-20	5.60E-19
Scfd1	-1.828146647	0.19672459	1.50E-20	5.62E-19
Zfp874b	-2.324759571	0.25023015	1.54E-20	5.74E-19
Tln1	1.784890952	0.19212675	1.54E-20	5.74E-19
Prmt9	-1.673994245	0.18034511	1.66E-20	6.18E-19
Bcr	2.050543075	0.22093316	1.67E-20	6.20E-19
Exosc7	-1.376793248	0.14834092	1.67E-20	6.20E-19
Elmsan1	1.903197076	0.20509788	1.70E-20	6.29E-19
LOC102557117	-2.738646238	0.29516341	1.72E-20	6.34E-19
Arhgap23	2.657470434	0.28673225	1.89E-20	6.97E-19
Mrpl42	-1.872678346	0.20217719	2.00E-20	7.32E-19
Mrpl42	-1.872678346	0.20217719	2.00E-20	7.32E-19
Impad1	10.46770674	1.1303477	2.03E-20	7.41E-19
Fam32a	-1.328614974	0.14346931	2.03E-20	7.41E-19
Tmem248	1.980388608	0.21391625	2.09E-20	7.59E-19
RGD1306063	-2.24184352	0.24244497	2.31E-20	8.39E-19
Scmh1	2.139174094	0.23137925	2.35E-20	8.49E-19
Lbh	3.537807437	0.38288916	2.47E-20	8.93E-19
Ccdc91	-1.095510741	0.11862793	2.59E-20	9.32E-19
Tmem5	-1.216430705	0.13173947	2.62E-20	9.41E-19
Rgp1	1.840788386	0.19946975	2.75E-20	9.86E-19
Stx4	-1.384166805	0.15000492	2.77E-20	9.92E-19

Hvcn1	3.937721218	0.42693531	2.88E-20	1.03E-18
Itgb3	2.868016716	0.31108892	2.99E-20	1.07E-18
Washc3	-2.018237508	0.2190493	3.15E-20	1.12E-18
Hspa1a	11.20807707	1.21701946	3.28E-20	1.16E-18
Cript	-1.290744344	0.14022111	3.41E-20	1.21E-18
Fads3	3.541761528	0.38480901	3.45E-20	1.22E-18
Igf2r	1.725243367	0.18758043	3.67E-20	1.29E-18
Igfbp1	4.510595699	0.49071219	3.86E-20	1.36E-18
Gnai2	1.641978006	0.17866824	3.92E-20	1.38E-18
Acp1	-1.1625385	0.12650551	3.94E-20	1.38E-18
Dusp7	1.717556179	0.18697396	4.07E-20	1.42E-18
Hipk2	2.712583685	0.29542542	4.23E-20	1.48E-18
Lactb2	-1.950169192	0.21239705	4.24E-20	1.48E-18
Thoc7	-1.784588475	0.19453517	4.57E-20	1.59E-18
S100a11	4.790151868	0.52260564	4.91E-20	1.70E-18
Atp5j	-1.732349217	0.1891737	5.31E-20	1.84E-18
Sumo1	-1.065413168	0.11638409	5.47E-20	1.89E-18
Tfe3	1.675515141	0.18305632	5.54E-20	1.91E-18
Tep1	1.803525542	0.19709732	5.67E-20	1.95E-18
Dld	-2.232324248	0.24397416	5.70E-20	1.96E-18
Syvn1	1.496762582	0.16359278	5.73E-20	1.96E-18
Akr1b10	6.174111673	0.6755491	6.28E-20	2.15E-18
Pmp22	4.530633439	0.49579653	6.36E-20	2.17E-18
Mrpl46	-1.790843166	0.1959944	6.41E-20	2.18E-18
Aknad1	-3.61721595	0.39622749	6.90E-20	2.34E-18
Cog4	-2.486969249	0.27261042	7.32E-20	2.48E-18
Col5a2	3.646897099	0.39984834	7.46E-20	2.52E-18
Fam53c	2.110895239	0.23149412	7.61E-20	2.57E-18
Dgkq	-1.329478116	0.14593316	8.22E-20	2.77E-18
Paqr8	4.013082788	0.441068	9.15E-20	3.08E-18
Hmox2	-1.914008009	0.21049442	9.64E-20	3.23E-18
Nfic	1.831791559	0.2017345	1.08E-19	3.63E-18
Rmdn1	-2.999682389	0.33041465	1.10E-19	3.67E-18
Hk1	2.543406467	0.28019725	1.11E-19	3.71E-18
Grk2	1.21148385	0.13351934	1.15E-19	3.83E-18
Ficd	2.352712834	0.25930142	1.15E-19	3.83E-18
LOC108348151	2.611705858	0.28791183	1.18E-19	3.90E-18
Ube4b	1.178316229	0.12990942	1.19E-19	3.92E-18
Syf2	-1.184793127	0.13066301	1.22E-19	4.02E-18
Wfs1	1.63062753	0.17985866	1.23E-19	4.06E-18
Slirp	-1.95730941	0.21590955	1.24E-19	4.08E-18
Ncbp2	-1.509911532	0.16658087	1.26E-19	4.12E-18
Crim1	2.366455156	0.26109729	1.26E-19	4.13E-18
Itpkb	2.091870268	0.2308789	1.30E-19	4.24E-18
Ddx23	-1.306551506	0.14426851	1.35E-19	4.39E-18
Irf3	-1.852391033	0.20458724	1.37E-19	4.47E-18

Casp3	-2.151026006	0.23759234	1.39E-19	4.50E-18
Snrpd2l	6.546640906	0.72358202	1.46E-19	4.74E-18
LOC100912604	2.415955573	0.26749508	1.69E-19	5.45E-18
Lama5	3.334230633	0.36920549	1.70E-19	5.49E-18
Prelp	1.72537475	0.19119504	1.81E-19	5.82E-18
LOC103694910	9.531202377	1.05630308	1.83E-19	5.86E-18
LOC103690343	-4.24893563	0.47099541	1.86E-19	5.96E-18
Chst14	2.737187113	0.30346946	1.89E-19	6.03E-18
Elk4	1.399663204	0.15521843	1.93E-19	6.14E-18
Calhm2	2.240340593	0.24863389	2.05E-19	6.52E-18
Prkrip1	-1.387288851	0.15402715	2.12E-19	6.74E-18
Emilin2	3.737126513	0.41517316	2.23E-19	7.06E-18
Ppp2r5b	1.636331212	0.18179015	2.23E-19	7.06E-18
Angptl3	-4.351327769	0.48365255	2.32E-19	7.34E-18
Anp32a	-1.801442313	0.2002354	2.33E-19	7.34E-18
Cops2	-2.225710922	0.24751725	2.42E-19	7.63E-18
Foxo3	2.097584512	0.23335565	2.50E-19	7.83E-18
Pom121	1.935008223	0.21526732	2.50E-19	7.83E-18
Slc39a11	1.594829378	0.17749602	2.58E-19	8.08E-18
RGD1309730	-2.096198442	0.23335577	2.64E-19	8.24E-18
Tap2	1.344465776	0.14970179	2.68E-19	8.36E-18
Rgmb	2.533393936	0.28211649	2.71E-19	8.42E-18
Jtb	-1.277404171	0.14227747	2.75E-19	8.54E-18
Gpatch11	-1.757452731	0.195782	2.79E-19	8.65E-18
Palmd	-2.305499829	0.25693252	2.88E-19	8.91E-18
Cfdp1	-1.658428189	0.18493693	3.03E-19	9.36E-18
Ptk2b	2.308887444	0.25759353	3.15E-19	9.69E-18
Stom	1.820410294	0.20314725	3.22E-19	9.87E-18
C1qtnf6	3.308117898	0.36948688	3.45E-19	1.06E-17
Plxna1	2.365222368	0.26418129	3.46E-19	1.06E-17
Arid5a	3.514535205	0.392563	3.47E-19	1.06E-17
Ndufaf1	-1.949965106	0.21783456	3.50E-19	1.07E-17
Det1	1.436037663	0.16045296	3.56E-19	1.08E-17
Ube2h	1.025812264	0.1147044	3.78E-19	1.15E-17
RGD1564698	-6.32304183	0.70746698	3.98E-19	1.20E-17
Dnajc19	-2.079353073	0.23266338	3.99E-19	1.21E-17
Cep170b	1.998329306	0.22374472	4.21E-19	1.27E-17
Naa35	-1.334067976	0.14954881	4.64E-19	1.40E-17
Ctns	1.91890324	0.21518456	4.77E-19	1.43E-17
Tmco1	-1.382790716	0.15509798	4.85E-19	1.46E-17
Slc1a5	4.361826486	0.48950159	5.07E-19	1.52E-17
Denr	-1.787863642	0.20067546	5.14E-19	1.54E-17
Etf1	-1.013267096	0.11377136	5.28E-19	1.58E-17
Zc3h4	1.045852033	0.11744207	5.33E-19	1.59E-17
Mrgprf	4.163020936	0.46749072	5.34E-19	1.59E-17
Aph1a	1.402854076	0.15754507	5.36E-19	1.59E-17

Nol9	2.607604585	0.29296436	5.55E-19	1.64E-17
Col1a1	6.264052426	0.70382064	5.58E-19	1.65E-17
Azgp1	-3.011767347	0.3384679	5.67E-19	1.67E-17
Pcca	-2.00593981	0.22544009	5.69E-19	1.68E-17
Zfp710	2.166157438	0.243455	5.71E-19	1.68E-17
Emp2	3.455758956	0.38863451	6.00E-19	1.76E-17
Ikzf1	2.910866448	0.32753051	6.26E-19	1.83E-17
Anks6	4.875837268	0.54920269	6.81E-19	1.99E-17
Slco3a1	3.774438608	0.42514498	6.81E-19	1.99E-17
Arl8a	1.391043558	0.15676978	7.11E-19	2.07E-17
Bloc1s1	-3.095165066	0.34882564	7.11E-19	2.07E-17
Pccb	-2.153407933	0.24269841	7.13E-19	2.07E-17
Qsox1	2.101460879	0.23685185	7.15E-19	2.07E-17
Fblim1	4.067379506	0.45850264	7.25E-19	2.10E-17
Flna	3.25598158	0.36704923	7.27E-19	2.10E-17
Aldh8a1	-2.887155756	0.32572188	7.73E-19	2.23E-17
Il5ra	8.666130809	0.97779762	7.80E-19	2.24E-17
Psmc4	-1.468988599	0.16576319	7.86E-19	2.26E-17
B3gnt7	3.266076597	0.36869936	8.12E-19	2.33E-17
Lrpap1	-1.985425231	0.22416883	8.23E-19	2.36E-17
Ucp2	2.084498329	0.23551746	8.70E-19	2.49E-17
Robo1	2.394431442	0.27057702	8.80E-19	2.51E-17
Arrb1	2.907086176	0.32865156	9.11E-19	2.60E-17
Gprc5a	7.789725734	0.88069484	9.15E-19	2.60E-17
Mrpl15	-1.48306663	0.16767405	9.16E-19	2.60E-17
Ints8	-1.260585895	0.14253129	9.21E-19	2.61E-17
Zcchc4	-1.902260621	0.2152764	9.89E-19	2.79E-17
Ythdc1	-1.60528609	0.1816858	9.96E-19	2.81E-17
Mrps7	-1.396535536	0.15810174	1.02E-18	2.86E-17
AABR07001435.1	-2.234514538	0.25296842	1.02E-18	2.86E-17
Clip2	2.817728023	0.31909432	1.04E-18	2.93E-17
Btg3	4.185308259	0.47421854	1.09E-18	3.05E-17
Spryd7	-1.499708306	0.17001674	1.13E-18	3.17E-17
Tnpo2	1.314990437	0.14910246	1.15E-18	3.21E-17
Gtf3c6	-1.955943746	0.22181328	1.17E-18	3.25E-17
Plec	1.635875666	0.18555461	1.18E-18	3.29E-17
Ugcg	3.088409782	0.35032295	1.19E-18	3.30E-17
Slc35e1	2.271389148	0.25776645	1.23E-18	3.41E-17
Mkl1	1.619591752	0.18380342	1.23E-18	3.41E-17
Ptcd1	-1.236233628	0.1403101	1.24E-18	3.43E-17
Dnajc7	-1.913515923	0.21724341	1.27E-18	3.51E-17
Ndufb3	-2.086973285	0.23696167	1.28E-18	3.53E-17
Serinc2	5.352847299	0.60781919	1.29E-18	3.54E-17
Loxl1	4.176274983	0.47429108	1.31E-18	3.58E-17
Sco1	-1.433395662	0.16281399	1.32E-18	3.62E-17
Anxa7	3.563000077	0.4047715	1.34E-18	3.66E-17

Sept07	2.345718878	0.26649395	1.34E-18	3.66E-17
Nudt2	-1.72548449	0.19616626	1.42E-18	3.86E-17
Csmd1	3.526777403	0.40102452	1.44E-18	3.91E-17
Frmd6	2.842868677	0.32335264	1.47E-18	4.00E-17
Dpysl2	2.4759593	0.2817431	1.52E-18	4.13E-17
Phax	-1.362922902	0.15515855	1.58E-18	4.27E-17
Acat1	-2.435472723	0.2774216	1.65E-18	4.46E-17
NEWGENE_1586233	-2.23150787	0.25427471	1.69E-18	4.57E-17
Micall1	1.584841632	0.18064588	1.74E-18	4.68E-17
Smim15	-1.923673406	0.21960695	1.96E-18	5.27E-17
Dact2	3.779903399	0.43155573	1.97E-18	5.30E-17
Myh10	2.694233677	0.3077221	2.03E-18	5.45E-17
Trap1	-1.939825611	0.2217006	2.14E-18	5.72E-17
Eif2b5	-1.116187358	0.12767991	2.29E-18	6.11E-17
Cdc42se1	1.878761201	0.21494756	2.32E-18	6.19E-17
Csnk2a2	1.404862465	0.16074936	2.34E-18	6.24E-17
Cul2	-2.073332601	0.23742015	2.49E-18	6.61E-17
Tmem245	2.274777855	0.26049894	2.49E-18	6.62E-17
Dhrs4	-1.810949815	0.20741299	2.52E-18	6.68E-17
Olr1	6.603542826	0.75647202	2.56E-18	6.77E-17
Rpp14	-1.497937619	0.17160358	2.57E-18	6.78E-17
Agpat4	2.339414198	0.26803592	2.59E-18	6.84E-17
Adora2a	1.655749153	0.18986009	2.76E-18	7.25E-17
Rn50_5_0814.6	-9.538973912	1.09379645	2.76E-18	7.25E-17
Arhgap22	4.64545443	0.53275936	2.79E-18	7.33E-17
Slc35a1	-1.463145542	0.16782879	2.83E-18	7.41E-17
Tes	4.4156792	0.50658083	2.87E-18	7.50E-17
Rps27a	-2.099750158	0.24096507	2.94E-18	7.67E-17
Tbc1d13	1.211564426	0.13907316	2.99E-18	7.80E-17
Sh3d19	1.61567279	0.18558421	3.15E-18	8.20E-17
Pold3	-1.455212243	0.16718481	3.20E-18	8.30E-17
Mrps26	-1.583212411	0.18188945	3.20E-18	8.30E-17
Gabpb1	-1.435365971	0.1649346	3.24E-18	8.40E-17
Trio	1.403215823	0.16134581	3.41E-18	8.82E-17
Tnks	2.311254577	0.26583142	3.49E-18	9.00E-17
Tstd3	-2.618494797	0.30128777	3.59E-18	9.26E-17
Peak1	2.084257018	0.23994805	3.74E-18	9.64E-17
Tars	-1.293524785	0.14893767	3.79E-18	9.73E-17
Gripap1	-1.384722098	0.1594887	3.88E-18	9.96E-17
Immp1l	-2.117587238	0.2439107	3.90E-18	9.98E-17
Mob3a	2.125901803	0.24519779	4.32E-18	1.10E-16
Sdpr	-2.174565769	0.25082237	4.33E-18	1.11E-16
Ap2a1	1.481195702	0.1708705	4.38E-18	1.12E-16
Col6a1	2.993532951	0.34558856	4.63E-18	1.18E-16
Ppp1r3c	-3.435401737	0.3967455	4.76E-18	1.21E-16
Stn1	-1.694713578	0.19577411	4.87E-18	1.24E-16

Ano6	1.608459507	0.18584073	4.93E-18	1.25E-16
Ttyh3	1.577062649	0.18228334	5.07E-18	1.28E-16
Irak3	3.109619561	0.35945027	5.10E-18	1.29E-16
Spire2	4.805739907	0.55554492	5.13E-18	1.29E-16
AABR07019083.1	4.186601785	0.48400194	5.15E-18	1.30E-16
Sec14l1	2.132773716	0.24658729	5.19E-18	1.30E-16
Lin7a	-3.118130586	0.36053902	5.22E-18	1.31E-16
Gpat3	6.469713413	0.74858134	5.49E-18	1.38E-16
Hibch	-2.218810556	0.25681866	5.64E-18	1.41E-16
Prex1	2.4286762	0.28133059	5.99E-18	1.50E-16
Nid1	2.447479688	0.28354608	6.05E-18	1.51E-16
Cblb	1.650012871	0.19120023	6.15E-18	1.53E-16
Mrps18c	-1.553501445	0.18007074	6.29E-18	1.56E-16
Ubp2	2.533508928	0.29366645	6.29E-18	1.56E-16
Itgav	2.83509559	0.32867975	6.37E-18	1.58E-16
Extl3	1.910893991	0.22164553	6.61E-18	1.64E-16
Slc9a8	1.442304182	0.16733478	6.74E-18	1.67E-16
Unc119b	1.318143264	0.15293655	6.76E-18	1.67E-16
Gpc1	6.272725525	0.72787301	6.82E-18	1.68E-16
Aldob	-2.435443029	0.28264048	6.89E-18	1.70E-16
Rbfox2	1.500280832	0.17414588	6.99E-18	1.72E-16
Mrps33	-1.805470886	0.20966064	7.22E-18	1.77E-16
Pigo	1.43202295	0.16631328	7.28E-18	1.78E-16
Plcx2	3.287419958	0.38196029	7.52E-18	1.84E-16
Fam65a	1.621655597	0.18842667	7.55E-18	1.84E-16
Lym2	-1.676931797	0.19485865	7.57E-18	1.85E-16
Arg1	-2.946255464	0.34244827	7.73E-18	1.88E-16
Slc35b1	1.896815492	0.22056379	7.98E-18	1.94E-16
Osmr	4.117562062	0.47890206	8.12E-18	1.97E-16
Mmp24	3.696237481	0.42991322	8.14E-18	1.97E-16
Mterf1	-2.252099854	0.26212866	8.58E-18	2.08E-16
Psmg1	-1.710643811	0.1991186	8.62E-18	2.08E-16
Nckap5l	2.055475816	0.23926009	8.62E-18	2.08E-16
Dynl1	2.476882367	0.28833161	8.67E-18	2.09E-16
Mrpl39	-1.337760735	0.1557272	8.67E-18	2.09E-16
Plaur	5.63107931	0.65564831	8.81E-18	2.12E-16
Adamts9	2.210270073	0.25741262	8.97E-18	2.15E-16
Ptgr2	-1.498998958	0.17462605	9.16E-18	2.19E-16
Ntn1	2.474246754	0.28828113	9.26E-18	2.22E-16
LOC100362333	-1.054987862	0.1229474	9.42E-18	2.25E-16
Cyb561	1.976571313	0.23035432	9.44E-18	2.25E-16
Ing2	-1.4492498	0.16894269	9.62E-18	2.29E-16
Ptdss1	1.057344174	0.12325685	9.62E-18	2.29E-16
Plekha3	2.091888516	0.24400836	1.01E-17	2.39E-16
Etv5	2.084946639	0.24329866	1.04E-17	2.46E-16
Trib3	4.114526848	0.48014015	1.04E-17	2.46E-16

Src	1.919671078	0.22428552	1.14E-17	2.69E-16
Sun2	1.723042424	0.20131116	1.14E-17	2.69E-16
Degs1	1.600554232	0.18701568	1.14E-17	2.70E-16
Fam149b1	-1.51494221	0.17705383	1.16E-17	2.74E-16
Snu13	2.078770208	0.24304522	1.20E-17	2.82E-16
Tmem119	3.594330774	0.42056599	1.27E-17	2.98E-16
GImp	1.653514029	0.19350794	1.29E-17	3.02E-16
Uhrf1bp1	2.131687469	0.24949182	1.30E-17	3.03E-16
Sdr9c7	-2.747307541	0.32180654	1.38E-17	3.22E-16
Tnc	7.949303139	0.93142049	1.41E-17	3.28E-16
Ncoa3	1.734918908	0.20329104	1.41E-17	3.29E-16
Myc	3.90240052	0.45737013	1.44E-17	3.34E-16
Anks3	-2.375690033	0.27846711	1.45E-17	3.36E-16
Anxa2	4.629867474	0.54272855	1.45E-17	3.38E-16
Rpap3	-2.451891648	0.28744589	1.46E-17	3.39E-16
Cpeb2	2.797518895	0.32807473	1.50E-17	3.47E-16
Pigh	-1.329659658	0.15601331	1.56E-17	3.60E-16
Dhfr	-2.287253381	0.26852744	1.63E-17	3.75E-16
Igdcc4	5.031889287	0.5907944	1.64E-17	3.77E-16
Zmat3	2.956529512	0.34714528	1.64E-17	3.78E-16
Irf5	2.13380338	0.25059613	1.67E-17	3.83E-16
Rmdn2	-2.084170329	0.24481042	1.69E-17	3.88E-16
Cyp2a1	-2.935006992	0.34479177	1.70E-17	3.90E-16
Psmc2	-1.152833779	0.13547512	1.75E-17	4.00E-16
Ptafr	1.977992939	0.23246751	1.76E-17	4.02E-16
Otud1	3.789737404	0.44565249	1.83E-17	4.19E-16
Sptssa	-2.087819394	0.24567356	1.92E-17	4.38E-16
Fkbp11	1.737456351	0.20446024	1.93E-17	4.40E-16
Cd86	-2.036368663	0.23966199	1.95E-17	4.43E-16
Spop	-1.476522843	0.17381463	1.98E-17	4.50E-16
Nt5dc3	2.831805649	0.33341126	2.01E-17	4.55E-16
Saraf	1.651869759	0.19453151	2.04E-17	4.61E-16
Prss53	-3.592137797	0.42302254	2.04E-17	4.61E-16
Ltn1	-1.953121478	0.23003063	2.05E-17	4.64E-16
Arfgap3	1.746920521	0.20581234	2.10E-17	4.74E-16
Wiz	1.185606094	0.1396995	2.12E-17	4.78E-16
Toe1	-1.818931037	0.21445236	2.22E-17	4.99E-16
Yeats4	-1.375307462	0.16215635	2.23E-17	5.00E-16
Emc2	-2.364183085	0.2788429	2.28E-17	5.11E-16
Igbp1	-1.886972372	0.22260477	2.32E-17	5.18E-16
Tmem229b	2.165502757	0.25553428	2.36E-17	5.28E-16
Ndrp1	4.411638406	0.52071073	2.41E-17	5.37E-16
Atmin	2.204555582	0.26021077	2.41E-17	5.37E-16
Rpl21	-2.218423348	0.26185966	2.42E-17	5.38E-16
Exosc10	-1.137152955	0.13423209	2.42E-17	5.38E-16
Dap3	-1.072752304	0.12663188	2.42E-17	5.38E-16

Ern1	1.616603466	0.19093428	2.52E-17	5.59E-16
Ttc28	2.295597641	0.27118732	2.56E-17	5.67E-16
Cdadc1	-1.952968626	0.23083816	2.67E-17	5.89E-16
Sfn	5.47583518	0.64723343	2.67E-17	5.89E-16
Mrpl41	-1.27563218	0.15079353	2.69E-17	5.92E-16
Piezo1	2.897199826	0.34282703	2.89E-17	6.36E-16
Zrsr2	-1.818640187	0.21523429	2.92E-17	6.43E-16
Tmem41a	1.802025085	0.21330663	2.96E-17	6.51E-16
Lipc	-2.869980342	0.33988925	3.07E-17	6.73E-16
Cetn2	-2.453065675	0.29059412	3.13E-17	6.86E-16
Ndufa6	-1.865032558	0.22100594	3.21E-17	7.01E-16
Polr2b	-1.665481406	0.19742039	3.28E-17	7.16E-16
Rrp12	2.227520298	0.26411175	3.34E-17	7.29E-16
AABR07004112.1	10.13616328	1.20190721	3.36E-17	7.31E-16
R3hcc1	-1.246595523	0.14782786	3.38E-17	7.35E-16
Fiz1	1.266627736	0.15022237	3.41E-17	7.40E-16
Dnaja1	-1.668006846	0.19798335	3.61E-17	7.83E-16
Timm44	-2.029497496	0.24093632	3.66E-17	7.93E-16
Mrc2	3.446811797	0.40923622	3.68E-17	7.97E-16
App	2.445589216	0.29037947	3.70E-17	8.00E-16
Apbb3	-1.684463494	0.20001533	3.71E-17	8.01E-16
Irs2	2.830506633	0.33610271	3.72E-17	8.01E-16
Wdr77	1.849460603	0.219746	3.88E-17	8.36E-16
Pqlc3	3.661185419	0.43513767	3.97E-17	8.53E-16
Copg2	-1.714537505	0.20384067	4.06E-17	8.72E-16
Cbr4	-1.76548458	0.20998895	4.19E-17	8.98E-16
B3galnt1	4.882790574	0.5808628	4.24E-17	9.08E-16
Rcan3	3.124902479	0.37178904	4.28E-17	9.15E-16
Ndufaf2	-2.669146349	0.31772293	4.43E-17	9.47E-16
Wdfy3	1.934480352	0.23034792	4.54E-17	9.68E-16
Gsap	-2.022739226	0.24090392	4.60E-17	9.80E-16
Plod1	1.251824429	0.14909844	4.62E-17	9.83E-16
Slc7a11	8.195597393	0.97629037	4.67E-17	9.93E-16
Igsf5	-1.626894115	0.19381851	4.70E-17	9.96E-16
Slc44a2	1.568300855	0.18683664	4.70E-17	9.96E-16
Ttll12	1.716367743	0.20451355	4.76E-17	1.01E-15
Cers5	1.776532207	0.21178015	4.92E-17	1.04E-15
Hivep3	3.334626198	0.39766729	5.05E-17	1.07E-15
Dnaja2	-1.208036264	0.14411882	5.19E-17	1.09E-15
Sdcbp2	10.14848903	1.21099972	5.28E-17	1.11E-15
Tnfrsf12a	3.908042291	0.46702161	5.86E-17	1.23E-15
Kank1	-2.197263566	0.2627315	6.11E-17	1.28E-15
Xpc	-2.393515283	0.28628866	6.25E-17	1.31E-15
Fam162a	-1.866031637	0.22320156	6.26E-17	1.31E-15
Bcat1	8.784071849	1.0508119	6.31E-17	1.32E-15
Apool	-2.609506013	0.31222812	6.40E-17	1.33E-15

LOC103690013	2.354689348	0.28175086	6.41E-17	1.34E-15
Pan2	-1.523943524	0.18236145	6.45E-17	1.34E-15
Chchd1	-1.750621638	0.20950897	6.50E-17	1.35E-15
Nfatc2	2.432938705	0.29128291	6.68E-17	1.39E-15
Usp22	1.799485075	0.21544335	6.68E-17	1.39E-15
Tcp11l1	2.903214278	0.34788549	7.10E-17	1.47E-15
Nfkb2	2.556183204	0.3063242	7.14E-17	1.48E-15
Nkiras2	1.50595531	0.18051563	7.27E-17	1.50E-15
Fam160a2	1.630787183	0.19557087	7.52E-17	1.55E-15
Mrps31	-1.708543926	0.20491823	7.58E-17	1.56E-15
Atf6	1.812405789	0.21746911	7.81E-17	1.61E-15
Nat1	-2.148742827	0.25789351	7.96E-17	1.63E-15
Ptbp1	2.098288941	0.25191809	8.14E-17	1.67E-15
Fkbp10	4.587461049	0.5508717	8.25E-17	1.69E-15
Ilkap	-1.427502417	0.17142893	8.29E-17	1.70E-15
Dpagt1	1.546829657	0.18576599	8.31E-17	1.70E-15
Vhl	1.65638834	0.19897764	8.47E-17	1.73E-15
Tmem126a	-1.732759218	0.20815306	8.47E-17	1.73E-15
N6amt1	-1.957397841	0.23515819	8.52E-17	1.74E-15
Usp36	1.462114648	0.17567396	8.58E-17	1.75E-15
Notch3	2.734693954	0.32869279	8.80E-17	1.79E-15
Cnm2	1.460994782	0.17560931	8.83E-17	1.79E-15
Runx3	4.338870189	0.52155991	8.87E-17	1.80E-15
Klf4	4.892100835	0.58825973	9.08E-17	1.84E-15
AABR07065406.1	-2.081477286	0.25042553	9.43E-17	1.91E-15
Ankrd52	1.746982879	0.21021045	9.52E-17	1.92E-15
Slc7a7	1.637721969	0.19726858	1.02E-16	2.06E-15
Tmem120b	2.3712447	0.28566658	1.03E-16	2.08E-15
Tns3	1.683934637	0.20287321	1.04E-16	2.09E-15
Hadha	-1.515288199	0.18257182	1.04E-16	2.10E-15
Gab2	3.43154339	0.41346877	1.05E-16	2.10E-15
Pml	1.908356545	0.23014746	1.11E-16	2.23E-15
Samd4b	1.350533109	0.16290383	1.13E-16	2.26E-15
Gtpbp2	2.227770205	0.26872836	1.13E-16	2.26E-15
Klf2	2.199888375	0.26537137	1.13E-16	2.26E-15
Guf1	-1.811897685	0.21863573	1.16E-16	2.31E-15
Igsf23	9.452410307	1.14074102	1.17E-16	2.33E-15
Myl12a	2.193489598	0.26477755	1.19E-16	2.36E-15
Gpkow	-1.53213613	0.18515354	1.29E-16	2.55E-15
Gsk3a	1.092151687	0.13201203	1.30E-16	2.59E-15
Hsp90aa1	9.516317666	1.15037745	1.31E-16	2.60E-15
Pnpt1	-2.005772844	0.24256912	1.35E-16	2.68E-15
Slc25a46	-1.710129376	0.20700163	1.44E-16	2.85E-15
Rhot1	-1.486987014	0.18005115	1.47E-16	2.91E-15
Meox2	-5.10929974	0.61875288	1.49E-16	2.94E-15
Higd2al1	8.092620309	0.98008356	1.49E-16	2.94E-15

Chst1	4.32561699	0.52400525	1.52E-16	2.99E-15
Rab3d	3.013424411	0.36508342	1.53E-16	3.01E-15
PsmA5	-1.009938206	0.12240023	1.57E-16	3.08E-15
Rpl36al	-1.637865429	0.19850201	1.57E-16	3.08E-15
Rgs19	1.955782398	0.23712097	1.61E-16	3.15E-15
Sdccag3	-1.16390561	0.14119275	1.67E-16	3.27E-15
Acadl	-1.977822674	0.23997889	1.70E-16	3.32E-15
Cmtm7	2.357768414	0.28616217	1.73E-16	3.38E-15
Nek3	-2.369043315	0.28762663	1.77E-16	3.45E-15
Etfa	-2.103605015	0.25539978	1.77E-16	3.45E-15
Cbl	2.953710202	0.35866287	1.79E-16	3.48E-15
Marcks1	1.918830181	0.23300747	1.79E-16	3.48E-15
Zfp68	-2.826940638	0.34335185	1.82E-16	3.53E-15
Alg3	1.448582104	0.17595542	1.83E-16	3.54E-15
Ltbp3	2.543315434	0.30894747	1.84E-16	3.55E-15
Srsf1	-1.160551661	0.14102455	1.88E-16	3.63E-15
Map4	1.192308486	0.14492026	1.91E-16	3.69E-15
Dnaaf5	1.759698182	0.21394547	1.95E-16	3.76E-15
Ints4	-1.366082734	0.16609926	1.96E-16	3.77E-15
Prkx	1.849388842	0.22487809	1.97E-16	3.78E-15
Hmga1	4.028192956	0.48985282	1.98E-16	3.80E-15
Taf13	-2.093480998	0.25463588	2.01E-16	3.85E-15
Scd2	2.325724635	0.28295652	2.05E-16	3.92E-15
Ccdc6	2.211917274	0.26931407	2.15E-16	4.12E-15
Zfp958	-2.8984612	0.35291759	2.16E-16	4.13E-15
Eif3el1	-1.487714737	0.18125903	2.26E-16	4.30E-15
Ago2	2.594978962	0.31633301	2.34E-16	4.46E-15
Mrpl47	-1.405512598	0.1714638	2.46E-16	4.69E-15
Cdc26	-1.320847885	0.16118754	2.52E-16	4.79E-15
Pgrmc1	-1.771931868	0.21646628	2.71E-16	5.14E-15
Pygb	2.360745573	0.2885012	2.77E-16	5.26E-15
Immt	-1.632921866	0.19956582	2.78E-16	5.27E-15
Podn	-2.696647923	0.32957653	2.79E-16	5.28E-15
Dennd5a	1.902056586	0.23254013	2.85E-16	5.39E-15
Nipal3	1.843311362	0.22542207	2.91E-16	5.49E-15
Vldlr	4.171905387	0.51026692	2.94E-16	5.54E-15
Aloxe3	6.199031729	0.75838102	2.98E-16	5.62E-15
Atp1b1	2.103971715	0.25752842	3.09E-16	5.81E-15
Abcc3	3.77143491	0.46176615	3.15E-16	5.92E-15
Rpap2	-2.155316552	0.26394169	3.19E-16	5.99E-15
Pmvk	-2.096805167	0.25682427	3.23E-16	6.06E-15
Ankzf1	-1.289649342	0.1580239	3.32E-16	6.22E-15
Ccdc71	1.156218576	0.14168527	3.34E-16	6.24E-15
Xrcc6	-1.611744882	0.19751683	3.35E-16	6.26E-15
Abcc1	3.134376619	0.38412117	3.35E-16	6.26E-15
Pdap1	-1.034171342	0.12681158	3.49E-16	6.50E-15

NEWGENE_1310139	2.878494277	0.35303567	3.53E-16	6.58E-15
Parp16	1.32551463	0.16258268	3.55E-16	6.61E-15
Nr4a1	3.643440878	0.44706638	3.65E-16	6.78E-15
Sec24b	1.468324644	0.18020265	3.69E-16	6.86E-15
Commd1	-1.271870258	0.15616925	3.82E-16	7.08E-15
LOC108348144	-1.686221161	0.20706084	3.84E-16	7.10E-15
Acin1	-1.081881602	0.13286085	3.86E-16	7.13E-15
Trem2	5.652383756	0.69415807	3.86E-16	7.13E-15
Inpp5d	1.867571519	0.22935159	3.86E-16	7.13E-15
Rnh1	1.613402703	0.1981981	3.94E-16	7.26E-15
Ccnd2	2.27025301	0.279051	4.10E-16	7.55E-15
Lime1	-2.373583388	0.29179495	4.14E-16	7.61E-15
Pcsk6	1.141197894	0.14034901	4.25E-16	7.81E-15
Nkain1	6.586836919	0.81058878	4.44E-16	8.14E-15
Ngrn	-1.306599319	0.16081383	4.48E-16	8.21E-15
Dmap1	-1.692531132	0.20832534	4.49E-16	8.23E-15
Akr1e2	-2.23540631	0.27520789	4.56E-16	8.34E-15
Scarf2	2.534394356	0.31203265	4.58E-16	8.36E-15
Prmt3	1.838949408	0.22641351	4.58E-16	8.36E-15
Lpcat2	1.822678521	0.2244364	4.62E-16	8.42E-15
Sh3bgrl3	2.081543516	0.25634562	4.66E-16	8.48E-15
Spred2	2.040053494	0.25128005	4.71E-16	8.57E-15
LOC100912405	-4.182782163	0.51537332	4.82E-16	8.75E-15
Atp8b2	2.805309382	0.34568405	4.85E-16	8.80E-15
Bag6	1.285463979	0.15842005	4.89E-16	8.86E-15
Asxl1	1.461840169	0.18019494	4.96E-16	8.97E-15
Cpz	2.874551943	0.35464494	5.26E-16	9.51E-15
Zfp687	1.15422316	0.14252415	5.57E-16	1.00E-14
St14	1.985675163	0.24529302	5.72E-16	1.03E-14
RGD1305455	1.827083353	0.22583438	5.95E-16	1.07E-14
Akna	2.775273921	0.34305952	5.98E-16	1.07E-14
Zmiz1	1.530942025	0.18924134	5.97E-16	1.07E-14
Pσμα3	-1.164922051	0.14400552	5.99E-16	1.08E-14
Egr3	6.479843754	0.80121211	6.09E-16	1.09E-14
Abr	2.860887615	0.35384515	6.21E-16	1.11E-14
Cmya5	-3.379307788	0.41798153	6.23E-16	1.11E-14
Lrpprc	-1.794348929	0.22196319	6.27E-16	1.12E-14
F11	-3.181965114	0.39361633	6.27E-16	1.12E-14
Gtpbp10	-2.332160023	0.28866955	6.53E-16	1.16E-14
Chst15	2.197185481	0.27204016	6.65E-16	1.18E-14
Irgq	1.786724371	0.2212457	6.71E-16	1.19E-14
Ube2j1	1.516858131	0.18783519	6.72E-16	1.19E-14
Tdp2	-1.956695257	0.24232453	6.76E-16	1.20E-14
Cdr2	4.043335707	0.50097786	6.98E-16	1.24E-14
Cpq	-3.368069075	0.41733171	7.00E-16	1.24E-14
Bmp10	3.085641366	0.38234687	7.01E-16	1.24E-14

Gsta4	-2.337866813	0.28982282	7.23E-16	1.28E-14
Gse1	1.958954191	0.24290454	7.34E-16	1.29E-14
Psmid7	-1.227659068	0.15230917	7.61E-16	1.34E-14
Etfdh	-2.711874846	0.33649704	7.68E-16	1.35E-14
Crlf2	2.21399703	0.27473342	7.71E-16	1.36E-14
Gmcl1	-1.19831973	0.14878474	8.01E-16	1.41E-14
Suclg1	-1.062961918	0.13201018	8.14E-16	1.43E-14
Plekhn2	1.952254725	0.24250475	8.25E-16	1.45E-14
Iqgap1	2.50846695	0.31162622	8.31E-16	1.45E-14
Zfand3	1.024763248	0.12731245	8.33E-16	1.46E-14
Stk11ip	1.473975413	0.18313334	8.37E-16	1.46E-14
N4bp1	2.103703471	0.26141677	8.46E-16	1.48E-14
Pik3c3	-2.618681407	0.32548583	8.59E-16	1.50E-14
Glyr1	-1.116463479	0.13878217	8.64E-16	1.50E-14
LOC681410	1.769747509	0.21999109	8.65E-16	1.50E-14
Phyh	-2.576176707	0.3204189	8.98E-16	1.56E-14
Nid2	2.19105402	0.2726364	9.24E-16	1.60E-14
Sh3pxd2b	4.731423741	0.58903299	9.55E-16	1.65E-14
Usp31	3.303579733	0.4112695	9.54E-16	1.65E-14
Vegfd	3.974385613	0.49492359	9.72E-16	1.68E-14
Arhgef2	2.09302154	0.2606798	9.82E-16	1.70E-14
AABR07000902.1	-8.36553591	1.04197062	9.86E-16	1.70E-14
Pprc1	2.517703832	0.31366243	1.00E-15	1.73E-14
Ccdc28b	-2.338689207	0.2914175	1.01E-15	1.75E-14
Plpp5	1.444709618	0.18003006	1.02E-15	1.75E-14
LOC100912068	3.840667456	0.4786158	1.02E-15	1.75E-14
Rangap1	1.812898694	0.22593828	1.02E-15	1.76E-14
Clptm1l	1.263706778	0.15754629	1.05E-15	1.80E-14
Decr1	-1.809517642	0.22573722	1.09E-15	1.87E-14
Actn1	2.76923227	0.34545766	1.09E-15	1.87E-14
Msrb2	-1.789124334	0.22329147	1.12E-15	1.92E-14
Ranbp17	-2.643099849	0.32999866	1.15E-15	1.97E-14
Agap1	1.761800685	0.21998479	1.16E-15	1.98E-14
Snpc5	-2.129235209	0.26593216	1.18E-15	2.01E-14
Ip6k1	1.452316162	0.18143726	1.20E-15	2.04E-14
Slain2	1.498648503	0.18730908	1.23E-15	2.10E-14
Cldn2	-1.844112875	0.23049547	1.24E-15	2.10E-14
Fbxo9	-2.137638216	0.26726635	1.26E-15	2.14E-14
Sdha	-2.036156045	0.25458954	1.27E-15	2.15E-14
Ptgfrn	1.610119859	0.20132581	1.27E-15	2.15E-14
Ppp2cb	1.701597555	0.21281449	1.29E-15	2.18E-14
Tsc22d2	2.581838852	0.32297723	1.31E-15	2.21E-14
Tspan9	1.462144882	0.18291408	1.31E-15	2.21E-14
Rnf19b	1.771744357	0.22166043	1.32E-15	2.22E-14
Pigr	-2.658370064	0.33272001	1.35E-15	2.28E-14
Chrn1	2.644037702	0.330952	1.36E-15	2.29E-14

Nlgn2	1.922141836	0.2406137	1.37E-15	2.30E-14
Plxnd1	1.517754334	0.18999763	1.37E-15	2.30E-14
Timm9	-1.766213822	0.22120545	1.41E-15	2.37E-14
Hip1	1.645314743	0.20617299	1.46E-15	2.45E-14
Lrrc58	2.719730528	0.34083629	1.47E-15	2.46E-14
Rbks	-1.788663988	0.22417438	1.48E-15	2.47E-14
Ldb1	-1.053818134	0.13210316	1.50E-15	2.50E-14
Tmem107	4.334640523	0.54345914	1.51E-15	2.52E-14
Ssb	-1.746572164	0.21899539	1.52E-15	2.53E-14
Hyou1	1.802200733	0.22603686	1.55E-15	2.58E-14
Ccdc59	-2.305031227	0.28914174	1.56E-15	2.60E-14
RGD1307704	1.627499397	0.20427169	1.62E-15	2.69E-14
Phtf1	-2.351027386	0.29511815	1.63E-15	2.71E-14
Prdm9	-3.565539541	0.44771228	1.67E-15	2.76E-14
Vsig10l	2.079824584	0.26118899	1.68E-15	2.78E-14
Polr3c	-1.154514051	0.1450148	1.70E-15	2.82E-14
Lfng	2.381936657	0.29921285	1.71E-15	2.83E-14
Bbs4	-2.581881372	0.32439755	1.73E-15	2.86E-14
Tmem258b	1.865494414	0.2343916	1.74E-15	2.86E-14
Gas2	-1.98361376	0.249369	1.80E-15	2.96E-14
Sugt1	-1.351717734	0.16994575	1.81E-15	2.97E-14
Rmi1	-2.087576991	0.26246876	1.81E-15	2.98E-14
LOC103693430	-1.373668103	0.17284199	1.90E-15	3.12E-14
Atp5e	-2.4937098	0.31388898	1.95E-15	3.19E-14
B2m	-1.59607586	0.20091752	1.96E-15	3.21E-14
RGD1308147	-2.388046225	0.30062362	1.96E-15	3.21E-14
LOC680406	-3.626838721	0.45656852	1.96E-15	3.21E-14
Zcchc9	-1.752915319	0.22069273	1.98E-15	3.23E-14
Cir1	-1.95626058	0.24641201	2.04E-15	3.33E-14
Bri3bp	2.7941466	0.35195902	2.04E-15	3.33E-14
Tusc3	2.724411485	0.34338265	2.12E-15	3.45E-14
Arfgef3	4.102948299	0.51715806	2.13E-15	3.46E-14
Lifr	2.122237318	0.26757401	2.17E-15	3.52E-14
Map1b	3.432234277	0.43273593	2.17E-15	3.52E-14
Nadsyn1	-1.455081892	0.18350051	2.20E-15	3.57E-14
Srxn1	3.376526928	0.42592604	2.24E-15	3.62E-14
Hcfc1	1.4984885	0.18904352	2.25E-15	3.64E-14
Mmp23	3.371720495	0.42541632	2.27E-15	3.67E-14
Hnrnpm	-1.099489663	0.13877084	2.32E-15	3.74E-14
Akr1c12	-3.533532488	0.44601059	2.33E-15	3.75E-14
Mark4	1.273093165	0.16074974	2.38E-15	3.84E-14
Lars2	-1.359071833	0.17171702	2.48E-15	3.99E-14
Mcoln2	4.684905877	0.59200375	2.50E-15	4.02E-14
Hsd3b5	-3.313809652	0.41880571	2.52E-15	4.05E-14
Snrpe	-1.185088645	0.14978336	2.53E-15	4.06E-14
Skp1	-1.116276588	0.1411312	2.58E-15	4.14E-14

Vegfb	1.639216372	0.20731765	2.64E-15	4.23E-14
Trip6	2.2122639	0.27981035	2.65E-15	4.24E-14
Scamp2	1.094674018	0.13849191	2.70E-15	4.30E-14
St7l	-1.670664331	0.21137483	2.71E-15	4.31E-14
Pkmyt1	3.81770472	0.48304647	2.71E-15	4.32E-14
Snw1	-1.722003865	0.21795559	2.77E-15	4.41E-14
Sat2	-2.16768866	0.27441139	2.80E-15	4.45E-14
Hsd11b1	-2.830202279	0.35828753	2.81E-15	4.45E-14
Slc4a2	1.151477779	0.14585402	2.91E-15	4.61E-14
LOC100911305	1.9218979	0.2434634	2.93E-15	4.63E-14
Bak1	2.187981465	0.27718141	2.93E-15	4.64E-14
Btg2	2.819844604	0.35726772	2.95E-15	4.67E-14
Tfam	-1.003494314	0.12717092	3.00E-15	4.74E-14
Prr12	1.150633776	0.1458212	3.00E-15	4.74E-14
Mettl21b	4.441909629	0.56323609	3.11E-15	4.90E-14
Lbp	2.596554823	0.32930281	3.15E-15	4.95E-14
March03	1.532151647	0.19433228	3.17E-15	4.98E-14
Cat	-3.160649804	0.40092701	3.19E-15	5.01E-14
Rufy3	-1.431006478	0.18153447	3.20E-15	5.02E-14
Lonrf1	2.215763729	0.28115275	3.25E-15	5.09E-14
C8b	-2.611837694	0.3315043	3.31E-15	5.18E-14
Acad9	-1.863126774	0.23650119	3.33E-15	5.21E-14
Col6a2	2.782445353	0.3532155	3.34E-15	5.22E-14
Fam3c	2.096654726	0.26618887	3.36E-15	5.26E-14
Tmem115	1.33314228	0.16929082	3.41E-15	5.32E-14
Syde1	3.229906127	0.41016944	3.42E-15	5.33E-14
Trmt1l	-1.313616023	0.16682553	3.43E-15	5.34E-14
Mocs2	-1.915228898	0.24325477	3.45E-15	5.37E-14
Metrn1	2.217173611	0.28168588	3.52E-15	5.47E-14
Mycbp	-1.183845467	0.15041025	3.52E-15	5.47E-14
Rtn3	1.033697888	0.13133529	3.53E-15	5.47E-14
Abcd3	-1.856002037	0.23591135	3.62E-15	5.62E-14
Smlr1	-2.314367631	0.29418092	3.63E-15	5.62E-14
Cnn2	2.712965151	0.34485392	3.63E-15	5.62E-14
Matr3	-2.413276186	0.30678067	3.65E-15	5.64E-14
Ccdc92	4.219045797	0.53647763	3.71E-15	5.73E-14
LOC100361492	5.221854209	0.66428699	3.82E-15	5.89E-14
Trim35	2.784816732	0.35430587	3.84E-15	5.93E-14
Slc15a3	2.040049356	0.25955956	3.85E-15	5.93E-14
Rasl11b	5.666905641	0.72109679	3.88E-15	5.97E-14
Cdr2l	1.74898681	0.22266548	4.00E-15	6.16E-14
Atg16l1	-1.172953024	0.14937284	4.08E-15	6.26E-14
Rela	1.393649473	0.17749007	4.10E-15	6.28E-14
Rhog	1.636993759	0.20855306	4.18E-15	6.41E-14
Inhbb	7.295788721	0.92953565	4.20E-15	6.43E-14
Dek	-2.188922266	0.27890661	4.22E-15	6.46E-14

Txndc5	2.628318935	0.33521336	4.48E-15	6.85E-14
S100a10	3.747950788	0.47808293	4.52E-15	6.91E-14
Mcee	-2.461778991	0.3140269	4.53E-15	6.91E-14
Hagh	-2.255042731	0.28772294	4.59E-15	7.00E-14
Leo1	-1.807604213	0.23071362	4.69E-15	7.15E-14
Camk2n2	3.220608651	0.41118696	4.78E-15	7.28E-14
Dtnbp1	-1.548304659	0.19768288	4.79E-15	7.28E-14
Gucy2c	7.140177213	0.91198684	4.91E-15	7.45E-14
Pacs2	1.313523823	0.16777494	4.91E-15	7.45E-14
Dis3l	-1.249263945	0.15960744	4.99E-15	7.56E-14
Pex10	-1.792256497	0.22898341	5.00E-15	7.56E-14
Ksr1	1.54737884	0.19770163	5.00E-15	7.56E-14
Alb	-2.95097895	0.37712694	5.08E-15	7.67E-14
Tec	-1.874518723	0.23965374	5.21E-15	7.85E-14
Shisa5	1.159552431	0.14828739	5.30E-15	7.98E-14
Hspa1b	7.991857877	1.02227868	5.38E-15	8.10E-14
Hsc70-ps2	3.136613981	0.40141215	5.54E-15	8.33E-14
Ablim1	2.08956436	0.26742059	5.55E-15	8.34E-14
Mkrn1	-1.434851903	0.18366	5.60E-15	8.40E-14
AABR07003537.1	8.824488907	1.12953146	5.61E-15	8.40E-14
Prag1	2.905856158	0.3720792	5.73E-15	8.58E-14
Egr2	5.259914752	0.67365477	5.81E-15	8.68E-14
Apbb1ip	2.096844255	0.26854957	5.81E-15	8.68E-14
LOC103689983	-1.050559411	0.13466103	6.12E-15	9.14E-14
Galm	-2.356143643	0.30203434	6.15E-15	9.17E-14
Ggnbp2	-2.187475075	0.28049112	6.25E-15	9.32E-14
AABR07024908.1	-1.170084546	0.15004239	6.27E-15	9.34E-14
Nol6	1.530008185	0.19636041	6.60E-15	9.83E-14
Ccz1b	-1.159342922	0.14880366	6.64E-15	9.88E-14
Ssr2	1.883761975	0.24192002	6.88E-15	1.02E-13
Hnrnpr	-1.934255891	0.24843563	6.93E-15	1.03E-13
Tmem64	1.595786265	0.20505362	7.12E-15	1.06E-13
Dera	-1.261253851	0.16211589	7.26E-15	1.07E-13
Reck	1.869201237	0.24030721	7.35E-15	1.09E-13
Sipa1l3	1.986197946	0.25535218	7.35E-15	1.09E-13
Dbi	-2.355440894	0.30287608	7.43E-15	1.10E-13
Csf2rb	2.61624956	0.33664425	7.75E-15	1.14E-13
Nr1i2	-2.16961052	0.27924993	7.88E-15	1.16E-13
Rnf19a	-1.820958111	0.23446714	8.08E-15	1.19E-13
Dnajb11	1.533098436	0.19748885	8.30E-15	1.22E-13
Triap1	-1.947093518	0.25082221	8.30E-15	1.22E-13
Triap1	-1.947093518	0.25082221	8.30E-15	1.22E-13
Neurl3	4.146565569	0.53422502	8.37E-15	1.23E-13
RGD1359158	-2.139238152	0.27564228	8.43E-15	1.24E-13
Plrg1	-1.403531703	0.18089284	8.57E-15	1.25E-13
Ccdc120	1.890708088	0.24367765	8.56E-15	1.25E-13

Actr1a	1.184073245	0.15260949	8.57E-15	1.25E-13
Cmb1	-2.295383068	0.29585896	8.60E-15	1.26E-13
Naxd	-1.462751831	0.18862144	8.84E-15	1.29E-13
Btn2a2	-1.901601268	0.24521193	8.84E-15	1.29E-13
Svip	-1.950456873	0.25151794	8.85E-15	1.29E-13
MGC95210	-1.821108993	0.23485609	8.89E-15	1.30E-13
Rreb1	1.197677441	0.15446206	8.91E-15	1.30E-13
Ctgf	3.903080059	0.50342491	8.97E-15	1.31E-13
Cd44	6.047174991	0.78003024	9.01E-15	1.31E-13
Plekhg2	1.650950642	0.21296722	9.04E-15	1.31E-13
Adi1	-1.728927321	0.22305099	9.10E-15	1.32E-13
Clec4f	-2.370266907	0.30591752	9.33E-15	1.35E-13
Col16a1	2.98962581	0.38585527	9.33E-15	1.35E-13
Atp6v1e1	-1.056591646	0.13641311	9.52E-15	1.38E-13
Wipf2	2.101741551	0.27142694	9.69E-15	1.40E-13
Apcs	-1.554794551	0.20082934	9.80E-15	1.42E-13
Sqstm1	1.884955702	0.24348482	9.82E-15	1.42E-13
Pkd1	1.331859516	0.17204507	9.84E-15	1.42E-13
Tuba1a	2.595345208	0.33534078	9.99E-15	1.44E-13
Tom1l2	1.864562002	0.24092963	1.00E-14	1.44E-13
Vps45	-1.612920327	0.2084956	1.03E-14	1.48E-13
Clec7a	2.751924638	0.35576281	1.03E-14	1.48E-13
Aldoa	2.406630712	0.31114247	1.04E-14	1.49E-13
Kyat3	-2.937360332	0.37977459	1.04E-14	1.49E-13
Mnat1	-1.54838954	0.20019955	1.04E-14	1.49E-13
Sp2	1.735892864	0.22446595	1.05E-14	1.50E-13
Npc1l1	9.056032207	1.17117044	1.05E-14	1.51E-13
Mccc2	-2.925271245	0.37832191	1.06E-14	1.51E-13
Fndc3b	2.438589723	0.31540462	1.06E-14	1.52E-13
Arf6	1.341483971	0.17364786	1.12E-14	1.59E-13
Apoh	-2.573496658	0.33321999	1.14E-14	1.62E-13
Syk	1.592554971	0.20621179	1.14E-14	1.62E-13
Grpel1	-1.500037201	0.19424349	1.14E-14	1.62E-13
Csnk1e	1.540901148	0.19972409	1.21E-14	1.72E-13
Emp3	3.018959911	0.39134672	1.22E-14	1.73E-13
Vamp3	-1.244500283	0.16132532	1.22E-14	1.73E-13
Slc12a9	1.732908804	0.2247624	1.26E-14	1.78E-13
Chrne	-3.776235963	0.48985354	1.27E-14	1.80E-13
Cluap1	-1.663827036	0.21593614	1.31E-14	1.85E-13
Ero1b	2.021404622	0.26243342	1.33E-14	1.89E-13
Trim27	1.873428859	0.24331315	1.36E-14	1.93E-13
Nfe2l2	-1.945642233	0.25273541	1.38E-14	1.95E-13
Rpl5	-1.723014579	0.2238242	1.38E-14	1.95E-13
LOC689757	-3.914524516	0.50850383	1.38E-14	1.95E-13
Psat1	3.362626391	0.43708811	1.43E-14	2.02E-13
Ncam1	5.357902699	0.69660118	1.45E-14	2.05E-13

Klhdc10	1.169192821	0.15201734	1.46E-14	2.05E-13
Ajuba	1.837332935	0.23889977	1.46E-14	2.05E-13
RGD1311251	-2.585184724	0.33615889	1.47E-14	2.06E-13
Amotl1	2.367366256	0.30785026	1.47E-14	2.06E-13
Prpf40b	-1.229749017	0.15996124	1.50E-14	2.10E-13
Ube3b	1.286296623	0.16733024	1.50E-14	2.11E-13
Smarcal1	-1.298938089	0.1690529	1.55E-14	2.16E-13
Etfrf1	-2.530477806	0.3293611	1.55E-14	2.17E-13
Dcst1	-2.599509316	0.33838436	1.56E-14	2.18E-13
Prorsd1	-2.004618844	0.26096076	1.57E-14	2.19E-13
RGD1564614	-3.005535055	0.39127087	1.57E-14	2.19E-13
Mfhas1	2.654060892	0.34561726	1.60E-14	2.23E-13
Cela1	-5.266172153	0.68581518	1.61E-14	2.23E-13
Flnb	1.471412384	0.19175877	1.68E-14	2.33E-13
Plscr3	1.358486005	0.17705933	1.69E-14	2.34E-13
Cxcl11	-1.605062249	0.20923727	1.71E-14	2.36E-13
Exoc3	-1.038717622	0.13541817	1.71E-14	2.37E-13
Crem	-1.569762588	0.20470004	1.74E-14	2.41E-13
Pigq	1.203985158	0.15703885	1.76E-14	2.44E-13
Bms1	-1.646428601	0.21480527	1.79E-14	2.47E-13
Ppa2	-1.699033788	0.2216913	1.80E-14	2.49E-13
Slit3	3.890764603	0.50769693	1.81E-14	2.49E-13
Comt	-1.726913601	0.22534728	1.81E-14	2.50E-13
Ctsd	1.143075233	0.1492236	1.86E-14	2.56E-13
Hipk3	1.701236065	0.22209906	1.86E-14	2.56E-13
Cd300e	-3.034554728	0.39634986	1.91E-14	2.63E-13
Rcn1	3.064146305	0.40035857	1.96E-14	2.68E-13
Dars2	-1.429311519	0.18676225	1.96E-14	2.69E-13
Fmnl1	2.174340853	0.28421344	2.00E-14	2.75E-13
Map6	4.075889709	0.53281518	2.01E-14	2.76E-13
Nostrin	-2.417128508	0.31601931	2.03E-14	2.78E-13
RGD1597339	-1.322678875	0.17293574	2.04E-14	2.78E-13
LOC100125368	-2.751501421	0.35979363	2.05E-14	2.80E-13
LOC100125364	-1.510445515	0.19751793	2.06E-14	2.80E-13
Tyw5	-2.224666859	0.29093265	2.06E-14	2.81E-13
Coro2b	2.892680915	0.37837467	2.09E-14	2.85E-13
Creg1	-2.490291509	0.3258315	2.12E-14	2.89E-13
Slc25a37	1.713913921	0.22428021	2.14E-14	2.91E-13
Dusp4	5.072754817	0.66386913	2.15E-14	2.92E-13
Ccdc107	-1.935237361	0.25326845	2.15E-14	2.92E-13
AABR07000398.1	3.175918062	0.41573871	2.19E-14	2.96E-13
Pecr	-2.133005704	0.27938985	2.27E-14	3.07E-13
Zbtb48	-2.004588433	0.26264139	2.30E-14	3.12E-13
Dynlt3	-2.308087083	0.30245814	2.33E-14	3.15E-13
Sema3b	4.138921529	0.54245266	2.35E-14	3.17E-13
Cep63	-1.642148288	0.21556998	2.58E-14	3.48E-13

Mfsd5	1.433291794	0.18819927	2.62E-14	3.53E-13
Card19	2.203223907	0.28939136	2.67E-14	3.60E-13
Fra10ac1	-1.97655332	0.25977558	2.77E-14	3.72E-13
Unc93b1	1.308086538	0.17192117	2.77E-14	3.72E-13
Papss2	-1.627321615	0.21390284	2.79E-14	3.74E-13
Mto1	-1.247789181	0.16401404	2.79E-14	3.74E-13
Rbbp9	-2.491093122	0.32747828	2.81E-14	3.77E-13
Rest	2.102879776	0.27646406	2.82E-14	3.78E-13
Trib2	2.365235722	0.31101157	2.85E-14	3.82E-13
LOC100909474	8.842110552	1.16323415	2.93E-14	3.92E-13
Apoc2	-3.275228551	0.43092682	2.95E-14	3.95E-13
Tmbim1	3.7466663	0.49316652	3.03E-14	4.04E-13
Cd63	2.145167412	0.2823696	3.03E-14	4.04E-13
Timp1	3.906816039	0.51426436	3.03E-14	4.04E-13
Plp2	2.583812768	0.34033696	3.15E-14	4.20E-13
Eci2	-2.493061069	0.32853007	3.24E-14	4.30E-13
Sfxn3	1.952281897	0.25730874	3.27E-14	4.34E-13
Casz1	4.104278111	0.54099525	3.29E-14	4.36E-13
Rnaseh1	-1.605812144	0.21167612	3.29E-14	4.37E-13
Ahnak2	6.659507969	0.87799104	3.33E-14	4.41E-13
Syn1	3.215586176	0.42397551	3.34E-14	4.43E-13
Sem1	-1.234706734	0.16282043	3.37E-14	4.46E-13
Herc4	-1.799132915	0.237355	3.46E-14	4.57E-13
Txnrd1	1.340239343	0.17688334	3.54E-14	4.67E-13
Ankmy2	-1.689978914	0.22307042	3.56E-14	4.71E-13
Syap1	-1.625610402	0.21471861	3.71E-14	4.89E-13
Mkln1	-1.687099535	0.22287662	3.74E-14	4.93E-13
LOC103692171	1.404054137	0.18551716	3.78E-14	4.98E-13
Vsir	1.650758804	0.21814415	3.81E-14	5.02E-13
Podxl	2.560030359	0.33835163	3.84E-14	5.05E-13
Suclg2	-1.936174698	0.25591488	3.86E-14	5.07E-13
Tab1	-1.315013019	0.17389959	3.97E-14	5.22E-13
Efemp2	2.733298852	0.36148327	3.99E-14	5.23E-13
Adam19	2.614693535	0.34583602	4.02E-14	5.26E-13
Psmc3	-1.189848606	0.15742114	4.08E-14	5.35E-13
Med31	-1.659386631	0.21964312	4.19E-14	5.49E-13
Isyna1	2.439429075	0.32291484	4.21E-14	5.50E-13
Metap1d	-1.638832685	0.21695563	4.23E-14	5.53E-13
Slc35f6	2.075584863	0.27486257	4.31E-14	5.62E-13
Cdv3	1.820460994	0.24108727	4.32E-14	5.63E-13
Sephs1	-1.020669348	0.13519918	4.37E-14	5.70E-13
Bhlhe41	6.362260097	0.84300605	4.45E-14	5.80E-13
Arl3	-1.382547082	0.18319628	4.46E-14	5.81E-13
RGD1562699	-3.449078692	0.45735296	4.65E-14	6.04E-13
Foxp3	5.497938055	0.72909703	4.67E-14	6.07E-13
Colec11	-1.402578011	0.1860032	4.68E-14	6.07E-13

Ica1	2.935438301	0.38937906	4.74E-14	6.15E-13
Fosl1	10.95880825	1.45402676	4.81E-14	6.24E-13
Maz	1.389544445	0.18440152	4.87E-14	6.30E-13
Rras2	1.645090358	0.21832869	4.89E-14	6.32E-13
C6	-3.085004589	0.40946435	4.91E-14	6.35E-13
Pygl	-2.549405992	0.33841381	4.94E-14	6.38E-13
Tgfbr2	1.239064535	0.16454422	5.06E-14	6.53E-13
Cnot10	-1.186454785	0.15757266	5.09E-14	6.56E-13
Bloc1s5	-2.139054217	0.28409353	5.10E-14	6.57E-13
Trmt12	-1.679898441	0.22313274	5.12E-14	6.60E-13
Rn60_12_0107.3	-3.693712201	0.49093402	5.32E-14	6.84E-13
Fscn1	3.566231783	0.47400084	5.33E-14	6.84E-13
Gpaa1	1.349408935	0.17940574	5.41E-14	6.95E-13
Hspb1	7.107658936	0.94503284	5.43E-14	6.97E-13
Farp1	1.58122843	0.2102892	5.51E-14	7.06E-13
Zfp316	1.5564878	0.20705641	5.60E-14	7.17E-13
Zfand2a	4.229495998	0.56265406	5.60E-14	7.17E-13
Brcc3	-1.999132832	0.26611772	5.81E-14	7.44E-13
Sec24d	1.561525945	0.20787684	5.83E-14	7.45E-13
Hsd17b12	-1.69031888	0.22503233	5.85E-14	7.46E-13
Mthfd2	4.007852431	0.53356296	5.85E-14	7.46E-13
LOC108348175	1.818011382	0.24213204	5.99E-14	7.63E-13
Enpp1	-1.776097261	0.23661003	6.08E-14	7.74E-13
Zfyve21	-1.559315719	0.20773615	6.09E-14	7.75E-13
Rnf10	1.308000402	0.17430029	6.18E-14	7.86E-13
Nipsnap1	-2.156189058	0.28736787	6.23E-14	7.91E-13
Hmbox1	1.780730732	0.23736507	6.28E-14	7.98E-13
Lrrc25	1.768914191	0.23599487	6.60E-14	8.38E-13
Zyx	2.56489548	0.34220679	6.62E-14	8.40E-13
C1galt1c1	-1.689715797	0.22557546	6.85E-14	8.68E-13
Acadm	-2.698982586	0.36033837	6.88E-14	8.71E-13
Ndufa2	-2.183724721	0.29157104	6.91E-14	8.75E-13
Ube2o	1.803648299	0.24092009	7.07E-14	8.94E-13
Kcng4	-2.483579121	0.33185101	7.21E-14	9.10E-13
Aadat	-2.664783942	0.35608803	7.24E-14	9.13E-13
Fhl2	2.876220137	0.38440402	7.30E-14	9.21E-13
Mlxip	2.325233917	0.3108367	7.40E-14	9.32E-13
Anapc13	-1.576601692	0.21082479	7.53E-14	9.48E-13
Pdcd4	-1.843308714	0.24651871	7.58E-14	9.53E-13
Rsrc2	-2.103529538	0.28138299	7.68E-14	9.65E-13
N4bp2l2	-1.590479805	0.2127646	7.70E-14	9.67E-13
Cdk5rap1	-1.540398701	0.20607633	7.73E-14	9.69E-13
Birc2	-1.748107632	0.23388316	7.76E-14	9.73E-13
Cul3	-1.577718803	0.21111042	7.81E-14	9.79E-13
Spns1	1.520989986	0.20356806	7.92E-14	9.90E-13
Itpkc	2.588109819	0.34659527	8.19E-14	1.02E-12

Uqcrb	-1.578638628	0.21141516	8.20E-14	1.02E-12
Gabarapl2	-1.433398586	0.19197643	8.23E-14	1.03E-12
Vti1b	-1.226058162	0.16426386	8.40E-14	1.05E-12
Trim28	1.339343212	0.17944623	8.41E-14	1.05E-12
Rsrp1	-1.515271908	0.20306548	8.52E-14	1.06E-12
Herpud1	1.579243871	0.2117446	8.77E-14	1.09E-12
Tspan5	3.074962396	0.41234129	8.83E-14	1.10E-12
Gne	-2.025091529	0.27165483	9.01E-14	1.12E-12
Sfr1	-2.096652691	0.28131659	9.12E-14	1.13E-12
Cdk7	-1.510225123	0.20273912	9.40E-14	1.17E-12
AABR07005549.1	3.225500493	0.43305302	9.46E-14	1.17E-12
Cdh13	3.471765388	0.46613764	9.48E-14	1.17E-12
LOC103692719	2.388192995	0.3206793	9.53E-14	1.18E-12
H3f3a	-1.073665771	0.14419866	9.64E-14	1.19E-12
Cotl1	2.845341157	0.38227172	9.82E-14	1.21E-12
Smarce1	-1.366888843	0.18369191	9.98E-14	1.23E-12
Dip2b	1.726895301	0.2321287	1.01E-13	1.25E-12
RGD1311805	-1.27529239	0.1714559	1.02E-13	1.26E-12
Sbf1	1.305932344	0.17560134	1.03E-13	1.27E-12
Slc39a8	-2.250565134	0.30266665	1.04E-13	1.28E-12
Bcap29	-1.914429865	0.25776321	1.11E-13	1.36E-12
Cul1	-1.641022077	0.22098455	1.12E-13	1.37E-12
Fam188a	-1.437434784	0.19359317	1.13E-13	1.38E-12
Pyroxd1	-2.195797532	0.29575576	1.13E-13	1.39E-12
Lrrc45	-1.515343678	0.20415093	1.15E-13	1.41E-12
Pon3	-2.492866466	0.33587474	1.15E-13	1.41E-12
Ckb	2.267740213	0.30555514	1.16E-13	1.41E-12
LOC684270	-2.353951823	0.31720523	1.16E-13	1.42E-12
Nudt6	-1.53635059	0.20713844	1.20E-13	1.46E-12
Ndufa4	-1.888392157	0.25462379	1.20E-13	1.47E-12
Clec4a1	1.577737916	0.21280795	1.23E-13	1.50E-12
Tmed10	1.02704058	0.1385624	1.24E-13	1.51E-12
NEWGENE_1309258	1.850711773	0.24970359	1.25E-13	1.52E-12
Lrrc59	1.724882717	0.23276794	1.26E-13	1.53E-12
Parvg	1.954219654	0.26374131	1.27E-13	1.54E-12
Rfc1	-2.147342241	0.28982429	1.27E-13	1.54E-12
Itpr3	3.924980311	0.52975897	1.27E-13	1.55E-12
Zkscan3	-1.55354622	0.20973077	1.29E-13	1.56E-12
Slc12a4	1.372105611	0.18531285	1.32E-13	1.60E-12
Hsbp1	-1.130572711	0.15272029	1.33E-13	1.61E-12
Twf1	-1.033101851	0.13958122	1.35E-13	1.63E-12
Tatdn1	-1.853945277	0.25051194	1.36E-13	1.64E-12
Pts	-1.799464476	0.24317017	1.36E-13	1.65E-12
Gnpda1	2.3136024	0.31264953	1.36E-13	1.65E-12
Utp15	1.633380449	0.220856	1.41E-13	1.70E-12
Pgghg	1.491383366	0.20166133	1.41E-13	1.70E-12

Samd1	1.837646486	0.24848625	1.41E-13	1.70E-12
Cd83	2.389519584	0.32316849	1.42E-13	1.72E-12
Acsn1	-2.435214358	0.32935168	1.43E-13	1.72E-12
Tm4sf19	5.158973967	0.69776954	1.43E-13	1.72E-12
Pck2	2.462714061	0.33311395	1.44E-13	1.72E-12
Adcy3	2.077933103	0.28111118	1.45E-13	1.74E-12
Cd300lb	4.699503933	0.63588911	1.46E-13	1.76E-12
Nsdhl	-2.097781243	0.28403652	1.52E-13	1.82E-12
Afmid	-2.805038148	0.37987687	1.54E-13	1.84E-12
Ints10	-1.429096466	0.1935986	1.56E-13	1.87E-12
F9	-2.978030102	0.40349408	1.58E-13	1.88E-12
Glod4	-1.376706304	0.18653507	1.58E-13	1.89E-12
Tbc1d2b	1.192097004	0.16159567	1.62E-13	1.93E-12
Tmsb4x	-1.658351021	0.22486194	1.64E-13	1.96E-12
Git1	1.509947047	0.20476888	1.66E-13	1.98E-12
Bud31	-1.214289269	0.16467946	1.66E-13	1.98E-12
Cdh3	4.023703409	0.54571758	1.67E-13	1.98E-12
Gnpat	-1.161979723	0.15761829	1.68E-13	2.00E-12
Mgrn1	1.304848355	0.17710176	1.73E-13	2.06E-12
Pncr2	-1.682946735	0.22853695	1.78E-13	2.12E-12
Paox	1.560987233	0.21200294	1.80E-13	2.13E-12
Tagln2	2.146400212	0.29154971	1.81E-13	2.15E-12
Trerf1	2.113726312	0.28719377	1.84E-13	2.18E-12
H2afv	-1.718460539	0.23350277	1.85E-13	2.19E-12
Rnf44	1.808793073	0.24580886	1.86E-13	2.20E-12
Trappc2b	-1.346477442	0.18298853	1.86E-13	2.20E-12
Osbpl1a	-1.323871334	0.17991763	1.86E-13	2.20E-12
Mut	-2.883098144	0.39202408	1.92E-13	2.26E-12
Rfwd2	-1.208589897	0.16436256	1.94E-13	2.28E-12
AABR07006049.2	4.458009894	0.60627555	1.94E-13	2.28E-12
Thbs2	2.316435734	0.31512441	1.97E-13	2.32E-12
Grk6	1.646569446	0.22401439	1.98E-13	2.33E-12
Zadh2	-1.673614932	0.22773645	2.00E-13	2.35E-12
Tc2n	-3.234714368	0.44041343	2.06E-13	2.42E-12
Galnt10	1.373477075	0.18705692	2.10E-13	2.46E-12
Pyurf	-1.323201413	0.1803052	2.16E-13	2.53E-12
Zfp516	2.760807705	0.37623199	2.17E-13	2.54E-12
Ivd	-2.858871674	0.38961508	2.17E-13	2.55E-12
Fabp4	4.722406044	0.64370207	2.20E-13	2.57E-12
LOC100174910	-1.796306898	0.24495847	2.25E-13	2.63E-12
LOC100909505	10.91279435	1.48840414	2.27E-13	2.65E-12
Akr1c14	-2.574591994	0.35116286	2.27E-13	2.66E-12
Insig2	-2.726019194	0.37186786	2.29E-13	2.67E-12
Glyat1	-2.084848427	0.2844043	2.29E-13	2.67E-12
Mrps22	-1.594721305	0.21755101	2.30E-13	2.68E-12
Gfod1	2.792961709	0.38110236	2.33E-13	2.71E-12

Nploc4	1.452330825	0.19819742	2.34E-13	2.73E-12
Med8	-1.395599955	0.19046352	2.35E-13	2.73E-12
Rab6a	1.53772274	0.20992726	2.39E-13	2.78E-12
RGD1305713	-1.238208196	0.16904799	2.40E-13	2.79E-12
Plod2	3.941332135	0.53817767	2.42E-13	2.81E-12
Esd	-1.547861409	0.2114192	2.46E-13	2.85E-12
Vps53	-1.342815764	0.18342364	2.46E-13	2.86E-12
Coa7	-1.28134658	0.17503326	2.47E-13	2.86E-12
RGD1309350	-1.451971982	0.19836302	2.48E-13	2.88E-12
Rn50_5_0815.7	-10.14526059	1.38628674	2.51E-13	2.91E-12
Rasa3	1.25651741	0.171749	2.55E-13	2.95E-12
Phc1	1.452463822	0.19857939	2.59E-13	2.99E-12
Dcun1d3	1.866379838	0.2551966	2.60E-13	3.01E-12
Snx12	2.318324587	0.31706675	2.64E-13	3.04E-12
Tomm5	-1.221474683	0.16713027	2.70E-13	3.11E-12
Sh3tc1	1.437667535	0.19675481	2.73E-13	3.15E-12
Dusp2	4.241983633	0.58061436	2.75E-13	3.17E-12
Relb	2.93992565	0.40239774	2.75E-13	3.17E-12
Adgrg1	1.727590304	0.23647863	2.76E-13	3.18E-12
Nxf1	-1.047687078	0.1434593	2.81E-13	3.23E-12
Man1b1	1.217177225	0.16667659	2.82E-13	3.24E-12
Lrrc8e	3.208443549	0.43952549	2.88E-13	3.31E-12
Mdp1	-2.126038093	0.2913473	2.94E-13	3.37E-12
Hmgcl	-1.564228568	0.2144105	2.98E-13	3.41E-12
Hnrnp3	-1.434284801	0.19663202	3.00E-13	3.44E-12
Zfp717	-2.272866625	0.31161488	3.01E-13	3.45E-12
Pla2g12a	1.471178807	0.20172075	3.03E-13	3.46E-12
Cmklr1	1.886656698	0.25869959	3.03E-13	3.47E-12
Parm1	4.178734612	0.57306707	3.06E-13	3.49E-12
Gabbr2	4.160697752	0.5706917	3.09E-13	3.52E-12
Mrpl45	-1.369560313	0.18787968	3.11E-13	3.55E-12
Rnd1	3.180120979	0.4362843	3.12E-13	3.56E-12
Lyc2	-4.012294289	0.55051672	3.14E-13	3.58E-12
Lpxn	1.255988554	0.1723444	3.15E-13	3.59E-12
Slc25a24	3.724250146	0.51105834	3.16E-13	3.60E-12
Scarb2	1.697793099	0.23313622	3.28E-13	3.72E-12
Snx2	-1.755286036	0.24102878	3.28E-13	3.72E-12
Wars2	-1.390426978	0.19093499	3.28E-13	3.73E-12
Pias3	1.227723773	0.16859951	3.29E-13	3.73E-12
LOC683674	1.317077099	0.18088925	3.31E-13	3.75E-12
Grin2d	2.795722242	0.38401435	3.33E-13	3.77E-12
Tnk2	1.795253985	0.24667004	3.39E-13	3.83E-12
Trim30c	-2.393747566	0.32894114	3.41E-13	3.85E-12
Raph1	1.081942654	0.14871688	3.46E-13	3.91E-12
Hdac4	1.736695152	0.23873727	3.48E-13	3.92E-12
Dusp16	1.770943138	0.24352695	3.54E-13	3.99E-12

Ttc23	-2.110926743	0.29037777	3.61E-13	4.06E-12
Rap2a	1.589265163	0.21862066	3.61E-13	4.06E-12
Mob4	-1.415793407	0.19481302	3.66E-13	4.12E-12
Tubb3	6.303687901	0.86738355	3.66E-13	4.12E-12
Nrip2	4.734353226	0.65162579	3.72E-13	4.18E-12
Srp14	-1.069704585	0.14727701	3.78E-13	4.24E-12
Csnk1d	1.096777736	0.15104815	3.84E-13	4.31E-12
Hacd3	-1.006700922	0.13872209	3.96E-13	4.44E-12
Pde10a	7.043229365	0.97062899	3.98E-13	4.45E-12
Siah2	1.100625758	0.15168513	3.99E-13	4.46E-12
Ch25h	5.799564767	0.79950625	4.05E-13	4.53E-12
Nr1h4	-2.21397112	0.30538502	4.17E-13	4.67E-12
Lgals8	-1.497062675	0.20661651	4.30E-13	4.81E-12
Dclk1	3.301135988	0.45564711	4.33E-13	4.83E-12
Tpk1	-1.194176103	0.16485978	4.37E-13	4.87E-12
Chmp2b	-1.287572441	0.17780498	4.44E-13	4.95E-12
Id1	2.769365142	0.38245258	4.45E-13	4.96E-12
Fat1	2.491189919	0.34421822	4.58E-13	5.10E-12
Rpa3	-1.245038853	0.17205052	4.61E-13	5.12E-12
Cdk4	1.113073195	0.15383333	4.64E-13	5.15E-12
Ctdspl	1.515079225	0.20941837	4.67E-13	5.18E-12
Lactb	-1.180553788	0.16323129	4.75E-13	5.27E-12
Stk40	1.740992986	0.2407268	4.75E-13	5.27E-12
Trappc11	-1.375633237	0.19026356	4.82E-13	5.35E-12
Cox7a2	-1.618069059	0.22392928	4.98E-13	5.52E-12
Zfp57	2.395238259	0.33152101	5.01E-13	5.55E-12
Mthfr	1.98227881	0.2743872	5.03E-13	5.57E-12
Slc8a1	2.725776676	0.37734423	5.06E-13	5.60E-12
RGD1562987	-1.083843375	0.1500479	5.07E-13	5.60E-12
Depdc7	-2.228419544	0.30858852	5.15E-13	5.68E-12
Akt2	1.056712984	0.14634671	5.18E-13	5.71E-12
Nxt2	-2.152478528	0.2981305	5.20E-13	5.74E-12
Dag1	1.127240943	0.15615097	5.24E-13	5.77E-12
Lbr	2.040572219	0.28266856	5.24E-13	5.77E-12
Spink1l	-2.27873539	0.31568043	5.26E-13	5.78E-12
Srpra	1.188050317	0.16460933	5.30E-13	5.82E-12
Zfp3	-2.379323954	0.3298369	5.45E-13	5.98E-12
RGD1310587	-2.113828215	0.29315462	5.57E-13	6.11E-12
Cables1	2.098984165	0.29110707	5.58E-13	6.12E-12
Msantd4	-1.852288568	0.25688983	5.58E-13	6.12E-12
Rpl4	-1.285811912	0.17836713	5.64E-13	6.18E-12
Lmna	1.915973741	0.26585624	5.73E-13	6.27E-12
Mettl5	-1.267167774	0.17584523	5.76E-13	6.29E-12
Hmgcs1	-2.905137902	0.40316553	5.77E-13	6.31E-12
Fam171a2	1.958515277	0.27182974	5.81E-13	6.34E-12
Zbtb45	1.439973909	0.1998863	5.85E-13	6.38E-12

Eno2	4.004853683	0.55596988	5.87E-13	6.41E-12
Rbm48	-2.099978497	0.29157463	5.92E-13	6.46E-12
Taf11	-1.06388755	0.14771882	5.93E-13	6.46E-12
Mical2	1.455988396	0.20217897	5.96E-13	6.48E-12
Amz1	2.649584784	0.36793	5.96E-13	6.49E-12
Arhgdia	1.588855938	0.2206376	5.97E-13	6.49E-12
Rngtt	-1.837177167	0.25518281	6.05E-13	6.57E-12
Hars2	-1.349925399	0.18757945	6.18E-13	6.70E-12
AABR07066529.1	2.270193666	0.31549187	6.21E-13	6.74E-12
LOC100910875	1.619004952	0.22500082	6.22E-13	6.74E-12
Cmtr2	1.922384283	0.26725354	6.33E-13	6.86E-12
Sufu	1.890310793	0.26285443	6.41E-13	6.94E-12
Dopey2	1.123670466	0.15625582	6.42E-13	6.95E-12
Mrpl33	-1.978495702	0.27513045	6.43E-13	6.95E-12
Kcnab2	2.50179964	0.34794087	6.46E-13	6.99E-12
Parp2	-1.057436347	0.14707481	6.49E-13	7.01E-12
Tulp4	1.984875242	0.27613989	6.58E-13	7.10E-12
Fmnl3	2.03096285	0.28255417	6.58E-13	7.10E-12
Dirc2	1.156662052	0.16094543	6.64E-13	7.15E-12
Prkd3	-2.396601775	0.33359097	6.76E-13	7.27E-12
Fer1l5	-2.561012383	0.35647657	6.76E-13	7.27E-12
Hsd17b4	-1.789351708	0.24909035	6.79E-13	7.30E-12
Otud4	1.996163142	0.27787705	6.79E-13	7.30E-12
Akr1cl	-1.850701712	0.2576324	6.80E-13	7.30E-12
Timp3	2.305283891	0.32093673	6.82E-13	7.32E-12
Cyp3a18	-3.096298517	0.43109295	6.85E-13	7.35E-12
Wsb2	1.133278947	0.15779276	6.87E-13	7.36E-12
Clpx	-2.736127312	0.38120191	7.09E-13	7.60E-12
Snrpb2	-1.32333521	0.1843803	7.12E-13	7.62E-12
Tmem181	1.337357575	0.18634994	7.15E-13	7.64E-12
Tmsb10	3.101532097	0.43216985	7.14E-13	7.64E-12
Dars	-1.376368229	0.19185491	7.28E-13	7.78E-12
Pex3	-1.198642352	0.16715104	7.44E-13	7.95E-12
Carm1	1.08232366	0.15099083	7.60E-13	8.11E-12
Cgnl1	-1.527736215	0.21313459	7.61E-13	8.12E-12
Timm8b	-1.212343826	0.16914033	7.63E-13	8.13E-12
Uqcrh	-1.481885044	0.20690001	7.93E-13	8.44E-12
Sepsecs	-1.953211878	0.27270595	7.93E-13	8.44E-12
Ndufb7	-1.672803469	0.23360173	8.01E-13	8.52E-12
Luc7l2	-1.349428595	0.18852563	8.20E-13	8.71E-12
Ccdc126	-1.99723409	0.27905914	8.24E-13	8.75E-12
Chi3l1	3.850396914	0.53798425	8.24E-13	8.75E-12
Cbarp	3.323939718	0.46444771	8.26E-13	8.76E-12
Aamdc	-2.757184005	0.38533416	8.35E-13	8.85E-12
LOC103689964	-1.853757886	0.25910597	8.40E-13	8.90E-12
Tbxas1	2.129354146	0.29765206	8.44E-13	8.93E-12

Rab11fip1	1.632864899	0.22824965	8.44E-13	8.93E-12
Mfap2	3.629189439	0.50778546	8.86E-13	9.37E-12
Anapc4	-1.612107065	0.2255906	8.92E-13	9.43E-12
Slc36a1	1.338840495	0.18735826	8.94E-13	9.44E-12
Cfap126	-2.14326106	0.30000519	9.06E-13	9.56E-12
Mphosph8	-2.518866637	0.3525945	9.08E-13	9.57E-12
Man1c1	1.346008872	0.18842392	9.10E-13	9.59E-12
Rhbdd1	1.305519643	0.18276551	9.12E-13	9.61E-12
Zfp319	1.30160952	0.18225861	9.23E-13	9.71E-12
Timm21	-2.065448386	0.28923748	9.26E-13	9.75E-12
Fkbp3	-1.873519047	0.26251814	9.56E-13	1.00E-11
Entpd7	2.226480026	0.31213358	9.81E-13	1.03E-11
Fbxo46	1.011083569	0.14174807	9.82E-13	1.03E-11
Trappc9	1.05160405	0.14743253	9.84E-13	1.03E-11
Fzr1	1.534224921	0.21522492	1.01E-12	1.06E-11
Srf	1.382987258	0.19403331	1.02E-12	1.07E-11
Uimc1	-1.13991924	0.15995169	1.03E-12	1.08E-11
Ap4s1	-1.317278725	0.18486274	1.04E-12	1.08E-11
Gpr176	4.270198213	0.59927627	1.04E-12	1.08E-11
LOC100911575	1.588662447	0.22300197	1.05E-12	1.10E-11
Eln	3.350443702	0.47041868	1.06E-12	1.11E-11
Tefm	-1.65871173	0.23289244	1.06E-12	1.11E-11
Rcl1	-1.376969428	0.19339755	1.08E-12	1.13E-11
Oard1	-2.047323825	0.28759392	1.09E-12	1.13E-11
Opa1	-1.506413715	0.21163226	1.09E-12	1.14E-11
Il15ra	-2.330052881	0.3273601	1.10E-12	1.14E-11
Junb	2.299322565	0.32306009	1.10E-12	1.14E-11
Vamp1	-2.428906908	0.34133408	1.11E-12	1.15E-11
Oasl	3.562443211	0.50063751	1.11E-12	1.15E-11
Prnp	3.764160801	0.52909837	1.12E-12	1.17E-11
LOC108348078	-2.275526928	0.31994207	1.14E-12	1.18E-11
Sult1a1	-2.980609112	0.41911768	1.15E-12	1.19E-11
Shc4	5.501317123	0.77368356	1.16E-12	1.20E-11
Tp53	1.685625651	0.2371212	1.17E-12	1.21E-11
Gli3	3.208776747	0.45139598	1.17E-12	1.21E-11
Mettl18	-1.690514301	0.23782323	1.17E-12	1.21E-11
Vav1	1.971897335	0.27749241	1.19E-12	1.23E-11
Papola	-1.094511398	0.15402835	1.20E-12	1.23E-11
Etnppl	-3.81556874	0.53696901	1.20E-12	1.23E-11
Adam23	1.907810214	0.26849595	1.20E-12	1.23E-11
Mab21l3	-2.707889232	0.38111601	1.20E-12	1.24E-11
Crcp	-1.941851174	0.27346921	1.24E-12	1.28E-11
RGD1309808	-2.407934946	0.33919085	1.26E-12	1.29E-11
Enoph1	1.273353487	0.17939551	1.27E-12	1.30E-11
Coro1a	2.500755322	0.35234738	1.27E-12	1.31E-11
Pdss2	-1.15037781	0.16209169	1.27E-12	1.31E-11

Kmt5c	-1.296917448	0.18279712	1.29E-12	1.33E-11
RGD1562218	-1.011224374	0.14253894	1.30E-12	1.33E-11
Wls	2.020796215	0.28489264	1.31E-12	1.34E-11
Tmem65	2.259335628	0.31853191	1.31E-12	1.34E-11
Snapin	-1.318001546	0.18581689	1.31E-12	1.34E-11
Sult1c2a	-2.962833664	0.41802382	1.36E-12	1.39E-11
Zfp933	-3.122254036	0.44063843	1.38E-12	1.41E-11
Arhgap31	1.850775975	0.26120906	1.39E-12	1.42E-11
Gpr183	3.467653179	0.489486	1.40E-12	1.43E-11
Gramd1c	-2.587964185	0.36534441	1.40E-12	1.43E-11
Snupn	-1.735962651	0.24509214	1.41E-12	1.44E-11
Tmem25	-2.304008417	0.32529736	1.41E-12	1.44E-11
Slc20a1	2.443811211	0.34506668	1.42E-12	1.44E-11
Ebi3	2.917837796	0.41200594	1.42E-12	1.44E-11
Bean1	4.309912489	0.60860839	1.43E-12	1.45E-11
Drg1	-1.02191521	0.14430724	1.43E-12	1.45E-11
Cebpd	2.696201335	0.3808448	1.45E-12	1.47E-11
Mterf3	-1.345842776	0.19018693	1.48E-12	1.50E-11
Tram2	2.265624082	0.32019443	1.49E-12	1.51E-11
Has1	10.71081404	1.51449182	1.52E-12	1.54E-11
Tmem201	1.415728027	0.20022823	1.54E-12	1.56E-11
Casc3	1.069859731	0.15139458	1.59E-12	1.60E-11
Cyp51	-2.347027718	0.33213337	1.59E-12	1.61E-11
Thoc5	-1.131467717	0.16016155	1.61E-12	1.63E-11
Cfi	-2.50496794	0.35470448	1.64E-12	1.65E-11
Dpcd	-1.525433886	0.21601927	1.65E-12	1.66E-11
Grhl1	4.333903808	0.61388626	1.67E-12	1.68E-11
Gem	4.957720962	0.70235403	1.68E-12	1.69E-11
Rin1	5.11863786	0.72519581	1.69E-12	1.70E-11
LOC679823	1.613161615	0.22861374	1.71E-12	1.72E-11
Preli2	-1.989407507	0.28194483	1.71E-12	1.72E-11
Ugp2	-2.619116682	0.37123993	1.73E-12	1.73E-11
Ccl9	-1.733116034	0.24570193	1.74E-12	1.75E-11
Samd11	-2.137787736	0.30310434	1.75E-12	1.76E-11
Rn50_5_0814.4	-6.100816913	0.86508228	1.76E-12	1.76E-11
Adsl	-1.301893358	0.18468942	1.80E-12	1.80E-11
Rn50_X_0677.1	8.508245427	1.20792506	1.87E-12	1.87E-11
Mettl25	-1.337861945	0.18999684	1.90E-12	1.90E-11
Gcn1l1	1.151999706	0.16364816	1.93E-12	1.93E-11
Ppp6r3	-1.391862841	0.1977482	1.94E-12	1.94E-11
Pipox	-2.78061554	0.39548632	2.05E-12	2.05E-11
Tns1	1.647993011	0.23441323	2.06E-12	2.06E-11
Sacm1l	-1.366720638	0.19445001	2.09E-12	2.08E-11
Rnf186	3.056377465	0.43490652	2.10E-12	2.09E-11
Prkaca	-1.282451806	0.18251753	2.12E-12	2.11E-11
Saa4	-2.621997856	0.3733066	2.16E-12	2.15E-11

Rab29	-1.568421703	0.22334014	2.18E-12	2.17E-11
Snrnp25	-1.3401686	0.190856	2.19E-12	2.17E-11
B3gnt9	2.929449942	0.41733024	2.23E-12	2.21E-11
Ifrd2	1.645391589	0.23441007	2.23E-12	2.21E-11
Casp2	1.715357554	0.24437936	2.23E-12	2.21E-11
Nacc1	1.304745557	0.18592085	2.25E-12	2.23E-11
AC114460.1	1.592114096	0.22691911	2.28E-12	2.26E-11
RGD1562758	6.062960573	0.86418698	2.29E-12	2.26E-11
Ngly1	-1.758838329	0.25084008	2.35E-12	2.33E-11
Stk16	-1.712706128	0.24426054	2.35E-12	2.33E-11
Coq9	-1.353406681	0.19305402	2.37E-12	2.35E-11
Atp1a3	6.419761432	0.91604508	2.42E-12	2.39E-11
Cygb	2.411691891	0.34415474	2.42E-12	2.39E-11
Fan1	-1.536083952	0.21927566	2.47E-12	2.43E-11
Hddc3	-1.50355487	0.21465296	2.48E-12	2.44E-11
Fam129b	2.23164726	0.31859858	2.48E-12	2.44E-11
Nadk2	-2.063089768	0.29454109	2.48E-12	2.44E-11
Fabp5	2.462911567	0.3516635	2.49E-12	2.45E-11
Bmp2	1.92028261	0.27437449	2.58E-12	2.54E-11
Prpf38b	-1.282897173	0.18333211	2.60E-12	2.56E-11
Slc25a20	-1.365480481	0.19518247	2.64E-12	2.59E-11
Uhmk1	1.654901206	0.23659368	2.66E-12	2.61E-11
Hmox1	1.800609106	0.25742641	2.66E-12	2.61E-11
Cnppd1	1.438227599	0.20565536	2.68E-12	2.63E-11
Slc37a2	2.624579431	0.37535841	2.71E-12	2.65E-11
Rn60_X_0641.1	1.215021889	0.17379014	2.72E-12	2.67E-11
Mvb12b	1.770059922	0.25324284	2.76E-12	2.70E-11
Ssc5d	3.461421242	0.49525436	2.77E-12	2.70E-11
Nubpl	-1.597124655	0.22867108	2.86E-12	2.80E-11
Xkr9	-1.792181127	0.2566532	2.89E-12	2.82E-11
Mest	2.934006706	0.42039488	2.97E-12	2.90E-11
Hivep2	2.814646075	0.40338998	3.01E-12	2.93E-11
LOC100910577	-3.505318152	0.50238971	3.01E-12	2.93E-11
Tmem26	3.601631878	0.51621381	3.02E-12	2.94E-11
Midn	1.413011374	0.20252646	3.02E-12	2.94E-11
Nt5dc1	-1.384559865	0.19854481	3.09E-12	3.01E-11
Pradc1	-1.790502437	0.25690707	3.18E-12	3.09E-11
Eepd1	-1.351068608	0.19398046	3.28E-12	3.19E-11
Per1	3.162294376	0.4540623	3.30E-12	3.20E-11
Apaf1	2.084592885	0.29939585	3.34E-12	3.24E-11
Sirpa	1.517314999	0.21795206	3.36E-12	3.26E-11
Rilp	-2.66202526	0.38244392	3.39E-12	3.28E-11
Sphk1	4.417779041	0.63468221	3.39E-12	3.28E-11
Tbc1d16	2.682419208	0.3853868	3.39E-12	3.28E-11
Ehd4	2.341170982	0.33637304	3.40E-12	3.29E-11
Ttc39c	-1.85604641	0.26669285	3.42E-12	3.30E-11

Mapk7	1.584731441	0.22773619	3.44E-12	3.32E-11
C9	-2.283197947	0.32811928	3.44E-12	3.32E-11
Tymp	-2.864200043	0.41166527	3.46E-12	3.34E-11
Pabpc1	1.418591573	0.2039111	3.48E-12	3.35E-11
Faap20	2.112953122	0.30372674	3.48E-12	3.35E-11
LOC100365062	-1.523928986	0.21917149	3.57E-12	3.44E-11
Tbce	-1.680396981	0.24168954	3.58E-12	3.44E-11
Manba	1.983786711	0.28536938	3.61E-12	3.47E-11
Dmwd	1.367623803	0.19673656	3.61E-12	3.47E-11
Amer1	2.140249097	0.3079035	3.63E-12	3.48E-11
Rasal2	2.093655869	0.301211	3.63E-12	3.48E-11
Prickle1	2.305949195	0.33175016	3.63E-12	3.48E-11
Selplg	1.906739564	0.2743647	3.66E-12	3.51E-11
Tcea1	-1.220386533	0.17563779	3.70E-12	3.54E-11
Rbm15b	1.820934885	0.26208718	3.71E-12	3.55E-11
Cox6a2	7.84831933	1.12974909	3.73E-12	3.57E-11
Myof	2.902641936	0.41788059	3.76E-12	3.59E-11
Eef2	1.059852839	0.15259274	3.77E-12	3.60E-11
Hdac7	1.701143596	0.24497965	3.81E-12	3.64E-11
Wnt4	2.717844007	0.39145121	3.84E-12	3.66E-11
Phc2	1.32521532	0.19089314	3.86E-12	3.68E-11
Yod1	2.182768186	0.31452366	3.92E-12	3.74E-11
Lpar6	-2.013834411	0.2901935	3.93E-12	3.74E-11
Bpnt1	-1.19101482	0.17167312	3.99E-12	3.79E-11
Cd68	1.529250013	0.22049743	4.05E-12	3.85E-11
Chst12	2.313868499	0.33371141	4.10E-12	3.89E-11
Crtc3	1.47698862	0.21309389	4.17E-12	3.96E-11
Hdac2	-1.538516036	0.22203273	4.23E-12	4.01E-11
Sh2b2	2.673472841	0.38586229	4.25E-12	4.03E-11
Ssh1	1.131515255	0.16338007	4.34E-12	4.11E-11
Ppp1r14b	1.905270782	0.27512236	4.35E-12	4.12E-11
Ftsj1	-1.006598418	0.14547675	4.54E-12	4.29E-11
LOC100911068	1.973377624	0.28526624	4.59E-12	4.34E-11
Mbd2	1.006548186	0.14553681	4.64E-12	4.39E-11
Mmp12	6.066125484	0.87717212	4.66E-12	4.40E-11
Was	1.905665014	0.27557321	4.67E-12	4.41E-11
Aadac	-3.155025598	0.45640165	4.75E-12	4.48E-11
Col8a1	3.352310318	0.48509986	4.83E-12	4.55E-11
Lcn12	-2.624302255	0.37978781	4.85E-12	4.57E-11
Pkn1	1.095612598	0.1585839	4.89E-12	4.61E-11
Pfdn5	-1.11775976	0.1617963	4.90E-12	4.61E-11
Sdf2l1	1.779463483	0.25758213	4.90E-12	4.61E-11
Ints5	1.146124011	0.1660207	5.07E-12	4.77E-11
Ccng1	2.605526146	0.37743639	5.08E-12	4.77E-11
sept09	1.205222691	0.17459682	5.10E-12	4.78E-11
Hist1h2bcl1	-1.149870365	0.16659287	5.12E-12	4.80E-11

Irf2bpl	1.143071965	0.16563255	5.15E-12	4.83E-11
Stac2	7.425052864	1.0759335	5.16E-12	4.84E-11
Gpx2	5.27753271	0.76476126	5.17E-12	4.84E-11
Serpind1	-2.382779178	0.3453866	5.24E-12	4.91E-11
Pofut1	1.406379527	0.2038629	5.25E-12	4.91E-11
Dot1l	3.052823508	0.44261995	5.30E-12	4.96E-11
Spryd3	1.183365815	0.17159146	5.33E-12	4.98E-11
Cyp2c13	-3.081116405	0.44677337	5.33E-12	4.98E-11
Mpc1	-2.138327465	0.31015887	5.41E-12	5.05E-11
Ccdc94	-1.657169716	0.24036615	5.41E-12	5.05E-11
Dnajc24	-2.070050039	0.30036393	5.51E-12	5.13E-11
Asgr2	-2.109665488	0.30613373	5.53E-12	5.14E-11
Olfml2b	2.747403503	0.39892499	5.70E-12	5.30E-11
Atf7	1.885842802	0.27386094	5.73E-12	5.33E-11
Myo5a	2.650474987	0.38517273	5.93E-12	5.51E-11
Exosc8	-1.610727872	0.23409791	5.96E-12	5.53E-11
Dffb	-1.48038889	0.21517713	5.99E-12	5.56E-11
Zfp382	-3.064641672	0.44546077	6.00E-12	5.56E-11
Adgre5	1.293645818	0.18806931	6.05E-12	5.60E-11
Mocs3	1.150396827	0.16726643	6.09E-12	5.63E-11
Phlda1	3.988939788	0.58025517	6.22E-12	5.76E-11
Smox	2.740655907	0.39870471	6.25E-12	5.78E-11
Gstz1	-2.868573104	0.41733305	6.26E-12	5.79E-11
LOC501110	-2.716163355	0.39521385	6.30E-12	5.82E-11
Vkorc1l1	4.474901703	0.65118533	6.33E-12	5.85E-11
Pard3b	1.919251235	0.27932862	6.38E-12	5.88E-11
Egr1	3.530272214	0.51382323	6.39E-12	5.90E-11
Xrcc5	-1.167329068	0.1699537	6.49E-12	5.98E-11
Daam2	2.399033049	0.34933159	6.53E-12	6.02E-11
Cadps2	-1.490412513	0.21702972	6.54E-12	6.02E-11
Pcgf5	1.562326492	0.22751284	6.56E-12	6.03E-11
Tmem164	1.55642382	0.22666821	6.58E-12	6.05E-11
LOC298795	4.914875597	0.71584314	6.61E-12	6.07E-11
Papln	1.8576429	0.27056144	6.61E-12	6.07E-11
Zfp110	-1.772980298	0.2582981	6.69E-12	6.14E-11
Tmco6	1.122579617	0.16355895	6.72E-12	6.17E-11
NEWGENE_1582994	-1.583566465	0.23088262	6.95E-12	6.37E-11
Apon	-3.552709939	0.51802208	6.97E-12	6.39E-11
Ptbp3	2.335990122	0.34075553	7.12E-12	6.52E-11
Ier5l	2.980069064	0.43484006	7.22E-12	6.61E-11
Cog5	-1.345913896	0.1963946	7.23E-12	6.61E-11
RGD1306474	-4.792070772	0.69934497	7.27E-12	6.64E-11
Rhoc	2.088234833	0.30477827	7.30E-12	6.67E-11
Abcg3l1	-2.055350673	0.30005327	7.39E-12	6.74E-11
Slamf9	2.974125337	0.43419852	7.40E-12	6.75E-11
Rmdn3	-1.115344315	0.16288634	7.52E-12	6.85E-11

Apoe	-2.681466388	0.39160316	7.52E-12	6.85E-11
RGD1359290	3.012312179	0.43993542	7.53E-12	6.86E-11
Kcnn4	3.271439489	0.47782846	7.57E-12	6.89E-11
Aebp1	3.098706738	0.45265083	7.61E-12	6.92E-11
Il34	1.66660741	0.24345714	7.62E-12	6.92E-11
Cxcr4	1.999731903	0.29212595	7.62E-12	6.92E-11
Phldb1	2.35651337	0.34429265	7.67E-12	6.97E-11
Klf3	1.591513123	0.2326198	7.83E-12	7.10E-11
Cpne2	2.028179789	0.2964839	7.88E-12	7.14E-11
Chst2	2.702303687	0.39508451	7.93E-12	7.18E-11
Hsd17b13	-2.051972724	0.30014229	8.11E-12	7.33E-11
Nfs1	-1.441340369	0.21086945	8.19E-12	7.40E-11
Mia2	-1.653389795	0.24198516	8.34E-12	7.53E-11
Selenot	-1.204081119	0.17622686	8.34E-12	7.53E-11
Map4k4	2.298554016	0.33664426	8.62E-12	7.78E-11
Nxn	1.268478458	0.18581263	8.69E-12	7.84E-11
Ier5	1.749304419	0.25638942	8.93E-12	8.05E-11
Dus1l	-1.09810872	0.16096327	8.97E-12	8.09E-11
Hdac8	-1.114194834	0.16334476	9.03E-12	8.14E-11
Scamp4	1.598975951	0.23453089	9.25E-12	8.32E-11
Tmem98	1.157944987	0.16986563	9.31E-12	8.37E-11
Nln	-1.209393838	0.1776043	9.79E-12	8.80E-11
Amy1a	-3.078981426	0.45218763	9.82E-12	8.82E-11
Ube2g2	1.327824504	0.19507355	9.98E-12	8.96E-11
Cdk11b	-1.093331869	0.16063445	1.00E-11	8.98E-11
Cspp1	-1.708210832	0.25104667	1.02E-11	9.10E-11
Selenom	2.528275284	0.37166142	1.03E-11	9.21E-11
Adipoq	-2.282330149	0.33570608	1.06E-11	9.46E-11
Glb1l2	3.138349519	0.46163647	1.06E-11	9.48E-11
Tnfaip3	2.112544946	0.31078081	1.06E-11	9.52E-11
Apip	-1.581164064	0.23263869	1.07E-11	9.58E-11
NEWGENE_1308196	-1.36989792	0.20155829	1.07E-11	9.58E-11
Ace	3.074547377	0.45237368	1.07E-11	9.58E-11
Tbx20	3.03894691	0.4472791	1.09E-11	9.72E-11
Wdr83	-1.424839558	0.20979673	1.11E-11	9.90E-11
Nynrin	2.131473766	0.31386061	1.11E-11	9.92E-11
Hal	-2.523422569	0.37158993	1.11E-11	9.93E-11
AABR07026997.1	5.643394441	0.83119319	1.13E-11	1.00E-10
Wnt5a	3.060976919	0.45103833	1.15E-11	1.02E-10
Clptm1	1.143701707	0.16852778	1.15E-11	1.02E-10
Msantd3	4.520671117	0.66623611	1.16E-11	1.03E-10
Sprr1a	10.87135835	1.60269277	1.18E-11	1.05E-10
Mapkapk3	1.851160024	0.27293619	1.18E-11	1.05E-10
Acot13	-1.93422338	0.28534602	1.21E-11	1.08E-10
Fam214b	1.017223943	0.15010113	1.23E-11	1.09E-10
Cdipt	1.167700568	0.17230887	1.23E-11	1.09E-10

Ufm1	-1.066369962	0.15736182	1.23E-11	1.09E-10
Eif2b4	-1.041476904	0.15381408	1.28E-11	1.13E-10
Optn	-1.624746713	0.23995568	1.28E-11	1.13E-10
Klra2	-2.726123314	0.40263186	1.28E-11	1.13E-10
Ubqln2	1.013824362	0.14973751	1.28E-11	1.13E-10
Psme1	-1.220307913	0.1802681	1.29E-11	1.14E-10
Akr1c3	-2.753102935	0.40671856	1.30E-11	1.14E-10
Gm29106	-3.818562405	0.56415755	1.30E-11	1.15E-10
Snx14	-2.144330198	0.31685041	1.31E-11	1.15E-10
Kbtbd4	-1.408024798	0.20812891	1.33E-11	1.17E-10
Ppfibp2	-2.212249639	0.32700858	1.33E-11	1.17E-10
Ndufs1	-1.56068417	0.23071049	1.34E-11	1.18E-10
Slc35e4	3.403858057	0.50326495	1.35E-11	1.19E-10
Plcl2	-1.404943657	0.2077383	1.35E-11	1.19E-10
Fstl1	1.520086264	0.22477484	1.35E-11	1.19E-10
Otc	-3.170735038	0.46931888	1.42E-11	1.25E-10
RGD1359508	-2.814278825	0.41657253	1.42E-11	1.25E-10
Itga4	2.856653314	0.4230199	1.45E-11	1.27E-10
Ccdc17	-1.543035076	0.22857157	1.47E-11	1.29E-10
Sult1b1	-1.760754384	0.26084533	1.48E-11	1.29E-10
Slc13a4	-3.532725369	0.52347706	1.49E-11	1.31E-10
Myh9l1	1.922863816	0.28494426	1.50E-11	1.31E-10
LOC100361457	5.004588663	0.74203521	1.54E-11	1.34E-10
Polr1b	1.114844408	0.16532784	1.55E-11	1.35E-10
Dusp12	-2.057992863	0.30534717	1.59E-11	1.39E-10
Atpaf1	-1.17650575	0.17461334	1.61E-11	1.40E-10
Tax1bp3	2.329710766	0.34600704	1.66E-11	1.45E-10
Dram1	1.86569052	0.27710874	1.67E-11	1.45E-10
Slc45a4	1.166773911	0.17330582	1.67E-11	1.45E-10
Mettl6	-1.490779331	0.22144003	1.67E-11	1.46E-10
Ydjc	3.897489005	0.57907878	1.69E-11	1.47E-10
Dbn1	2.469253972	0.3670114	1.72E-11	1.50E-10
Eif4g1	1.540377291	0.22900836	1.74E-11	1.51E-10
Cyth2	1.433073917	0.21308505	1.75E-11	1.52E-10
Lrp10	1.463633499	0.21765982	1.76E-11	1.53E-10
lfrd1	2.657604179	0.3953283	1.79E-11	1.55E-10
LOC100360413	-1.270375794	0.18899292	1.79E-11	1.56E-10
Ccdc130	-1.485893663	0.22109656	1.81E-11	1.57E-10
Dpp7	1.413706799	0.21042334	1.84E-11	1.59E-10
Gmip	1.089737276	0.16221504	1.84E-11	1.60E-10
Hoga1	-2.129053231	0.31699952	1.86E-11	1.61E-10
Pdp2	-1.665183136	0.2479903	1.88E-11	1.63E-10
Mipep	-1.382505302	0.20591137	1.89E-11	1.64E-10
Zfp157	-2.586664959	0.38527665	1.90E-11	1.64E-10
Fbxo32	2.863451986	0.42657927	1.91E-11	1.65E-10
Cmtm3	1.574941711	0.23464326	1.92E-11	1.66E-10

Zfp692	-2.09943042	0.31293662	1.96E-11	1.69E-10
Atp13a1	1.047625344	0.15616789	1.97E-11	1.70E-10
Wdr54	3.058436804	0.45606473	2.00E-11	1.72E-10
Sfrp1	3.756638295	0.56038176	2.03E-11	1.75E-10
Echdc1	-2.686707682	0.40083088	2.04E-11	1.76E-10
Mtfp1	-1.67706114	0.2502208	2.05E-11	1.76E-10
Lama2	1.612519876	0.24067864	2.09E-11	1.79E-10
C5ar1	2.298653455	0.34314084	2.10E-11	1.80E-10
Acad11	-1.963040549	0.29311992	2.13E-11	1.83E-10
Actb	1.359152802	0.20298607	2.15E-11	1.84E-10
Flnc	5.398398391	0.80627744	2.15E-11	1.84E-10
Tada3	-1.120291594	0.16739092	2.19E-11	1.88E-10
Tdo2	-2.76808106	0.41375904	2.23E-11	1.91E-10
Ghr	-2.0442975	0.30567003	2.26E-11	1.94E-10
Adamts4	3.542594742	0.52990672	2.30E-11	1.97E-10
Meiob	-4.517194291	0.67568207	2.30E-11	1.97E-10
RGD1559896	1.106970137	0.1655917	2.31E-11	1.97E-10
Paqr4	2.063756029	0.30873661	2.32E-11	1.98E-10
Prr13	1.580897552	0.23650133	2.32E-11	1.98E-10
Ctsh	-2.145503504	0.32097976	2.32E-11	1.98E-10
Sord	-1.995898984	0.29879473	2.39E-11	2.04E-10
RGD1304587	-1.213100636	0.18161388	2.40E-11	2.04E-10
Spsb4	3.840625494	0.57507881	2.42E-11	2.06E-10
Rcbtb2	-1.893515146	0.28359197	2.44E-11	2.08E-10
Fyn	1.93944111	0.29047425	2.44E-11	2.08E-10
Adgrv1	-2.857210444	0.42802382	2.47E-11	2.10E-10
B4galt2	2.483900511	0.37218421	2.49E-11	2.12E-10
Stxbp1	1.947602461	0.29184588	2.50E-11	2.12E-10
Ndufv2	-1.453332786	0.21787591	2.55E-11	2.16E-10
Igf1r	2.97777104	0.4465273	2.58E-11	2.19E-10
Aak1	1.681031884	0.25215586	2.62E-11	2.22E-10
Lrrc8a	1.319992546	0.19799928	2.62E-11	2.22E-10
Tinf2	-1.472024364	0.22081858	2.62E-11	2.22E-10
Vps18	1.027143795	0.15411738	2.65E-11	2.24E-10
Zbtb7a	1.35106313	0.20272151	2.65E-11	2.24E-10
Siglec1	2.367333759	0.35535497	2.70E-11	2.28E-10
A2m	5.900029554	0.88582863	2.73E-11	2.30E-10
Metap2	-1.296041787	0.19459529	2.73E-11	2.31E-10
Doc2a	7.613935624	1.14338852	2.76E-11	2.32E-10
Sirt3	-2.146920186	0.32267591	2.86E-11	2.41E-10
Mup4	-6.145664345	0.92376793	2.88E-11	2.42E-10
Map4k1	1.737283114	0.26127992	2.95E-11	2.48E-10
Slc27a2	-1.607185894	0.24183525	3.02E-11	2.54E-10
Gppbp1	-1.831468676	0.27558569	3.02E-11	2.54E-10
Gda	1.737649495	0.26147512	3.02E-11	2.54E-10
LOC100361907	-2.689451162	0.40476732	3.04E-11	2.56E-10

Wdsub1	-2.033954193	0.3061866	3.08E-11	2.58E-10
Esam	1.41080264	0.21244815	3.12E-11	2.62E-10
Chd3	-1.19653547	0.18020039	3.14E-11	2.63E-10
Slc39a7	1.336293718	0.20126837	3.15E-11	2.64E-10
Hnf4a	-1.615744262	0.24336945	3.16E-11	2.64E-10
Ilf2	-1.040017313	0.15673057	3.23E-11	2.70E-10
LOC100910979	-3.299047401	0.49718066	3.23E-11	2.71E-10
Fjx1	5.580254408	0.84154007	3.33E-11	2.79E-10
Lrfn4	2.474506629	0.37320195	3.35E-11	2.80E-10
Sra1	-1.322293961	0.19943801	3.35E-11	2.80E-10
Ankrd13b	2.360569383	0.35604758	3.36E-11	2.80E-10
Rarg	1.621623242	0.24463108	3.38E-11	2.82E-10
AABR07003049.1	2.508139806	0.37857054	3.47E-11	2.89E-10
Ndufa10	-1.620863637	0.24466675	3.48E-11	2.90E-10
Zfp879	-3.085920081	0.46586394	3.49E-11	2.91E-10
Rps25	-1.450891	0.21907061	3.52E-11	2.93E-10
Mrpl22	-1.024627634	0.1547463	3.56E-11	2.96E-10
Dnajc9	-1.81730231	0.27453048	3.60E-11	2.99E-10
Mapkapk2	1.427428156	0.2156749	3.63E-11	3.02E-10
Emilin1	1.447011229	0.21863578	3.63E-11	3.02E-10
Orc2	-1.436664008	0.21713163	3.68E-11	3.05E-10
Bbs2	-1.289626919	0.19490978	3.68E-11	3.05E-10
Metap1	-1.000909571	0.15127985	3.68E-11	3.05E-10
Clk3	-1.000667158	0.15126707	3.71E-11	3.07E-10
Itgad	2.939195007	0.44436494	3.73E-11	3.09E-10
Gcsh	-1.549444171	0.23425923	3.73E-11	3.09E-10
Pik3r5	2.111696348	0.31936246	3.79E-11	3.13E-10
Elovl7	6.961010343	1.05313538	3.85E-11	3.18E-10
Disp1	2.731621704	0.41334471	3.88E-11	3.21E-10
Map1a	3.756478114	0.56847834	3.90E-11	3.22E-10
Uckl1	-1.024943589	0.15514638	3.94E-11	3.25E-10
Cd28	4.868934683	0.73716254	3.98E-11	3.28E-10
RGD1307603	-3.338038539	0.50551543	4.02E-11	3.31E-10
Arl5b	2.566430278	0.38868288	4.03E-11	3.32E-10
Pls3	-1.582462241	0.23966091	4.03E-11	3.32E-10
RGD1561277	-2.327757872	0.3525296	4.03E-11	3.32E-10
Hpd	-1.506901942	0.22837578	4.16E-11	3.42E-10
RGD1306148	-1.31820752	0.19978032	4.16E-11	3.42E-10
Asb16	-3.182849266	0.48244453	4.19E-11	3.44E-10
Acot1	5.822980007	0.88273657	4.21E-11	3.46E-10
Csrnp1	2.144756762	0.32527058	4.29E-11	3.52E-10
L2hgdh	-1.673495946	0.25392284	4.38E-11	3.59E-10
RGD1562378	-2.073842233	0.3146889	4.39E-11	3.60E-10
Ttpa	-2.740031473	0.41579217	4.40E-11	3.60E-10
Lysmd4	-1.686994014	0.25601673	4.42E-11	3.61E-10
Vill	-2.040327669	0.30974646	4.49E-11	3.67E-10

Glmn	-2.427545083	0.3686275	4.54E-11	3.71E-10
Smurf1	1.120103345	0.17014767	4.61E-11	3.76E-10
Vps51	1.236628278	0.18795124	4.72E-11	3.86E-10
Mmp2	1.74759911	0.26564517	4.75E-11	3.87E-10
Idh1	-1.94151567	0.29520475	4.81E-11	3.92E-10
Rnf122	2.645996084	0.4025549	4.93E-11	4.02E-10
Ids	2.111655345	0.32128099	4.94E-11	4.03E-10
LOC683897	-1.154385025	0.17569225	5.01E-11	4.08E-10
Rasd1	-3.004242898	0.45734457	5.07E-11	4.13E-10
Phf2	1.358538656	0.20682541	5.08E-11	4.13E-10
Chac1	3.003010965	0.45723963	5.11E-11	4.16E-10
LOC360919	-2.817487289	0.42905696	5.14E-11	4.18E-10
Gpsm2	-1.80664896	0.27519257	5.20E-11	4.23E-10
Dusp18	1.912950712	0.29140567	5.22E-11	4.24E-10
Plcg2	2.157245597	0.32881068	5.35E-11	4.34E-10
Peo1	-1.26624506	0.19303249	5.39E-11	4.37E-10
St3gal6	-1.679982426	0.25613572	5.42E-11	4.39E-10
Rhbdd2	1.859716008	0.2835487	5.43E-11	4.40E-10
Adat1	-1.515052395	0.23107045	5.50E-11	4.46E-10
Slc35a2	1.210447949	0.18470853	5.63E-11	4.56E-10
Micu2	-1.358700796	0.20737933	5.69E-11	4.60E-10
Pspc1	-1.757764171	0.26838267	5.77E-11	4.67E-10
Zbtb10	2.482921725	0.37927201	5.89E-11	4.76E-10
Fut4	1.935481257	0.29566735	5.90E-11	4.77E-10
Prdm1	2.444821917	0.37352103	5.94E-11	4.79E-10
Adamts8	4.724675041	0.72200028	5.99E-11	4.83E-10
Tmem151a	3.2260309	0.49298102	5.99E-11	4.83E-10
Gc	-2.168458234	0.33144913	6.06E-11	4.88E-10
Tle2	-1.596085752	0.24401655	6.12E-11	4.92E-10
Anapc16	-1.151649441	0.17609354	6.15E-11	4.95E-10
AABR07007905.2	-2.521881254	0.38560682	6.15E-11	4.95E-10
Cystm1	2.037591237	0.31157028	6.16E-11	4.95E-10
Dcaf7	1.185054714	0.18123909	6.21E-11	4.99E-10
Akr7a3	2.710406101	0.41460697	6.26E-11	5.03E-10
Sult1c3	-4.494944497	0.68760265	6.27E-11	5.03E-10
Elp3	-1.046066494	0.16006942	6.36E-11	5.10E-10
Uqcc3	-1.278219165	0.19560482	6.37E-11	5.11E-10
Plk3	2.486648995	0.38057009	6.40E-11	5.13E-10
Auh	-1.339298441	0.20498964	6.43E-11	5.15E-10
Tlr6	1.56050717	0.23891201	6.50E-11	5.21E-10
LOC691807	-1.180678824	0.18081204	6.58E-11	5.27E-10
Wasf1	1.15564207	0.17698379	6.59E-11	5.27E-10
Adrb2	2.000336553	0.30649737	6.74E-11	5.39E-10
Samd4a	1.534887235	0.2352271	6.79E-11	5.43E-10
Spryd4	-1.034734156	0.15860485	6.85E-11	5.47E-10
Slco1a6	-3.364554409	0.51575161	6.86E-11	5.48E-10

Pcdh18	1.686708091	0.2585674	6.88E-11	5.49E-10
Slc31a1	-1.294471206	0.19844556	6.89E-11	5.49E-10
Wdr55	-1.207608599	0.1851835	6.98E-11	5.56E-10
Creb5	7.667647718	1.17596844	7.02E-11	5.59E-10
Atg2a	1.04003886	0.15954211	7.08E-11	5.64E-10
RGD1562339	3.833708219	0.58814203	7.11E-11	5.66E-10
Clcn5	2.628046065	0.40323526	7.15E-11	5.69E-10
RGD1311899	-1.348565705	0.20702895	7.32E-11	5.82E-10
Gpn3	-1.526864431	0.23440227	7.32E-11	5.82E-10
Dvl3	1.308828546	0.20098775	7.42E-11	5.89E-10
Setd7	3.4064777	0.52314365	7.44E-11	5.90E-10
Zfp18	-1.183108129	0.18171467	7.48E-11	5.93E-10
Adhfe1	-2.949392322	0.45302618	7.49E-11	5.94E-10
Ralgds	2.100068138	0.32280877	7.74E-11	6.13E-10
Gpalpp1	-1.158259629	0.17808829	7.83E-11	6.20E-10
Nr3c1	-1.788154298	0.27496271	7.86E-11	6.22E-10
Zfp426	-2.433232902	0.37418235	7.88E-11	6.24E-10
Abcd4	-1.632530732	0.25109946	7.95E-11	6.29E-10
Armcx2	1.930413403	0.29697984	8.02E-11	6.34E-10
Mllt3	-1.974078088	0.30375916	8.09E-11	6.40E-10
Slc48a1	1.204514051	0.18534447	8.10E-11	6.40E-10
Usp20	1.78452872	0.2746604	8.18E-11	6.46E-10
Cyp39a1	-2.474562481	0.38092995	8.24E-11	6.50E-10
AABR07021096.1	-2.589988125	0.39882218	8.35E-11	6.59E-10
Pcbp2	1.403164755	0.21608969	8.39E-11	6.61E-10
Abhd4	1.057556547	0.16289355	8.45E-11	6.66E-10
Nrep	-3.06374656	0.47200984	8.54E-11	6.72E-10
Phykpl	-1.926006478	0.2967789	8.60E-11	6.77E-10
Oas3	3.3466653	0.51568928	8.60E-11	6.77E-10
Arhgap1	1.130891254	0.174266	8.61E-11	6.77E-10
Naglu	1.22490544	0.1887817	8.67E-11	6.82E-10
Pet100	-1.534753976	0.23654211	8.68E-11	6.82E-10
Afm	-2.641926886	0.40725502	8.75E-11	6.87E-10
Cdca7	3.453344912	0.53241444	8.80E-11	6.91E-10
Pkm	2.280834614	0.35171865	8.88E-11	6.97E-10
Cybrd1	1.45021869	0.22367772	8.96E-11	7.03E-10
Slc52a2	1.406221122	0.21692209	9.01E-11	7.06E-10
LOC108348083	3.697086745	0.57042672	9.10E-11	7.12E-10
Arhgap10	2.599199339	0.40104056	9.10E-11	7.12E-10
Hbegf	3.167410191	0.48890213	9.26E-11	7.24E-10
Mfge8	3.19664743	0.49346876	9.30E-11	7.27E-10
Laptm5	1.427509768	0.22051887	9.58E-11	7.49E-10
LOC100911337	-1.868124304	0.28859169	9.59E-11	7.49E-10
RGD1559600	-3.026198217	0.46760386	9.69E-11	7.57E-10
Dcaf6	-1.139046218	0.17604262	9.78E-11	7.63E-10
Nup214	2.00607872	0.3100724	9.82E-11	7.66E-10

LOC108348098	-1.178369766	0.18215909	9.87E-11	7.70E-10
Uggt1	1.077990587	0.16664597	9.88E-11	7.70E-10
Ackr3	2.525260342	0.39050341	1.00E-10	7.80E-10
Ak2	-1.018239364	0.15747347	1.01E-10	7.83E-10
Cd38	1.534556041	0.23738179	1.02E-10	7.91E-10
Npdc1	1.953000627	0.30213695	1.02E-10	7.93E-10
Pip4k2a	1.447012789	0.22390703	1.03E-10	8.00E-10
Crtapl1	1.361931373	0.21074998	1.03E-10	8.01E-10
Hpcal1	1.588791205	0.24588424	1.04E-10	8.05E-10
Rpl21	-1.144972425	0.17723003	1.04E-10	8.11E-10
Ankrd49	-1.405721542	0.21759559	1.05E-10	8.11E-10
Spn	1.041433166	0.16125142	1.06E-10	8.20E-10
Rpp40	-1.152435889	0.1784511	1.06E-10	8.22E-10
Dpm1	-1.002256694	0.15523971	1.07E-10	8.32E-10
Slc35a4	1.176149922	0.18219463	1.08E-10	8.35E-10
Dlg4	2.143656484	0.33217271	1.09E-10	8.46E-10
Prdm2	1.062412756	0.1646718	1.11E-10	8.55E-10
Actr1b	1.056935759	0.16386259	1.12E-10	8.64E-10
Sec61a2	1.333293391	0.20683274	1.15E-10	8.86E-10
Adap1	3.00122287	0.46569484	1.16E-10	8.95E-10
Rnf38	1.93126823	0.29975189	1.17E-10	9.04E-10
Sh2d1b	3.453208661	0.53599845	1.17E-10	9.06E-10
Foxred1	-1.282979824	0.19919173	1.19E-10	9.15E-10
Trmt10c	-1.217448522	0.18902158	1.19E-10	9.16E-10
Ebag9	-1.190134385	0.1848088	1.20E-10	9.21E-10
Rps6	-1.468447806	0.22807268	1.21E-10	9.29E-10
Vegfa	-1.41748599	0.22020377	1.22E-10	9.37E-10
Cenpb	1.428065376	0.22186884	1.22E-10	9.40E-10
Tlk1	-1.808557097	0.2810005	1.23E-10	9.42E-10
Tlk1	-1.808557097	0.2810005	1.23E-10	9.42E-10
Efhd2	1.016347423	0.15794429	1.24E-10	9.49E-10
Zfp36l2	1.232394327	0.19152945	1.24E-10	9.51E-10
Blnk	2.845981123	0.44237083	1.25E-10	9.57E-10
Ttr	-2.44145524	0.37951552	1.25E-10	9.59E-10
Iqgap3	3.889419105	0.6048499	1.27E-10	9.76E-10
Slc6a8	2.52599657	0.3929013	1.28E-10	9.83E-10
Atp5j2	-1.616789054	0.25152323	1.29E-10	9.90E-10
Pinx1	-1.452775848	0.22604727	1.30E-10	9.97E-10
AABR07013065.1	-3.195453873	0.49730684	1.31E-10	1.01E-09
Shc2	4.113383096	0.64027268	1.32E-10	1.01E-09
Zcchc14	1.501939044	0.23379858	1.33E-10	1.01E-09
Gpr137b	2.077587828	0.32345491	1.34E-10	1.02E-09
Nae1	-1.793693319	0.27927285	1.34E-10	1.02E-09
Sdcbp	1.791197246	0.27888815	1.34E-10	1.02E-09
Adamtsl2	2.56054448	0.39871088	1.34E-10	1.03E-09
Arfip2	-1.709710559	0.26624372	1.35E-10	1.03E-09

Otud3	1.535729379	0.23916479	1.35E-10	1.03E-09
Tacc2	1.980363759	0.30842216	1.35E-10	1.03E-09
Kdm6b	1.607227191	0.25030886	1.35E-10	1.03E-09
Creb3l1	2.039957209	0.31775686	1.36E-10	1.04E-09
Hck	1.885923721	0.29382805	1.38E-10	1.05E-09
Mmp9	4.277051124	0.66639307	1.38E-10	1.05E-09
LOC102554034	7.684050327	1.1973659	1.39E-10	1.05E-09
Ddx50	-1.532884959	0.23894435	1.41E-10	1.07E-09
Rpp21	-1.814398291	0.28284913	1.41E-10	1.07E-09
Csf1r	1.43064989	0.22303567	1.41E-10	1.07E-09
Hectd4	1.278006012	0.19929052	1.43E-10	1.08E-09
Mapk4	4.357070863	0.67947704	1.43E-10	1.09E-09
Pfdn1	-1.326125595	0.20684589	1.44E-10	1.09E-09
Slc27a4	2.162324864	0.33727899	1.44E-10	1.09E-09
Nsa2	-1.115064855	0.17396426	1.46E-10	1.10E-09
Fancl	-1.727953149	0.2696375	1.47E-10	1.11E-09
Impa1	-1.07588237	0.16794759	1.49E-10	1.13E-09
Sdhaf3	-1.64200835	0.25646959	1.53E-10	1.16E-09
Cnot7	-1.114989732	0.17420742	1.55E-10	1.17E-09
LOC500956	-1.278529676	0.19980151	1.56E-10	1.18E-09
Manf	1.270850846	0.19861367	1.57E-10	1.18E-09
Gramd4	-1.105105478	0.17276519	1.59E-10	1.20E-09
Gdpd5	2.170293223	0.33930672	1.59E-10	1.20E-09
Smyd5	1.739878225	0.27204784	1.60E-10	1.21E-09
Zfyve27	1.922373701	0.30059264	1.60E-10	1.21E-09
Mcts1	-1.390680327	0.2175426	1.63E-10	1.23E-09
Hic1	1.979749218	0.30982231	1.66E-10	1.25E-09
Nlrp12	-3.055127084	0.47826465	1.68E-10	1.26E-09
Bnip3l	-1.069286435	0.16743852	1.70E-10	1.28E-09
NEWGENE_619861	-1.13866439	0.17844156	1.76E-10	1.32E-09
Ciart	3.967121057	0.62193502	1.79E-10	1.34E-09
Las1l	-1.619123198	0.25385215	1.79E-10	1.34E-09
Ttf1	-1.71180604	0.26842705	1.80E-10	1.35E-09
Tpcn2	-1.279229434	0.20064552	1.82E-10	1.37E-09
Ddx1	-1.071882295	0.16813223	1.83E-10	1.37E-09
Bgn	1.246172697	0.19549986	1.84E-10	1.38E-09
RGD1307182	2.661552446	0.41756272	1.84E-10	1.38E-09
Prkch	1.591243606	0.24966174	1.85E-10	1.38E-09
Tollip	1.023656736	0.16062769	1.86E-10	1.39E-09
LOC103690164	-2.313192997	0.36298605	1.86E-10	1.39E-09
Zbtb4	1.326531992	0.20820526	1.87E-10	1.40E-09
Kdm2b	1.037397537	0.16284068	1.88E-10	1.40E-09
Nkd1	1.730738131	0.2718109	1.92E-10	1.43E-09
Maml2	2.476687826	0.38898347	1.93E-10	1.44E-09
Wipf1	1.530341738	0.2404592	1.96E-10	1.46E-09
Trim47	2.048106412	0.32201448	2.01E-10	1.50E-09

F2rl1	4.560349288	0.71722618	2.04E-10	1.52E-09
Hexim1	-1.342479742	0.21117239	2.05E-10	1.53E-09
Syngap1	2.328972487	0.3663675	2.06E-10	1.53E-09
Slc10a3	1.05589378	0.16609955	2.06E-10	1.53E-09
Pzp	-2.047789342	0.32216036	2.06E-10	1.53E-09
Rps6ka2	1.88777548	0.29698761	2.07E-10	1.53E-09
Sipa1l1	-1.246065371	0.19610597	2.10E-10	1.56E-09
Atp2a3	1.216199547	0.19145371	2.12E-10	1.57E-09
Gls2	-2.396786578	0.37731199	2.12E-10	1.57E-09
Cd8b	3.44297738	0.54202432	2.12E-10	1.57E-09
Mlh3	-1.728269063	0.27211166	2.13E-10	1.58E-09
Pja1	-1.642269696	0.25874952	2.20E-10	1.63E-09
Ahsa2	-1.426906439	0.22482637	2.20E-10	1.63E-09
Bcor	1.600033209	0.25211136	2.20E-10	1.63E-09
Pon2	-1.472544561	0.23205196	2.21E-10	1.64E-09
Ccnd1	1.971577499	0.31076904	2.24E-10	1.65E-09
Srr	-1.986614772	0.3132414	2.27E-10	1.67E-09
Msra	-2.09627767	0.33060298	2.29E-10	1.69E-09
Spa17	-2.254572261	0.35564955	2.31E-10	1.70E-09
Mafg	1.272838738	0.20086198	2.34E-10	1.73E-09
Etfb	-1.84477956	0.29118136	2.37E-10	1.74E-09
Lats2	1.405010658	0.221774	2.37E-10	1.74E-09
Ccdc90b	-1.4635753	0.2310823	2.40E-10	1.76E-09
Paics	-1.211307508	0.19129543	2.42E-10	1.78E-09
Smdt1	-1.284818768	0.20290945	2.42E-10	1.78E-09
Fos	4.577012195	0.72292868	2.43E-10	1.79E-09
Pacs1	1.545547768	0.24412156	2.43E-10	1.79E-09
Ubp2l	1.035490029	0.1636222	2.47E-10	1.82E-09
Rps24	-1.451517706	0.22940435	2.49E-10	1.83E-09
Smoc2	2.385630474	0.37710719	2.51E-10	1.84E-09
LOC498368	-1.185232502	0.1874415	2.56E-10	1.88E-09
Fam134b	3.209201593	0.50753688	2.56E-10	1.88E-09
Nat6	-2.142328766	0.33902852	2.63E-10	1.93E-09
Angptl8	-2.224900068	0.35218723	2.66E-10	1.94E-09
Pah	-1.652066899	0.26155224	2.68E-10	1.96E-09
Rnf150	2.0807527	0.32947153	2.69E-10	1.97E-09
Exoc1	-1.149585108	0.1820639	2.72E-10	1.98E-09
Phldb3	1.969484068	0.31192352	2.72E-10	1.98E-09
Acta2	4.991692642	0.79072877	2.74E-10	2.00E-09
Glyat	-2.930521664	0.46427538	2.75E-10	2.01E-09
Gemin2	-1.341143464	0.21250808	2.77E-10	2.02E-09
RGD1306746	-1.216480359	0.19276779	2.78E-10	2.02E-09
Mbip	-2.177322243	0.34509254	2.80E-10	2.04E-09
Tnik	4.195278651	0.66499094	2.81E-10	2.05E-09
Atp5c1	-1.268064009	0.2010643	2.85E-10	2.07E-09
Cx3cr1	3.344475649	0.53039829	2.87E-10	2.09E-09

Pf4	2.407789337	0.38194494	2.90E-10	2.11E-09
Iqcb1	-2.161616999	0.34290248	2.90E-10	2.11E-09
Unc13b	2.254512899	0.35765789	2.91E-10	2.11E-09
Spi1	1.733393849	0.2750042	2.92E-10	2.12E-09
Rftn1	2.161901503	0.34303812	2.93E-10	2.13E-09
Odc1	1.473956972	0.23388699	2.94E-10	2.13E-09
Bicc1	2.493517564	0.39580312	2.98E-10	2.16E-09
Prune	1.150119797	0.18256382	2.98E-10	2.16E-09
Rpl35a	-1.505925125	0.23912131	3.02E-10	2.19E-09
LOC100910235	-4.321491071	0.68628872	3.04E-10	2.20E-09
Map2k1	1.48009127	0.23507198	3.05E-10	2.20E-09
Bmp2k	1.677253377	0.26639146	3.05E-10	2.20E-09
Sec63	-1.162015431	0.18457764	3.06E-10	2.21E-09
Cdc42ep1	1.376703161	0.21869785	3.07E-10	2.22E-09
Cxcl9	-2.035922993	0.32353196	3.12E-10	2.25E-09
Nit2	-2.029156222	0.32247253	3.12E-10	2.25E-09
Copb2	-1.220222156	0.19393242	3.13E-10	2.26E-09
Anp32a	-1.518264444	0.24142227	3.20E-10	2.30E-09
Tsc22d1	-1.959124911	0.31157291	3.22E-10	2.32E-09
Mast2	1.565747579	0.24907356	3.25E-10	2.34E-09
Zfp94	-1.689981719	0.26888502	3.28E-10	2.36E-09
Rassf5	1.508202327	0.24001309	3.30E-10	2.37E-09
Ankrd27	-1.279957065	0.20370578	3.31E-10	2.38E-09
Fxyd5	2.875054739	0.45757407	3.32E-10	2.38E-09
Ermard	-1.930794357	0.30731452	3.33E-10	2.39E-09
Eaf1	1.965108269	0.3128289	3.35E-10	2.40E-09
Fbrs	1.101114991	0.17532235	3.37E-10	2.42E-09
Tmem242	-1.123062009	0.17882802	3.38E-10	2.43E-09
Cyp3a23/3a1	-3.072341127	0.4892224	3.38E-10	2.43E-09
Neurl1b	3.666555896	0.58409702	3.44E-10	2.47E-09
Sf3a3	-1.476627447	0.23525378	3.46E-10	2.48E-09
Trim39	-1.013355818	0.16145138	3.46E-10	2.48E-09
Rn50_5_0814.15	-4.85067097	0.77306377	3.51E-10	2.51E-09
Atxn7l3	1.511507323	0.2409329	3.53E-10	2.52E-09
Mrpl21	-1.211671967	0.19325724	3.62E-10	2.58E-09
Cfl1	1.600619122	0.25532301	3.63E-10	2.60E-09
Nmi	-1.024128317	0.16337459	3.64E-10	2.60E-09
Stk3	-1.583444146	0.25265913	3.68E-10	2.63E-09
Apoa4	-3.01252121	0.48071494	3.69E-10	2.63E-09
Mitd1	-2.140327979	0.34155688	3.70E-10	2.64E-09
Obsl1	2.303456248	0.36761708	3.71E-10	2.64E-09
Eif3f	1.272469971	0.20326787	3.85E-10	2.74E-09
LOC100912218	1.954026023	0.3122207	3.89E-10	2.77E-09
Fam53a	1.17700586	0.18806834	3.89E-10	2.77E-09
Arl11	2.080202231	0.33252619	3.96E-10	2.81E-09
Dagla	1.948248917	0.31143742	3.96E-10	2.81E-09

Klf5	6.160014578	0.98483111	3.98E-10	2.83E-09
Ifitm2	1.585721598	0.25355584	4.00E-10	2.84E-09
Clk1	-1.749331866	0.27995593	4.14E-10	2.94E-09
Endod1	2.58301968	0.41347015	4.18E-10	2.97E-09
Snx25	-1.372360924	0.21969895	4.20E-10	2.98E-09
Enpep	-2.452155627	0.3925699	4.20E-10	2.98E-09
Slc16a3	4.600966294	0.7366639	4.22E-10	2.99E-09
Llgl1	1.048371486	0.1679211	4.29E-10	3.04E-09
Stxbp3	-1.465663133	0.23484184	4.35E-10	3.08E-09
LOC100363268	-1.649245602	0.26425878	4.35E-10	3.08E-09
Ints13	-1.357681356	0.217591	4.39E-10	3.10E-09
Map3k9	1.116831886	0.17899054	4.39E-10	3.10E-09
Ang2	-2.416758013	0.38734587	4.40E-10	3.11E-09
Trak2	1.046081017	0.1676904	4.43E-10	3.13E-09
Apoc1	-2.669364718	0.42792885	4.44E-10	3.13E-09
Zfp498	1.402610256	0.22485805	4.44E-10	3.13E-09
Cgrrf1	-1.271445723	0.20384786	4.45E-10	3.14E-09
Ampd3	2.518045484	0.40385613	4.52E-10	3.19E-09
Ets2	1.549292343	0.24855169	4.57E-10	3.22E-09
LOC499770	-1.57161151	0.25215673	4.59E-10	3.23E-09
Fabp7	-3.744907703	0.6008796	4.59E-10	3.24E-09
Fcer1g	1.415784935	0.22724019	4.65E-10	3.28E-09
LOC103689996	4.960867347	0.79625775	4.66E-10	3.28E-09
Sec62	-1.554659213	0.24956142	4.68E-10	3.29E-09
Numbl	3.205152955	0.51467159	4.74E-10	3.33E-09
Tmem171	4.44459888	0.71393134	4.80E-10	3.37E-09
RGD1559482	2.254026959	0.36207418	4.81E-10	3.38E-09
Klc4	-1.783449496	0.28653984	4.84E-10	3.40E-09
Prkra	-1.194101686	0.19189389	4.89E-10	3.43E-09
Brd4	1.224720151	0.19686871	4.94E-10	3.47E-09
RT1-CE4	1.018534543	0.1637642	4.99E-10	3.50E-09
Ms4a4a	5.083677723	0.81741942	5.00E-10	3.50E-09
Gga1	1.109092137	0.17836405	5.03E-10	3.52E-09
Prickle4	-2.549762201	0.41015539	5.08E-10	3.56E-09
Cst6	4.228083278	0.68040975	5.16E-10	3.61E-09
Hnrnpa2b1	-1.13294134	0.18234913	5.20E-10	3.63E-09
Rps3a	-1.530149063	0.24649646	5.38E-10	3.76E-09
Ddb2	-2.002968206	0.32266918	5.38E-10	3.76E-09
Olr59	-3.194293242	0.51479295	5.47E-10	3.82E-09
Hand2	1.780649322	0.28705294	5.53E-10	3.86E-09
Dad1	1.510254661	0.24351946	5.58E-10	3.89E-09
Itga3	1.769423503	0.2853346	5.60E-10	3.90E-09
Mbl1	-2.361278979	0.38082676	5.63E-10	3.92E-09
Actg1	2.152724093	0.3472453	5.67E-10	3.94E-09
Cabp2	-2.856714866	0.46086272	5.70E-10	3.96E-09
Swt1	-2.117254413	0.34160321	5.72E-10	3.98E-09

RGD1308706	-1.225538402	0.19775372	5.74E-10	3.99E-09
Stmn1	1.812866029	0.29253752	5.75E-10	4.00E-09
Arntl2	-2.93429205	0.47356511	5.79E-10	4.02E-09
Haus5	-1.148979338	0.1854411	5.79E-10	4.02E-09
Ubiad1	1.187185307	0.19168024	5.88E-10	4.08E-09
Trnt1	-1.669236433	0.26971636	6.06E-10	4.20E-09
Fcnb	3.932153909	0.6357168	6.20E-10	4.29E-09
Eno1	1.661568662	0.26863695	6.20E-10	4.30E-09
Mmp11	3.293952844	0.53255095	6.20E-10	4.30E-09
Dusp9	8.703953331	1.40736582	6.23E-10	4.31E-09
Snx24	-1.022457293	0.16538716	6.32E-10	4.37E-09
Sema7a	4.337918834	0.70192966	6.41E-10	4.43E-09
Socs7	1.265317576	0.20476991	6.44E-10	4.45E-09
Rnf4	1.289032801	0.20866669	6.51E-10	4.50E-09
Dbt	-1.549585083	0.25091512	6.59E-10	4.55E-09
Rn60_4_1636.2	1.917961857	0.31056213	6.58E-10	4.55E-09
Prrt1	2.619219798	0.42420773	6.64E-10	4.58E-09
Rgn	-2.724831755	0.44130706	6.64E-10	4.58E-09
Tet3	2.101709588	0.34039325	6.64E-10	4.58E-09
Nptxr	3.21325482	0.52046615	6.67E-10	4.60E-09
NEWGENE_1308612	-1.085081654	0.17584829	6.81E-10	4.69E-09
Apoa2	-3.248573567	0.52648039	6.81E-10	4.69E-09
Clic1	1.802637736	0.29216198	6.83E-10	4.70E-09
Stag1	-1.522407915	0.24679617	6.89E-10	4.74E-09
Gcdh	-2.280801758	0.36974775	6.89E-10	4.74E-09
Glis2	1.603064106	0.25991264	6.93E-10	4.76E-09
Gadd45a	2.129940598	0.34533595	6.93E-10	4.76E-09
Xylb	-1.428332113	0.23158346	6.93E-10	4.76E-09
Zfp830	-1.782309621	0.28898112	6.93E-10	4.76E-09
Rabep1	-1.738788882	0.28193564	6.95E-10	4.77E-09
Hpf1	-1.282335402	0.20794003	6.97E-10	4.78E-09
Synpo2	2.671885362	0.43328887	6.98E-10	4.79E-09
Ctdnep1	1.021921826	0.16574229	7.02E-10	4.81E-09
Grk3	2.344942725	0.38044126	7.10E-10	4.86E-09
Slc38a1	3.794691579	0.61569378	7.13E-10	4.88E-09
Dennd2a	1.52340556	0.24722933	7.19E-10	4.92E-09
RGD1564854	-1.918092748	0.31131218	7.21E-10	4.93E-09
Plekhg1	2.547527199	0.41350579	7.24E-10	4.95E-09
Emp1	3.999719417	0.64948044	7.35E-10	5.02E-09
Blvra	-1.05685619	0.17161323	7.35E-10	5.02E-09
Ddx52	-1.801661977	0.29261862	7.41E-10	5.06E-09
Omd	-3.672770576	0.59654263	7.42E-10	5.07E-09
Omd	-3.672770576	0.59654263	7.42E-10	5.07E-09
LOC100911660	-2.792403217	0.45358083	7.44E-10	5.08E-09
Gfpt2	2.797004553	0.45443327	7.51E-10	5.12E-09
Tbc1d23	-1.281494056	0.2082209	7.53E-10	5.13E-09

Zmynd10	-3.960949194	0.64392981	7.69E-10	5.24E-09
Zdhhc7	1.452831103	0.23620971	7.72E-10	5.26E-09
Ildr2	2.521827308	0.41009865	7.78E-10	5.29E-09
Limk2	1.403317927	0.22821639	7.79E-10	5.30E-09
Cd37	1.604304266	0.26093316	7.83E-10	5.32E-09
Polr3gl	-1.130190278	0.18383042	7.85E-10	5.33E-09
Flrt2	3.737658441	0.60802888	7.89E-10	5.36E-09
Mgat3	3.882955621	0.63177306	7.94E-10	5.39E-09
Ankrd46	-1.779601243	0.2895456	7.94E-10	5.39E-09
Atp5l	-1.404126762	0.22848048	7.97E-10	5.41E-09
Idnk	-2.057558353	0.33484412	8.01E-10	5.43E-09
Dact3	2.4490466	0.39858681	8.03E-10	5.44E-09
Nbn	-1.90262207	0.30968334	8.06E-10	5.46E-09
Rpp38	1.641618012	0.2672223	8.08E-10	5.48E-09
Eif4g2	-1.081051095	0.17599734	8.13E-10	5.50E-09
Homez	-1.352027097	0.22015152	8.18E-10	5.54E-09
Tmem39a	1.226333218	0.19970045	8.21E-10	5.55E-09
Nt5dc2	1.6849315	0.27440367	8.23E-10	5.57E-09
AABR07054262.1	6.790099193	1.10589832	8.26E-10	5.58E-09
Apoa5	-1.886010115	0.30729167	8.38E-10	5.66E-09
Cd1d1	-1.958671028	0.31917066	8.42E-10	5.69E-09
Atp10a	3.281561016	0.5347838	8.45E-10	5.70E-09
Haa0	-1.937417689	0.31576005	8.48E-10	5.72E-09
Tbc1d4	1.326534231	0.21622883	8.52E-10	5.75E-09
Acer2	1.549428074	0.25256521	8.53E-10	5.75E-09
Hilpda	2.397757788	0.39087142	8.55E-10	5.76E-09
RGD1310951	1.076831973	0.17555916	8.58E-10	5.78E-09
Pcmt1d1	-1.715311127	0.27965664	8.59E-10	5.78E-09
Pelo	1.669403299	0.2722346	8.67E-10	5.83E-09
Osbp15	1.689555152	0.27553107	8.68E-10	5.84E-09
Mansc1	1.849015587	0.30157945	8.73E-10	5.87E-09
Mum1	-1.243447124	0.20287091	8.83E-10	5.93E-09
Rad51d	-1.491017792	0.24328383	8.86E-10	5.95E-09
Rn50_5_0814.30	-6.804430097	1.11074621	9.01E-10	6.05E-09
Cmpk2	2.469961122	0.40329548	9.10E-10	6.10E-09
Sgsh	1.516518951	0.24762119	9.11E-10	6.11E-09
LOC500584	-2.57546975	0.42061514	9.18E-10	6.15E-09
RGD1305464	1.356365598	0.22159154	9.30E-10	6.23E-09
Ofd1	-1.985010136	0.32432206	9.33E-10	6.25E-09
Usp10	1.079869609	0.17644886	9.36E-10	6.26E-09
Gstp1	1.998471208	0.32658837	9.40E-10	6.29E-09
Igsf10	2.251921664	0.36809951	9.49E-10	6.35E-09
Gli4	-1.380240848	0.2256428	9.54E-10	6.38E-09
Thbs1	4.159347361	0.68077131	9.98E-10	6.67E-09
Fam105a	2.23746761	0.36630983	1.01E-09	6.73E-09
Lamb1	2.204235269	0.36088265	1.01E-09	6.74E-09

Ankrd44	2.282712015	0.37372852	1.01E-09	6.74E-09
Hcls1	1.606464691	0.26304124	1.01E-09	6.76E-09
Sdccag8	-2.149128624	0.35200261	1.03E-09	6.84E-09
Polr2e	-1.577063015	0.25832918	1.03E-09	6.86E-09
Cdc5l	-1.443646005	0.23655913	1.04E-09	6.94E-09
Cacul1	1.138787556	0.18660686	1.04E-09	6.94E-09
Map3k2	2.015092089	0.33025862	1.05E-09	6.98E-09
Gas2l3	3.867330977	0.63428575	1.08E-09	7.17E-09
P3h1	1.270715179	0.20842972	1.08E-09	7.19E-09
Mthfd1	-1.372380021	0.22514878	1.09E-09	7.24E-09
Ms4a6c	3.703843329	0.60770437	1.10E-09	7.27E-09
Hlx	1.569640848	0.25758215	1.10E-09	7.31E-09
Pid1	-1.91076592	0.31369011	1.12E-09	7.43E-09
Fkrp	1.367152442	0.22445432	1.12E-09	7.44E-09
Gapdh	1.39258302	0.22870063	1.14E-09	7.52E-09
Acadsb	-2.740852085	0.45013222	1.14E-09	7.52E-09
Mmp3	5.168009008	0.84887212	1.14E-09	7.56E-09
Ust5r	-2.977434552	0.48905808	1.14E-09	7.56E-09
Ywhah	1.204666146	0.19794255	1.16E-09	7.66E-09
Tenm4	6.356832855	1.04469903	1.17E-09	7.71E-09
Stat3	1.349188599	0.22175558	1.17E-09	7.74E-09
Pla2g7	3.210747809	0.52783296	1.18E-09	7.79E-09
F2r	2.084194144	0.34275755	1.20E-09	7.90E-09
NEWGENE_1306714	3.080377088	0.506716	1.21E-09	7.97E-09
Cav2	-2.088624732	0.34359577	1.21E-09	7.98E-09
Chkb	-1.095490447	0.18023846	1.22E-09	8.01E-09
Il6st	1.50373734	0.24745523	1.23E-09	8.07E-09
Afp	-2.175446035	0.35813163	1.24E-09	8.19E-09
Hypk	-1.191284754	0.19612692	1.25E-09	8.20E-09
Gle1	-1.424664513	0.23457606	1.25E-09	8.24E-09
Mtif2	-2.277021177	0.37493774	1.25E-09	8.25E-09
Vps41	-1.697218078	0.27950232	1.26E-09	8.29E-09
LOC100912538	-1.47073452	0.24226109	1.27E-09	8.36E-09
Ly6g6c	8.51231073	1.40277545	1.29E-09	8.49E-09
Abhd5	-1.347733119	0.22223858	1.32E-09	8.69E-09
Hddc2	-1.975525121	0.32587954	1.34E-09	8.80E-09
LOC100359574	1.43858309	0.2373761	1.36E-09	8.90E-09
Mtch1	1.192591383	0.19679443	1.36E-09	8.91E-09
Pitpnm2	1.039675275	0.1716263	1.38E-09	9.04E-09
Elmo1	1.986319671	0.32798436	1.39E-09	9.12E-09
Gaa	1.030506008	0.17016319	1.40E-09	9.13E-09
Rapgef2	1.212310806	0.20021793	1.40E-09	9.18E-09
Prrg4	2.669504235	0.44093617	1.41E-09	9.22E-09
Nox4	-5.236252118	0.86501048	1.42E-09	9.26E-09
Sertad2	1.728407133	0.28560237	1.43E-09	9.35E-09
Grhpr	-1.808876151	0.29901021	1.45E-09	9.47E-09

Sapcd2	5.035566684	0.83246306	1.46E-09	9.50E-09
Pms2	-1.242421437	0.2054002	1.46E-09	9.50E-09
Zfp386	-2.781737776	0.45990499	1.46E-09	9.52E-09
Trim46	4.654236225	0.76954327	1.47E-09	9.54E-09
Nos3	1.701971536	0.28149299	1.48E-09	9.65E-09
LOC102550456	1.636155213	0.27064084	1.49E-09	9.69E-09
Hsf2	-1.285950718	0.21274845	1.50E-09	9.74E-09
Inmt	-10.14710959	1.67911528	1.51E-09	9.82E-09
Sost	2.673136811	0.44241847	1.52E-09	9.88E-09
Zfp472	-2.55886529	0.42359011	1.53E-09	9.95E-09
Esyt2	1.341133552	0.22218417	1.58E-09	1.02E-08
Wdr92	-1.193063606	0.19765625	1.58E-09	1.02E-08
Qtrt1	1.744125408	0.28897155	1.58E-09	1.02E-08
LOC259245	-5.245737928	0.86912165	1.58E-09	1.02E-08
Mug1	-3.065883938	0.50796176	1.58E-09	1.02E-08
Tbc1d22b	1.478460261	0.2450185	1.60E-09	1.03E-08
Otulin	-1.1810244	0.19576796	1.61E-09	1.04E-08
Def8	-1.004172889	0.16645744	1.61E-09	1.04E-08
Prodh1	-3.19046773	0.52891286	1.62E-09	1.05E-08
Dpp6	-4.757226368	0.78879975	1.63E-09	1.05E-08
Larp7	-1.6264468	0.26971582	1.64E-09	1.06E-08
Peg12	2.323967078	0.38546488	1.65E-09	1.06E-08
Gstt2	-1.65260241	0.27412871	1.65E-09	1.07E-08
Foxf1	1.189580828	0.1973642	1.67E-09	1.07E-08
Pdhb	-1.121685132	0.18613985	1.68E-09	1.08E-08
Mcph1	1.782163882	0.29589759	1.71E-09	1.10E-08
Mmp14	1.399695242	0.23242726	1.72E-09	1.11E-08
Ddx54	1.207942777	0.20061253	1.73E-09	1.11E-08
Fam58b	-1.125104661	0.18686682	1.73E-09	1.12E-08
Usp47	-1.251799275	0.20797949	1.76E-09	1.13E-08
Lrrc8c	1.318254098	0.21902756	1.76E-09	1.13E-08
Pde5a	3.068022026	0.50990897	1.78E-09	1.14E-08
Eps8	2.263345444	0.37621064	1.79E-09	1.15E-08
Usp13	4.57587456	0.76069402	1.79E-09	1.15E-08
Slc17a2	-1.807932922	0.30058597	1.80E-09	1.16E-08
Rassf7	-1.84192818	0.30624723	1.80E-09	1.16E-08
Cdc25a	1.479194644	0.24598347	1.82E-09	1.16E-08
Ifitm1	1.481011998	0.24638782	1.84E-09	1.18E-08
Mfsd11	1.462426212	0.24330957	1.85E-09	1.18E-08
Cyb5r3	-2.088953985	0.34759995	1.86E-09	1.19E-08
Lypd1	4.113446169	0.684658	1.88E-09	1.20E-08
Bhmt	-4.145464669	0.69002225	1.88E-09	1.20E-08
Abl2	2.789521844	0.46444517	1.90E-09	1.21E-08
Crym	-2.93005334	0.48794214	1.91E-09	1.22E-08
Capn5	1.322902949	0.22033773	1.93E-09	1.23E-08
Gbe1	-1.804723927	0.30058889	1.93E-09	1.23E-08

F13b	-2.424510638	0.40391404	1.94E-09	1.24E-08
Hk3	2.078454266	0.34627695	1.95E-09	1.24E-08
Grina	1.10566038	0.18426289	1.97E-09	1.25E-08
Sh2d3c	1.290028984	0.21500312	1.97E-09	1.26E-08
Idh3g	-1.117622918	0.18630834	1.99E-09	1.27E-08
Dnajc17	-1.831535081	0.30532115	1.99E-09	1.27E-08
Klhl12	-1.450264041	0.24177378	1.99E-09	1.27E-08
Higd1a	-1.046729625	0.17454667	2.01E-09	1.28E-08
Zmiz2	10.30011891	1.71768167	2.02E-09	1.28E-08
Cdc42ep2	1.523561104	0.25413719	2.03E-09	1.29E-08
Lima1	-1.008544541	0.16825299	2.04E-09	1.30E-08
Tpst1	-1.643109487	0.27413472	2.05E-09	1.30E-08
Ugt2b35	-2.064197822	0.34451013	2.08E-09	1.32E-08
Ccdc43	-1.468340443	0.24512324	2.10E-09	1.33E-08
Gan	1.812383696	0.30256614	2.10E-09	1.33E-08
Inhbe	-1.823559364	0.30445004	2.10E-09	1.33E-08
Srms	2.886595585	0.48193851	2.10E-09	1.33E-08
Foxp4	1.154407093	0.19275714	2.11E-09	1.34E-08
Sptlc2	1.67491636	0.27979792	2.15E-09	1.36E-08
Foxq1	5.759217215	0.96243645	2.18E-09	1.38E-08
Ripply1	-3.739317991	0.6250214	2.19E-09	1.39E-08
Minpp1	1.034323556	0.17289986	2.20E-09	1.39E-08
Paqr7	-2.040936262	0.34123144	2.22E-09	1.40E-08
Irf2bp2	1.102295642	0.1843229	2.23E-09	1.41E-08
Nrros	1.211126057	0.2025238	2.23E-09	1.41E-08
Mro	-2.039528588	0.34106966	2.23E-09	1.41E-08
Ado	1.194628822	0.1998342	2.26E-09	1.42E-08
Il10ra	1.778110921	0.29746338	2.26E-09	1.43E-08
Dhrs9	3.635922141	0.60834476	2.28E-09	1.43E-08
Acat2	-2.397247297	0.40124091	2.31E-09	1.45E-08
Ephb2	2.731406925	0.45728374	2.33E-09	1.47E-08
Ino80d	2.043538119	0.34220706	2.35E-09	1.48E-08
Mccc1	-2.122617127	0.35549275	2.36E-09	1.48E-08
Frzb	2.412082111	0.40404309	2.37E-09	1.49E-08
Rpain	-1.447450196	0.24251262	2.39E-09	1.50E-08
Zcchc8	-1.27358549	0.21340305	2.40E-09	1.51E-08
B4galt3	1.153497326	0.19335135	2.43E-09	1.53E-08
RGD1303003	-1.62162245	0.2718375	2.44E-09	1.53E-08
Il2rb	1.43863211	0.2411723	2.44E-09	1.53E-08
Me3	-3.137261504	0.52619064	2.49E-09	1.56E-08
Gpr37	1.933725057	0.32443554	2.52E-09	1.58E-08
B4galt5	2.285842107	0.38353297	2.52E-09	1.58E-08
Trpm4	2.532588639	0.42503694	2.55E-09	1.59E-08
Zscan12	-1.954835862	0.32808529	2.55E-09	1.59E-08
Enox2	-1.639880911	0.27527822	2.57E-09	1.60E-08
Slc25a12	-1.268271954	0.21293237	2.58E-09	1.61E-08

Rarres2	-2.243348074	0.37668017	2.59E-09	1.62E-08
Actr3	1.056348761	0.17738555	2.60E-09	1.62E-08
Abhd6	-1.028697683	0.17273888	2.60E-09	1.62E-08
Arhgap39	1.370440575	0.23012707	2.60E-09	1.62E-08
AABR07058464.1	-1.983073655	0.33300622	2.60E-09	1.62E-08
Acad8	-1.074105556	0.18037515	2.60E-09	1.62E-08
Klkb1	-2.624766653	0.44080738	2.61E-09	1.63E-08
Thop1	1.439018897	0.24167492	2.61E-09	1.63E-08
Fam84b	1.899170896	0.31903045	2.63E-09	1.64E-08
Trmt10b	-1.07010722	0.17977346	2.64E-09	1.64E-08
Panx1	1.639510744	0.27557132	2.69E-09	1.67E-08
Cwf19l1	-1.100860894	0.18503885	2.69E-09	1.67E-08
Inpp5f	-1.233705827	0.20742498	2.72E-09	1.69E-08
Chrd	-1.338417957	0.22509928	2.75E-09	1.71E-08
Qpctl	1.063748645	0.1789391	2.77E-09	1.72E-08
Tie1	1.177915907	0.19818927	2.79E-09	1.73E-08
Pbld1	-1.967735786	0.33108658	2.79E-09	1.73E-08
Maob	-2.53793293	0.42707422	2.81E-09	1.74E-08
Pwwp2b	2.283175495	0.38427078	2.82E-09	1.75E-08
Phyhd1	-1.529770264	0.25747248	2.82E-09	1.75E-08
Pi16	2.813044552	0.47347233	2.83E-09	1.75E-08
Bmp8a	9.081539542	1.52924848	2.88E-09	1.78E-08
Stat2	-1.009481092	0.17006264	2.92E-09	1.81E-08
Lamc1	1.588895206	0.26772162	2.94E-09	1.82E-08
Gcfc2	-1.625330698	0.27390244	2.96E-09	1.83E-08
Zfp36	1.766410866	0.29770466	2.97E-09	1.83E-08
Gatsl3	1.548802862	0.26103931	2.97E-09	1.83E-08
Pdgfb	2.244869588	0.37840953	2.99E-09	1.84E-08
Khk	-2.151711482	0.36278724	3.01E-09	1.86E-08
Fbn2	4.950714639	0.83502252	3.05E-09	1.88E-08
Eif4ebp1	1.900912148	0.32066904	3.07E-09	1.89E-08
Tmem19	-1.180436751	0.19913659	3.07E-09	1.89E-08
Brd9	-1.547403483	0.26118521	3.13E-09	1.93E-08
Pigz	3.233170175	0.54576008	3.14E-09	1.93E-08
Adamts3	4.456744764	0.75255332	3.18E-09	1.96E-08
Traf3	1.228433759	0.20763097	3.29E-09	2.02E-08
Xylt1	2.013460076	0.34032963	3.29E-09	2.03E-08
Tmc3	-1.762433203	0.29797667	3.33E-09	2.04E-08
Htatsf1	-1.452682752	0.2456333	3.34E-09	2.05E-08
Elk3	1.214296012	0.20535781	3.36E-09	2.06E-08
Snai1	2.281271017	0.38581674	3.36E-09	2.06E-08
Mapre2	1.818304951	0.30751783	3.36E-09	2.06E-08
Terf1	-1.980022509	0.33496649	3.40E-09	2.08E-08
LOC679811	-1.553581474	0.26282322	3.40E-09	2.08E-08
Mgat4a	1.975892354	0.33437928	3.44E-09	2.11E-08
Ptma	2.109536274	0.35700914	3.44E-09	2.11E-08

Rab32	1.921654192	0.32532132	3.49E-09	2.13E-08
Bhmt2	-2.284872039	0.38685323	3.50E-09	2.14E-08
Apba2	-3.953501903	0.66939151	3.50E-09	2.14E-08
Plekhb1	-2.944883563	0.49871301	3.53E-09	2.16E-08
Bcl2l1	1.291260218	0.21873756	3.56E-09	2.18E-08
Pelp1	1.250243496	0.21182845	3.59E-09	2.19E-08
Smad3	1.000011845	0.16943967	3.59E-09	2.20E-08
Hes6	-3.284656186	0.55664161	3.62E-09	2.21E-08
Rup2	-2.788026136	0.47261579	3.65E-09	2.23E-08
LOC108348250	1.250777657	0.21207505	3.68E-09	2.25E-08
Gpr4	2.11653793	0.35898021	3.72E-09	2.27E-08
Proz	-1.744817217	0.29599203	3.75E-09	2.29E-08
Hif1an	1.177391408	0.19982439	3.81E-09	2.32E-08
Calml4	-2.896852629	0.49170033	3.83E-09	2.33E-08
Bdh1	-2.041412775	0.34661374	3.87E-09	2.36E-08
Gys2	-1.506613932	0.25584022	3.89E-09	2.36E-08
AABR07033987.1	1.152520766	0.19572144	3.90E-09	2.37E-08
Sec14l2	-1.906814501	0.32382716	3.90E-09	2.37E-08
Rpl18a	1.583477105	0.26898827	3.94E-09	2.39E-08
Vim	1.813815926	0.30815191	3.95E-09	2.40E-08
Abcg5	-5.389709841	0.91602738	4.01E-09	2.43E-08
Slc4a7	2.181599825	0.37088388	4.05E-09	2.46E-08
Tfpi	-1.086094829	0.1846647	4.07E-09	2.47E-08
Hsd17b10	-1.781820948	0.30299821	4.09E-09	2.48E-08
Sntb1	3.148586236	0.53542919	4.09E-09	2.48E-08
Dio3	3.655072497	0.62165675	4.11E-09	2.49E-08
Rn50_5_0815.3	-4.95654725	0.84325239	4.16E-09	2.52E-08
Kremen1	1.472873802	0.25059486	4.16E-09	2.52E-08
Kmt2a	1.785837059	0.30386321	4.17E-09	2.53E-08
Baz2a	1.381619732	0.23521398	4.26E-09	2.57E-08
Ptar1	1.564117675	0.26632366	4.28E-09	2.59E-08
Zfp217	1.281837534	0.21828056	4.29E-09	2.59E-08
Pip4k2b	1.316616172	0.22421318	4.30E-09	2.60E-08
Mtss1l	1.335319768	0.22739874	4.30E-09	2.60E-08
Usp43	3.359312342	0.57211978	4.31E-09	2.60E-08
Psme3	1.080053478	0.18400478	4.37E-09	2.63E-08
LOC100360117	1.810282614	0.30845021	4.39E-09	2.64E-08
LOC103690067	-1.711792832	0.29166674	4.38E-09	2.64E-08
Ccdc125	-1.71092793	0.29158678	4.42E-09	2.66E-08
Epha1	-1.376192807	0.23459598	4.46E-09	2.68E-08
Uros	-1.340994465	0.22860281	4.46E-09	2.69E-08
Kmt5a	1.599206553	0.27266179	4.49E-09	2.70E-08
Prpf38a	-1.222472984	0.20844393	4.50E-09	2.70E-08
Cryz1l	-1.806197002	0.3080144	4.52E-09	2.72E-08
Bmp7	1.776221245	0.30291355	4.52E-09	2.72E-08
Stab1	1.365421976	0.2328603	4.53E-09	2.72E-08

Thumpd2	-1.221339583	0.20829461	4.53E-09	2.72E-08
Hadh	-1.95774095	0.33401244	4.59E-09	2.76E-08
Acat2l1	-2.381427295	0.40631891	4.60E-09	2.76E-08
Olfml3	1.188597257	0.20287842	4.67E-09	2.80E-08
As3mt	-1.743402956	0.29766449	4.71E-09	2.83E-08
Cpeb1	6.62373939	1.13128491	4.77E-09	2.86E-08
Snx11	-1.106568766	0.18902508	4.80E-09	2.87E-08
H2afx	1.753847686	0.29964286	4.82E-09	2.89E-08
Apof	-3.445312308	0.5886301	4.82E-09	2.89E-08
Tma7	-1.145669131	0.19575266	4.84E-09	2.89E-08
Ahcy	-1.705535583	0.29143083	4.85E-09	2.90E-08
Tmem256	-1.744800225	0.29818791	4.88E-09	2.91E-08
Ufsp2	-1.167366669	0.19951651	4.89E-09	2.92E-08
Sdr42e1	-2.167769198	0.37053704	4.91E-09	2.93E-08
Supt7l	-1.020863736	0.17449955	4.91E-09	2.93E-08
Rnf31	1.015368628	0.17359969	4.95E-09	2.95E-08
Sap25	-2.63286375	0.4503112	5.01E-09	2.99E-08
Necap2	1.059646771	0.18127031	5.05E-09	3.00E-08
AABR07010705.1	1.219526032	0.20866499	5.08E-09	3.03E-08
Ccdc25	-1.385319415	0.23709958	5.13E-09	3.06E-08
Creb3l3	-1.184769847	0.20279248	5.15E-09	3.06E-08
C1qtnf1	1.385824437	0.23728776	5.21E-09	3.10E-08
Tcea3	-2.291279503	0.39233056	5.21E-09	3.10E-08
Fxr1	-1.377502821	0.23587655	5.22E-09	3.10E-08
Api5	-1.234352991	0.21142868	5.28E-09	3.13E-08
AABR07021823.1	-1.154433807	0.19775929	5.30E-09	3.14E-08
Mtcl1	3.973193599	0.68064741	5.30E-09	3.15E-08
AC106663.1	7.339842863	1.25739285	5.30E-09	3.15E-08
Thsd1	1.909139216	0.32716325	5.37E-09	3.18E-08
Limd1	1.251394386	0.21448153	5.39E-09	3.20E-08
Slc43a2	1.390922062	0.2384049	5.40E-09	3.20E-08
Dusp5	2.036569647	0.34906657	5.40E-09	3.20E-08
Ptpre	2.224062325	0.38125392	5.43E-09	3.21E-08
Boc	2.938305602	0.50369947	5.43E-09	3.21E-08
Mfap1a	-1.145924372	0.19645494	5.44E-09	3.22E-08
Tmem47	-1.681108225	0.28825453	5.48E-09	3.24E-08
Ston2	1.857408814	0.31851822	5.50E-09	3.25E-08
Ppp4r3a	-1.051624988	0.18035995	5.52E-09	3.26E-08
Slc43a3	-1.811327464	0.31068141	5.54E-09	3.27E-08
Il1rl1	7.123580999	1.22208938	5.58E-09	3.29E-08
Foxk1	1.00295875	0.17211671	5.64E-09	3.32E-08
Aig1	2.274898146	0.39042164	5.65E-09	3.33E-08
Pear1	1.207288483	0.20725072	5.70E-09	3.36E-08
Smim8	-1.064137203	0.18272441	5.75E-09	3.39E-08
Capn7	-1.259003758	0.21620832	5.78E-09	3.40E-08
Echdc2	-2.046512969	0.35144965	5.78E-09	3.40E-08

Upb1	-2.498723264	0.42932335	5.88E-09	3.46E-08
Nfkbie	1.573042444	0.27028217	5.88E-09	3.46E-08
Cyp2f4	-1.774988604	0.30502553	5.91E-09	3.47E-08
Dhrs1	-1.507036153	0.25898465	5.92E-09	3.47E-08
Cib2	-4.35712813	0.74884881	5.94E-09	3.49E-08
Bspry	2.664619242	0.45805355	5.98E-09	3.51E-08
Ctu1	1.154482365	0.19853112	6.06E-09	3.55E-08
Ptpn14	3.253321011	0.5595675	6.10E-09	3.57E-08
Mfsd10	1.450116792	0.24944537	6.12E-09	3.58E-08
Tex12	-2.740163014	0.47135335	6.12E-09	3.58E-08
Nif3l1	-1.224709921	0.21068618	6.14E-09	3.59E-08
Postn	4.937156457	0.84934907	6.14E-09	3.59E-08
Bmp8b	8.619487079	1.48283762	6.14E-09	3.59E-08
Prr16	-2.232861368	0.3841488	6.16E-09	3.60E-08
Hmbs	-1.035253551	0.17812926	6.18E-09	3.61E-08
Larp1	1.36638726	0.23512085	6.19E-09	3.62E-08
Itgax	3.547871799	0.61057048	6.22E-09	3.63E-08
Thoc1	-1.640737408	0.28237859	6.23E-09	3.64E-08
Rap2b	1.850174208	0.31844968	6.25E-09	3.65E-08
Ctsl	1.723458913	0.29667282	6.27E-09	3.66E-08
Mrps28	-1.164881681	0.20054022	6.30E-09	3.67E-08
Nasp	-1.503624247	0.25890608	6.34E-09	3.69E-08
LOC100909715	3.462537563	0.59622601	6.34E-09	3.70E-08
Cdca4	1.455892816	0.25079125	6.43E-09	3.74E-08
Eda2r	6.66187347	1.14763498	6.44E-09	3.75E-08
Ski	1.383763961	0.23839536	6.46E-09	3.76E-08
Rn50_X_0729.6	3.33185091	0.57419003	6.53E-09	3.80E-08
Jun	2.629806345	0.45328726	6.57E-09	3.82E-08
Dhx58	-1.359179458	0.23428432	6.58E-09	3.82E-08
Sestd1	1.935082275	0.33363461	6.63E-09	3.85E-08
Rgs4	4.26859917	0.73604051	6.65E-09	3.86E-08
Wdr5	1.002309737	0.17284977	6.68E-09	3.88E-08
Ccdc174	-1.484493152	0.25600484	6.68E-09	3.88E-08
Rpl13	1.251624809	0.21589386	6.73E-09	3.91E-08
Coq5	-1.035048418	0.17858534	6.80E-09	3.94E-08
LOC108348072	1.967772616	0.33959545	6.85E-09	3.97E-08
Fkbp2	-1.186852091	0.20489373	6.93E-09	4.02E-08
Pak2	1.001502973	0.17296018	7.02E-09	4.07E-08
Hnrnph1	-1.642816198	0.28378042	7.08E-09	4.10E-08
Lipo1	-2.775005948	0.47950673	7.16E-09	4.14E-08
Lgals1	2.963883291	0.51223542	7.20E-09	4.16E-08
Ezr	2.138157772	0.36970187	7.32E-09	4.23E-08
Tnfsf18	7.38747609	1.27774861	7.40E-09	4.27E-08
Jmy	1.370214706	0.23700477	7.41E-09	4.28E-08
Zfp330	-1.260791633	0.2180863	7.42E-09	4.28E-08
Itga6	1.467408949	0.25383716	7.43E-09	4.29E-08

Adcy7	2.532742046	0.43812665	7.43E-09	4.29E-08
Als2	-1.354999226	0.23443522	7.48E-09	4.31E-08
Cd302	-2.046933649	0.3541698	7.49E-09	4.32E-08
RGD1560687	3.004895259	0.52024292	7.65E-09	4.41E-08
Arhgef37	-2.015663647	0.34897363	7.65E-09	4.41E-08
RGD1559960	-4.592759413	0.79516805	7.66E-09	4.41E-08
Arl16	-1.447978722	0.25070229	7.66E-09	4.41E-08
Pros1	-1.661008052	0.2877402	7.81E-09	4.49E-08
Ankrd13c	-1.297050833	0.22472069	7.84E-09	4.51E-08
Msh2	-1.122144765	0.19452278	7.99E-09	4.59E-08
Cyp1b1	5.239279189	0.90828521	8.01E-09	4.60E-08
Cep95	-1.833940226	0.31793658	8.01E-09	4.60E-08
Strn	1.431160352	0.24812816	8.03E-09	4.61E-08
Mrpl54	-1.26543901	0.21940461	8.04E-09	4.61E-08
Slc2a6	3.844266646	0.66669913	8.11E-09	4.65E-08
Cd180	1.658053986	0.28757255	8.13E-09	4.66E-08
Camsap1	1.052496112	0.18260434	8.22E-09	4.71E-08
Slc4a5	3.885209063	0.67409512	8.23E-09	4.71E-08
F2	-1.963523114	0.34071266	8.26E-09	4.73E-08
Adm	2.02194536	0.35092262	8.32E-09	4.76E-08
Amacr	-2.36307067	0.41017722	8.36E-09	4.78E-08
Rn50_X_0752.1	7.952698641	1.38074347	8.43E-09	4.82E-08
Esy1	1.318983878	0.22902718	8.46E-09	4.83E-08
Fech	-1.108517585	0.19248617	8.46E-09	4.84E-08
Sesn1	-1.57127616	0.27291128	8.54E-09	4.88E-08
Ftl1l1	2.021877651	0.35118497	8.55E-09	4.88E-08
Trim23	-1.792782253	0.31163169	8.77E-09	5.00E-08
Man2a2	1.118407744	0.19447489	8.88E-09	5.06E-08
Uqcrcq	-1.617674333	0.28128802	8.87E-09	5.06E-08
Agl	-1.478733493	0.25722533	8.99E-09	5.12E-08
Pak6	3.371260484	0.58664225	9.10E-09	5.18E-08
Plau	2.077460758	0.36168848	9.26E-09	5.27E-08
Rbfa	-1.577271047	0.27464693	9.31E-09	5.29E-08
RGD1307315	1.911496839	0.33285266	9.31E-09	5.30E-08
Jund	1.670896014	0.29105244	9.42E-09	5.35E-08
Cdc40	-1.012674298	0.17640196	9.43E-09	5.35E-08
Timmdc1	-1.197272406	0.20859098	9.48E-09	5.38E-08
Nup210	1.237641254	0.21563395	9.49E-09	5.39E-08
Med13l	1.300193608	0.2267	9.73E-09	5.52E-08
Scyl3	-1.490710417	0.26008051	9.94E-09	5.64E-08
Slc25a39	1.065256652	0.18586595	9.97E-09	5.65E-08
Ptprb	1.443654879	0.25188759	9.96E-09	5.65E-08
Tead4	2.091122545	0.36496934	1.01E-08	5.70E-08
Cd55	5.694985733	0.99399326	1.01E-08	5.71E-08
Hs1bp3	1.057537653	0.18461799	1.01E-08	5.74E-08
Nckap1l	1.178497428	0.2057343	1.01E-08	5.74E-08

Lamp2	-1.222793738	0.21349683	1.02E-08	5.77E-08
Tgfbr3	1.160358324	0.20260041	1.02E-08	5.77E-08
Galt	-1.473295999	0.2572427	1.02E-08	5.77E-08
Foxk2	1.1447806	0.19996844	1.04E-08	5.85E-08
Gpld1	-2.249711669	0.39302806	1.04E-08	5.87E-08
Crtc1	1.05075868	0.18358668	1.04E-08	5.89E-08
AC117869.1	4.529823999	0.79146012	1.04E-08	5.89E-08
Kynu	-2.741836302	0.47935304	1.07E-08	6.01E-08
Bcl2l11	2.07819257	0.36353718	1.09E-08	6.12E-08
Rbm6	-1.379539812	0.24155833	1.12E-08	6.32E-08
Smim3	2.278339943	0.39909449	1.14E-08	6.40E-08
Nop9	1.075210993	0.18837529	1.14E-08	6.44E-08
Rnf217	1.44858911	0.25387483	1.16E-08	6.51E-08
Ncoa4	-1.273676081	0.2232246	1.16E-08	6.51E-08
Gpsm3	1.2791953	0.22430477	1.18E-08	6.62E-08
Fam83h	1.090641342	0.19124554	1.18E-08	6.62E-08
Ndufaf5	-1.147665862	0.20133716	1.20E-08	6.72E-08
Bace2	1.284348063	0.22532731	1.20E-08	6.73E-08
Atp5i	-1.453896263	0.25507598	1.20E-08	6.73E-08
Ppp1r3b	-2.86455925	0.50264556	1.21E-08	6.76E-08
Abhd11	-1.342289908	0.2355595	1.21E-08	6.78E-08
Tuba1b	1.823593355	0.32002078	1.21E-08	6.78E-08
Copb1	-1.018138933	0.17875018	1.23E-08	6.88E-08
Mgat5	1.843792491	0.32372596	1.23E-08	6.89E-08
Shank3	1.348957269	0.23686184	1.23E-08	6.90E-08
Penk	5.391346449	0.94667773	1.23E-08	6.91E-08
Ptger2	2.923857146	0.51344674	1.24E-08	6.92E-08
Lsm5	-1.544921696	0.27130761	1.24E-08	6.93E-08
Oma1	-1.289963986	0.22660036	1.25E-08	6.99E-08
Epn2	1.093036666	0.19202799	1.26E-08	7.01E-08
Bdh2	-2.004845558	0.35222924	1.26E-08	7.02E-08
Tlk2	-1.039164764	0.18258992	1.26E-08	7.04E-08
Golga5	-1.220935939	0.21458743	1.27E-08	7.10E-08
Parp9	-1.422863053	0.25008134	1.27E-08	7.10E-08
Col5a3	4.248471811	0.74683759	1.28E-08	7.14E-08
Tmem189	1.181199722	0.20768471	1.29E-08	7.19E-08
Tp53i3	-1.209098619	0.2126522	1.30E-08	7.25E-08
LOC102555672	-2.894467744	0.50911255	1.31E-08	7.27E-08
Phf7	-1.041625347	0.1832459	1.31E-08	7.31E-08
Lrrc32	1.129336992	0.1987245	1.32E-08	7.37E-08
AABR07072593.1	-1.495155715	0.26309995	1.32E-08	7.37E-08
LOC102555377	-2.976018105	0.52371273	1.33E-08	7.38E-08
Hat1	-1.215193537	0.21395509	1.35E-08	7.50E-08
Dhx32	-1.110575094	0.19553441	1.35E-08	7.50E-08
Ctdp1	1.181485267	0.20804191	1.35E-08	7.52E-08
Uox	-1.695125724	0.29863278	1.38E-08	7.64E-08

Tert	-1.582439318	0.27878668	1.38E-08	7.65E-08
Ppwd1	-1.869457219	0.32941878	1.39E-08	7.69E-08
Slc1a4	1.789432517	0.31536746	1.39E-08	7.73E-08
Dusp10	2.725014586	0.48026418	1.40E-08	7.73E-08
Ctla2a	-1.520302487	0.26795482	1.40E-08	7.74E-08
Parg	-1.323587883	0.2333402	1.41E-08	7.80E-08
Gnaq	1.340475956	0.23632195	1.41E-08	7.81E-08
Fam35a	-1.624101734	0.28649784	1.44E-08	7.96E-08
Galk2	-1.048351001	0.18500158	1.46E-08	8.05E-08
Fdft1	-1.811782826	0.31975734	1.46E-08	8.08E-08
Cd9	2.349014177	0.41464281	1.47E-08	8.12E-08
Pank1	-1.639320369	0.28951368	1.49E-08	8.25E-08
Mapk1ip1	-1.254402923	0.22154675	1.50E-08	8.26E-08
Tgm1	2.556647745	0.451576	1.50E-08	8.28E-08
Crbn	-1.461547861	0.25817521	1.50E-08	8.30E-08
Ttc32	-1.03507583	0.18284819	1.51E-08	8.31E-08
Atp5s	-1.416460402	0.25023874	1.51E-08	8.32E-08
Chac2	-1.981242298	0.35018657	1.53E-08	8.46E-08
Rps6ka4	1.362758771	0.24101427	1.57E-08	8.62E-08
Dsc2	1.063076943	0.18803924	1.57E-08	8.66E-08
Cables2	1.184427146	0.20952942	1.58E-08	8.69E-08
Celf2	1.524582756	0.26981411	1.60E-08	8.80E-08
Slc23a2	1.012591674	0.17922375	1.61E-08	8.83E-08
Grb14	-1.013444136	0.17938816	1.61E-08	8.85E-08
Usp40	-1.149961357	0.20360547	1.62E-08	8.92E-08
Pcbd2	-1.290996018	0.22861545	1.63E-08	8.97E-08
Rhbdf1	1.318851952	0.23356873	1.64E-08	8.99E-08
Bbs10	-1.423150836	0.25204331	1.64E-08	8.99E-08
LOC301124	-1.351337441	0.23933896	1.64E-08	9.01E-08
Rhoj	1.525352628	0.27017357	1.64E-08	9.02E-08
Gmds	2.489653314	0.44122021	1.67E-08	9.18E-08
Abcb11	-1.988268207	0.35237152	1.68E-08	9.18E-08
Tmem42	-1.133524505	0.2009145	1.68E-08	9.22E-08
Get4	1.02632717	0.18198511	1.70E-08	9.33E-08
Acox2	-2.662618433	0.47212257	1.70E-08	9.33E-08
lyd	-2.312998986	0.41028453	1.72E-08	9.44E-08
Acsl5	-1.520187604	0.26968533	1.73E-08	9.47E-08
Ces1f	-3.726599806	0.66114122	1.73E-08	9.48E-08
E2f1	3.361203024	0.59639061	1.74E-08	9.52E-08
E2f1	3.361203024	0.59639061	1.74E-08	9.52E-08
Wdpcp	-2.190281314	0.38871137	1.75E-08	9.58E-08
Dbndd2	1.221182487	0.21683335	1.78E-08	9.74E-08
Ndc1	1.426294212	0.25326901	1.79E-08	9.75E-08
Ccar1	-1.455796528	0.25855783	1.80E-08	9.81E-08
Uba3	-1.319916988	0.23455447	1.83E-08	9.98E-08
Zdhhc21	2.108627319	0.37472207	1.83E-08	9.99E-08

Tcf4	1.925688578	0.34226473	1.84E-08	1.00E-07
LOC100910418	10.76405829	1.91328522	1.84E-08	1.01E-07
Kif12	2.376524565	0.4226243	1.87E-08	1.02E-07
Ccl12	4.718274174	0.83906485	1.87E-08	1.02E-07
Ramp2	1.620176534	0.28816948	1.88E-08	1.03E-07
RGD1309534	-2.406535699	0.42813455	1.90E-08	1.03E-07
Ppm1g	1.212033117	0.21564093	1.90E-08	1.03E-07
Synj2	1.825792305	0.32487787	1.91E-08	1.04E-07
Ctdsp2	1.529998123	0.27231052	1.93E-08	1.05E-07
Pram1	1.436544708	0.25578645	1.95E-08	1.06E-07
Gsta2	-3.625616257	0.64606435	2.00E-08	1.09E-07
Dyrk3	6.525178225	1.16285654	2.01E-08	1.09E-07
Rps21-ps1	-1.388177208	0.24739604	2.01E-08	1.09E-07
Fancg	1.616213555	0.28808689	2.02E-08	1.10E-07
Rnase4	-2.456259005	0.43800508	2.05E-08	1.11E-07
Nhs1	1.130253559	0.20158966	2.06E-08	1.12E-07
Eef1g	1.058039113	0.1887509	2.08E-08	1.13E-07
Capn1	1.194442076	0.21312665	2.09E-08	1.13E-07
Atp8b5p	-2.848246659	0.50825857	2.10E-08	1.13E-07
Dph7	-1.668654458	0.29780984	2.11E-08	1.14E-07
Map1s	2.257808679	0.40319859	2.15E-08	1.16E-07
Aif1	-1.147846876	0.20502971	2.16E-08	1.17E-07
Lect2	-1.222994246	0.21845238	2.16E-08	1.17E-07
Kcnk13	1.867784348	0.33363708	2.17E-08	1.17E-07
Rn50_2_1408.1	-1.396374608	0.24953043	2.19E-08	1.18E-07
Stk10	2.348392747	0.4197285	2.21E-08	1.19E-07
Slc36a2	3.695455644	0.66050791	2.21E-08	1.19E-07
Plpp2	1.524968322	0.2725939	2.22E-08	1.19E-07
Rpf1	-1.283548363	0.22950194	2.23E-08	1.20E-07
Tmc6	1.650307545	0.29515054	2.25E-08	1.21E-07
Sort1	1.109035426	0.1983485	2.25E-08	1.21E-07
Pdgfa	1.876330842	0.33563682	2.27E-08	1.22E-07
Nags	-1.670664541	0.29888418	2.27E-08	1.22E-07
Urgcp	1.089152501	0.19485713	2.28E-08	1.22E-07
Lrif1	-2.15281422	0.38516143	2.28E-08	1.22E-07
Trim7	3.72762369	0.66700456	2.29E-08	1.23E-07
Phf11b	-1.93189133	0.34575545	2.30E-08	1.24E-07
Cecr5	-1.088599708	0.19486575	2.32E-08	1.24E-07
Upp1	2.042221757	0.3656995	2.34E-08	1.26E-07
Entpd2	1.800183732	0.32235573	2.34E-08	1.26E-07
Hk2	2.103597009	0.3767088	2.35E-08	1.26E-07
P3h4	2.749490135	0.49238722	2.35E-08	1.26E-07
Mdh1	-1.259959031	0.22567288	2.36E-08	1.26E-07
Susd6	1.407037772	0.25202078	2.36E-08	1.26E-07
Psen1	1.06775741	0.19125646	2.37E-08	1.27E-07
Upf2	-1.832777726	0.32829921	2.37E-08	1.27E-07

Nr4a3	3.861404808	0.69170062	2.37E-08	1.27E-07
Ahnak	2.117925851	0.37940572	2.37E-08	1.27E-07
Gnptg	-1.307402355	0.23425463	2.39E-08	1.28E-07
Mrps35	-1.109857708	0.19886198	2.39E-08	1.28E-07
Oit3	1.314548766	0.2356654	2.43E-08	1.30E-07
Serpina4	-2.572665498	0.46136358	2.46E-08	1.31E-07
Sec61a1	1.084951586	0.19456784	2.46E-08	1.31E-07
Arcp5	1.135178081	0.20360456	2.47E-08	1.32E-07
Pcgf3	1.316029694	0.23604814	2.47E-08	1.32E-07
Krtcap2	1.25959401	0.22597745	2.49E-08	1.33E-07
RGD1306954	-1.012020606	0.18156323	2.49E-08	1.33E-07
Tfdp2	-2.172083205	0.38982896	2.52E-08	1.34E-07
Sqle	-1.912740207	0.34337904	2.54E-08	1.35E-07
Fbxl7	1.398937006	0.25115164	2.55E-08	1.35E-07
Clec16a	1.129868927	0.20284405	2.55E-08	1.35E-07
Zxdc	1.133543909	0.20351534	2.55E-08	1.35E-07
Tspo	1.899913464	0.34121428	2.58E-08	1.37E-07
Myo1g	1.958716243	0.35194156	2.61E-08	1.39E-07
Rnf130	-1.048132208	0.18837744	2.64E-08	1.40E-07
Dgkh	4.321322706	0.77679127	2.65E-08	1.41E-07
Heyl	1.735354632	0.31200686	2.67E-08	1.41E-07
Rorc	-1.656370731	0.29784254	2.68E-08	1.42E-07
Acot12	-1.973317881	0.35485607	2.68E-08	1.42E-07
Dab2	1.874570409	0.3371944	2.71E-08	1.43E-07
Hscb	-1.053717525	0.1895546	2.71E-08	1.44E-07
Jdp2	1.506538353	0.27107967	2.74E-08	1.45E-07
Flvcr2	1.833236622	0.33000296	2.77E-08	1.47E-07
Tbcel	1.474993237	0.2655125	2.77E-08	1.47E-07
Alg13	-1.711864966	0.30816862	2.78E-08	1.47E-07
Eif4ebp2	1.171526394	0.21089699	2.78E-08	1.47E-07
Cdk14	1.590566019	0.28638768	2.79E-08	1.48E-07
Plcb2	1.555173703	0.28001688	2.79E-08	1.48E-07
Entpd8	-2.490113691	0.44843405	2.81E-08	1.48E-07
Olr36	-3.746120081	0.67465523	2.81E-08	1.49E-07
Ccdc181	-2.179438658	0.39260135	2.84E-08	1.50E-07
Sympk	1.207042674	0.21747525	2.85E-08	1.50E-07
Rab17	-1.704794569	0.30716963	2.86E-08	1.51E-07
Dpt	-2.586125629	0.46608646	2.88E-08	1.52E-07
Cisd1	-1.013871548	0.18276363	2.90E-08	1.53E-07
Bag3	2.24138784	0.40403612	2.90E-08	1.53E-07
Vars	1.772944613	0.31960259	2.90E-08	1.53E-07
Yipf1	-1.09922188	0.19817718	2.91E-08	1.53E-07
Zkscan5	-1.627049146	0.2933678	2.92E-08	1.53E-07
Tmem108	2.649391327	0.47785108	2.95E-08	1.55E-07
Akr1c13	-3.312512751	0.59746388	2.95E-08	1.55E-07
Tstd1	-3.514689825	0.63402826	2.97E-08	1.56E-07

Bend3	1.93590781	0.34923922	2.97E-08	1.56E-07
Hhip	2.001287668	0.36106553	2.98E-08	1.56E-07
Cthrc1	6.90899107	1.24683092	3.00E-08	1.57E-07
Tsen15	-1.075086244	0.19405448	3.02E-08	1.58E-07
Pon1	-2.234110299	0.40333937	3.04E-08	1.59E-07
Xpr1	1.324176172	0.23918023	3.09E-08	1.62E-07
Atl2	-1.613889706	0.29152019	3.09E-08	1.62E-07
Cyp1a1	6.084854041	1.09919274	3.10E-08	1.62E-07
Ncoa7	1.819355144	0.32867675	3.11E-08	1.62E-07
Snx4	-1.023963097	0.18499642	3.11E-08	1.63E-07
Rab33b	-1.127554631	0.20377971	3.14E-08	1.64E-07
Lypla1	-1.180013767	0.21326773	3.15E-08	1.64E-07
Ptcd3	-1.740503057	0.31458195	3.15E-08	1.65E-07
Msh3	-1.495228116	0.27028245	3.16E-08	1.65E-07
Pik3c2b	1.791496562	0.32389501	3.18E-08	1.66E-07
Pag1	1.9866896	0.35926736	3.21E-08	1.67E-07
Gin1	-1.658630702	0.30002738	3.23E-08	1.69E-07
Prss46	8.120084174	1.46938991	3.27E-08	1.71E-07
Ier3	1.554073165	0.28125853	3.29E-08	1.71E-07
RGD1565622	-2.633986801	0.47686302	3.32E-08	1.73E-07
Zfp496	1.065600224	0.19297141	3.35E-08	1.74E-07
AABR07006258.2	1.868229796	0.33839837	3.37E-08	1.76E-07
Iscu	-1.108773893	0.20086687	3.39E-08	1.76E-07
Ldlrad1	-2.928006148	0.53045915	3.39E-08	1.77E-07
Lsm11	1.68077958	0.30451715	3.40E-08	1.77E-07
Tmem220	-1.676855756	0.30382076	3.40E-08	1.77E-07
Cpped1	-1.282162954	0.23233066	3.42E-08	1.78E-07
Gtf2f1	-1.209230613	0.21911862	3.42E-08	1.78E-07
Galnt6	2.438432053	0.44192599	3.43E-08	1.78E-07
Stmn4	9.177506567	1.66352721	3.45E-08	1.79E-07
Abcc8	-3.053181081	0.55342954	3.45E-08	1.79E-07
Ccl2	3.832689679	0.69475054	3.46E-08	1.79E-07
Cmtm4	1.893797802	0.34333902	3.47E-08	1.80E-07
Car1	-5.280817377	0.95757267	3.49E-08	1.81E-07
Acot9	1.827197808	0.33138479	3.51E-08	1.82E-07
LOC100909524	-1.820401615	0.33015011	3.51E-08	1.82E-07
Nsrp1	-1.577723996	0.28625987	3.56E-08	1.84E-07
Spag1	-2.456094214	0.44570316	3.58E-08	1.85E-07
Abca6	-2.240735617	0.40665051	3.58E-08	1.86E-07
Il23a	4.410555108	0.80054652	3.60E-08	1.86E-07
Timp2	1.618710424	0.29383877	3.61E-08	1.87E-07
LOC100364435	1.785433211	0.32416741	3.63E-08	1.88E-07
Cd33	2.099811905	0.38125177	3.64E-08	1.88E-07
Ndufb9	-1.143649121	0.20766374	3.65E-08	1.88E-07
Hccs	-1.029683127	0.18699523	3.66E-08	1.89E-07
Ipcef1	6.771875169	1.22982589	3.66E-08	1.89E-07

Sntb2	2.356686741	0.42799551	3.66E-08	1.89E-07
Pdzk1	-1.660028906	0.3015136	3.68E-08	1.90E-07
She	1.80275667	0.32746471	3.69E-08	1.90E-07
Sc1t1	-1.895457317	0.34432347	3.69E-08	1.90E-07
Armcx3	1.713426987	0.31127567	3.70E-08	1.91E-07
Cldn4	3.462646552	0.62911486	3.71E-08	1.91E-07
Arhgef6	1.493914985	0.27148881	3.74E-08	1.93E-07
Nr5a2	-1.653969626	0.30064016	3.77E-08	1.94E-07
Tacc1	1.319328272	0.23983491	3.78E-08	1.94E-07
Kifc3	1.670521314	0.30369162	3.78E-08	1.95E-07
Echs1	-1.664104858	0.3025525	3.79E-08	1.95E-07
AABR07026893.1	-1.571423733	0.28573904	3.81E-08	1.96E-07
Snapc1	-1.324556252	0.24088959	3.83E-08	1.97E-07
Sumf2	-1.169873066	0.21277471	3.84E-08	1.97E-07
Zfp105	-1.429552678	0.26002731	3.85E-08	1.98E-07
Serpina3c	-2.344879464	0.42660197	3.87E-08	1.99E-07
Mex3a	8.215915093	1.49486539	3.88E-08	1.99E-07
Fv1	1.384742791	0.25202124	3.92E-08	2.01E-07
Cpeb3	1.47338313	0.26819207	3.93E-08	2.02E-07
Cbs	-2.241531193	0.40808484	3.96E-08	2.03E-07
Gckr	-2.346537591	0.42750116	4.04E-08	2.07E-07
Cks1l	1.399591181	0.25501681	4.06E-08	2.08E-07
Rpl26	-1.198281348	0.2183717	4.08E-08	2.09E-07
Dok1	1.521364026	0.27729302	4.10E-08	2.10E-07
Usp6nl	1.149713739	0.20957517	4.11E-08	2.10E-07
Plekho2	1.618879626	0.29514766	4.14E-08	2.11E-07
Daam1	-1.21439062	0.22149586	4.19E-08	2.14E-07
Nme3	-2.01591747	0.36768946	4.19E-08	2.14E-07
Cacna2d1	3.107025549	0.56697668	4.25E-08	2.17E-07
Rbms1	1.703187099	0.31081071	4.26E-08	2.17E-07
Fndc1	4.893826929	0.89330281	4.29E-08	2.19E-07
Zfp865	-1.557414677	0.2842949	4.30E-08	2.19E-07
Klhl23	2.093995239	0.38226359	4.30E-08	2.19E-07
AABR07001923.1	-3.491311097	0.6375872	4.35E-08	2.22E-07
Slc23a1	-2.07381515	0.37873573	4.36E-08	2.22E-07
Fgfr1	1.551565548	0.28337502	4.37E-08	2.22E-07
Naaa	1.743239837	0.31843814	4.39E-08	2.24E-07
Pdk3	2.050747536	0.37472713	4.43E-08	2.26E-07
LOC299277	7.969884053	1.45637322	4.44E-08	2.26E-07
Hrasls5	6.110555389	1.11665121	4.44E-08	2.26E-07
Ptk6	-2.840217813	0.51905458	4.45E-08	2.26E-07
Slc37a1	1.346281118	0.24606678	4.47E-08	2.27E-07
Snrnp48	-1.715304261	0.31371928	4.56E-08	2.32E-07
Pdlim5	1.338059507	0.24482079	4.62E-08	2.34E-07
Arhgap18	-1.472430515	0.26942528	4.63E-08	2.35E-07
Rab7b	3.459180055	0.63312617	4.66E-08	2.37E-07

Rn50_5_0814.28	-5.898143217	1.07971935	4.69E-08	2.38E-07
Ndufc1	-1.579364154	0.28918771	4.72E-08	2.40E-07
AABR07030494.1	6.012234861	1.10092732	4.73E-08	2.40E-07
Myo1f	1.712532491	0.31359791	4.74E-08	2.40E-07
Nat2	-2.269999341	0.4157217	4.75E-08	2.41E-07
Rfesd	-1.599111113	0.29286193	4.75E-08	2.41E-07
Ldlrad4	-1.128452055	0.20674304	4.81E-08	2.43E-07
LOC103692531	-1.788919639	0.32774652	4.81E-08	2.43E-07
Hacd2	-1.070206266	0.19611041	4.84E-08	2.45E-07
Slco1b2	-2.836420463	0.51976953	4.84E-08	2.45E-07
Dmxi2	-1.974264253	0.36191763	4.90E-08	2.48E-07
Frem1	2.715046109	0.49773482	4.90E-08	2.48E-07
Kctd15	2.359113019	0.43249039	4.91E-08	2.48E-07
Ppp2r1b	1.708507653	0.31332136	4.96E-08	2.50E-07
Qprt	-1.663153458	0.30500112	4.95E-08	2.50E-07
Espl1	4.617259756	0.8468952	4.98E-08	2.51E-07
Arrdc2	-2.471156845	0.45328973	4.99E-08	2.52E-07
Cacna1c	3.932700276	0.72139365	4.99E-08	2.52E-07
Pym1	-1.198203033	0.21982492	5.02E-08	2.53E-07
LOC688583	-1.168021252	0.21434578	5.06E-08	2.55E-07
Lpl	3.130635979	0.57466965	5.10E-08	2.57E-07
Car3	-5.891849832	1.08194588	5.16E-08	2.60E-07
Gchfr	-2.260145329	0.41524314	5.24E-08	2.64E-07
Set	3.355014747	0.61645605	5.26E-08	2.65E-07
Ldha	-1.217933411	0.22397677	5.40E-08	2.71E-07
Cpd	1.591082649	0.29269424	5.45E-08	2.74E-07
Tmem150a	-1.348436562	0.24807996	5.46E-08	2.75E-07
Tbk1	-1.411598518	0.25976789	5.51E-08	2.77E-07
D2hgdh	-1.484536095	0.27327209	5.56E-08	2.79E-07
Map2k6	-2.752377083	0.5067317	5.58E-08	2.80E-07
Med9	1.418103823	0.26115589	5.63E-08	2.83E-07
Steap1	3.660354941	0.6741826	5.66E-08	2.84E-07
Arid1a	1.13924289	0.20987893	5.70E-08	2.86E-07
Rrp9	1.529364004	0.28177953	5.71E-08	2.87E-07
RGD1307100	-1.787770934	0.32940239	5.72E-08	2.87E-07
Kif18b	4.582424842	0.84435217	5.73E-08	2.87E-07
Urb1	1.087831275	0.20044922	5.73E-08	2.87E-07
Kdelc2	-1.154187585	0.21273398	5.78E-08	2.89E-07
LOC102549542	-2.164616132	0.39898404	5.79E-08	2.90E-07
LOC500124	-1.552885168	0.28630605	5.83E-08	2.92E-07
Cyp3a85-ps	-3.877213168	0.71497536	5.87E-08	2.93E-07
Cln3	1.328594481	0.24505363	5.91E-08	2.95E-07
Rn50_5_0815.11	-4.628049113	0.85361976	5.90E-08	2.95E-07
LOC100911319	3.51565047	0.64851753	5.92E-08	2.96E-07
Runx2	2.853643518	0.52658974	5.99E-08	2.99E-07
Rab3il1	1.219565196	0.22505044	5.99E-08	2.99E-07

Dnah9	-3.492887426	0.64458887	6.00E-08	2.99E-07
Cdkn1a	2.260885586	0.41729642	6.03E-08	3.01E-07
Fam210b	-2.128023822	0.39287708	6.08E-08	3.03E-07
Ccl3	3.10384531	0.57319064	6.13E-08	3.05E-07
Nmral1	-1.256039039	0.23200773	6.17E-08	3.07E-07
Ntng2	1.682792138	0.31086417	6.19E-08	3.08E-07
Scamp5	1.71833233	0.3174838	6.22E-08	3.10E-07
Dlat	1.052134701	0.19440088	6.23E-08	3.10E-07
Tra2a	-1.128911062	0.20863238	6.27E-08	3.12E-07
AABR07054000.1	-1.731215478	0.32003791	6.32E-08	3.14E-07
Cyp4v3	-1.26216053	0.23333052	6.33E-08	3.14E-07
Nfam1	1.244995056	0.23018828	6.35E-08	3.16E-07
Pus10	-1.552622096	0.28710326	6.38E-08	3.17E-07
Sema5a	2.224576655	0.41148439	6.44E-08	3.20E-07
Lag3	-2.099220631	0.38836146	6.47E-08	3.21E-07
Smad4	1.058936896	0.19591648	6.48E-08	3.22E-07
Ccdc84	-1.326800961	0.24553725	6.53E-08	3.24E-07
Ccbe1	2.88227123	0.53351247	6.57E-08	3.26E-07
Gcgr	-1.839613799	0.34055751	6.60E-08	3.27E-07
Rpl22	-1.004105411	0.1858911	6.61E-08	3.27E-07
RT1-S3	-1.316717642	0.24377656	6.61E-08	3.28E-07
Pim1	1.328778167	0.24609542	6.68E-08	3.31E-07
Acaa2	-1.476012048	0.2733785	6.70E-08	3.32E-07
Ccnd3	1.02622666	0.19012487	6.75E-08	3.34E-07
ste2	-2.927105531	0.54231092	6.76E-08	3.34E-07
ste2	-2.927105531	0.54231092	6.76E-08	3.34E-07
Usp35	2.702131956	0.5007191	6.80E-08	3.36E-07
Tanc1	1.247819494	0.23126665	6.83E-08	3.38E-07
Cd3e	2.453998269	0.45491966	6.88E-08	3.40E-07
Zswim4	1.961432288	0.36362929	6.89E-08	3.40E-07
Adamts1	1.670638014	0.30982763	6.96E-08	3.44E-07
Gm17067	-2.308155721	0.42814748	7.01E-08	3.46E-07
Bok	1.896123391	0.35174052	7.02E-08	3.46E-07
Sh3bp5l	1.375075644	0.25508464	7.02E-08	3.46E-07
Tbc1d1	1.225547561	0.22738017	7.05E-08	3.48E-07
Edem3	1.641413352	0.3046052	7.10E-08	3.50E-07
Nudt16	-1.671268617	0.31025927	7.18E-08	3.53E-07
Pex1	-1.058258377	0.19645933	7.18E-08	3.53E-07
Pnir	-2.175871413	0.4041214	7.28E-08	3.58E-07
Rnf145	1.590812348	0.29549208	7.30E-08	3.59E-07
E4f1	-1.022411208	0.18991153	7.30E-08	3.59E-07
Gzf1	-1.181779914	0.21954188	7.33E-08	3.60E-07
Acsl1	-2.194029893	0.40763387	7.35E-08	3.61E-07
Lacc1	2.108326969	0.39172647	7.36E-08	3.61E-07
Kbtbd3	-2.071729509	0.38492532	7.36E-08	3.61E-07
Fam120a	1.258680749	0.23388771	7.38E-08	3.62E-07

March09	1.669773858	0.31031659	7.41E-08	3.63E-07
LOC100912565	-5.043792655	0.93760161	7.47E-08	3.66E-07
Nsmaf	-1.010714528	0.18791573	7.51E-08	3.68E-07
Tpm4	1.918896663	0.35694256	7.62E-08	3.73E-07
Cyp2c11	-5.454698294	1.01496497	7.69E-08	3.76E-07
Acap2	1.74718396	0.32511202	7.70E-08	3.77E-07
Ca5a	-2.356452837	0.43849134	7.70E-08	3.77E-07
LOC100360095	-7.108686126	1.3229719	7.73E-08	3.78E-07
Gatad2b	1.089999117	0.2028677	7.75E-08	3.79E-07
Tmtc1	2.085640789	0.38833762	7.84E-08	3.83E-07
Nol10	-1.166111489	0.21712599	7.84E-08	3.83E-07
Cyp2j4	-1.7562438	0.32701791	7.85E-08	3.83E-07
Vcl	1.489390026	0.27733862	7.86E-08	3.83E-07
Pak4	1.024209918	0.19071671	7.86E-08	3.83E-07
Fam19a4	6.306614672	1.17473993	7.94E-08	3.87E-07
Rce1	1.055201547	0.19656673	7.95E-08	3.88E-07
Fmc1	-1.438291935	0.26795814	7.98E-08	3.89E-07
Lsm2	1.640109125	0.30574971	8.13E-08	3.96E-07
Phc3	1.631768847	0.30425613	8.18E-08	3.98E-07
Mat1a	-2.014147112	0.3755547	8.18E-08	3.98E-07
Hip1r	1.563119726	0.29146578	8.19E-08	3.98E-07
Kiz	-1.945392964	0.36275227	8.19E-08	3.98E-07
LOC102550396	-2.40914298	0.44936032	8.26E-08	4.02E-07
Kat2b	-1.723986569	0.32159626	8.29E-08	4.03E-07
Itpr1p1	2.411548953	0.44987218	8.30E-08	4.03E-07
Praf2	1.737298785	0.32411877	8.32E-08	4.04E-07
Dock2	2.202580652	0.41097482	8.35E-08	4.05E-07
Mfsd14a	2.333038652	0.43540049	8.40E-08	4.07E-07
Wdr59	-1.078831	0.20136114	8.43E-08	4.09E-07
Robo2	2.443586564	0.45617088	8.47E-08	4.11E-07
Tmem56	1.092223047	0.20394167	8.53E-08	4.13E-07
Taf4	1.241494036	0.23183828	8.56E-08	4.15E-07
RGD1566320	-1.182365347	0.22080879	8.57E-08	4.15E-07
Tshr	4.818203565	0.8998409	8.58E-08	4.15E-07
Lgsn	-6.43483854	1.20176216	8.58E-08	4.15E-07
Fst	4.925264523	0.91998841	8.62E-08	4.17E-07
Tank	-1.24781367	0.23309096	8.63E-08	4.18E-07
LOC100912485	-2.017781	0.37703968	8.72E-08	4.22E-07
Stx11	2.692606814	0.50329724	8.80E-08	4.25E-07
Ugt2b37	-2.763510531	0.5166121	8.83E-08	4.27E-07
AABR07063829.1	3.126414273	0.58448546	8.84E-08	4.27E-07
Gpatch1	-1.307236028	0.24449731	8.96E-08	4.33E-07
Stx1b	-2.855694454	0.53413776	8.97E-08	4.33E-07
Dnajc5	1.137522594	0.21276981	8.98E-08	4.33E-07
Aplp1	1.249438335	0.233712	8.99E-08	4.34E-07
Wipi1	1.139313949	0.21312653	9.01E-08	4.34E-07

Desi2	1.010746215	0.18910671	9.05E-08	4.36E-07
Tyw3	-1.486228989	0.27807507	9.06E-08	4.37E-07
Fhdc1	3.523260254	0.65950932	9.18E-08	4.42E-07
Pgam5	1.205857221	0.22573079	9.19E-08	4.43E-07
Zfp609	1.231298409	0.23056154	9.27E-08	4.47E-07
G6pc3	1.285234752	0.24066649	9.28E-08	4.47E-07
Reep1	1.847830961	0.34616854	9.40E-08	4.53E-07
LOC681367	-1.487931757	0.27876997	9.42E-08	4.54E-07
Klhl17	-1.377708694	0.25820226	9.51E-08	4.58E-07
Nphp4	2.22830333	0.4177219	9.59E-08	4.61E-07
Taf7	-1.149158469	0.21544987	9.62E-08	4.63E-07
Tuba1c	1.792344289	0.33604504	9.63E-08	4.63E-07
Csf1	2.673687186	0.50131471	9.64E-08	4.63E-07
Igtp	-1.519638977	0.28497328	9.68E-08	4.65E-07
Trmu	-1.45055673	0.27211063	9.78E-08	4.69E-07
Mgst3	-2.473863711	0.46416548	9.84E-08	4.72E-07
Emb	1.876793304	0.35231315	9.98E-08	4.78E-07
Zc3h12c	1.982674566	0.37222505	1.00E-07	4.80E-07
Sema3c	2.6765995	0.50251527	1.00E-07	4.80E-07
Ptgir	1.667568307	0.31308568	1.00E-07	4.80E-07
Cgn	-1.11532542	0.20942389	1.01E-07	4.81E-07
Fdps	-1.402261734	0.26330291	1.01E-07	4.81E-07
Lrrc57	-1.539377569	0.28926893	1.03E-07	4.92E-07
Des	2.181541324	0.41005844	1.04E-07	4.96E-07
AC114343.1	-2.19222702	0.41207732	1.04E-07	4.96E-07
Gstm6	-2.959252973	0.55628097	1.04E-07	4.97E-07
Hmgcs2	-1.357640319	0.25522795	1.04E-07	4.98E-07
Irs3	-2.013178086	0.37848668	1.04E-07	4.98E-07
Akap2	1.92271831	0.36158022	1.05E-07	5.02E-07
Rps6kb1	-1.374177106	0.25847664	1.06E-07	5.05E-07
Pdcd5	-1.04032923	0.19571221	1.06E-07	5.07E-07
Pgs1	1.41000027	0.26544504	1.09E-07	5.17E-07
Slc25a48	-2.8741617	0.54135865	1.10E-07	5.25E-07
Csf2ra	1.505224462	0.28363498	1.12E-07	5.31E-07
Selenoo	-1.317100115	0.24824	1.12E-07	5.34E-07
Dsg2	1.12670743	0.21237354	1.12E-07	5.35E-07
Tmem173	1.930435303	0.36391414	1.13E-07	5.37E-07
Acads	-1.645715714	0.31027608	1.13E-07	5.38E-07
Nle1	1.423499783	0.26849964	1.15E-07	5.45E-07
LOC103689949	3.228014206	0.60892467	1.15E-07	5.46E-07
Mboat711	1.068658099	0.20162738	1.16E-07	5.49E-07
Pik3r1	-1.749347845	0.33007816	1.16E-07	5.50E-07
Vnn3	-1.607624483	0.3033611	1.16E-07	5.51E-07
Cd4	1.024185661	0.19326796	1.16E-07	5.51E-07
Pfn1	1.097496974	0.20711893	1.17E-07	5.52E-07
Pygm	1.737215061	0.32796035	1.18E-07	5.58E-07

Znf48	1.101486687	0.20798668	1.18E-07	5.61E-07
Uap1l1	1.656655088	0.31281884	1.18E-07	5.61E-07
C1s	-1.91551844	0.36172015	1.19E-07	5.62E-07
Ehbp1	-1.154051498	0.2179562	1.19E-07	5.64E-07
Mmnrn2	1.185233392	0.22387401	1.20E-07	5.66E-07
Creb3	1.009952256	0.19080148	1.20E-07	5.68E-07
Herpud2	1.063190253	0.20091301	1.21E-07	5.72E-07
Bco1	-2.192272034	0.41443576	1.22E-07	5.79E-07
Steap2	3.133800819	0.59252847	1.23E-07	5.81E-07
Eif1	1.048940416	0.19841426	1.25E-07	5.88E-07
Epcam	-1.676674832	0.31717921	1.25E-07	5.89E-07
Cwf19l2	-1.62065482	0.30661712	1.25E-07	5.90E-07
Rasip1	1.126998697	0.21323975	1.26E-07	5.92E-07
Osbp17	-1.350281157	0.25551922	1.26E-07	5.94E-07
Rps5	1.244140713	0.23547215	1.27E-07	5.96E-07
Dkk3	1.792448711	0.33934789	1.28E-07	6.01E-07
Pxmp2	-1.813695859	0.34343829	1.28E-07	6.05E-07
Stac3	-7.635540305	1.44628805	1.30E-07	6.10E-07
Fermt3	1.253624804	0.23749573	1.30E-07	6.12E-07
Crnk1	-1.407562506	0.26669775	1.31E-07	6.15E-07
LOC691427	-1.44578926	0.27395154	1.31E-07	6.15E-07
Stx2	-1.009060603	0.19120936	1.31E-07	6.16E-07
Rgs1	3.466307407	0.65690289	1.32E-07	6.18E-07
Vcan	4.197253134	0.7954515	1.32E-07	6.18E-07
Cep57	-1.669061743	0.31634283	1.32E-07	6.19E-07
Tars2	-1.066851371	0.20228482	1.33E-07	6.26E-07
Cdkn2b	2.396330649	0.45437753	1.34E-07	6.26E-07
Ddx5	-1.173254757	0.22246446	1.34E-07	6.26E-07
Ephb3	2.327637383	0.44138892	1.34E-07	6.27E-07
Baat	-1.88846423	0.35818738	1.35E-07	6.31E-07
Paccin1	3.190537385	0.60521581	1.35E-07	6.32E-07
Spn	2.117109486	0.40166519	1.36E-07	6.35E-07
Atox1	-1.778883066	0.33769145	1.38E-07	6.46E-07
Rpgr	-1.745332473	0.33134429	1.38E-07	6.47E-07
P4ha1	1.320680052	0.25077399	1.39E-07	6.50E-07
Ttc33	-1.16901727	0.22201704	1.40E-07	6.53E-07
Tdrkh	-2.24279143	0.42595175	1.40E-07	6.53E-07
Sult1c2	-2.077102619	0.39458355	1.41E-07	6.58E-07
Coasy	-1.067304851	0.20275648	1.41E-07	6.58E-07
Exosc9	-1.207989698	0.22953422	1.42E-07	6.62E-07
Eif3k	1.006380661	0.19123865	1.42E-07	6.63E-07
Ube2v2	-1.404769526	0.26698355	1.43E-07	6.65E-07
Spata2L	1.775399977	0.33751659	1.44E-07	6.70E-07
Pdgfrb	1.457446602	0.27709148	1.44E-07	6.71E-07
Setdb2	-1.600677964	0.30432482	1.44E-07	6.71E-07
Il2rg	2.015214217	0.38315624	1.44E-07	6.72E-07

AABR07014550.1	-3.608829848	0.68622103	1.45E-07	6.74E-07
Fgd3	1.198824841	0.22796601	1.45E-07	6.74E-07
Ssbp4	1.616164053	0.30732214	1.45E-07	6.74E-07
Ubxn11	2.938198596	0.55873491	1.45E-07	6.74E-07
Nfkbil1	1.643153491	0.31260106	1.47E-07	6.82E-07
LOC501038	-2.729134191	0.51934887	1.48E-07	6.87E-07
Dhrs7	-1.439665214	0.27399759	1.49E-07	6.89E-07
Zscan29	-2.100921859	0.39990575	1.49E-07	6.92E-07
Gas7	2.742253039	0.52202343	1.50E-07	6.93E-07
Pomgnt1	1.007353546	0.19180523	1.50E-07	6.97E-07
Cldn23	3.172767621	0.60415078	1.51E-07	6.98E-07
Zfp869	-1.566981773	0.29842127	1.51E-07	7.01E-07
Rbl2	-1.659317962	0.3160384	1.52E-07	7.03E-07
Micall2	1.833120703	0.34925946	1.53E-07	7.09E-07
Osbp10	2.507459368	0.47779173	1.54E-07	7.11E-07
Msrb1	-1.369554304	0.26098142	1.54E-07	7.12E-07
Yipf2	1.078106129	0.20548245	1.55E-07	7.16E-07
Sebox	-4.16857387	0.79454113	1.55E-07	7.16E-07
AC107531.3	-3.530348735	0.67295782	1.55E-07	7.18E-07
RGD1305089	-1.20599447	0.22989134	1.55E-07	7.18E-07
Nck1	-1.173480293	0.22374748	1.57E-07	7.23E-07
Abcc6	-2.040839974	0.38927276	1.58E-07	7.30E-07
Mettl14	-1.127673182	0.2151343	1.59E-07	7.34E-07
RGD1564865	-3.398849981	0.64847588	1.59E-07	7.36E-07
AABR07053741.1	-1.432450533	0.27331386	1.60E-07	7.36E-07
Plscr1	1.33698641	0.25513268	1.60E-07	7.39E-07
AABR07030603.1	2.037050246	0.38876599	1.61E-07	7.41E-07
Chrna7	5.779653262	1.10382906	1.64E-07	7.56E-07
Fgb	-1.797641674	0.34339932	1.65E-07	7.60E-07
AABR07013802.1	-1.666758461	0.31840884	1.65E-07	7.61E-07
RGD1564664	2.103810595	0.40205115	1.67E-07	7.68E-07
Ice2	-1.471787523	0.28133697	1.68E-07	7.73E-07
RT1-Da	1.343653554	0.25693958	1.70E-07	7.81E-07
Klhl9	-1.206514522	0.2307423	1.71E-07	7.83E-07
LOC103694864	2.45497323	0.46951859	1.71E-07	7.84E-07
Arsb	1.120422047	0.21432751	1.72E-07	7.88E-07
LOC688655	5.337814613	1.02120561	1.72E-07	7.90E-07
Sh2d4a	-1.111594241	0.2126699	1.72E-07	7.91E-07
Calr3	-1.839694205	0.35200633	1.73E-07	7.93E-07
Tiam1	2.961222109	0.56670053	1.74E-07	7.97E-07
Cacybp	-1.304401272	0.24966945	1.75E-07	8.00E-07
Camk2d	1.943246561	0.37201536	1.76E-07	8.04E-07
Rab15	5.583791021	1.06919822	1.77E-07	8.09E-07
Pdlim4	1.949074551	0.37323901	1.77E-07	8.10E-07
Evi5	-1.628144361	0.31178635	1.77E-07	8.10E-07
Mtrf1	-2.134626982	0.4088515	1.78E-07	8.14E-07

Eml5	-2.336802418	0.44776091	1.80E-07	8.24E-07
Glis3	3.565346583	0.68321548	1.80E-07	8.25E-07
Dapp1	-1.783875851	0.34184433	1.80E-07	8.25E-07
Tmem259	1.090490846	0.20902595	1.82E-07	8.31E-07
Churc1	-1.052372662	0.20178357	1.83E-07	8.38E-07
Ldhd	-1.611734489	0.30904474	1.84E-07	8.39E-07
Igfbp2	3.439638286	0.6595689	1.84E-07	8.40E-07
Plekhh1	1.693013193	0.32488484	1.88E-07	8.57E-07
Reg4	-2.788325886	0.53532665	1.90E-07	8.68E-07
Kin	-1.400686255	0.26893034	1.91E-07	8.69E-07
Edem2	1.022469629	0.19633062	1.91E-07	8.71E-07
Cbx6	1.424488529	0.27362226	1.93E-07	8.80E-07
Rab40b	-1.979254756	0.38048507	1.97E-07	8.99E-07
Fam83d	4.844012596	0.93162377	2.00E-07	9.10E-07
Frmd8	2.533143403	0.48729725	2.01E-07	9.15E-07
C8a	-1.788532767	0.34407429	2.01E-07	9.16E-07
Nrp2	1.260826833	0.24255817	2.01E-07	9.16E-07
Gpx1	-1.799932618	0.34633059	2.02E-07	9.21E-07
Txlna	1.156694136	0.22259381	2.03E-07	9.24E-07
Ces2h	-1.580013516	0.30407934	2.04E-07	9.26E-07
Ndrp2	-2.888141934	0.55618654	2.07E-07	9.42E-07
Sept08	1.772996473	0.34153327	2.09E-07	9.49E-07
Apoc1	-2.239112288	0.43156532	2.12E-07	9.64E-07
Cep76	1.654344824	0.31887135	2.12E-07	9.64E-07
Ly6e	1.792651436	0.34560686	2.14E-07	9.70E-07
Pcdhgb8	2.957414593	0.57015706	2.14E-07	9.70E-07
Hfe2	-1.441547357	0.27799851	2.15E-07	9.78E-07
Cd99l2	-23.14425428	4.4643113	2.17E-07	9.83E-07
Alg10	1.44620442	0.27896731	2.17E-07	9.84E-07
F8	1.077041209	0.20775605	2.17E-07	9.84E-07
Trib1	1.955979561	0.37753416	2.21E-07	1.00E-06
AABR07055826.1	-4.162045075	0.80344037	2.22E-07	1.00E-06
Zfp617	-2.230223435	0.43058738	2.22E-07	1.01E-06
Ccrl2	2.094691753	0.40449056	2.24E-07	1.01E-06
Ppp1r12c	1.021503903	0.19735782	2.27E-07	1.03E-06
Serping1	-1.879792188	0.36324584	2.28E-07	1.03E-06
Apba1	2.594702312	0.50143439	2.28E-07	1.03E-06
Pkib	3.244554423	0.62706535	2.29E-07	1.04E-06
Pla2g16	-2.010996955	0.3887693	2.31E-07	1.04E-06
AABR07027575.1	4.677234524	0.90421947	2.31E-07	1.04E-06
Fcna	-1.574796869	0.30445609	2.31E-07	1.04E-06
Atrip	-1.197483406	0.23154462	2.32E-07	1.05E-06
Lman1	1.277694352	0.24706094	2.32E-07	1.05E-06
Prkcdbp	1.756142738	0.33977118	2.36E-07	1.06E-06
Apom	-1.863225295	0.3605359	2.37E-07	1.07E-06
Slc16a4	-2.378766104	0.46030468	2.37E-07	1.07E-06

LOC100363112	-7.488710557	1.44959218	2.39E-07	1.08E-06
Serpina6	-2.255983302	0.43673177	2.40E-07	1.08E-06
Arhgap44	2.866910661	0.55508237	2.41E-07	1.08E-06
Yap1	1.154254859	0.22359216	2.44E-07	1.10E-06
Fnip2	1.264211302	0.24501355	2.47E-07	1.11E-06
Kctd18	-1.068098283	0.20702872	2.48E-07	1.12E-06
Max	1.124706762	0.21808861	2.51E-07	1.13E-06
LOC100909441	3.776158299	0.73235012	2.52E-07	1.13E-06
lah1	-1.13592397	0.22031406	2.52E-07	1.13E-06
LOC100158225	-1.917669419	0.37210926	2.56E-07	1.15E-06
Ctps1	2.139818356	0.41531727	2.57E-07	1.16E-06
Serpina5	-4.528682847	0.87914898	2.59E-07	1.16E-06
Sec22a	-1.147015474	0.22273366	2.61E-07	1.17E-06
Dhx36	-1.562195342	0.30338291	2.62E-07	1.17E-06
Aldh3a2	-1.357329699	0.26360954	2.62E-07	1.17E-06
Fstl3	2.848035473	0.55324383	2.63E-07	1.18E-06
Tbc1d9	1.716025215	0.33337257	2.64E-07	1.18E-06
Rerg	1.284805389	0.24967358	2.66E-07	1.19E-06
Ddx20	-1.287000811	0.25014409	2.67E-07	1.20E-06
Sdc2	-1.669365045	0.32451972	2.69E-07	1.20E-06
Pcmdt2	-1.689483052	0.32845181	2.69E-07	1.20E-06
Stard4	-1.177842065	0.22897958	2.69E-07	1.20E-06
Elmod3	-1.263907737	0.24573733	2.70E-07	1.21E-06
Ndufa8	-1.129183725	0.21954829	2.70E-07	1.21E-06
Igfbp5	4.062657578	0.79017254	2.73E-07	1.22E-06
Tonsl	2.914417325	0.5669697	2.74E-07	1.22E-06
Ypel3	-1.094208208	0.21288849	2.75E-07	1.23E-06
Ep300	1.569115971	0.30533738	2.76E-07	1.23E-06
Xdh	-1.116403578	0.21732185	2.79E-07	1.24E-06
Kctd19	5.580505149	1.0869033	2.83E-07	1.26E-06
AABR07070599.1	4.655931076	0.90689753	2.84E-07	1.26E-06
Ddc	-2.268904906	0.44195496	2.84E-07	1.26E-06
Egf	-2.051798879	0.39968248	2.84E-07	1.27E-06
Dedd2	1.486380634	0.28956949	2.85E-07	1.27E-06
Eif6	1.282434565	0.24994485	2.88E-07	1.28E-06
Wt1	3.87601101	0.7554743	2.89E-07	1.29E-06
Psme4	-1.058961763	0.20644074	2.90E-07	1.29E-06
Ptrh1	2.046122266	0.39895712	2.92E-07	1.30E-06
Riok1	-1.387097694	0.27050764	2.93E-07	1.30E-06
Lurap1l	1.547484008	0.30178691	2.93E-07	1.30E-06
Lancl1	1.144397992	0.22319512	2.94E-07	1.30E-06
Dpp4	-1.430935558	0.27910137	2.94E-07	1.31E-06
Rapgef5	1.145103056	0.22356701	3.02E-07	1.34E-06
Enpp2	-2.5033434	0.48881055	3.03E-07	1.34E-06
Brpf3	1.579284279	0.30840063	3.04E-07	1.35E-06
Zmym1	-1.386656723	0.27084118	3.06E-07	1.35E-06

Oat	-2.895627492	0.56586365	3.10E-07	1.37E-06
Idua	-1.071142381	0.20936796	3.12E-07	1.38E-06
Kctd13	1.298292816	0.25388864	3.16E-07	1.40E-06
Apex1	1.032263469	0.20191588	3.18E-07	1.41E-06
Mcm6	3.139992595	0.61422774	3.19E-07	1.41E-06
Ptprv	3.501667545	0.685074	3.20E-07	1.41E-06
Uroc1	-2.313801068	0.45273328	3.21E-07	1.42E-06
Brdt	-3.23466262	0.63292781	3.21E-07	1.42E-06
Ralb	1.175429861	0.22999681	3.21E-07	1.42E-06
Pcdhgb6	2.075761856	0.40627163	3.23E-07	1.43E-06
Edar	-2.940053037	0.57544508	3.24E-07	1.43E-06
Olfml2a	2.324090783	0.45504609	3.27E-07	1.44E-06
Gosr1	1.145811939	0.22435232	3.27E-07	1.44E-06
Apoc3	-2.35797362	0.46203262	3.33E-07	1.47E-06
Tmlhe	-1.257815937	0.24664728	3.40E-07	1.50E-06
Lysmd2	1.15670246	0.22682307	3.40E-07	1.50E-06
Ank2	4.256612988	0.83489671	3.43E-07	1.51E-06
Fpgs	-1.027131226	0.20146324	3.43E-07	1.51E-06
Rtp3	-1.277619057	0.25061488	3.43E-07	1.51E-06
Lgals3bp	1.341482286	0.26315684	3.44E-07	1.51E-06
Pla2g12b	-1.253591099	0.2460302	3.48E-07	1.53E-06
Asrgl1	-1.958170353	0.38432698	3.49E-07	1.53E-06
Reep4	1.010267936	0.19835817	3.52E-07	1.55E-06
Nrbp2	-1.359794499	0.26698888	3.52E-07	1.55E-06
Arhgap30	1.29212223	0.25371235	3.53E-07	1.55E-06
Krcc1	-1.398177913	0.27460494	3.55E-07	1.56E-06
Nrm	2.398296521	0.47107859	3.56E-07	1.56E-06
Ap5z1	1.228912617	0.2415398	3.62E-07	1.59E-06
Usp46	-1.017982526	0.20013393	3.65E-07	1.60E-06
Nova2	2.309927677	0.4541542	3.65E-07	1.60E-06
MGC114492	1.881460574	0.36991033	3.65E-07	1.60E-06
Mpdz	-1.469658849	0.28896812	3.66E-07	1.60E-06
Smyd4	-1.760849636	0.34638044	3.70E-07	1.62E-06
Atp2b4	1.346322402	0.26497958	3.76E-07	1.64E-06
Plekha3	1.143651036	0.22515776	3.79E-07	1.66E-06
Cyp2e1	-1.474586187	0.29046547	3.84E-07	1.68E-06
Tax1bp1	-1.287615657	0.25373694	3.88E-07	1.70E-06
Sh3yl1	-1.701904445	0.33538357	3.89E-07	1.70E-06
Ly6h	5.094729091	1.00410624	3.90E-07	1.70E-06
Spp2	-2.070343964	0.40808366	3.91E-07	1.71E-06
Lrrc29	-1.366846648	0.26945608	3.92E-07	1.71E-06
Cttnbp2nl	1.508322108	0.29741733	3.95E-07	1.72E-06
Crmp1	2.071541947	0.4085103	3.96E-07	1.72E-06
RGD1305733	-2.81453746	0.55566701	4.08E-07	1.78E-06
C4b	1.511714531	0.29848172	4.09E-07	1.78E-06
Cnpy2	-1.044391447	0.20623042	4.10E-07	1.79E-06

Ccne1	2.745603532	0.54216775	4.10E-07	1.79E-06
Rwdd3	-2.411469927	0.47622376	4.11E-07	1.79E-06
Sox11	10.44696696	2.06340141	4.13E-07	1.80E-06
AABR07034657.1	1.511878353	0.29870714	4.16E-07	1.81E-06
Dao	-1.93342758	0.38202023	4.17E-07	1.81E-06
Rbp1	-1.845464804	0.36465566	4.17E-07	1.81E-06
Zfp347	-2.629144585	0.51950235	4.17E-07	1.81E-06
Selenop	-1.910893549	0.37758259	4.17E-07	1.81E-06
Dnajc21	-1.331769699	0.26318748	4.19E-07	1.82E-06
Ces1d	-3.78366288	0.74800276	4.23E-07	1.84E-06
Ces1d	-3.78366288	0.74800276	4.23E-07	1.84E-06
Tpbgl	6.625063274	1.30988801	4.24E-07	1.84E-06
Swsap1	1.723037712	0.3407311	4.26E-07	1.85E-06
Larp1b	-1.228569736	0.24299867	4.28E-07	1.86E-06
Slc2a13	2.530645262	0.50055271	4.29E-07	1.86E-06
Acss3	-1.73434455	0.34315578	4.32E-07	1.87E-06
Gramd1b	1.611028395	0.31897367	4.40E-07	1.91E-06
Tarbp1	1.470102792	0.29110781	4.42E-07	1.91E-06
Notum	-2.394167545	0.47445478	4.51E-07	1.95E-06
RGD1566386	-2.412089587	0.47815398	4.55E-07	1.97E-06
Smc6	-1.884094777	0.37351883	4.55E-07	1.97E-06
Aimp2	1.27416838	0.25263135	4.57E-07	1.98E-06
AABR07040855.1	-1.349277634	0.26754876	4.58E-07	1.98E-06
Shroom4	1.34866819	0.26748118	4.60E-07	1.99E-06
Slc25a21	-2.261113316	0.44846657	4.61E-07	1.99E-06
Slc30a10	-1.748144499	0.34676092	4.62E-07	2.00E-06
Ccl4	2.785018193	0.55248875	4.63E-07	2.00E-06
Glipr2	2.608517138	0.51749938	4.64E-07	2.00E-06
Strbp	-1.260046465	0.2501413	4.72E-07	2.04E-06
S100a6	2.910065322	0.57769727	4.72E-07	2.04E-06
Tgfb3	1.886380508	0.3745208	4.73E-07	2.04E-06
Dnajc12	-1.278136946	0.25378535	4.75E-07	2.05E-06
Acss2	-2.095119049	0.41607641	4.77E-07	2.05E-06
Cyfp2	2.620600571	0.52049544	4.78E-07	2.06E-06
Pbx3	1.384592607	0.27504849	4.80E-07	2.07E-06
RGD1561333	2.215224156	0.44010715	4.82E-07	2.07E-06
Adtrp	-1.602317336	0.31834987	4.82E-07	2.08E-06
Setd1b	1.586717647	0.3153125	4.85E-07	2.09E-06
Adcy4	1.173223317	0.23315212	4.85E-07	2.09E-06
Kcnk6	1.280039646	0.25438929	4.86E-07	2.09E-06
LOC108348052	1.852147343	0.3681221	4.87E-07	2.09E-06
Trip12	-1.155272874	0.22962161	4.87E-07	2.09E-06
Sesn3	1.347140009	0.26788636	4.94E-07	2.12E-06
Pop1	-1.298231896	0.25818799	4.95E-07	2.12E-06
Znr1	1.121839412	0.2231238	4.96E-07	2.13E-06
Atf6b	1.072186354	0.21325784	4.97E-07	2.13E-06

Fmr1	-1.504046285	0.29919072	4.98E-07	2.14E-06
Zfp704	1.979193495	0.39377972	5.00E-07	2.15E-06
Ethe1	-2.206868859	0.43921383	5.05E-07	2.16E-06
Tox3	2.556155629	0.50878469	5.06E-07	2.17E-06
Adk	-1.359344592	0.27057257	5.06E-07	2.17E-06
Tnrc18	1.042252289	0.20745726	5.06E-07	2.17E-06
Clcn6	1.068672776	0.21279348	5.11E-07	2.19E-06
Csrp3	8.744081337	1.74158138	5.15E-07	2.20E-06
Mrnip	-2.173140541	0.43296989	5.19E-07	2.22E-06
Tor4a	1.23744583	0.24659458	5.22E-07	2.23E-06
Fau	1.124848287	0.22415782	5.22E-07	2.23E-06
Gpx3	1.92213764	0.38306115	5.23E-07	2.23E-06
Tagln	2.620535984	0.52225966	5.23E-07	2.23E-06
Gpt2	-1.629944516	0.32483719	5.23E-07	2.23E-06
Gldc	-1.457359522	0.29047542	5.24E-07	2.24E-06
Nr1h3	-1.11671982	0.22263719	5.28E-07	2.25E-06
Cyba	1.493244959	0.29779215	5.32E-07	2.27E-06
RT1-CE9-ps1	1.228364028	0.24497679	5.33E-07	2.27E-06
Prodh2	-1.690979341	0.33734029	5.37E-07	2.29E-06
Zswim3	-1.063105506	0.21211893	5.39E-07	2.30E-06
Litaf	1.05822193	0.2111176	5.41E-07	2.31E-06
Taf5	-1.304032825	0.26023719	5.42E-07	2.31E-06
LOC100910771	-3.128280799	0.62434336	5.43E-07	2.31E-06
Pik3c2g	-1.916787124	0.38261019	5.45E-07	2.32E-06
LOC100910046	-1.51144031	0.30172471	5.46E-07	2.32E-06
Mllt1	1.05191425	0.21003881	5.49E-07	2.33E-06
Relt	1.799844517	0.35945233	5.52E-07	2.35E-06
Proc	-1.746066581	0.34871756	5.53E-07	2.35E-06
Gusb	-1.121028219	0.2239012	5.53E-07	2.35E-06
Ramp3	4.87866382	0.97475332	5.59E-07	2.37E-06
Acnat2	-2.526682621	0.50486683	5.60E-07	2.37E-06
Ybx1	1.045823338	0.20899257	5.61E-07	2.38E-06
Sec14l4	-1.32852916	0.2655207	5.63E-07	2.39E-06
Cfhr1	-2.148919215	0.42953796	5.65E-07	2.39E-06
Zfp524	1.144907035	0.22898096	5.73E-07	2.43E-06
Alox15	2.415919791	0.48321095	5.74E-07	2.43E-06
Wfdc3	-1.46656587	0.29333689	5.75E-07	2.43E-06
AABR07015674.1	7.540955912	1.50847526	5.76E-07	2.44E-06
Zfp868	-1.566233761	0.31334597	5.78E-07	2.45E-06
Insc	-1.138391398	0.22775761	5.79E-07	2.45E-06
Ces1a	-2.31173473	0.46265338	5.83E-07	2.47E-06
Spns2	1.108202129	0.22187437	5.89E-07	2.49E-06
Mcu	1.001797125	0.20076775	6.04E-07	2.55E-06
Hist1h2bk	3.085457422	0.61846385	6.07E-07	2.56E-06
Sall2	1.637618457	0.32826942	6.08E-07	2.57E-06
Hnrnpa1	-1.267471014	0.25410417	6.10E-07	2.58E-06

Syng	-1.258570666	0.25235099	6.12E-07	2.58E-06
Agtpbp1	1.90265479	0.38161679	6.17E-07	2.60E-06
Urm1	1.06340561	0.21335698	6.22E-07	2.63E-06
Edf1	-1.046868413	0.2100423	6.23E-07	2.63E-06
Mphosph6	-1.330275941	0.26695647	6.26E-07	2.64E-06
Tfcp2	-1.009381245	0.20259222	6.28E-07	2.65E-06
Lrp12	1.142549645	0.22933176	6.29E-07	2.65E-06
Tmem38b	-1.231385285	0.24719253	6.31E-07	2.66E-06
Fam102b	2.91498444	0.58531128	6.35E-07	2.67E-06
Adamts14	2.33889722	0.46967944	6.37E-07	2.68E-06
Ftcd	-2.069320476	0.41565297	6.41E-07	2.70E-06
Secisbp2	-1.130008651	0.22709005	6.49E-07	2.73E-06
Syng1	-1.41255554	0.28386877	6.49E-07	2.73E-06
Zfp638	-1.72477193	0.34672311	6.54E-07	2.75E-06
Aldh7a1	-1.607969377	0.32335212	6.60E-07	2.77E-06
Dbr1	-1.041751612	0.20957712	6.67E-07	2.80E-06
Slc5a9	4.997393109	1.00579054	6.74E-07	2.83E-06
Sec16b	-1.473874859	0.29684423	6.86E-07	2.88E-06
Golm1	-1.830784392	0.3687947	6.90E-07	2.89E-06
Ceacam1	-1.939959116	0.39078591	6.90E-07	2.89E-06
Gon7	-1.126436736	0.22698479	6.96E-07	2.91E-06
Efr3b	3.900777365	0.7860796	6.97E-07	2.92E-06
Bcam	1.367178551	0.27552741	6.98E-07	2.92E-06
Hn1	1.375165461	0.27718754	7.01E-07	2.93E-06
Ptges3l1	1.160769272	0.23403097	7.05E-07	2.95E-06
RGD1561812	-1.829421922	0.3688807	7.07E-07	2.96E-06
Dhrs7l1	-4.786115856	0.96516447	7.09E-07	2.97E-06
Zeb2	1.516296676	0.30585459	7.14E-07	2.98E-06
Xrcc4	-1.313701039	0.26499483	7.14E-07	2.98E-06
Fggy	-1.550788914	0.31285098	7.16E-07	2.99E-06
Abcb1a	1.9781836	0.39922153	7.23E-07	3.02E-06
Ttc38	-1.234636246	0.24917214	7.23E-07	3.02E-06
Cdc23	-1.006590436	0.20321433	7.29E-07	3.04E-06
Pcyt2	-1.428377157	0.28838979	7.31E-07	3.05E-06
Fen1	1.704108241	0.34407567	7.32E-07	3.05E-06
Chchd2	1.815130829	0.36649262	7.32E-07	3.05E-06
Fbxo3	-1.356215405	0.27383968	7.32E-07	3.05E-06
Ggh	-1.241721367	0.2507728	7.36E-07	3.07E-06
Fam60a	1.95513421	0.39491363	7.39E-07	3.08E-06
Slc29a3	1.026954813	0.20744095	7.40E-07	3.08E-06
Cwc27	-1.055165013	0.21320449	7.46E-07	3.10E-06
Ppp4r3b	-1.562174477	0.31566282	7.46E-07	3.11E-06
Rn60_14_0076.1	1.82365363	0.36869846	7.57E-07	3.15E-06
Arhgef25	1.826898132	0.36938681	7.58E-07	3.15E-06
Osbpl11	-1.213001815	0.24528284	7.60E-07	3.16E-06
Nfe2	-2.159647436	0.43672071	7.61E-07	3.16E-06

Eml4	-1.030719351	0.20845724	7.63E-07	3.17E-06
Clec11a	1.770413174	0.3581288	7.67E-07	3.19E-06
AABR07024498.1	2.100388873	0.42504916	7.75E-07	3.22E-06
Kdm1b	-1.276023759	0.25830851	7.82E-07	3.24E-06
Ube2c	4.270423769	0.86453608	7.83E-07	3.25E-06
Wtip	2.052646446	0.4157434	7.92E-07	3.28E-06
Tfcp2l1	1.394248182	0.28244195	7.96E-07	3.30E-06
AABR07026797.1	1.188158111	0.24073957	8.00E-07	3.31E-06
Ercc5	-2.154072537	0.43653688	8.04E-07	3.33E-06
Ubap1l	-3.177137688	0.64394539	8.06E-07	3.34E-06
Zfp358	1.257351911	0.25496922	8.16E-07	3.38E-06
Nxpe1	-1.984110475	0.40236519	8.18E-07	3.38E-06
Sorcs2	1.863026262	0.37787234	8.21E-07	3.39E-06
AC120727.1	-6.10095182	1.23776262	8.26E-07	3.41E-06
Cdc25b	2.555922987	0.5185864	8.28E-07	3.42E-06
Arhgap28	2.94044116	0.59677516	8.34E-07	3.44E-06
Sbds	-1.210425867	0.24569233	8.37E-07	3.45E-06
Cfh	-1.748654138	0.35500434	8.40E-07	3.47E-06
Ccdc38	-3.151310357	0.64000136	8.48E-07	3.50E-06
Lrrfip1	1.322673539	0.26868972	8.54E-07	3.52E-06
Pla2g2d	2.7237954	0.55332343	8.54E-07	3.52E-06
Entpd6	1.112539872	0.22603741	8.57E-07	3.53E-06
Dpyd	-1.825740152	0.37097475	8.59E-07	3.54E-06
Bcl3	1.475980354	0.29996724	8.63E-07	3.56E-06
Exosc3	-1.149232386	0.23360083	8.67E-07	3.57E-06
Plxna3	2.347677419	0.47739227	8.76E-07	3.60E-06
Tmem106c	-1.142695621	0.23239881	8.79E-07	3.62E-06
Mtmr11	1.905547563	0.38762314	8.83E-07	3.63E-06
Cyp27b1	6.055686245	1.23191704	8.85E-07	3.64E-06
Hist2h3c2	5.526648339	1.1243304	8.86E-07	3.64E-06
Hs3st1	1.998573285	0.4067952	8.97E-07	3.69E-06
Uhrf1	3.848801143	0.7834701	8.99E-07	3.70E-06
Rnf125	-2.588365569	0.52691029	9.00E-07	3.70E-06
Zwint	1.525588285	0.31064975	9.06E-07	3.72E-06
Col6a6	1.714396992	0.34916925	9.11E-07	3.74E-06
Nr1i3	-4.534501732	0.92363526	9.14E-07	3.75E-06
Itgb2	1.5567457	0.31711363	9.15E-07	3.75E-06
Ncf1	1.423623942	0.29000145	9.15E-07	3.75E-06
Fam134c	-1.270217504	0.25875418	9.16E-07	3.75E-06
Topors	-1.332450443	0.27145536	9.18E-07	3.76E-06
C4bpb	-1.651902681	0.33655872	9.19E-07	3.76E-06
Ddhd1	-2.132218265	0.43441877	9.19E-07	3.76E-06
Trappc12	-1.114425183	0.22709084	9.23E-07	3.78E-06
Hs3st3a1	5.429261295	1.10678662	9.32E-07	3.81E-06
Ccl7	4.134135438	0.84287495	9.35E-07	3.82E-06
Map2k7	1.241112298	0.25312524	9.43E-07	3.86E-06

Mier1	-1.186158163	0.24197679	9.49E-07	3.88E-06
Stab2	1.11614916	0.22775201	9.55E-07	3.90E-06
Lyplal1	-1.051681212	0.21470634	9.67E-07	3.95E-06
Ccdc8	2.951296821	0.60254661	9.68E-07	3.95E-06
Lmbrd2	1.457094127	0.29749791	9.69E-07	3.96E-06
Arc	2.955995475	0.60363544	9.73E-07	3.97E-06
Alg2	1.214901693	0.24812117	9.76E-07	3.98E-06
Plbd1	-1.37475451	0.28081156	9.80E-07	4.00E-06
Lgalsl	-1.229007987	0.25105516	9.81E-07	4.00E-06
Gpd1l	1.028205295	0.21004842	9.83E-07	4.01E-06
Plg	-1.767517807	0.36133227	1.00E-06	4.07E-06
B3gnt2	1.124566165	0.22993423	1.00E-06	4.09E-06
Mpst	-1.495057147	0.30572028	1.01E-06	4.10E-06
Lif	3.443910285	0.70429073	1.01E-06	4.10E-06
Ddit4l	4.404747763	0.90088672	1.01E-06	4.11E-06
Ddit4l	4.404747763	0.90088672	1.01E-06	4.11E-06
Padi3	6.361940579	1.30123698	1.01E-06	4.12E-06
Xylt1	3.191402897	0.65288351	1.02E-06	4.14E-06
Cbx8	-1.284210768	0.26281006	1.03E-06	4.17E-06
Sri	1.11580603	0.22835052	1.03E-06	4.17E-06
Atp6v0c	1.032016636	0.21121637	1.03E-06	4.18E-06
LOC100910143	-23.10651384	4.7302165	1.03E-06	4.20E-06
Tmed5	1.46001703	0.29902746	1.05E-06	4.25E-06
Zcchc7	-1.681429902	0.34438167	1.05E-06	4.25E-06
Kif26b	1.598135249	0.32738489	1.05E-06	4.27E-06
Tcof1	1.158364052	0.23732017	1.06E-06	4.28E-06
Ssna1	-1.056617385	0.21648667	1.06E-06	4.28E-06
Gsg1	9.239083225	1.89398721	1.07E-06	4.34E-06
Coq10a	-1.365565199	0.27995721	1.07E-06	4.35E-06
Abhd18	-1.745770115	0.35796167	1.08E-06	4.36E-06
Ces4a	-2.139464222	0.43872571	1.08E-06	4.37E-06
Itgb1bp2	-2.030584408	0.41643084	1.08E-06	4.38E-06
Tbx2	1.789070769	0.36695393	1.09E-06	4.39E-06
Aim1l	-1.585949372	0.32532391	1.09E-06	4.40E-06
AABR07057196.1	-1.178400802	0.24174329	1.09E-06	4.41E-06
Katna1	-1.013184545	0.20785724	1.09E-06	4.41E-06
Hgd	-1.726581274	0.35429434	1.10E-06	4.44E-06
Zfp422	-1.135925621	0.23316691	1.11E-06	4.47E-06
LOC103691699	-2.897613946	0.59501968	1.12E-06	4.51E-06
Sfmbt2	1.827794397	0.37539933	1.12E-06	4.53E-06
Cst7	2.425640084	0.49825635	1.13E-06	4.54E-06
Cpxm1	1.932995067	0.397124	1.13E-06	4.56E-06
LOC102556092	1.503453083	0.30893832	1.14E-06	4.58E-06
Nrarp	1.805487212	0.37108022	1.14E-06	4.60E-06
Hsd17b2	-2.468523792	0.50740081	1.14E-06	4.61E-06
Mpv17l	-2.06731902	0.42524712	1.17E-06	4.70E-06

Htra3	2.780866075	0.5720568	1.17E-06	4.70E-06
Zfp451	-1.032824394	0.21251373	1.17E-06	4.73E-06
Phf14	-1.021066685	0.21014968	1.18E-06	4.76E-06
Mmd2	-5.172937323	1.06468629	1.18E-06	4.76E-06
Spock1	-2.718621495	0.55954495	1.18E-06	4.76E-06
Sash3	1.381366684	0.28437428	1.19E-06	4.78E-06
Aurkc	-2.557125592	0.52641602	1.19E-06	4.78E-06
Aldh6a1	-1.953531616	0.40219731	1.19E-06	4.79E-06
LOC100911486	2.056161515	0.42342887	1.20E-06	4.82E-06
LOC102546716	3.724757889	0.767073	1.20E-06	4.82E-06
Tbccd1	-1.165812665	0.24015145	1.21E-06	4.85E-06
Pld2	1.144726059	0.23587731	1.22E-06	4.88E-06
Cdo1	-2.234561327	0.46069393	1.23E-06	4.94E-06
Gnl3	-1.152759963	0.23769646	1.24E-06	4.96E-06
Hfe	-1.64215028	0.33875313	1.25E-06	5.01E-06
Tgds	-1.011027495	0.20868228	1.27E-06	5.08E-06
Hebp1	-1.052658409	0.21730458	1.27E-06	5.10E-06
Luc7l3	-1.874338731	0.38693246	1.27E-06	5.10E-06
C8g	-1.812367655	0.37417824	1.28E-06	5.11E-06
Adrm1	1.049432192	0.21666857	1.28E-06	5.11E-06
Il1rn	1.506598035	0.31108175	1.28E-06	5.12E-06
Rgs5	1.482724485	0.30619499	1.28E-06	5.13E-06
Fbxl6	1.085338517	0.22418827	1.29E-06	5.16E-06
Tigd2	-1.514600217	0.31292705	1.30E-06	5.19E-06
Mmd	2.772148161	0.57288625	1.31E-06	5.22E-06
Bbx	1.506525152	0.31136184	1.31E-06	5.23E-06
Cyp4b1	2.73431287	0.56512836	1.31E-06	5.23E-06
Rn50_17_0383.1	5.401829766	1.1165868	1.31E-06	5.24E-06
Washc2c	-1.028990181	0.2127164	1.32E-06	5.25E-06
Fry	1.967631118	0.40677793	1.32E-06	5.26E-06
Pcyox1l	2.022020254	0.41803442	1.32E-06	5.26E-06
Prr36	5.612441285	1.16065595	1.33E-06	5.30E-06
Nectin2	-1.348893505	0.27903193	1.34E-06	5.33E-06
Kif2a	1.038451304	0.2148419	1.34E-06	5.34E-06
RGD1564171	-2.322011434	0.48042252	1.34E-06	5.35E-06
Asgr1	-1.501151994	0.31070666	1.36E-06	5.40E-06
Mtus1	-1.289753203	0.26695921	1.36E-06	5.40E-06
Mmp10	8.025498515	1.66146758	1.36E-06	5.42E-06
AABR07000261.1	-3.821035197	0.79103658	1.36E-06	5.42E-06
Cald1	-1.108286436	0.22952604	1.38E-06	5.47E-06
Frmd4a	1.891232493	0.39168091	1.38E-06	5.47E-06
Zufsp	-1.212418196	0.25114763	1.38E-06	5.49E-06
Tada2a	-1.136605882	0.2354435	1.38E-06	5.49E-06
Csad	-2.323922069	0.48140555	1.38E-06	5.50E-06
Ecm1	-1.259001938	0.26083362	1.39E-06	5.51E-06
Ppid	-1.084557181	0.22472402	1.39E-06	5.53E-06

Il1rap	-1.228571596	0.25465187	1.40E-06	5.57E-06
Spib	2.244078428	0.46537313	1.42E-06	5.64E-06
Abca5	1.568068548	0.32526743	1.43E-06	5.67E-06
Rn60_2_1877.6	-2.813012214	0.58369585	1.44E-06	5.71E-06
Dmtn	-1.889408004	0.39212315	1.45E-06	5.74E-06
S1pr1	-1.746294768	0.36243859	1.45E-06	5.74E-06
LOC100363469	1.334640539	0.27707156	1.46E-06	5.77E-06
Fam126a	1.813728301	0.37658422	1.46E-06	5.79E-06
Cep70	-2.07619938	0.43115031	1.47E-06	5.81E-06
Rangrf	1.181986917	0.24547847	1.47E-06	5.82E-06
Klf7	1.921972489	0.3993449	1.49E-06	5.88E-06
RGD1311946	1.606823663	0.33386954	1.49E-06	5.89E-06
LOC680039	-1.0313251	0.21430066	1.49E-06	5.89E-06
Cacna2d2	1.405423965	0.29207197	1.49E-06	5.91E-06
Aldh9a1	-1.157561646	0.24057261	1.50E-06	5.91E-06
Pdzd2	1.707946889	0.35499559	1.50E-06	5.93E-06
Nat8b	-1.818000538	0.37795399	1.51E-06	5.96E-06
Vash2	5.836157592	1.21362428	1.52E-06	5.99E-06
RGD1561465	7.490327271	1.55769063	1.52E-06	6.00E-06
Slc41a3	2.055256258	0.42750861	1.53E-06	6.03E-06
Aff3	1.901599024	0.39556102	1.53E-06	6.03E-06
Tlr2	1.449562247	0.301646	1.54E-06	6.08E-06
Lrrk1	1.050817965	0.21873181	1.55E-06	6.12E-06
Klhl7	-1.083657217	0.22558017	1.56E-06	6.13E-06
Rhobtb3	-1.40104182	0.29184471	1.58E-06	6.23E-06
Mt-nd3	-1.18645999	0.24721873	1.59E-06	6.27E-06
LOC100909998	-2.208924575	0.46028451	1.59E-06	6.27E-06
Tppp	-2.428588305	0.50658622	1.63E-06	6.43E-06
Tril	2.099042789	0.43789514	1.64E-06	6.45E-06
Fchsd1	1.409215849	0.29399725	1.64E-06	6.45E-06
Ptgs2	4.568613136	0.95314649	1.64E-06	6.45E-06
LOC100910526	-4.439270799	0.92625466	1.65E-06	6.47E-06
Rnaseh2b	-1.00284385	0.20925844	1.65E-06	6.47E-06
LOC108348298	-1.032534902	0.21557734	1.67E-06	6.56E-06
Plpp3	-1.507470179	0.31482185	1.68E-06	6.60E-06
Tshz3	2.014366105	0.42075377	1.69E-06	6.62E-06
Prmt6	2.613307677	0.54593792	1.69E-06	6.64E-06
Rem2	1.579831799	0.33004166	1.69E-06	6.64E-06
Fam63b	1.169626642	0.24440435	1.70E-06	6.68E-06
Lcor	1.804433602	0.3770605	1.71E-06	6.68E-06
Mfap3	1.231800554	0.257422	1.71E-06	6.69E-06
Pla2g15	1.271166942	0.26572275	1.72E-06	6.73E-06
Zfp260	-1.286155017	0.26886385	1.72E-06	6.74E-06
Kdr	-1.044894133	0.21849833	1.73E-06	6.78E-06
RGD1562420	3.340032155	0.69844394	1.73E-06	6.79E-06
Ercc6	-1.198111453	0.25055067	1.74E-06	6.79E-06

Tlcd2	-2.531216956	0.52934861	1.74E-06	6.79E-06
Brix1	-1.22831299	0.25688915	1.74E-06	6.80E-06
Lilrb4	2.682054837	0.56096387	1.74E-06	6.81E-06
Ttc5	-1.252948912	0.2621521	1.76E-06	6.86E-06
Nol4l	2.560587321	0.53596695	1.77E-06	6.93E-06
Nmrk1	-1.73893231	0.36407524	1.79E-06	6.96E-06
Ppig	-1.414950497	0.29626093	1.79E-06	6.97E-06
Meis1	-1.149378684	0.24070615	1.80E-06	7.00E-06
Haus7	-1.044967446	0.21889163	1.81E-06	7.04E-06
LOC681341	2.001295683	0.41926209	1.81E-06	7.06E-06
Rn60_12_0107.2	-3.36208533	0.70446182	1.82E-06	7.08E-06
C7	2.230153201	0.46763121	1.85E-06	7.20E-06
Ak7	-2.651302419	0.55606729	1.86E-06	7.23E-06
Ddit3	2.059354936	0.43200506	1.87E-06	7.27E-06
Sprtn	1.468492796	0.30815911	1.89E-06	7.32E-06
AABR07007730.1	17.31272463	3.63364375	1.89E-06	7.35E-06
Slc46a1	-1.48582314	0.31187457	1.90E-06	7.36E-06
AABR07030162.1	3.188032383	0.66928007	1.90E-06	7.39E-06
Riok3	1.057007582	0.22193788	1.91E-06	7.41E-06
Fbxo8	-1.04263889	0.21896146	1.92E-06	7.44E-06
Zcchc24	-1.016288212	0.2134278	1.92E-06	7.44E-06
Sh3bgrl2	1.501834856	0.31547297	1.93E-06	7.48E-06
Mtrf1l	-1.24525407	0.2615876	1.93E-06	7.49E-06
Rbp4	-1.616791247	0.3397179	1.94E-06	7.53E-06
Mn1	1.408391462	0.29603915	1.96E-06	7.59E-06
Fmo4	-1.875422892	0.39423682	1.96E-06	7.60E-06
Gnmt	-3.209651687	0.67479387	1.97E-06	7.62E-06
Cuedc1	1.408018642	0.29604924	1.97E-06	7.64E-06
Gadd45b	1.918984768	0.4035198	1.98E-06	7.65E-06
Cdk17	1.280725269	0.26945608	2.00E-06	7.75E-06
Tceal9	2.118300677	0.44588943	2.03E-06	7.83E-06
Ccdc159	-1.389879791	0.29259111	2.03E-06	7.85E-06
LOC100363472	-1.178932111	0.248264	2.05E-06	7.91E-06
Dgcr6	-1.199045942	0.25252731	2.05E-06	7.92E-06
LOC257650	-2.382128025	0.50182832	2.07E-06	7.97E-06
Mmab	-1.208124865	0.25457308	2.08E-06	8.01E-06
Slc39a6	1.336200507	0.28158345	2.08E-06	8.03E-06
Dcun1d4	-1.094779901	0.23075101	2.09E-06	8.06E-06
Mrps18b	1.075087466	0.22662771	2.10E-06	8.08E-06
Atp13a3	1.827316547	0.38533799	2.11E-06	8.15E-06
Cdt1	3.128104645	0.65965095	2.12E-06	8.15E-06
Homer3	1.39723967	0.29473775	2.13E-06	8.21E-06
Sv2a	1.319017888	0.2783361	2.15E-06	8.27E-06
Clk4	-1.814737037	0.38296592	2.15E-06	8.28E-06
Rbm42	1.114629824	0.23523833	2.16E-06	8.29E-06
Vps36	-1.084634161	0.22901211	2.18E-06	8.38E-06

RGD1310081	2.345596607	0.49553656	2.21E-06	8.49E-06
Ddx10	-1.3116154	0.27714863	2.22E-06	8.53E-06
Stard13	-1.112119098	0.23502094	2.22E-06	8.55E-06
Suox	-1.725357213	0.36479721	2.25E-06	8.64E-06
Dcaf4	-1.114927253	0.23585875	2.28E-06	8.74E-06
Adamts11	3.704787427	0.78402644	2.30E-06	8.82E-06
Gzma	-2.263645837	0.47929194	2.33E-06	8.92E-06
Bach1	1.512338294	0.32030767	2.34E-06	8.98E-06
Opn3	2.579076128	0.54627932	2.34E-06	8.99E-06
Kctd11	1.225017344	0.25950225	2.35E-06	9.01E-06
Zfp11	-1.639649239	0.34733652	2.35E-06	9.01E-06
Mex3c	1.28679873	0.27269461	2.37E-06	9.09E-06
Slc2a5	-2.570383179	0.54485714	2.39E-06	9.14E-06
Dnase1l3	-1.230753051	0.26093926	2.40E-06	9.18E-06
Fbxw17	1.354713786	0.287239	2.40E-06	9.19E-06
Rnf146	-1.021068269	0.21661305	2.43E-06	9.30E-06
Jchain	2.043727298	0.43361221	2.44E-06	9.32E-06
Naf1	1.275731802	0.27086187	2.48E-06	9.47E-06
Cds1	1.0259938	0.21785282	2.48E-06	9.48E-06
Tmod1	2.931714796	0.62286882	2.52E-06	9.60E-06
Rfxank	-1.337240426	0.28415306	2.53E-06	9.64E-06
Atp13a5	-1.826250468	0.38822448	2.55E-06	9.72E-06
Vma21	1.252858547	0.26638432	2.56E-06	9.76E-06
Cryab	4.007745251	0.85220818	2.57E-06	9.78E-06
LOC297568	-2.539909244	0.5401089	2.57E-06	9.79E-06
Zfp458	-3.153863812	0.6710549	2.60E-06	9.91E-06
Usp15	-1.21024796	0.25752428	2.61E-06	9.92E-06
LOC100909840	2.726240616	0.58015931	2.61E-06	9.94E-06
Coq8a	-2.041723689	0.43452658	2.62E-06	9.96E-06
Tmcc2	2.24616204	0.47816253	2.63E-06	1.00E-05
Spry2	1.345525094	0.28645758	2.64E-06	1.00E-05
Acot11	3.420871406	0.72834377	2.64E-06	1.00E-05
Rnd2	-1.90276228	0.40512019	2.64E-06	1.00E-05
Hsd17b6	-1.946526741	0.41462033	2.67E-06	1.01E-05
Il36b	-2.040698924	0.43471725	2.68E-06	1.02E-05
Clec1b	-1.659268822	0.35346458	2.68E-06	1.02E-05
Mcm5	3.581969557	0.7631334	2.68E-06	1.02E-05
RGD1310819	4.38474275	0.93449676	2.70E-06	1.03E-05
Klhdc8a	-1.595584548	0.34009755	2.71E-06	1.03E-05
Dcakd	1.046882048	0.22321005	2.73E-06	1.03E-05
Ptprh	-3.054500061	0.65136519	2.74E-06	1.04E-05
Tspan17	4.168080608	0.88891002	2.75E-06	1.04E-05
Smug1	1.404648519	0.29956521	2.75E-06	1.04E-05
Ngdn	-1.057258154	0.22549108	2.75E-06	1.04E-05
Tmem14c	-1.032801694	0.22032171	2.76E-06	1.05E-05
Ano2	5.708009016	1.21781069	2.77E-06	1.05E-05

Myom1	-2.557997109	0.54581483	2.78E-06	1.05E-05
Inf2	1.360468747	0.29037699	2.80E-06	1.06E-05
Dnajb9	1.153447841	0.24622723	2.81E-06	1.06E-05
Cars2	-1.547776433	0.33042915	2.81E-06	1.06E-05
Asap2	1.429397751	0.30516452	2.81E-06	1.06E-05
Acbd4	-1.104003352	0.23573696	2.82E-06	1.07E-05
Rpusd2	-1.159175803	0.2475317	2.83E-06	1.07E-05
Gpm6b	1.775428142	0.3791769	2.84E-06	1.07E-05
Fzd3	2.007591106	0.42904786	2.88E-06	1.09E-05
Frs3	-1.34034916	0.28650768	2.89E-06	1.09E-05
Snai2	-1.78374634	0.38144128	2.92E-06	1.10E-05
Nphp1	-1.160069371	0.24808473	2.92E-06	1.10E-05
Vps54	-1.183214067	0.25305872	2.93E-06	1.10E-05
St8sia1	-3.174759336	0.67901587	2.93E-06	1.10E-05
Cideb	-1.483179993	0.31722469	2.93E-06	1.10E-05
Smc1a	-1.195005967	0.25561352	2.94E-06	1.11E-05
Mmp13	5.46756909	1.16957004	2.94E-06	1.11E-05
Sp6	4.153102155	0.88872483	2.97E-06	1.12E-05
Casp6	-1.316376002	0.28177043	2.99E-06	1.12E-05
Casp6	-1.316376002	0.28177043	2.99E-06	1.12E-05
Tmem159	-1.160796972	0.24849829	2.99E-06	1.13E-05
Abca8a	-1.892377551	0.40512044	3.00E-06	1.13E-05
Unc5c	2.383639783	0.51033893	3.00E-06	1.13E-05
Slu7	-1.145124317	0.2451888	3.01E-06	1.13E-05
Itih1	-1.70441854	0.36494312	3.01E-06	1.13E-05
Lpcat1	1.411964854	0.30243935	3.03E-06	1.14E-05
Fam207a	-1.106035485	0.2369285	3.04E-06	1.14E-05
Xirp2	9.455155271	2.025797	3.05E-06	1.14E-05
Plxdc2	1.691341947	0.36243577	3.06E-06	1.15E-05
Nrp1	1.16443386	0.24953308	3.06E-06	1.15E-05
Ston1	2.127384439	0.45591025	3.07E-06	1.15E-05
Mlh1	-1.668185818	0.35760932	3.09E-06	1.16E-05
Inhbc	-1.661452936	0.35617406	3.09E-06	1.16E-05
Cdc34	1.108806028	0.2377079	3.09E-06	1.16E-05
Msc	3.127808946	0.67055282	3.09E-06	1.16E-05
Pdcd10	-1.008596664	0.21623529	3.10E-06	1.16E-05
Neurl2	-1.376209971	0.29504635	3.10E-06	1.16E-05
Pcolce	1.623096147	0.34807525	3.12E-06	1.17E-05
Dok4	1.542044094	0.3307039	3.12E-06	1.17E-05
Atg4a	-1.351784292	0.28993081	3.12E-06	1.17E-05
Cyp2c6v1	-1.515935903	0.32525378	3.15E-06	1.18E-05
Cpne9	6.329630644	1.3586025	3.18E-06	1.19E-05
Ppic	2.014902321	0.43272414	3.22E-06	1.20E-05
Stk24	1.121244405	0.24086981	3.24E-06	1.21E-05
Zfp322a	-1.512772887	0.3250273	3.25E-06	1.21E-05
Dnajb1	2.135667109	0.45925751	3.32E-06	1.24E-05

Stap1	2.34147748	0.50375594	3.35E-06	1.25E-05
Dpys	-1.570120609	0.33788519	3.37E-06	1.26E-05
Prkacb	1.331483258	0.28653909	3.37E-06	1.26E-05
Myo10	1.297257896	0.27926514	3.40E-06	1.27E-05
Tex12	-2.948738226	0.63498297	3.42E-06	1.27E-05
RGD1311756	-1.149559769	0.24760753	3.44E-06	1.28E-05
Reg3b	7.424775075	1.5992442	3.44E-06	1.28E-05
LOC108351584	-1.709740647	0.36839075	3.47E-06	1.29E-05
LOC689065	-3.500448464	0.7543638	3.48E-06	1.29E-05
Galns	1.657257391	0.35720123	3.49E-06	1.30E-05
Itga8	2.494795313	0.53783515	3.51E-06	1.30E-05
Fxyd1	-1.973623609	0.42551939	3.52E-06	1.31E-05
Zfp52	-2.855905944	0.615983	3.55E-06	1.32E-05
Tnn	4.944548068	1.06655366	3.55E-06	1.32E-05
Tnfsf9	3.816750069	0.82338038	3.56E-06	1.32E-05
Pddc1	-1.083516995	0.23374995	3.56E-06	1.32E-05
Myo7a	1.155358228	0.24935877	3.60E-06	1.34E-05
Srpx2	2.896777367	0.62547203	3.63E-06	1.35E-05
Tbc1d31	-1.409888515	0.30448942	3.65E-06	1.35E-05
Rbm19	1.007592959	0.21765981	3.67E-06	1.36E-05
Cacna1d	-1.446253344	0.31243366	3.67E-06	1.36E-05
Exoc8	1.355754775	0.29290129	3.68E-06	1.36E-05
Cyp4f1	-1.377569261	0.29768379	3.70E-06	1.37E-05
Ngfr	2.202312814	0.47626808	3.76E-06	1.39E-05
Slc16a7	-1.078273959	0.23320213	3.77E-06	1.40E-05
Arrdc4	1.971142923	0.42634506	3.78E-06	1.40E-05
Clic4	1.182732845	0.25583939	3.78E-06	1.40E-05
Zcchc6	-1.39629044	0.30209193	3.80E-06	1.41E-05
LOC102547241	3.676157859	0.79542055	3.81E-06	1.41E-05
Stx3	1.622148513	0.35099679	3.81E-06	1.41E-05
Sh3d21	-2.704647358	0.58527811	3.82E-06	1.41E-05
Cdc42ep5	1.915733699	0.41459425	3.82E-06	1.41E-05
Fn1	1.086159666	0.23507938	3.83E-06	1.42E-05
Plgrkt	-1.078904917	0.23351623	3.83E-06	1.42E-05
Tf	-1.658938374	0.35907262	3.84E-06	1.42E-05
LOC679739	-1.149581836	0.24884478	3.84E-06	1.42E-05
Slc35g1	1.29498737	0.28033801	3.85E-06	1.42E-05
LOC100910196	2.75861348	0.59726	3.86E-06	1.42E-05
Acpp	-1.555316414	0.33677785	3.87E-06	1.43E-05
F10	-1.59211766	0.34477168	3.88E-06	1.43E-05
Golga1	-1.306420585	0.28293432	3.89E-06	1.43E-05
LOC308990	1.512550405	0.32763311	3.90E-06	1.44E-05
Gjc2	2.090898606	0.45291575	3.90E-06	1.44E-05
Rpl27a	-1.03805438	0.22486699	3.91E-06	1.44E-05
Sept07	-1.141940976	0.2474724	3.94E-06	1.45E-05
Exo5	-1.109259291	0.24040386	3.95E-06	1.45E-05

Vwa5a	-2.06678056	0.44810091	3.98E-06	1.47E-05
Fam13b	-1.093358256	0.23725074	4.06E-06	1.49E-05
Utp3	-1.279749935	0.27778504	4.09E-06	1.50E-05
Piga	1.54644844	0.33576451	4.11E-06	1.51E-05
Adgrf5	-1.015315863	0.22048718	4.13E-06	1.52E-05
Serf1	-1.323050406	0.28734064	4.14E-06	1.52E-05
Fmnl2	1.770764789	0.38462601	4.15E-06	1.52E-05
Slc4a4	2.099183231	0.45596977	4.15E-06	1.52E-05
Chid1	1.008537547	0.21909571	4.16E-06	1.53E-05
Chid1	1.008537547	0.21909571	4.16E-06	1.53E-05
Col8a2	2.152352018	0.46767924	4.18E-06	1.53E-05
Srpx	1.476035819	0.32076344	4.19E-06	1.54E-05
Bysl	1.22360397	0.26592104	4.20E-06	1.54E-05
Dohh	1.139563553	0.24770155	4.21E-06	1.54E-05
Cacna1b	7.03763011	1.52980911	4.22E-06	1.55E-05
Hpse	1.223438563	0.26601417	4.24E-06	1.55E-05
MGC116121	-1.082434371	0.23536401	4.25E-06	1.56E-05
Fdxr	-1.142117146	0.24842722	4.28E-06	1.57E-05
Pycr2	1.27939184	0.27830035	4.28E-06	1.57E-05
Scn5a	2.310425934	0.50258708	4.28E-06	1.57E-05
Pzca	3.399301304	0.74003451	4.36E-06	1.59E-05
Tgs1	-1.248755978	0.27190621	4.38E-06	1.60E-05
RGD1561161	1.245157268	0.27117882	4.40E-06	1.61E-05
Zhx1	-1.425901921	0.31054901	4.40E-06	1.61E-05
E2f8	5.854503323	1.27525484	4.41E-06	1.61E-05
Nmt2	2.041148818	0.44461878	4.42E-06	1.61E-05
Dram2	-1.143634384	0.24922912	4.46E-06	1.63E-05
Capg	1.866169439	0.4067307	4.47E-06	1.63E-05
RGD1560854	1.102784007	0.24039833	4.49E-06	1.64E-05
RGD1563482	-1.542898569	0.33635021	4.49E-06	1.64E-05
Fmo3	-1.985142284	0.43284342	4.51E-06	1.64E-05
Pstpip2	-1.371231483	0.29906973	4.54E-06	1.65E-05
Aff1	1.372683029	0.29939441	4.54E-06	1.65E-05
Efna1	-1.114350445	0.24326509	4.63E-06	1.69E-05
Acsl3	-1.227290129	0.26794953	4.64E-06	1.69E-05
LOC102550729	-2.015506089	0.44010538	4.66E-06	1.70E-05
Egfl8	-2.500580679	0.54639032	4.73E-06	1.72E-05
Acsn3	-3.28415513	0.71801967	4.79E-06	1.74E-05
Gp1bb	2.671110946	0.58409544	4.81E-06	1.75E-05
Skiv2l2	-1.086378521	0.2375748	4.81E-06	1.75E-05
Tnfrsf10b	1.800241939	0.39375461	4.83E-06	1.75E-05
Dtymk	-1.051729839	0.2300627	4.84E-06	1.76E-05
AABR07009715.1	1.548078407	0.33876934	4.88E-06	1.77E-05
Ufl1	-1.220335341	0.26709296	4.90E-06	1.78E-05
Rbak	-1.347732005	0.29503633	4.92E-06	1.79E-05
Fam83g	4.133576946	0.90500409	4.94E-06	1.79E-05

Ifnlr1	2.560189555	0.5606306	4.96E-06	1.80E-05
Ncs1	2.923485147	0.64035687	4.99E-06	1.81E-05
Ccdc71l	3.310133237	0.72523207	5.01E-06	1.82E-05
Vgf	7.574808094	1.65977292	5.02E-06	1.82E-05
AABR07027753.2	3.670394172	0.80438283	5.04E-06	1.83E-05
Wnt9b	1.960356626	0.42966708	5.05E-06	1.83E-05
Bbox1	-1.783284064	0.39087091	5.06E-06	1.83E-05
Snx20	1.918331025	0.42070718	5.12E-06	1.85E-05
Fam133b	-1.575187739	0.34550811	5.14E-06	1.86E-05
Acad10	-1.716912078	0.37662595	5.15E-06	1.86E-05
Acbd5	-1.684268631	0.36954429	5.17E-06	1.87E-05
AC117058.1	-2.636507218	0.57847725	5.17E-06	1.87E-05
Mug2	-2.174275522	0.47715036	5.19E-06	1.88E-05
Fam171a1	1.741095628	0.38241001	5.29E-06	1.91E-05
Fosb	3.646263576	0.80095378	5.30E-06	1.91E-05
Slco1a4	-2.482152073	0.54538797	5.33E-06	1.92E-05
Fah	-1.706009247	0.37488858	5.35E-06	1.93E-05
Gclc	-1.078648929	0.23703958	5.35E-06	1.93E-05
Slc25a13	-1.557109827	0.3422472	5.37E-06	1.93E-05
Kat6a	1.076579448	0.236662	5.39E-06	1.94E-05
Rspo3	-1.306413244	0.28728419	5.43E-06	1.95E-05
Rnf6	-1.084431976	0.23852795	5.46E-06	1.96E-05
Mss51	-2.54893995	0.56080195	5.49E-06	1.97E-05
Cyb5a	-1.565031093	0.34438968	5.51E-06	1.98E-05
Plcd4	6.670234051	1.46835429	5.55E-06	2.00E-05
Krr1	-1.240391758	0.27311829	5.58E-06	2.00E-05
Cep164	1.062958406	0.23408049	5.60E-06	2.01E-05
Tmem200a	4.924411504	1.08481186	5.64E-06	2.02E-05
Dock4	1.069815178	0.23570231	5.66E-06	2.03E-05
Srgap1	2.251947474	0.49645187	5.73E-06	2.05E-05
Echdc3	-1.366493822	0.30129541	5.75E-06	2.06E-05
Sox12	1.692820603	0.37331173	5.77E-06	2.07E-05
Slc26a8	-1.389190833	0.30639831	5.79E-06	2.07E-05
Acot2	2.094280568	0.46191945	5.79E-06	2.07E-05
Lcp1	1.367551175	0.30165329	5.80E-06	2.08E-05
Endov	-1.306757695	0.28828799	5.82E-06	2.08E-05
Rpl32	-1.331375917	0.29373998	5.83E-06	2.08E-05
Abl1	3.165217257	0.69839202	5.84E-06	2.09E-05
Epb41l2	1.371466168	0.3027011	5.88E-06	2.10E-05
Tas1r1	-2.410050852	0.53195161	5.88E-06	2.10E-05
RGD1564804	-1.350614588	0.29812825	5.89E-06	2.10E-05
Ctnnal1	-1.206661703	0.26636191	5.89E-06	2.10E-05
Krt4	2.581257554	0.56981294	5.90E-06	2.11E-05
Mios	-1.233045021	0.27226919	5.93E-06	2.12E-05
LOC686087	1.865132572	0.41199181	5.98E-06	2.13E-05
Kcnd1	2.376454273	0.52497859	5.99E-06	2.13E-05

Fgl1	-2.166797952	0.47886224	6.04E-06	2.15E-05
AABR07024303.1	-1.628581066	0.3599546	6.06E-06	2.16E-05
Ifi47	1.803979678	0.39900934	6.15E-06	2.19E-05
Tbx15	5.776474576	1.27765796	6.15E-06	2.19E-05
Ift46	-1.008806333	0.22314755	6.16E-06	2.19E-05
Atg10	-1.033738187	0.22883656	6.26E-06	2.22E-05
Sfi1	-1.123166507	0.24864554	6.27E-06	2.23E-05
S1pr3	1.483250975	0.32839362	6.28E-06	2.23E-05
Bphl	-2.119293993	0.46932301	6.31E-06	2.24E-05
Stag2	-1.296667084	0.28716345	6.32E-06	2.24E-05
Pdlim7	1.588362941	0.35179195	6.33E-06	2.25E-05
Snx8	1.008894492	0.22346389	6.34E-06	2.25E-05
Slc52a3	1.548344828	0.34303164	6.37E-06	2.26E-05
Creld2	1.045614399	0.23170876	6.40E-06	2.27E-05
Lgals5	1.94114393	0.43018711	6.41E-06	2.27E-05
Tln2	1.199371003	0.26590434	6.47E-06	2.29E-05
Mocs1	-1.036648151	0.22984012	6.47E-06	2.29E-05
Gpt	-1.667526173	0.36982483	6.51E-06	2.31E-05
LOC688459	6.984062595	1.54972335	6.59E-06	2.33E-05
Dnmt3a	1.048654125	0.23281463	6.66E-06	2.36E-05
Nkg7	1.430109566	0.31752412	6.67E-06	2.36E-05
Igf2bp3	-1.811070053	0.40224371	6.72E-06	2.38E-05
Gcat	-1.783461915	0.39616912	6.74E-06	2.38E-05
Sema6a	1.404406633	0.31200313	6.76E-06	2.39E-05
Ttc19	-1.044293322	0.23202934	6.77E-06	2.39E-05
Mgst1	-1.437116622	0.31934251	6.79E-06	2.40E-05
Hao1	-1.529915836	0.34014103	6.86E-06	2.42E-05
AC118165.1	-1.52735786	0.3397141	6.92E-06	2.44E-05
Trim62	1.806993346	0.40199319	6.95E-06	2.45E-05
AABR07005618.1	-1.590899896	0.3539691	6.97E-06	2.46E-05
Sf3b1	-1.063098339	0.23654007	6.98E-06	2.46E-05
Magix	-1.664605616	0.37038635	6.98E-06	2.46E-05
Rdh16	-1.608182321	0.35794472	7.03E-06	2.48E-05
Rdh16	-1.608182321	0.35794472	7.03E-06	2.48E-05
Dennd3	1.105177734	0.24601488	7.05E-06	2.48E-05
Lrrc24	2.411046809	0.53670503	7.05E-06	2.48E-05
Ppfia1	1.272198921	0.28327923	7.09E-06	2.50E-05
Fam92a	-1.217770714	0.2712174	7.12E-06	2.51E-05
Snx13	-1.381771914	0.30786046	7.18E-06	2.52E-05
Mal2	-1.102788927	0.24577013	7.22E-06	2.54E-05
Plxdc1	2.7852775	0.6208272	7.24E-06	2.55E-05
Caap1	-1.036011947	0.231013	7.30E-06	2.57E-05
Ust	2.152310219	0.47994611	7.31E-06	2.57E-05
Gck	-3.379515125	0.75383782	7.36E-06	2.58E-05
Lrig3	-1.309510237	0.29213503	7.38E-06	2.59E-05
Rubcn	1.001339816	0.22347257	7.44E-06	2.61E-05

Tmem132a	1.006788231	0.2247506	7.48E-06	2.62E-05
Kbtbd12	-2.613916015	0.58371833	7.53E-06	2.64E-05
Rhoq	1.251614644	0.27951146	7.54E-06	2.64E-05
LOC102551435	1.26212433	0.28198409	7.61E-06	2.66E-05
St6galnac3	-2.361757894	0.5277966	7.65E-06	2.68E-05
LOC497899	-1.478047787	0.33046635	7.73E-06	2.70E-05
Mia2	-1.336946243	0.29900561	7.77E-06	2.72E-05
LOC501406	-2.771331026	0.61993601	7.81E-06	2.73E-05
Svbp	-1.337009658	0.29911862	7.83E-06	2.73E-05
RGD1305587	-1.011427341	0.22628521	7.83E-06	2.74E-05
Fbp1	-1.327395492	0.29700862	7.85E-06	2.74E-05
AABR07049574.1	1.687986848	0.37781002	7.90E-06	2.76E-05
Abat	-1.837728553	0.41136381	7.92E-06	2.76E-05
Lhpp	-1.499107676	0.33587846	8.07E-06	2.82E-05
Slc24a3	3.759384567	0.84229578	8.07E-06	2.82E-05
Arid2	1.109810576	0.24867631	8.09E-06	2.82E-05
Zdhhc2	1.226429007	0.27482027	8.09E-06	2.82E-05
Trhde	-1.939189226	0.43458015	8.11E-06	2.83E-05
Lyl1	1.339470716	0.30027392	8.16E-06	2.84E-05
Racgap1	3.211765605	0.72001798	8.17E-06	2.84E-05
Rfxapl1	-21.09949121	4.73085248	8.20E-06	2.85E-05
Sgk2	-1.190183321	0.26685631	8.20E-06	2.85E-05
Mgam	-1.357579289	0.30448095	8.25E-06	2.87E-05
Igf1	-1.268688173	0.28455321	8.25E-06	2.87E-05
Kmo	-1.833286975	0.41122004	8.27E-06	2.87E-05
Palid1	-1.79532247	0.40273925	8.28E-06	2.88E-05
Nipal2	1.589265792	0.3567628	8.40E-06	2.92E-05
Cdk1	3.906110028	0.8769508	8.42E-06	2.92E-05
Csdc2	5.123125758	1.15044516	8.46E-06	2.94E-05
AABR07063893.1	-2.795480648	0.62778257	8.47E-06	2.94E-05
ErbB2	1.740740093	0.39096091	8.49E-06	2.95E-05
Fads1	-1.830966478	0.41136569	8.55E-06	2.97E-05
Cachd1	1.699010505	0.38185705	8.61E-06	2.99E-05
Gpc6	3.091248606	0.69479896	8.62E-06	2.99E-05
Snx29	1.18793783	0.26702706	8.64E-06	2.99E-05
Id4	-1.601799996	0.3603369	8.78E-06	3.04E-05
Pxdc1	1.070167928	0.24074205	8.78E-06	3.04E-05
Ebp	-1.563456518	0.35178764	8.82E-06	3.05E-05
Tmem178a	1.293667811	0.29110745	8.83E-06	3.06E-05
Pde3b	-1.289887814	0.29031035	8.87E-06	3.07E-05
Zfp575	3.06132728	0.68903166	8.87E-06	3.07E-05
Slc22a8	-2.10854688	0.47462946	8.89E-06	3.07E-05
Snx30	1.017288884	0.2290664	8.95E-06	3.09E-05
Nkiras1	-1.016349942	0.22922855	9.26E-06	3.20E-05
Nfyb	-1.135108307	0.25604754	9.28E-06	3.20E-05
LOC100912228	2.016373949	0.45504938	9.37E-06	3.23E-05

AABR07063855.1	-1.091919015	0.24642854	9.38E-06	3.24E-05
LOC103690175	4.978076435	1.12359363	9.40E-06	3.24E-05
Rrm2	3.850694227	0.86918761	9.41E-06	3.25E-05
Elf1	1.139667881	0.25737991	9.51E-06	3.28E-05
Ddah1	-1.052860445	0.2377796	9.52E-06	3.28E-05
Dhrs13	1.010410369	0.22821953	9.54E-06	3.28E-05
AABR07034445.1	2.035363945	0.45978282	9.56E-06	3.29E-05
Scrn3	-1.235024561	0.27901126	9.58E-06	3.30E-05
Nup58	1.246115747	0.2815387	9.60E-06	3.30E-05
Ass1	-1.25643974	0.28390835	9.62E-06	3.31E-05
Lrrc40	-1.088229248	0.24595523	9.67E-06	3.32E-05
Ccr8	5.358122809	1.2111543	9.69E-06	3.33E-05
LOC100911854	-1.602140436	0.3622979	9.77E-06	3.36E-05
Phf11	-1.861300323	0.42102944	9.83E-06	3.38E-05
Disp2	3.195010077	0.7229008	9.88E-06	3.39E-05
Tcf15	4.656621739	1.05419939	1.00E-05	3.43E-05
Zpbp2	-2.013818613	0.45593394	1.00E-05	3.43E-05
Lama4	1.229761354	0.27845923	1.00E-05	3.44E-05
Ramp1	1.364633052	0.309131	1.01E-05	3.47E-05
LOC499136	-2.266692967	0.51348586	1.01E-05	3.47E-05
Ptprz1	6.835061922	1.54857952	1.02E-05	3.48E-05
Exoc6	-1.362120887	0.30880873	1.03E-05	3.52E-05
Nemp1	1.879589829	0.42631946	1.04E-05	3.56E-05
LOC100909712	-1.277313705	0.28975712	1.04E-05	3.57E-05
Tmem141	-1.057750612	0.23999187	1.05E-05	3.58E-05
Skil	1.233137607	0.27980331	1.05E-05	3.58E-05
LOC100912642	-1.702934383	0.38645082	1.05E-05	3.59E-05
Clspn	4.110246606	0.93277963	1.05E-05	3.59E-05
Gstm6l	-3.529486099	0.80142811	1.06E-05	3.63E-05
Dph1	1.160859025	0.26360997	1.06E-05	3.64E-05
Sytl2	-2.062661972	0.46841611	1.07E-05	3.64E-05
Lymr9	-1.129882114	0.25662074	1.07E-05	3.65E-05
Acyp1	-1.269319819	0.28831935	1.07E-05	3.65E-05
Cyb5b	-1.063065518	0.24154394	1.08E-05	3.67E-05
Hspa8	1.826215447	0.41505409	1.08E-05	3.69E-05
Agfg1	1.105269802	0.25122307	1.08E-05	3.70E-05
Rdm1	-1.045078775	0.23757326	1.09E-05	3.71E-05
Rab12	1.311551288	0.29832623	1.10E-05	3.75E-05
Ttc39a	3.131279397	0.7122956	1.10E-05	3.76E-05
Erg	-1.175589793	0.26744352	1.10E-05	3.76E-05
Lyz2	1.807630323	0.41126153	1.11E-05	3.77E-05
Chtf18	2.03060115	0.46202448	1.11E-05	3.77E-05
Bbs9	-1.077641049	0.24524129	1.11E-05	3.78E-05
Gli2	2.991122577	0.68072064	1.11E-05	3.79E-05
Rpl31	-1.045192593	0.23786906	1.11E-05	3.79E-05
LOC688754	2.716166703	0.61827303	1.12E-05	3.80E-05

LOC100911166	8.088670822	1.84225202	1.13E-05	3.84E-05
Chaf1b	3.263803361	0.7434745	1.13E-05	3.85E-05
Cplx2	1.436511571	0.32725098	1.14E-05	3.86E-05
Ocstamp	1.99023022	0.45362422	1.15E-05	3.90E-05
Stra6	4.955835738	1.1296443	1.15E-05	3.90E-05
Mrvi1	1.54257989	0.35163431	1.15E-05	3.90E-05
Gpat2	-2.1218106	0.48375611	1.15E-05	3.92E-05
Klrg1	-1.64515476	0.37511662	1.16E-05	3.92E-05
Shisa4	3.332565575	0.75991454	1.16E-05	3.93E-05
Stt3a	1.015670067	0.23161349	1.16E-05	3.93E-05
Glyctk	-1.401430994	0.31962538	1.16E-05	3.94E-05
Chdh	-1.441634673	0.32882701	1.16E-05	3.95E-05
Rhobtb1	-1.237307482	0.28226499	1.17E-05	3.96E-05
RT1-DOa	-2.450182922	0.55917994	1.18E-05	3.99E-05
AABR07064257.1	-2.260703184	0.51652014	1.20E-05	4.07E-05
Nhp2	1.473559636	0.33673485	1.21E-05	4.09E-05
Cwc22	-1.374924329	0.31438412	1.22E-05	4.14E-05
Pak1ip1	1.119030525	0.25600343	1.24E-05	4.18E-05
Thbd	1.260226612	0.28838292	1.24E-05	4.20E-05
Sctr	2.784643986	0.63738125	1.25E-05	4.22E-05
MIkl	-1.332121666	0.30508377	1.26E-05	4.27E-05
Palm2	1.708282447	0.39140012	1.27E-05	4.30E-05
Gnb4	1.340743322	0.30729057	1.28E-05	4.33E-05
Hirip3	-1.07965401	0.24745667	1.28E-05	4.33E-05
St8sia3	-2.012859515	0.46157856	1.30E-05	4.37E-05
Pfkfb2	1.280838054	0.2937543	1.30E-05	4.38E-05
Rnf138	1.047290402	0.24030367	1.31E-05	4.42E-05
Sox5	-1.35143159	0.31010154	1.31E-05	4.42E-05
Tdrp	1.571878625	0.36071915	1.31E-05	4.43E-05
Prkd1	2.491246373	0.57173304	1.32E-05	4.43E-05
Chchd4	2.475742136	0.56822253	1.32E-05	4.44E-05
Filip1l	1.651624141	0.37926397	1.33E-05	4.48E-05
Lipg	3.274112807	0.75230958	1.35E-05	4.53E-05
Hacl1	-2.088901282	0.48014669	1.36E-05	4.56E-05
Rpe	-1.007248533	0.23158232	1.36E-05	4.58E-05
AABR07066510.1	-1.296264274	0.29806093	1.37E-05	4.59E-05
Tlx3	6.177915382	1.42066291	1.37E-05	4.60E-05
Fam222a	1.828785493	0.42065876	1.38E-05	4.62E-05
AABR07055280.1	4.392744418	1.01051083	1.38E-05	4.63E-05
Ago1	1.083286056	0.24935669	1.40E-05	4.68E-05
Ptpro	1.17448353	0.27035633	1.40E-05	4.68E-05
Atp2c1	-1.167030311	0.26870642	1.40E-05	4.70E-05
Krt75	5.399151951	1.24348202	1.41E-05	4.73E-05
AABR07025787.1	5.087712816	1.17184767	1.41E-05	4.73E-05
Nr2f1	1.359772268	0.31322688	1.42E-05	4.74E-05
LOC100911730	1.61626724	0.3724817	1.43E-05	4.78E-05

Rab31	1.416438041	0.32650654	1.44E-05	4.81E-05
Rcor1	1.573233757	0.36267273	1.44E-05	4.81E-05
Nudt12	-1.606013728	0.37026057	1.44E-05	4.82E-05
Qdpr	-1.417123594	0.32674273	1.44E-05	4.82E-05
Arhgef10	1.166708338	0.26900469	1.44E-05	4.82E-05
Rcn2	1.199699549	0.27675857	1.46E-05	4.87E-05
LOC303448	-1.694520062	0.39092269	1.46E-05	4.87E-05
Spice1	-1.575613116	0.36351934	1.46E-05	4.88E-05
Ptgis	2.41185099	0.55661296	1.47E-05	4.91E-05
LOC100360143	-3.627209369	0.83711434	1.47E-05	4.91E-05
Dok3	1.290401632	0.29781369	1.47E-05	4.91E-05
AABR07058091.2	-2.529734153	0.58391974	1.48E-05	4.92E-05
Ggt5	1.72993153	0.39943483	1.48E-05	4.95E-05
Zfp182	-2.375017306	0.54844361	1.49E-05	4.96E-05
Faap24	-1.459034281	0.3370125	1.50E-05	4.98E-05
Rn50_11_0375.8	2.082027041	0.4810299	1.50E-05	5.00E-05
Prickle3	-1.101175597	0.2544674	1.51E-05	5.02E-05
Crot	-1.803859103	0.41690556	1.51E-05	5.04E-05
Hcn2	2.580500566	0.59641706	1.51E-05	5.04E-05
Iqcc	-1.586750354	0.36678178	1.52E-05	5.05E-05
Nxpe4	-1.66637152	0.38529139	1.53E-05	5.08E-05
Abca9	-1.96447612	0.45445162	1.54E-05	5.12E-05
Zfpm2	1.421847652	0.32895572	1.54E-05	5.13E-05
Crct1	8.622998146	1.99513504	1.55E-05	5.14E-05
Dock7	-1.084286294	0.25091715	1.55E-05	5.15E-05
Mcm3	2.623208215	0.60709876	1.55E-05	5.16E-05
Srek1	-1.271116006	0.2941944	1.56E-05	5.16E-05
Tmem158	3.85933512	0.89325171	1.56E-05	5.17E-05
Map1lc3a	1.028692612	0.23809499	1.56E-05	5.17E-05
Slco1a1	-1.662422634	0.38477327	1.56E-05	5.17E-05
S1pr5	2.234322713	0.51742824	1.57E-05	5.22E-05
Gamt	-1.519641832	0.35196305	1.58E-05	5.23E-05
B4galt6	1.811623501	0.41960036	1.58E-05	5.23E-05
Spire1	1.62607569	0.37663265	1.58E-05	5.23E-05
Rcbtb1	-1.221855646	0.2830929	1.59E-05	5.26E-05
Gna15	1.165583007	0.27006602	1.59E-05	5.27E-05
Nceh1	1.240987737	0.28756032	1.59E-05	5.27E-05
AABR07068285.2	3.693495429	0.85599868	1.60E-05	5.29E-05
Nupr1	2.277073318	0.5283189	1.63E-05	5.40E-05
Pcdh17	3.124691695	0.72502726	1.63E-05	5.41E-05
Actl10	3.058822033	0.70989746	1.64E-05	5.43E-05
LOC100363537	4.86484138	1.12938979	1.65E-05	5.46E-05
Map3k5	1.297255575	0.30117617	1.65E-05	5.46E-05
Jmjd7	1.262273597	0.29317363	1.67E-05	5.50E-05
LOC100912163	-2.278561495	0.52933933	1.67E-05	5.53E-05
Naa15	-1.155777849	0.26854462	1.68E-05	5.54E-05

Nudt13	-1.24115268	0.28843525	1.68E-05	5.56E-05
Pea15	1.05542912	0.24533274	1.69E-05	5.59E-05
March01	-1.728876746	0.40194095	1.70E-05	5.60E-05
Pnn	-1.514597163	0.35234929	1.72E-05	5.67E-05
Mup5	-3.628634666	0.84416715	1.72E-05	5.67E-05
Mcub	2.284095725	0.53138355	1.72E-05	5.67E-05
Slc9a3r2	-1.025826691	0.23871893	1.73E-05	5.70E-05
Hibadh	-1.461845387	0.34019913	1.73E-05	5.70E-05
Pgpep1	-1.283339908	0.29865675	1.73E-05	5.70E-05
Tnfrsf8	4.397132087	1.02333498	1.73E-05	5.71E-05
Batf	1.583507044	0.36854978	1.73E-05	5.71E-05
Rtn4ip1	-1.604960892	0.37356485	1.74E-05	5.72E-05
Fli1	1.508334064	0.35116982	1.75E-05	5.75E-05
Itih3	-1.245128075	0.290029	1.76E-05	5.80E-05
Oxld1	-1.406707652	0.32782091	1.78E-05	5.85E-05
Atoh8	-1.426570857	0.33257297	1.79E-05	5.88E-05
Rasgrp4	1.480349621	0.34510789	1.79E-05	5.88E-05
Arhgap9	1.094959499	0.25530818	1.80E-05	5.90E-05
Zbtb20	1.364496562	0.31818332	1.80E-05	5.91E-05
Clip3	3.072624818	0.71653778	1.80E-05	5.92E-05
Actr6	-1.266903716	0.2956241	1.82E-05	5.98E-05
AABR07022022.1	5.061119151	1.18115484	1.83E-05	6.00E-05
Slc7a6	2.0089129	0.46884891	1.83E-05	6.00E-05
Ubb	1.207963383	0.28204147	1.84E-05	6.05E-05
Cyp2r1	-1.709694774	0.39933202	1.86E-05	6.08E-05
Ndnf	3.285401643	0.76760351	1.87E-05	6.12E-05
Col7a1	2.717659909	0.63499845	1.87E-05	6.12E-05
Pmm1	1.354287423	0.31651813	1.88E-05	6.15E-05
Mrpl14	-1.210062542	0.28289041	1.89E-05	6.18E-05
Mt-co1	-1.171522727	0.27387977	1.89E-05	6.18E-05
Mzf1	-1.867772801	0.43674239	1.90E-05	6.20E-05
Kcnj8	1.107676414	0.25902961	1.90E-05	6.21E-05
Dr1	1.848223924	0.43228594	1.91E-05	6.23E-05
Mras	1.357462101	0.31752432	1.91E-05	6.24E-05
Fabp12	-2.502599264	0.58549873	1.92E-05	6.26E-05
Hdac11	-1.338309513	0.31321821	1.93E-05	6.30E-05
Fgd6	1.689733457	0.39562963	1.95E-05	6.35E-05
Thnsl2	-1.25186666	0.29311457	1.95E-05	6.35E-05
Dph5	-1.274470838	0.29844223	1.95E-05	6.36E-05
Eogt	1.074507985	0.25162398	1.95E-05	6.36E-05
Stk39	2.438139519	0.57099626	1.95E-05	6.37E-05
Nmnat3	-1.267597867	0.29690407	1.96E-05	6.39E-05
Vps50	-1.256322532	0.2942908	1.96E-05	6.40E-05
Trabd2b	3.886328293	0.91040204	1.97E-05	6.40E-05
Kif3c	2.396593276	0.56145256	1.97E-05	6.41E-05
Prkca	1.251710432	0.29327854	1.97E-05	6.42E-05

Eif2ak4	-1.126348565	0.26394229	1.98E-05	6.44E-05
Dapk2	-1.262185144	0.29588245	1.99E-05	6.48E-05
Dpf1	5.529679644	1.29630939	1.99E-05	6.48E-05
Btbd7	1.327237515	0.3111843	2.00E-05	6.50E-05
Tshz2	1.556718559	0.36503354	2.00E-05	6.51E-05
Gapdh-ps2	1.475975708	0.34610474	2.00E-05	6.51E-05
AABR07043748.1	-1.255834128	0.2945059	2.01E-05	6.52E-05
Rad51	2.812113507	0.65948306	2.01E-05	6.52E-05
Cobl	-1.011145438	0.23721317	2.02E-05	6.56E-05
Tgfb2	2.298944759	0.53958862	2.04E-05	6.62E-05
Mphosph10	-1.538660054	0.36120586	2.05E-05	6.64E-05
Mxra7	2.705920257	0.63526939	2.05E-05	6.65E-05
Slc36a4	1.469659958	0.34513442	2.06E-05	6.68E-05
Rnf169	1.185764444	0.27850351	2.07E-05	6.70E-05
Adamts15	2.108066887	0.49523022	2.07E-05	6.72E-05
Zfhx2	1.23821719	0.29094241	2.08E-05	6.75E-05
Nf1x	1.282133875	0.30166838	2.14E-05	6.92E-05
Nrip3	1.914091734	0.45078987	2.18E-05	7.04E-05
Tspan4	1.098651631	0.25875069	2.18E-05	7.04E-05
Pik3cd	1.032891527	0.24327498	2.18E-05	7.05E-05
Plcb4	-1.592786791	0.37515416	2.18E-05	7.05E-05
Lef1	3.860936533	0.90992201	2.20E-05	7.12E-05
Rad52	-1.398670492	0.32964678	2.21E-05	7.13E-05
Pde1a	1.807788029	0.42607646	2.21E-05	7.13E-05
Mt-co2	-1.050929331	0.24774966	2.22E-05	7.16E-05
Dhtkd1	-1.924975575	0.45396282	2.23E-05	7.20E-05
Clcn4	-1.554327343	0.36659107	2.24E-05	7.21E-05
Ywhag	1.08363481	0.25566719	2.25E-05	7.26E-05
Pkm	1.491280926	0.35185493	2.25E-05	7.26E-05
Rbm38	1.074025289	0.25341697	2.25E-05	7.27E-05
Pfkfb1	-1.824647344	0.4306961	2.27E-05	7.32E-05
Erich5	2.941357052	0.69447614	2.28E-05	7.35E-05
Cd84	1.817633379	0.4291887	2.29E-05	7.36E-05
Rbp7	-2.318447389	0.54747203	2.29E-05	7.37E-05
Pla2g4c	-5.650578486	1.33430667	2.29E-05	7.37E-05
Tcaf2	-1.482068141	0.35016947	2.31E-05	7.44E-05
Pot1b	-1.896411737	0.44844788	2.35E-05	7.55E-05
Has2	3.862470347	0.91356444	2.36E-05	7.58E-05
Cd300a	1.198003513	0.28337898	2.36E-05	7.59E-05
Epm2aip1	-1.128512304	0.26699233	2.37E-05	7.61E-05
Kdf1	-1.218168104	0.28828789	2.38E-05	7.65E-05
Alpk3	4.27755152	1.01281315	2.41E-05	7.72E-05
AABR07027902.1	-3.063845803	0.72546729	2.41E-05	7.72E-05
Lrp8	2.659183561	0.63012884	2.44E-05	7.83E-05
Ccdc15	2.892601578	0.68557037	2.45E-05	7.86E-05
Usp24	-1.006233699	0.2385012	2.45E-05	7.86E-05

Apoa1	-1.25666434	0.29791254	2.46E-05	7.89E-05
Tbl1xr1	-1.014509926	0.24055688	2.47E-05	7.92E-05
Lrrc56	-1.502777832	0.35635404	2.47E-05	7.92E-05
LOC100911796	-1.641521326	0.38927485	2.48E-05	7.93E-05
Cyb561a3	1.052273478	0.24956107	2.48E-05	7.94E-05
LOC100911313	3.90258544	0.92639331	2.52E-05	8.07E-05
Adora1	1.11132675	0.26382088	2.53E-05	8.08E-05
Dapk1	1.219000358	0.28942553	2.53E-05	8.10E-05
Hcar2	2.944419138	0.69920896	2.54E-05	8.12E-05
AABR07040412.1	1.195511428	0.28400892	2.56E-05	8.18E-05
Etaa1	-1.70512558	0.40510134	2.56E-05	8.19E-05
Prr7	2.605214522	0.61905015	2.57E-05	8.21E-05
Rnmt	-1.162131066	0.27625683	2.59E-05	8.27E-05
Serpina11	-1.366298095	0.32484038	2.60E-05	8.29E-05
Mid1p1	-1.349716415	0.32091865	2.60E-05	8.30E-05
Fam78a	1.081843789	0.25724341	2.60E-05	8.30E-05
Cnpy4	-1.066729848	0.25369931	2.61E-05	8.33E-05
H2afj	-1.305937537	0.31059613	2.62E-05	8.33E-05
Braf	1.107858528	0.2634988	2.62E-05	8.34E-05
Mib1	1.153413022	0.27437995	2.63E-05	8.36E-05
Rn50_5_0814.20	-3.307014805	0.78675005	2.63E-05	8.37E-05
Pde7a	-1.307167468	0.31115265	2.66E-05	8.45E-05
Cadm1	-1.00671122	0.23983292	2.70E-05	8.58E-05
Pde4c	-2.034042545	0.484602	2.70E-05	8.59E-05
Pou2f2	2.007695505	0.47848194	2.72E-05	8.64E-05
Dnajc27	1.210681875	0.28858454	2.73E-05	8.66E-05
RGD1560925	-4.013352971	0.95681383	2.73E-05	8.69E-05
Ogt	-1.120474021	0.26723942	2.76E-05	8.75E-05
Malt1	-1.236203523	0.29492809	2.77E-05	8.79E-05
Nck2	1.657603065	0.39549733	2.77E-05	8.80E-05
RT1-M6-1	5.272270106	1.25797243	2.78E-05	8.81E-05
Tnip2	-1.007802455	0.24049526	2.78E-05	8.82E-05
Csf3r	1.779219087	0.42467681	2.79E-05	8.85E-05
Dctd	2.19475545	0.52393953	2.80E-05	8.88E-05
Ppial4d	-1.751128331	0.41804334	2.80E-05	8.88E-05
Sat1	1.12877636	0.26955608	2.82E-05	8.93E-05
Ttc36	-2.009620768	0.47993879	2.82E-05	8.94E-05
Rfc4	-1.381391127	0.32993859	2.83E-05	8.95E-05
Prss32	-2.521816055	0.60234263	2.83E-05	8.96E-05
Zfp821	-1.293877364	0.30907891	2.84E-05	8.97E-05
LOC100360781	-1.871111659	0.44710839	2.85E-05	9.02E-05
Osgepl1	-1.2523516	0.29931828	2.86E-05	9.05E-05
Dpysl3	1.778521273	0.42516558	2.88E-05	9.09E-05
Klhl20	-1.147156247	0.27425377	2.88E-05	9.10E-05
Nxt1	1.088600252	0.26028604	2.89E-05	9.12E-05
Mad2l2	1.07108398	0.25611502	2.89E-05	9.13E-05

Cybb	1.065852793	0.25494149	2.91E-05	9.17E-05
Ccdc3	2.816734374	0.67380647	2.91E-05	9.19E-05
Pus3	-1.119244297	0.26777499	2.92E-05	9.21E-05
Slc10a1	-2.188416219	0.52377549	2.94E-05	9.27E-05
Rac2	1.144633941	0.27412397	2.97E-05	9.38E-05
Abcg8	-4.645149364	1.11246555	2.97E-05	9.38E-05
Atxn1	1.440251459	0.34494898	2.98E-05	9.39E-05
Phkb	-1.253680603	0.30041712	3.00E-05	9.47E-05
Fam83a	4.851485806	1.16367354	3.06E-05	9.63E-05
Aldh2	-1.335384406	0.32034309	3.06E-05	9.65E-05
Pex16	-1.139103215	0.27333123	3.08E-05	9.69E-05
LOC100359951	4.694963975	1.12662215	3.08E-05	9.70E-05
Tmem86a	1.304810471	0.31315698	3.09E-05	9.73E-05
Zfp40	-3.124066611	0.75000454	3.11E-05	9.77E-05
LOC691170	-1.946233772	0.46727432	3.11E-05	9.78E-05
Dnajc2	-1.204088664	0.28933962	3.16E-05	9.93E-05
Cfb	-3.003375301	0.7217208	3.16E-05	9.93E-05
Ret	2.781429241	0.6684067	3.16E-05	9.94E-05
Plk1	3.873692149	0.93115421	3.18E-05	9.98E-05
Ugt2b10	-2.24236441	0.53908849	3.19E-05	0.00010006
Parp6	1.173482446	0.28217335	3.20E-05	0.0001004
Hook1	-1.228976848	0.29587824	3.27E-05	0.000102574
Sptbn4	2.622248502	0.63139997	3.28E-05	0.000102798
Adh7	-2.5653246	0.6177808	3.29E-05	0.000103022
Fcrl2	4.555144024	1.09698404	3.29E-05	0.000103029
Kif22	3.026076968	0.72891175	3.30E-05	0.000103347
AABR07056845.1	-2.934854566	0.70697338	3.31E-05	0.0001034
Usp32	-1.156015151	0.27857851	3.33E-05	0.000104086
Myct1	1.314026719	0.31675358	3.35E-05	0.000104626
Celsr1	2.264341214	0.54597876	3.36E-05	0.000105116
LOC691921	-1.325318768	0.31957098	3.37E-05	0.000105153
Phf19	-2.448293855	0.59057519	3.39E-05	0.000105837
LOC108348287	-1.018771031	0.24587387	3.42E-05	0.000106788
Ptger4	2.574546378	0.62141826	3.43E-05	0.000106938
Zbtb46	1.179183302	0.28463427	3.43E-05	0.000107018
Nes	2.008819696	0.48539329	3.50E-05	0.000108983
Nes	2.008819696	0.48539329	3.50E-05	0.000108983
Cxcl12	-1.69058336	0.40868253	3.52E-05	0.000109856
Plekhg6	-1.537681919	0.37174778	3.53E-05	0.000109982
AABR07033887.1	1.813306186	0.43839324	3.53E-05	0.000110011
Ucma	-2.392867486	0.57889819	3.57E-05	0.000111303
Mt1m	7.376571457	1.78463404	3.57E-05	0.000111332
Apc2	1.44838612	0.35050986	3.59E-05	0.00011185
Aurkb	2.976232171	0.7204574	3.61E-05	0.00011239
Rlbp1	4.960420012	1.20103532	3.63E-05	0.000112815
Aldh1l2	-1.114862828	0.27001474	3.65E-05	0.000113374

Fam110c	-1.511632781	0.36622083	3.66E-05	0.000113945
Stam	1.02928713	0.24940033	3.67E-05	0.000114158
Gdf6	4.656315947	1.1284773	3.69E-05	0.000114517
Taf4b	1.408516684	0.34140412	3.70E-05	0.000114762
Gdf10	2.181588559	0.52880102	3.70E-05	0.0001148
Gnat3	-3.20608117	0.77742132	3.72E-05	0.000115551
LOC100912399	1.267875309	0.30750314	3.74E-05	0.000115964
Zfp455	-2.078068483	0.50401621	3.74E-05	0.000115997
Acot3	1.22956179	0.29831854	3.76E-05	0.000116649
Slc22a25	-2.468978619	0.59931455	3.79E-05	0.000117628
Micu3	-2.124745555	0.51584458	3.81E-05	0.000117967
Edem1	1.001280692	0.24334904	3.88E-05	0.000120069
Htr7	2.697973795	0.65588289	3.90E-05	0.000120613
Wwp1	-1.385211262	0.33695088	3.94E-05	0.000121893
Tdrd15	-1.787378306	0.43508884	3.99E-05	0.000123432
Grem2	-1.805652664	0.43978234	4.03E-05	0.000124638
Jam2	1.205743544	0.29373707	4.05E-05	0.000125126
Pm20d1	-1.537101465	0.37461334	4.08E-05	0.00012601
Cntnap1	1.979237796	0.4824676	4.09E-05	0.000126423
Lamc2	1.815855204	0.44266416	4.09E-05	0.000126518
AABR07028381.1	5.811336246	1.41679241	4.10E-05	0.000126685
Cox4i1	-1.041949389	0.25403212	4.10E-05	0.000126722
Tmed8	1.928350043	0.47023057	4.12E-05	0.000127128
Sfxn2	-1.182142839	0.28827422	4.12E-05	0.000127161
Zdhhc23	-1.267800001	0.30921925	4.13E-05	0.000127528
Wbscr17	6.143995732	1.49998889	4.20E-05	0.000129687
Ogfod1	1.097720908	0.26801642	4.21E-05	0.000129834
Pbx2	1.206542405	0.29466796	4.23E-05	0.000130424
Plekho1	1.17686938	0.28748147	4.25E-05	0.000130835
Dcaf13	-1.012551445	0.24755153	4.31E-05	0.000132726
Arrdc3	-2.133467573	0.52168906	4.32E-05	0.000133117
Ttll13	-2.627930088	0.64276405	4.34E-05	0.000133673
Zbtb16	2.743398938	0.67114644	4.36E-05	0.00013414
Zkscan4	-1.883313055	0.46101394	4.40E-05	0.000135528
Thumpd3	-1.006762984	0.24648087	4.42E-05	0.000135831
Zfr	-1.137957077	0.27877906	4.47E-05	0.000137343
Mylk3	-3.557913796	0.87169906	4.47E-05	0.000137522
Adgrg2	6.197738325	1.51853432	4.48E-05	0.000137609
Mzt2b	-1.102971643	0.27028553	4.49E-05	0.000137957
Ccs	-1.146030754	0.28091603	4.51E-05	0.000138585
Gsta1	-1.012547749	0.24822215	4.52E-05	0.000138768
Slf1	-1.891326864	0.46372228	4.53E-05	0.000139104
Sox6	-1.061583455	0.26031424	4.54E-05	0.000139372
LOC654482	2.917587739	0.71545908	4.54E-05	0.000139442
Zc2hc1a	1.731488089	0.42475363	4.57E-05	0.000140274
RGD1565059	-1.330540492	0.32644162	4.58E-05	0.000140587

Zmat1	-2.19573758	0.53874902	4.59E-05	0.000140723
Zfp954	-1.076837436	0.264286	4.61E-05	0.000141341
Als2cr12	-3.011643452	0.73917921	4.62E-05	0.000141444
Adh4	-1.087894776	0.26702105	4.62E-05	0.000141484
AABR07002779.1	9.10885641	2.23596351	4.63E-05	0.000141699
Bmf	-1.717942892	0.42173804	4.63E-05	0.000141862
Ubttd2	1.130091526	0.27752167	4.66E-05	0.000142664
E2f7	5.548907588	1.36325542	4.69E-05	0.000143684
Hjurp	4.273931369	1.05009524	4.70E-05	0.000143833
Iqgap2	-1.361189467	0.33444397	4.70E-05	0.000143833
Zfp219	1.108501948	0.27246934	4.73E-05	0.000144775
Znr1as1	-1.349239848	0.3319222	4.80E-05	0.000146809
Clybl	-1.920297915	0.47261039	4.84E-05	0.000147862
Cer1	-6.367464553	1.56757146	4.87E-05	0.000148583
Ddah2	1.535150553	0.37798089	4.88E-05	0.000148899
Casp1	-1.203116025	0.29624314	4.88E-05	0.000148977
Kazald1	1.933378842	0.47613178	4.89E-05	0.000149336
Tgif1	1.098058191	0.27052394	4.93E-05	0.000150328
Larp4b	1.171653046	0.28876281	4.96E-05	0.000151259
RGD1310212	-1.354212022	0.33376225	4.96E-05	0.000151259
Nab2	1.837136363	0.45291119	4.99E-05	0.000151919
Grcc10	-1.085604356	0.26763516	4.99E-05	0.000151919
LOC100911564	-19.19380613	4.73263898	5.00E-05	0.00015232
Gata3	2.639314258	0.65103019	5.03E-05	0.000153287
Aass	-1.750838091	0.43186922	5.03E-05	0.000153287
Actr3b	2.627941461	0.64868955	5.10E-05	0.000155115
Gpsm1	1.303959336	0.32190363	5.10E-05	0.000155308
Dbil5	-3.124144944	0.77137102	5.12E-05	0.000155686
Ccna2	3.381346317	0.83503524	5.14E-05	0.000156143
Eif2ak2	-1.351241937	0.33370801	5.14E-05	0.000156228
Fmo1	-4.128195426	1.01953631	5.14E-05	0.000156255
Zbtb47	1.267263334	0.31304133	5.16E-05	0.000156772
Arhgap12	-1.359013935	0.33571474	5.16E-05	0.000156805
AABR07058124.4	1.274036651	0.31472503	5.16E-05	0.000156805
Dynlt1	1.454597942	0.359426	5.19E-05	0.000157508
S100a16	1.086805743	0.26857378	5.20E-05	0.000157762
Pnpla3	-2.726669239	0.67386763	5.20E-05	0.000157895
Efcab2	-3.682727853	0.91017528	5.21E-05	0.000157935
Itga1	1.043978375	0.25801769	5.21E-05	0.000157935
Cdyl2	2.255400519	0.55752938	5.22E-05	0.000158448
Aspdh	-1.471441876	0.36375225	5.23E-05	0.000158535
Myh7b	-1.952350858	0.48277461	5.25E-05	0.000159259
Pdzrn3	-1.407627148	0.34820045	5.29E-05	0.000160154
Ttc21b	-1.635349073	0.40475676	5.34E-05	0.000161669
Tigit	5.496324308	1.36112448	5.39E-05	0.000163166
Gtse1	2.315543778	0.57347001	5.40E-05	0.000163344

Nin	2.480807056	0.61469021	5.44E-05	0.000164649
Mt-atp8	-1.383574628	0.34295126	5.48E-05	0.000165707
LOC100360856	-1.556247915	0.38618596	5.58E-05	0.000168713
Agxt	-1.453089079	0.36067859	5.61E-05	0.000169387
Pcdhgb7	2.005579515	0.49795259	5.63E-05	0.000170159
Trim34	-1.310829524	0.32551222	5.65E-05	0.000170618
Zfp964	-1.620142209	0.4023476	5.66E-05	0.000170769
Trpm6	-2.821771261	0.70081269	5.66E-05	0.00017092
Cbwd1	-1.162436268	0.2888973	5.73E-05	0.000172816
Fbxo10	2.093739149	0.52038105	5.73E-05	0.000172919
Trip13	2.213649556	0.55017814	5.73E-05	0.000172919
Akr1c1	-3.338020215	0.82999282	5.78E-05	0.000174096
LOC100359539	3.587799608	0.89284814	5.86E-05	0.000176473
Ddr2	2.747461924	0.68385441	5.88E-05	0.000177013
Uchl1	4.785402758	1.19118331	5.89E-05	0.000177078
Serac1	-1.19659695	0.29785524	5.88E-05	0.000177078
Lims1	1.33994772	0.33353957	5.89E-05	0.000177078
LOC100365363	-1.989162478	0.49513828	5.88E-05	0.000177078
Cdca3	3.569052598	0.88861421	5.91E-05	0.00017771
AABR07062512.1	-1.258100681	0.31325386	5.91E-05	0.000177822
Gipc1	1.117566475	0.27840348	5.96E-05	0.000179132
Tmem167b	1.250602023	0.31163812	6.00E-05	0.000179982
Ibtk	-1.007661631	0.25119914	6.04E-05	0.000181097
Prkar2a	1.143671834	0.28519809	6.07E-05	0.000182071
Faxc	6.611564579	1.64915739	6.10E-05	0.000182807
Ttc21a	-2.189504827	0.54634749	6.14E-05	0.000183923
Tgfb3l	-4.195716996	1.04697182	6.14E-05	0.000183931
LOC103689943	2.342160099	0.58459846	6.16E-05	0.000184671
Fbln5	1.343577385	0.33537747	6.17E-05	0.000184854
Scaper	-1.191132672	0.29733053	6.17E-05	0.000184879
Gm6576	1.00104207	0.24989241	6.18E-05	0.000184999
Srebf1	-1.491981183	0.37254491	6.21E-05	0.00018576
Napsa	1.185844603	0.29610038	6.21E-05	0.00018576
Dab1	-1.612733763	0.40321457	6.34E-05	0.000189636
Sec31b	-2.170973067	0.5428685	6.36E-05	0.000190023
Ccdc102a	1.375937875	0.34419523	6.40E-05	0.000191218
Zfp133	-1.158201781	0.28988955	6.46E-05	0.00019292
Card14	2.440523723	0.61087462	6.47E-05	0.000192969
Hsd1l2	-1.256608478	0.31459591	6.49E-05	0.000193565
Gdf15	2.140520295	0.53600279	6.51E-05	0.000194241
Ulk4	4.085042358	1.02322479	6.54E-05	0.000195127
AABR07024825.1	1.92157322	0.48166553	6.62E-05	0.000197343
Gsta3	1.882066522	0.47185771	6.65E-05	0.000197897
Prc1	3.167734539	0.79422233	6.65E-05	0.000197993
Palld	1.042272224	0.26142821	6.70E-05	0.000199325
Gca	1.669195127	0.41885342	6.74E-05	0.000200708

Fktn	-1.280349893	0.32153387	6.83E-05	0.000203274
Alas2	1.758825399	0.4417545	6.85E-05	0.000203672
Nat8l	4.689786267	1.17798165	6.86E-05	0.000203849
Rxrg	-1.089908224	0.27386843	6.90E-05	0.000205125
Fga	-1.229781976	0.30907267	6.92E-05	0.000205687
LOC100910708	5.336766545	1.34139814	6.93E-05	0.000206022
Icos	1.646019009	0.41378227	6.95E-05	0.000206442
Zfp39	-2.800552334	0.70403664	6.95E-05	0.000206493
Icam5	-2.965280043	0.74551134	6.96E-05	0.000206738
Slc27a5	-1.642653032	0.41300325	6.97E-05	0.000206827
Ddx3	-1.538789827	0.38689079	6.97E-05	0.000206827
Arsg	-1.192697942	0.29989243	6.98E-05	0.000206996
Tubb2b	1.634178066	0.41097833	7.00E-05	0.000207632
Gfm2	-1.023332579	0.25739798	7.02E-05	0.000208145
Vps37c	4.381477423	1.102134	7.02E-05	0.000208311
Zrsr1	-1.174554811	0.29562804	7.09E-05	0.000210315
AABR07053509.2	-2.958549239	0.74480673	7.12E-05	0.00021091
Ttc30b	-1.528463086	0.38478367	7.12E-05	0.00021091
RGD1564074	-1.136434037	0.28616546	7.15E-05	0.000211749
Hspb11	-1.314388812	0.33102908	7.17E-05	0.000212198
Agps	1.416423461	0.35678825	7.19E-05	0.000212772
Gimap4	-1.83261655	0.46178956	7.23E-05	0.00021396
Dok2	1.358695171	0.34245771	7.26E-05	0.000214809
Mtmt7	-3.035463839	0.76515591	7.27E-05	0.00021506
Fam25a	3.760095889	0.94794253	7.29E-05	0.000215501
Kazn	2.140866252	0.53974342	7.30E-05	0.000215584
Adora2b	-2.847554074	0.71802856	7.32E-05	0.0002161
Nt5e	-1.112384743	0.28056825	7.35E-05	0.000216853
Pold1	1.671462165	0.42158079	7.35E-05	0.000216853
Zfp949	-1.361042787	0.34339456	7.39E-05	0.000217838
LOC100910270	1.290931053	0.32572268	7.39E-05	0.000217993
Sc5d	-1.219599204	0.30788469	7.46E-05	0.000219844
Mtmt1	-1.02910631	0.25989072	7.50E-05	0.000221068
Hpgds	-1.398698536	0.35335092	7.55E-05	0.00022231
Poc1a	1.506981112	0.3807813	7.57E-05	0.000222998
Uqcr10	-1.067988057	0.26990608	7.59E-05	0.000223626
Lyar	-1.002697559	0.25350931	7.64E-05	0.000225064
Slc13a3	-2.912940732	0.73661903	7.67E-05	0.000225732
Sema3e	3.642919028	0.92150449	7.71E-05	0.000226787
Rock1	-1.209007655	0.30582463	7.71E-05	0.000226787
Wdr34	1.028165481	0.26022002	7.78E-05	0.000228612
Bmp6	1.164367867	0.29472425	7.79E-05	0.000228988
Lrrn3	-2.025387643	0.51268655	7.80E-05	0.000229105
Mybl2	2.950004451	0.74701771	7.85E-05	0.000230375
Tagap	1.811656769	0.45886067	7.88E-05	0.00023118
Slc22a6	-2.154672176	0.54590092	7.91E-05	0.000232178

Tmem88	1.090339111	0.27626979	7.93E-05	0.00023244
Esco1	-1.413662621	0.35828301	7.96E-05	0.000233274
AABR07042821.1	-1.08140937	0.27420483	8.02E-05	0.000235047
AC103024.2	1.165568642	0.29566013	8.07E-05	0.000236492
Ppil4	-1.170208316	0.29685409	8.08E-05	0.000236618
AABR07012274.1	5.734699547	1.45511102	8.11E-05	0.00023748
Myrip	2.226379327	0.56501662	8.14E-05	0.000238041
Zscan2	-1.625982066	0.41264256	8.13E-05	0.000238041
C2cd2	-1.009120617	0.25614933	8.16E-05	0.000238792
Pip5k1b	2.289859524	0.5813246	8.18E-05	0.000239289
Smpdl3b	2.252478686	0.5718817	8.19E-05	0.000239569
Pter	1.154579715	0.29325873	8.25E-05	0.000241087
Atrnl1	1.240637323	0.31519415	8.28E-05	0.000242013
AABR07034393.1	-2.150476926	0.54643087	8.30E-05	0.00024254
Wdr4	1.16863521	0.2969564	8.31E-05	0.000242618
Prss36	-1.451989267	0.36905288	8.34E-05	0.000243597
Gsdma	-1.916777914	0.48722238	8.35E-05	0.000243831
Eml1	1.143724136	0.29072975	8.36E-05	0.000243905
Mt-nd4l	-1.516532369	0.38563894	8.41E-05	0.000245346
Aqp7	3.689991621	0.93839227	8.42E-05	0.000245534
Spred1	1.192110291	0.3032398	8.45E-05	0.000246428
Dok5	5.425904806	1.38024223	8.45E-05	0.000246508
LOC100362999	-6.772573395	1.72297621	8.47E-05	0.000246769
Wnt2	1.777306578	0.45215089	8.47E-05	0.000246769
Pik3cg	1.072082559	0.27283336	8.51E-05	0.000248052
Fgf11	-2.244995538	0.57133168	8.52E-05	0.000248052
Zfp54	-2.480571013	0.63129211	8.52E-05	0.000248062
Prrg1	-1.746025174	0.4444602	8.55E-05	0.000248987
Siglec10	2.177208988	0.55438809	8.59E-05	0.000250086
Gfap	-1.471685799	0.37495076	8.67E-05	0.000252312
LOC298111	-4.957373293	1.26372179	8.75E-05	0.00025451
Slc38a4	-1.132011644	0.288576	8.75E-05	0.000254555
AABR07028795.1	2.54839623	0.64976991	8.78E-05	0.000255306
Cxcl10	1.859262626	0.47443048	8.89E-05	0.000258386
Dnhd1	-1.345903777	0.3435791	8.95E-05	0.000260095
Foxo1	1.1680706	0.2981926	8.96E-05	0.000260195
Nacad	3.717961501	0.94916946	8.96E-05	0.000260257
Rdh5	-1.34533445	0.34347139	8.97E-05	0.000260419
Tmem55a	1.512259001	0.38614122	8.99E-05	0.000260954
Fpgt	-1.046239974	0.26732489	9.09E-05	0.000263684
Alox5ap	1.073289237	0.27428067	9.11E-05	0.000264331
Klf10	1.124773987	0.28745838	9.12E-05	0.000264545
Akr1c19	-2.144845939	0.54815643	9.12E-05	0.000264545
P2ry6	1.20877566	0.30898962	9.15E-05	0.000265326
Ache	1.108848338	0.28356702	9.22E-05	0.000267071
Fetub	-1.882447932	0.48168479	9.30E-05	0.000269491

Pyroxd2	-1.563010795	0.40002986	9.34E-05	0.000270352
Serhl2	-1.452814641	0.37190237	9.37E-05	0.000271194
Lrrc10b	5.110758741	1.30857711	9.40E-05	0.000272108
RGD1309139	-2.126452689	0.54463356	9.45E-05	0.000273426
Hspbp1	1.103970938	0.28281483	9.48E-05	0.000274304
Dnttip2	-1.333497589	0.34165488	9.50E-05	0.000274774
Plxna2	-1.099338804	0.28181398	9.58E-05	0.000276942
LOC100912365	2.565918545	0.65782285	9.59E-05	0.000277232
Zfp1	-1.245440116	0.3192946	9.60E-05	0.000277232
Xk	-1.063907075	0.2727581	9.60E-05	0.000277237
Smtnl2	1.278891573	0.3279259	9.62E-05	0.000277888
Ncapd2	1.382099077	0.35448462	9.66E-05	0.000279039
Aldh5a1	-1.187709441	0.30469099	9.70E-05	0.000279893
AC130162.1	-1.996075012	0.51210792	9.71E-05	0.0002802
Atp8b4	1.297663585	0.33317473	9.83E-05	0.000283495
Rgs10	1.242476985	0.31916776	9.91E-05	0.000285616
Fam214a	-1.026008656	0.26357054	9.91E-05	0.000285726
Sp5	2.352633326	0.60495593	0.000100686	0.000289974
Pcdhgb5	1.471599909	0.37861095	0.000101558	0.000292383
Rims2	4.547934886	1.17221716	0.000104555	0.000300744
Acmsd	-2.238317468	0.5772059	0.000105384	0.000303023
Slc25a16	-1.05145913	0.27119027	0.000105665	0.000303747
Crip1	1.332368407	0.34364346	0.000105673	0.000303747
Sox18	1.010211108	0.26059124	0.000105921	0.000304353
Adap2	-1.57362534	0.4060964	0.000106623	0.000306207
Cyp4f4	-1.536992638	0.3966509	0.000106657	0.000306252
Hps4	-1.162823658	0.30014188	0.000106955	0.000307053
Pygo1	3.491469877	0.90131017	0.000107164	0.00030749
Gtdc1	-1.105268196	0.28539325	0.000107596	0.000308622
Krt14	7.59206049	1.96045398	0.000107679	0.000308805
Rnaseh2c	-1.333293941	0.34437114	0.000108089	0.000309905
Noct	2.031721415	0.52483729	0.000108325	0.000310439
Ncr3	-1.641278824	0.42406836	0.000108694	0.000311319
Gipc2	2.231408708	0.57654338	0.000108692	0.000311319
M6pr	3.666020739	0.94722254	0.000108708	0.000311319
LOC100909657	-1.615896926	0.41752679	0.000108762	0.000311419
Dock11	-1.217797652	0.31473355	0.00010915	0.000312417
Pcdhga11	2.46023601	0.63592993	0.000109407	0.0003131
Dio1	-1.742863477	0.4506509	0.000109986	0.00031459
Prss21	-3.076670402	0.79556822	0.000110064	0.000314759
Igip	-3.587183214	0.92812696	0.000111103	0.000317506
RGD1304624	1.266513547	0.32789951	0.00011223	0.000320503
Cul4b	-1.083427673	0.28063343	0.000113085	0.000322889
Spag8	-2.344997513	0.60773017	0.000114031	0.000325474
Eva1c	1.651035374	0.42791161	0.000114152	0.000325707
Smarca2	-1.18591947	0.30748871	0.000114886	0.000327685

Aspg	-1.72243128	0.44679648	0.000115697	0.000329768
RGD1566134	-3.530557099	0.91639813	0.000116849	0.000332875
Sirt4	-1.158208696	0.30066372	0.000117074	0.000333346
LOC103690166	-1.633407217	0.42403746	0.00011714	0.000333359
Veph1	-1.294736566	0.33612762	0.000117196	0.000333603
Ksr2	-1.177209513	0.30561314	0.000117176	0.000333603
Il2ra	2.540979056	0.65966952	0.000117206	0.000333603
Car14	-1.340892749	0.348175	0.000117539	0.000334491
Ninj2	-2.871539812	0.74583755	0.000118076	0.00033596
Pigp	-1.005004505	0.26110836	0.000118604	0.000337404
Smarcd3	1.869887514	0.48582579	0.000118657	0.000337496
Tlr9	2.120302264	0.55095725	0.000118893	0.00033805
Slc2a1	1.304768473	0.3390782	0.000119092	0.000338557
Slamf6	2.04506274	0.5315292	0.000119325	0.000338983
Haus1	6.760555131	1.75719923	0.000119404	0.000339147
Mpzl2	-1.134642654	0.29505303	0.00012028	0.000341516
Pcdh20	4.880268177	1.26993074	0.000121569	0.000345056
Cabp1	-1.110151905	0.28893208	0.000121907	0.00034594
Cttn	1.132480056	0.29478983	0.000122209	0.000346691
March06	1.156233105	0.30110766	0.000123068	0.000349068
Zfp53	-2.546625702	0.66330225	0.000123378	0.000349887
Ifi44l	-1.62620544	0.42358535	0.000123464	0.000350068
Dlg5	1.177036048	0.30670066	0.000124174	0.00035196
Bcl2	2.939462013	0.76638963	0.000125326	0.000354978
Hspa4l	1.908207351	0.4977935	0.00012642	0.000357978
Clic5	2.691030261	0.7021632	0.000126855	0.000359122
RGD1304810	2.292789531	0.59829222	0.00012699	0.000359442
Ugt2a1	-2.238459023	0.58423767	0.000127407	0.000360495
Tcaim	-1.426543064	0.37234227	0.000127485	0.000360653
Msl3l2	1.278805813	0.33392739	0.000128356	0.000362991
Rgs3	-1.267629969	0.33125205	0.000129828	0.000366647
Mxra8	1.142159685	0.29847358	0.000129889	0.000366754
Fhl1	1.368640387	0.35768203	0.000130022	0.000367067
Far1	2.177750226	0.56915291	0.000130083	0.000367176
Adam11	-4.328732485	1.1314069	0.000130256	0.000367601
Fam217a	-4.80047325	1.25489156	0.000130555	0.000368381
Fam179a	-3.525412174	0.9218294	0.00013111	0.000369688
Acy3	-1.672575417	0.43744762	0.000131577	0.000370815
LOC100362384	1.615513808	0.42257114	0.000131807	0.000371398
Masp2	-1.290315594	0.33761728	0.000132465	0.00037306
Armc6	1.103259405	0.28868666	0.000132562	0.000373266
LOC103694903	1.111018304	0.29084445	0.000133466	0.000375747
Tmem53	-1.399266614	0.36632186	0.000133574	0.000375987
Ndufv3	-1.123768253	0.29421474	0.000133695	0.000376262
Spatc1	2.44102331	0.63917044	0.000133967	0.000376898
Mt2A	3.200032343	0.83831561	0.000134966	0.000379576

LOC103689947	-1.349881471	0.35368695	0.000135303	0.000380395
Foxs1	2.39385298	0.62731169	0.000135605	0.000381111
Nr2c2	1.291186987	0.33845232	0.000136197	0.000382577
LOC103694863	1.654078497	0.43370315	0.000136819	0.000384192
Ctla4	4.212924028	1.1054614	0.0001384	0.000388566
Nek2	4.414382365	1.15882307	0.000139323	0.000390844
RGD1565183	1.066943972	0.28013812	0.000139736	0.00039191
Eno3	-1.16342005	0.30549047	0.000139887	0.000392199
Ankrd13d	1.731386836	0.45466049	0.000140046	0.000392576
Lhx4	5.969483126	1.56770177	0.000140213	0.000392977
Arhgap29	-1.329616777	0.34921746	0.000140425	0.000393505
AABR07069282.1	2.831509995	0.74370876	0.000140502	0.000393651
Obp1f	-5.048860584	1.32632159	0.000140854	0.00039457
Lmod1	1.889177835	0.4963459	0.000141134	0.000395288
Fzd4	-1.181556878	0.31047235	0.000141418	0.000396014
Unc80	-4.281430128	1.12519859	0.000141779	0.000396957
Cdc20	2.471404332	0.65027051	0.000144358	0.000403638
LOC108348085	8.291797245	2.18180455	0.000144445	0.000403727
Slc43a1	-1.421010492	0.37408332	0.000145488	0.000406504
Aifm3	-2.524104785	0.66459853	0.000145904	0.000407596
Cp	-1.434243901	0.37774689	0.000146553	0.000409129
Plekhs1	-2.075012161	0.54667644	0.000147236	0.000410893
Zbtb25	1.416537965	0.37325052	0.00014756	0.000411728
Amdhd1	-1.557001608	0.4102861	0.000147693	0.000412028
Mterf2	-1.778203746	0.46859383	0.000147783	0.00041214
Pkia	1.81602759	0.47856359	0.000147794	0.00041214
LOC100911956	-1.245268635	0.3281721	0.000147906	0.000412339
LOC108348101	-1.723750436	0.45430814	0.000148101	0.000412743
AC107331.1	-3.363104631	0.88681438	0.000149232	0.000415824
Thrsp	-2.657618991	0.70080722	0.000149303	0.00041588
Mllt11	1.54014479	0.40612923	0.000149287	0.00041588
Trbc2	1.462311439	0.38565412	0.000149578	0.000416489
Trim14	-1.013072309	0.2672196	0.000149945	0.00041724
Plxnc1	1.339720652	0.35339807	0.000150062	0.000417492
Arnt2	3.121785936	0.82349315	0.000150098	0.000417523
Shf	-1.203992816	0.31762302	0.000150263	0.00041791
Mcpt8	-1.851209361	0.48839299	0.000150399	0.000418218
Prkcb	1.446367273	0.3816445	0.000150751	0.000419125
Hlcs	1.118328281	0.2951028	0.000150876	0.000419401
Cpb2	-1.347119653	0.35562568	0.000151848	0.000421887
Rnpc3	-1.196190149	0.3158187	0.000152119	0.000422566
Jade1	-1.165314607	0.30771328	0.000152468	0.000423393
Evc	-1.568525257	0.41419707	0.000152535	0.000423506
Rpl36a	-1.156340885	0.30542392	0.00015308	0.000424946
Cacna2d4	-1.614087661	0.42635253	0.000153212	0.00042524
Ccr7	2.110074446	0.55767361	0.000154509	0.000428621

Cd14	1.115131351	0.29480619	0.000155204	0.00043033
Ghdc	1.083153215	0.28635816	0.000155253	0.000430394
Stx17	-1.088310196	0.28787275	0.000156498	0.00043377
Krt80	4.15053462	1.09788503	0.000156525	0.000433771
Ndufb2	-1.02505416	0.27134581	0.000158304	0.000438329
Pfcp	1.464462326	0.38779227	0.000159105	0.000440473
AABR07027752.2	2.808680072	0.74376538	0.000159176	0.000440594
Recql4	1.945547529	0.51521368	0.000159242	0.000440683
Rasgrp3	-1.21802298	0.32255567	0.000159262	0.000440683
Ntf3	-2.053898984	0.54392749	0.000159333	0.000440804
Rn50_5_0819.1	-3.11501439	0.82504814	0.000159652	0.000441611
LOC100360218	5.003209157	1.32625419	0.000161661	0.000447093
Tspan15	1.098358977	0.29138758	0.000163635	0.000452166
Cps1	-1.425273455	0.37813527	0.000163761	0.00045244
Phf20	1.067000387	0.28316396	0.000164471	0.000454323
Akap17b	-1.683178742	0.44671968	0.000164651	0.000454743
Trappc2	-1.246209107	0.33090879	0.000165871	0.000457802
Gjb1	-1.417268621	0.37637081	0.000166138	0.000458462
Stmn3	-3.564583147	0.94680597	0.000166649	0.000459793
Gtf2h2	-1.21681415	0.3232209	0.000166781	0.000460082
Ldoc1l	1.539604138	0.40899481	0.000166975	0.000460539
Cx3cl1	1.960589146	0.52112562	0.000168412	0.000464187
Nfatc2ip	1.043868609	0.27748276	0.000168612	0.000464582
Xpa	-1.525828463	0.40597204	0.000170964	0.000470744
Svop	3.024717399	0.80494677	0.000171509	0.000472084
Slc3a1	-4.018590848	1.06981971	0.000172427	0.00047445
Fn3k	-1.646325505	0.4382965	0.000172519	0.000474623
AABR07004876.1	4.330378606	1.15296392	0.000172743	0.000475159
Abhd3	3.67384172	0.97848452	0.000173602	0.000477361
Ttc25	-1.389047952	0.37000007	0.000173908	0.000478122
Crybg3	1.310905246	0.34947265	0.000176064	0.000483967
Fam175a	-1.305001782	0.34794143	0.000176386	0.000484691
Adgrl3	1.396225182	0.37279268	0.000180169	0.000494835
Dlg3	-1.557709443	0.41603614	0.000180992	0.00049676
Bach2	1.140079789	0.30455381	0.000181516	0.00049803
Ulk2	-1.077994871	0.28799506	0.000181762	0.000498623
Rad9b	-1.566919187	0.41864518	0.000181957	0.000499072
Nr5a1	5.181730699	1.38606772	0.000185166	0.000507703
Fam171b	2.109568506	0.56431689	0.000185291	0.000507962
Zfp867	-2.442938766	0.65359807	0.000185728	0.000509073
LOC500877	1.526250138	0.40839438	0.000186083	0.000509875
Plcx1	2.351749729	0.62947849	0.000186949	0.00051199
Mblac2	-1.091668242	0.29229849	0.000187885	0.000514435
Slc37a4	-1.377071268	0.36872892	0.000187981	0.000514555
Btnl2	5.811426208	1.55735218	0.000190262	0.000520713
Sulf1	2.511647862	0.67354953	0.000192262	0.000526097

LOC685431	5.137807674	1.37824362	0.000193163	0.000528475
Efna4	-1.11650898	0.29968679	0.000194862	0.000532853
Rn50_6_0926.2	2.266792138	0.60899639	0.000197513	0.000539921
Taf9b	-1.277222184	0.34322958	0.000198287	0.000541855
Irx5	2.058151054	0.55316496	0.000198685	0.000542853
RGD1359634	1.179900546	0.31718189	0.000199263	0.000544066
Efs	1.895296182	0.50955449	0.000199605	0.000544909
LOC688286	-1.565603876	0.42098066	0.000200057	0.000545868
Aste1	-1.344706009	0.36170228	0.000201033	0.000548256
Klhl15	1.437651961	0.386885	0.000202428	0.000551794
Zfp90	-1.3680782	0.36816675	0.000202466	0.000551794
Mutyh	-1.18653872	0.31936736	0.00020298	0.000553103
Crlf1	4.74961988	1.27960618	0.000205805	0.00056052
Zscan26	-1.237578347	0.33344092	0.000206004	0.00056097
LOC100911562	-1.431630498	0.38573667	0.0002061	0.000561137
Polg2	-1.229473634	0.33134393	0.000206796	0.000562843
RGD1310507	-1.091798576	0.29440392	0.000208486	0.000567253
LOC100910130	-1.819654144	0.49079385	0.000209255	0.00056925
Auts2	2.179126851	0.5879921	0.000210519	0.000572592
Adam12	3.397801492	0.91698366	0.000211048	0.000573937
Ntf4	2.712232603	0.73200356	0.000211209	0.000574279
Fzd5	1.187580531	0.32052993	0.000211346	0.000574555
AABR07021930.1	-2.50589405	0.67651258	0.000212113	0.000576448
Asf1b	3.07130511	0.82936252	0.000212887	0.000578262
LOC691995	2.614495107	0.7060493	0.000213071	0.000578666
Rhd	-1.265320904	0.34198391	0.000215648	0.000585274
Abcg3l3	-1.117912942	0.30238606	0.000218186	0.000591669
Itga2	4.269748972	1.15530145	0.000219206	0.000594336
Spata6	1.263025972	0.34189802	0.000220615	0.000597957
Senp7	-1.077347601	0.29167471	0.000221048	0.000598833
Icam4	-4.286932228	1.16132961	0.000223023	0.000603982
Nsmf	-1.033351119	0.28000339	0.000223818	0.000605934
Kcnj14	1.548192216	0.41955568	0.000224187	0.000606833
Cep83	-1.325637155	0.3594287	0.000225865	0.000610969
Milr1	-4.460682724	1.20952838	0.000226066	0.000611411
Rsg1	-1.314165114	0.35638529	0.000226482	0.000612434
LOC108348302	-1.865329494	0.50589428	0.000226742	0.000613035
Fmo6	3.674181185	0.9965855	0.000227119	0.00061385
Neb	2.607604436	0.70743283	0.000227797	0.00061548
Ttc8	-1.052877963	0.28567307	0.00022816	0.000616256
Lingo4	-2.648532994	0.71868908	0.000228498	0.000617066
Cyyr1	-1.502505193	0.40772068	0.000228583	0.000617192
Fnbp4	-1.222649957	0.33194178	0.00023021	0.00062138
Fam65b	1.803156465	0.48960323	0.000230602	0.000622231
Glyat12	-1.315726816	0.35755843	0.00023346	0.000629422
Hyls1	-1.465809162	0.39834035	0.000233425	0.000629422

Cdk6	1.360266151	0.36980648	0.000234776	0.000632658
AC080157.1	-2.249154484	0.61180865	0.000236698	0.000637415
Rnf213	1.197329757	0.32573316	0.000237106	0.00063813
Flvcr1	1.801636327	0.49022975	0.00023777	0.000639455
Ska2	-1.045575987	0.2845254	0.000238029	0.000640047
Pdik1l	-1.170131478	0.31899649	0.000244298	0.000656579
Ankrd65	-3.719248256	1.01405374	0.000244739	0.000657655
Pc	-1.247864144	0.34028516	0.000245304	0.000658957
Fam180a	1.225938617	0.33456216	0.000248009	0.000665893
Hyal1	-1.281244095	0.34983305	0.00024982	0.000670535
Rhov	1.832939118	0.50068709	0.000251382	0.000674617
Fcmr	1.465374736	0.40030235	0.000251557	0.000674974
Il18rap	2.20028704	0.60116626	0.000252185	0.000676437
Ttll7	1.279342965	0.34971515	0.00025395	0.000680948
Igfals	-1.36702489	0.37381921	0.000255269	0.000684372
Slc25a22	-1.733020567	0.4739668	0.000255765	0.000685587
Nhlrc1	-1.349359405	0.36909494	0.000256321	0.000686966
LOC100362350	-1.667044244	0.45629242	0.000258734	0.000693091
Ihh	-1.43918251	0.39396272	0.0002591	0.000693958
Tmem116	2.695817174	0.73803343	0.000259494	0.000694898
Cbx7	-1.322664171	0.36220854	0.000260546	0.000697486
Cand2	1.452294383	0.39824691	0.000265611	0.000710694
Ptprd	-1.602745911	0.43954418	0.000265959	0.000711508
Zfp772	-1.687306066	0.46281526	0.000266619	0.000713112
Lym7	-1.167977431	0.32036961	0.000266646	0.000713112
Vopp1	1.218603899	0.33427049	0.000266808	0.000713428
Top2a	3.310462453	0.90859653	0.000268966	0.000718963
Trps1	2.000390365	0.54908719	0.000269353	0.00071985
Nkx1-2	-3.47961302	0.95599866	0.000272884	0.000728362
AABR07066144.1	-1.149282289	0.31576864	0.000273026	0.00072862
Gulo	-1.109038928	0.30474266	0.000273419	0.000729549
Caps2	-1.908241724	0.52456927	0.000275051	0.000733544
LOC103690163	-1.803963	0.49607773	0.000276419	0.00073683
Zfp667	-1.870525496	0.51446192	0.000277026	0.000738206
Edn1	1.999879444	0.55014782	0.0002778	0.000740149
Tat	-1.427736244	0.39284041	0.000278636	0.000742135
Nptx2	3.150560558	0.86727204	0.000280444	0.000746828
Il17d	4.801061013	1.32180428	0.000281012	0.000748218
Tnfaip6	3.97676496	1.09489595	0.000281131	0.000748411
Uchl3	-1.450601856	0.3994073	0.000281357	0.000748892
Ikzf3	2.269105274	0.62482033	0.000281656	0.000749197
Pax8	1.888589683	0.52003979	0.000281642	0.000749197
Lrrc75b	1.442937105	0.3973523	0.00028191	0.000749628
Pld6	-1.875268327	0.51658106	0.000283253	0.000752832
Kifc1	2.602485573	0.71692763	0.000283363	0.000753
Zfp189	-1.459869569	0.40220132	0.000283752	0.000753789

Hrg	-1.66494458	0.4588627	0.000285166	0.000757298
Hrg	-1.66494458	0.4588627	0.000285166	0.000757298
Giot1	-1.850988812	0.51070737	0.000289675	0.00076852
Zfp563	-1.758396712	0.48519165	0.000289938	0.000769093
Lmtk3	4.09737081	1.13075815	0.000290575	0.000770657
Ptpn5	5.514387707	1.52195483	0.00029095	0.000771527
Apol3	-1.450227057	0.40051597	0.000293583	0.00077813
Paqr9	-1.254021714	0.34642628	0.000294739	0.000781066
Trpm7	-1.25170905	0.34597428	0.000296974	0.000786861
LOC102549115	7.753646119	2.14431237	0.000299291	0.000792614
Tmem200b	1.746568505	0.4831826	0.000300676	0.00079615
Mki67	3.097730392	0.85714532	0.000301499	0.000798202
Lpar5	2.089969797	0.57840015	0.000302251	0.000799932
RGD1309540	1.243473662	0.34433851	0.000304789	0.000806386
Serpinb6	1.09358395	0.30284422	0.000304966	0.000806725
Zfp418	-1.041228104	0.28843334	0.000306264	0.000809762
Nbeal1	1.332085524	0.36911157	0.000307502	0.000812773
RGD1559724	-1.845876903	0.5116373	0.000308823	0.000815868
Hba-a3	1.73014487	0.47967265	0.000309843	0.000818032
Rn50_5_0814.8	-4.120759677	1.14254025	0.000310158	0.000818731
Cdkn1c	-1.18935429	0.32994401	0.000312495	0.000824633
Bbip1	-1.496266289	0.415169	0.000313365	0.000826795
Slc10a6	2.229883641	0.61889729	0.000314572	0.000829845
Gpr84	4.152048589	1.15245594	0.000314828	0.000830252
Acyp2	-1.595522084	0.44303639	0.000316588	0.000834758
Hsf4	-1.400888204	0.38903595	0.00031709	0.000835947
AABR07009834.1	2.479109222	0.68925913	0.000322188	0.000848152
Apol9a	-1.051028025	0.29225806	0.000322859	0.000849775
Acox3	-1.156606057	0.32163216	0.000323083	0.000850095
Mettl23	-1.016339812	0.28276079	0.000325209	0.000855274
Gjb3	6.354471245	1.76796958	0.000325365	0.000855547
Zfp367	1.922015213	0.53535169	0.000330435	0.000867897
AABR07054189.1	1.510805182	0.42084051	0.000330715	0.000868493
AC098008.2	-2.643431206	0.73668817	0.000332888	0.000873918
Rap1gap2	1.370048589	0.38182014	0.000332964	0.000873976
Prima1	1.450656562	0.40431721	0.000333333	0.000874516
Vwa7	3.379259659	0.94191675	0.000333683	0.000875299
Zfp111	-1.252699494	0.34925827	0.000334835	0.000878038
Mtf2	-1.159730919	0.32338097	0.000335444	0.000879494
Cenpj	-1.402443091	0.39140369	0.000339526	0.000889337
Olr1353	-2.028209492	0.56636926	0.000342186	0.000896019
Hebp2	1.447399693	0.40425373	0.000343037	0.000897959
Smc3	-1.175186998	0.3286119	0.000348604	0.000911799
Galnt12	2.353260231	0.658599	0.000352739	0.000922013
Nrxn3	3.245317429	0.90861829	0.000354663	0.000926457
AABR07068587.1	-1.193165884	0.33434709	0.000358833	0.000936898

Tmem45a	1.87268921	0.52503794	0.000361409	0.00094287
Klhdc1	-1.466219035	0.41109241	0.000361586	0.00094318
Cdhr5	2.94358141	0.82536799	0.000361937	0.000943945
LOC100912534	7.070450978	1.98272133	0.000362425	0.000945065
Miip	1.107883432	0.31072222	0.000363148	0.0009468
Slc26a2	1.329483464	0.37306184	0.000365653	0.000953025
Pappa2	4.951303898	1.38976101	0.000367058	0.000956381
Fancf	1.104299923	0.31001592	0.000367935	0.000958361
Serpinf2	-1.151596727	0.32330943	0.000368177	0.000958837
Cln5	1.000359447	0.28097259	0.000370367	0.000964388
Nefm	4.564063351	1.2819862	0.000370643	0.00096495
Ggt7	1.818717309	0.51091746	0.000371266	0.00096642
Polr3f	-1.06936592	0.30041981	0.00037146	0.000966769
Rbmx2	-1.349917751	0.37952357	0.000375293	0.000975966
Zfc3h1	-1.315149565	0.37000163	0.000378781	0.000984722
Bard1	2.722618437	0.76602335	0.000379096	0.000985385
AABR07061825.1	-1.46209291	0.41139912	0.000379488	0.000986245
LOC103693608	1.391549404	0.39158467	0.000379945	0.000987274
Ptpn7	1.172754273	0.33010505	0.000381343	0.000990433
Pla2g2a	3.968634215	1.11772933	0.000384322	0.000997536
Chst11	3.111729229	0.87654803	0.000385258	0.000999806
Myh11	-1.875390316	0.5284433	0.00038685	0.001003457
Clca2	-6.883385009	1.9404718	0.00038924	0.001009174
Slc4a1ap	-1.00011422	0.28195734	0.000389584	0.001009907
Zmynd15	2.056551487	0.57986955	0.000390272	0.001011529
C4bpa	-1.519989556	0.42858554	0.000390347	0.001011562
Lztfl1	-1.202503087	0.33918301	0.000392177	0.00101582
Tmprss2	-1.350777707	0.38120119	0.000394888	0.001022678
Sds	-2.412381395	0.68081473	0.000395042	0.001022915
Icam1	1.058569448	0.29880572	0.000396101	0.001025495
Shpk	-1.038831587	0.29328007	0.000396933	0.001027323
Fahd2a	-1.216483977	0.34347305	0.000397533	0.00102855
Odf2l	-1.618063866	0.45720092	0.000401547	0.001038768
Dnah6	-2.778667682	0.78580493	0.000406114	0.001049918
Ppm1n	2.659742759	0.75223433	0.000406557	0.001050897
Art4	1.26998697	0.35948162	0.000411139	0.001062234
Slc30a3	1.681686334	0.47616175	0.000412813	0.00106622
LOC103691744	-1.748538136	0.49516513	0.000413644	0.001067895
Plxnb1	1.229330284	0.34813253	0.000413658	0.001067895
Ift74	-1.540901025	0.43637191	0.000413734	0.001067923
Zfp12	-1.659050714	0.47004155	0.000416215	0.001073986
Thy1	2.517137313	0.71328571	0.000417239	0.001076288
Pcdh19	4.757053062	1.34877421	0.000420383	0.001084227
Nnat	2.362484227	0.66987891	0.00042072	0.001084925
Thsd7a	1.581847586	0.44862247	0.00042187	0.001087717
Izumo4	-2.233255447	0.63361956	0.000424123	0.001092834

Ttc24	-3.109215464	0.88229785	0.000425088	0.001094629
Ribc1	-1.01066523	0.28680659	0.000425315	0.001095039
Nr0b2	-2.093818791	0.59446312	0.000427979	0.001101551
Sspo	-2.880176044	0.81814337	0.000430928	0.001108791
Tmem198	3.8686908	1.09983362	0.000435593	0.001120088
Slc6a17	5.32040592	1.51335759	0.000438711	0.001127749
Cenpm	-1.184005832	0.33694459	0.000441499	0.001134736
Pkd2	1.014383291	0.2887372	0.000442792	0.001137879
LOC24906	1.282923856	0.36518482	0.000442942	0.001137907
Top1	2.629260646	0.74868199	0.000444995	0.00114246
Top1	2.629260646	0.74868199	0.000444995	0.00114246
Adamts19	3.226084669	0.91882119	0.000446235	0.001145103
Cmc1	-1.37824617	0.39290111	0.000451709	0.001158602
Gpcpd1	-1.015904227	0.28981633	0.000456028	0.001169347
Jazf1	4.185123479	1.1939763	0.000456268	0.001169742
LOC108348136	-1.300157162	0.37112292	0.000459521	0.001177898
Mt1	2.577170605	0.73569615	0.000459986	0.001178904
AC129365.1	5.437970383	1.55323098	0.000463394	0.001187452
Il33	-1.19058094	0.34010702	0.0004642	0.00118933
Psrc1	5.146034109	1.47008887	0.0004644	0.00118947
Zc3h7a	-1.027079746	0.29342353	0.000464679	0.001189996
Fzd2	1.923016136	0.54942973	0.00046522	0.001191194
Hmgb1-ps3	-1.003447454	0.28689087	0.000469355	0.001201403
Fzd9	3.620276542	1.0352925	0.000470763	0.001204629
Loxl3	1.324731638	0.37892107	0.000472179	0.001207873
Dhh	2.69968374	0.77242394	0.000473919	0.001211754
Zfp641	-1.062669696	0.30412624	0.000475533	0.001215499
Zfp870	-1.453793101	0.41611385	0.000476307	0.001217286
Spata1	-2.632652494	0.75377993	0.000478341	0.00122191
Sh3bgrl	-1.126967149	0.32272703	0.000479394	0.001224409
Dusp13	2.626983119	0.75238426	0.000480236	0.001226368
Kctd17	1.31176063	0.37573725	0.00048092	0.00122792
Cass4	1.860381519	0.53295262	0.000481744	0.001229832
Edil3	3.351708462	0.9602286	0.00048206	0.001230447
Mal	1.742318335	0.49921152	0.000482767	0.001232057
Agmo	-1.334192866	0.38236698	0.000484288	0.00123536
Rpp25	1.506179168	0.43199886	0.000489321	0.001247222
Dcst2	-1.499642204	0.43018236	0.000490188	0.001249236
Tmem184c	1.374444502	0.39432037	0.000491028	0.001251181
Itgae	-1.176196697	0.33748708	0.000491842	0.001253058
Dusp1	1.11836987	0.3210255	0.000494457	0.001259327
Gsg2	1.397228577	0.40120154	0.000496551	0.001264067
Tnfrsf11b	1.371473253	0.39388313	0.000497815	0.001266958
Ganc	-1.102224895	0.31656601	0.000498024	0.001267224
Trappc6a	-1.016420201	0.29211987	0.00050242	0.001278211
Cebpe	1.874174935	0.5388716	0.000505242	0.001284786

Adamts7	-1.090678388	0.31360075	0.00050532	0.001284786
Slc46a3	-1.379740545	0.39684956	0.00050756	0.001290079
Zmym6	-1.245032484	0.35820447	0.000509409	0.001294577
Ccdc77	-2.012191252	0.57903279	0.000510681	0.001297607
RGD1560017	1.412136252	0.40658298	0.000514328	0.00130667
Cd209a	1.321009039	0.38044964	0.000516152	0.001310894
Calml3	4.558289121	1.31461694	0.00052554	0.001333489
Tmem132d	4.308737619	1.24307658	0.000527893	0.001338419
Nbl1	1.698823595	0.49056012	0.000534132	0.001353606
NEWGENE_2319083	-2.071640755	0.59841635	0.000536432	0.001359223
Flrt3	2.539355514	0.73475394	0.000548128	0.001386918
Serpinf1	-1.177956265	0.34086742	0.000548742	0.001388255
Siglech	2.684805907	0.77729858	0.000552294	0.001396807
Slc26a9	5.533540915	1.60334231	0.000557989	0.001409242
Prss56	5.209374314	1.50987317	0.000560158	0.001414145
Cxcr3	4.384578389	1.2708445	0.000560317	0.001414684
Cpe	1.835197348	0.53196193	0.000560865	0.001415719
AABR07042859.1	-1.877873293	0.54437731	0.000561459	0.001416907
Gcc2	-1.104942503	0.32044311	0.000564397	0.001423221
Cd69	2.903121812	0.84218113	0.000566541	0.001427743
Doc2g	-3.45661522	1.0030629	0.000568823	0.001433273
AABR07067042.4	4.832388771	1.40254418	0.00057012	0.001436318
Zswim6	1.101787854	0.31986826	0.000572106	0.00144043
Ccdc152	-3.467814684	1.00675572	0.000572023	0.00144043
Pttg1	2.523738004	0.73383283	0.000583612	0.001467812
C5	-1.134609487	0.32992835	0.000583959	0.00146846
AABR07002768.1	-1.320490579	0.38410057	0.000586294	0.001473874
Rasa4	1.109933006	0.32302524	0.000590248	0.001482899
Alms1	-1.008801766	0.29360569	0.000590574	0.001483491
Sigmar1	-1.022559378	0.29764467	0.000591453	0.001485128
Rarb	-1.178575245	0.34307136	0.000591757	0.001485494
Pir	-1.287713614	0.3749353	0.000593658	0.0014894
Bmper	1.702287066	0.49569032	0.000594361	0.001490247
Mepce	3.375714507	0.98309996	0.000595304	0.001492382
Atg9b	4.693323337	1.36687894	0.00059561	0.001492919
Adal	-1.1149277	0.32483394	0.000598484	0.001499661
Cux1	-1.041855709	0.30364788	0.00060107	0.001505446
Fbln1	1.715814776	0.50016749	0.000602513	0.00150883
Foxm1	1.610537806	0.46955646	0.000603775	0.001511756
RGD1561849	-1.815966849	0.52985372	0.000609619	0.001525451
Kcnj11	-2.949869577	0.86100324	0.000612351	0.001531806
Tnfrsf25	-2.916250288	0.85120039	0.00061244	0.001531806
Map10	-1.294643515	0.37791111	0.000613018	0.001533015
Prpf40a	-1.119444365	0.32698015	0.000618009	0.001544549
Gpr132	1.644298979	0.48028503	0.000617998	0.001544549
Dll1	-1.080348807	0.3157342	0.000622301	0.001555038

Adat2	1.282784495	0.37511908	0.000626965	0.001566211
Prdm4	1.083222497	0.31677239	0.000627223	0.001566615
LOC500300	-1.661393997	0.48595475	0.000628923	0.001569899
Crispld2	1.777392856	0.51990438	0.000629229	0.001570423
Aldh1l1	-1.435548703	0.41992571	0.000629493	0.001570841
Glr5	-1.06683986	0.31208546	0.000629853	0.001571499
LOC108348145	-1.466767626	0.42912298	0.000630694	0.001573357
Nudt14	-1.240255395	0.36290993	0.000631922	0.001575938
Igsf3	2.258038014	0.66110505	0.000636531	0.001586945
Il15	-1.683339197	0.49330869	0.000644067	0.00160475
AABR07031674.4	1.795958359	0.52643849	0.000646004	0.001609197
Klhl26	1.009942575	0.2961014	0.000647727	0.001612942
Lrrn4	3.89952059	1.14341361	0.000648629	0.001614884
Apold1	1.073338178	0.31477457	0.000649955	0.00161769
Fkbp8	-1.040043147	0.30528555	0.000657322	0.001635775
Tnks2	9.556663461	2.80547994	0.000658191	0.001637688
LOC100910371	5.529918066	1.62356313	0.00065913	0.001639773
Wfdc21	1.266528055	0.37186929	0.000659603	0.001640702
RGD1309362	-3.276149959	0.9619541	0.000659889	0.001641162
Zfp78	-1.98435237	0.58275916	0.000661402	0.001644422
Pparg	-1.352526735	0.39738967	0.000665217	0.001653655
Lpin2	-1.110516967	0.32647433	0.000670062	0.001665192
Ubn2	1.092549962	0.32120656	0.000670432	0.001665603
Tchh	4.884462425	1.43656433	0.000673612	0.001672738
Ticrr	3.4908275	1.02700528	0.000676239	0.001679006
Kctd20	1.289797049	0.37950222	0.000677181	0.001681089
Ahctf1	-1.105214541	0.32538088	0.000682088	0.001692239
Znf442	-4.706150982	1.38633004	0.000687081	0.001704367
Akr1c12l1	-3.809875806	1.12334468	0.000694993	0.001723207
Mfap5	3.448658694	1.01765914	0.000701953	0.001739934
Plagl1	3.731885335	1.10138775	0.000703149	0.001742368
Clic2	-1.431603797	0.4225833	0.000704701	0.00174595
Mroh2a	1.897026052	0.56004167	0.000705856	0.001748544
Aff2	1.96161552	0.57972291	0.000715129	0.001770708
Fbxo11	-1.112646267	0.32892814	0.00071792	0.001777349
Lrrc3	2.368179518	0.70095977	0.000728874	0.00180337
Zfand1	-1.043753971	0.30894136	0.000728862	0.00180337
Kcnn1	1.871911039	0.55408254	0.000729096	0.001803647
Fam198b	1.0579432	0.31321677	0.000731025	0.001807869
Zfp503	1.042761116	0.30876885	0.00073239	0.001810972
Prtg	-1.727168023	0.51147249	0.000733199	0.001812494
AABR07045405.1	1.463447815	0.43348712	0.000735508	0.001817578
Zfp397	-1.14020878	0.33779556	0.000736976	0.001820654
Elovl2	-1.498906063	0.44410879	0.000737922	0.001822713
RGD1304963	-4.003316064	1.18616767	0.000738156	0.001823016
Mt-nd6	-1.431835267	0.42446634	0.000742838	0.001834022

Tox2	1.733301587	0.5139146	0.000744235	0.001837194
Fbxo27	2.362630542	0.7005764	0.000745136	0.001839137
Wdr5b	-1.110399251	0.32932983	0.000747075	0.00184301
Rem1	1.327551599	0.39373789	0.000747157	0.00184301
Rn50_X_0631.1	3.34641779	0.99249896	0.000747033	0.00184301
RGD1566325	-1.46876972	0.43563568	0.000747451	0.001843455
Smim1	-1.366313527	0.40537124	0.000750253	0.001850088
Zfp51	-1.751859805	0.51982502	0.000751422	0.001852409
LOC100911515	1.331675774	0.39535462	0.000756313	0.001862775
Zfp862	1.295903331	0.38475962	0.000756921	0.001863709
Ccdc191	-1.550650499	0.46040718	0.000757161	0.001864019
Nos1	1.291982141	0.38361163	0.000757312	0.001864075
Fam189a2	3.554637238	1.05592261	0.000761616	0.00187357
Pnlcd1	-2.005286751	0.59588911	0.000764879	0.001881313
Rn50_5_0814.3	-4.817699373	1.43167662	0.000765228	0.001881889
Lhx8	-2.123570722	0.6312159	0.000767508	0.001887211
Bclaf1	-1.18700626	0.35286392	0.000768436	0.001889207
Slco2b1	-1.37212827	0.40793712	0.000769391	0.001890985
Pex11a	-1.061728563	0.31573176	0.000771688	0.001896058
RT1-DOb	-1.514997512	0.4506866	0.000775113	0.001903326
Hba-a2	1.363977366	0.40583874	0.000776931	0.001906929
Kcnk2	-4.305815028	1.28177342	0.000781504	0.001916997
LOC365839	-1.034626869	0.30802345	0.00078247	0.001919078
Mgp	1.650820263	0.49158468	0.00078463	0.001924086
Oaf	-1.419275944	0.42267834	0.00078561	0.001926198
Hexim2	-1.280440613	0.3813781	0.000786779	0.001928774
Sltm	-1.010953949	0.30130583	0.000792956	0.001943333
Stil	2.437589179	0.72660007	0.000794258	0.001946232
Zfp617	-1.587591735	0.47330373	0.000795727	0.001949537
Hist1h1d	1.671852064	0.49853423	0.000797863	0.001954182
Ephx1	-1.330537345	0.39686039	0.000800394	0.001960087
Spock2	2.258562715	0.67455967	0.000813374	0.001990379
Asic4	2.908577829	0.86886812	0.000815298	0.001994788
AC098750.3	-2.475904341	0.73970047	0.000816407	0.0019972
Fut7	1.902481263	0.56856268	0.000819497	0.002004158
AABR07025051.3	4.041473319	1.20870842	0.0008269	0.002020444
Pnck	-3.133981145	0.93803235	0.000834724	0.002038643
AABR07049353.1	7.119652225	2.13113112	0.000835417	0.002039724
Zfp329	-1.862609673	0.55754977	0.000835658	0.002040006
Crk	1.034362086	0.30995685	0.000846525	0.002065607
Procr	1.244897265	0.37327091	0.000852675	0.002079992
Hp	-1.286533044	0.38582132	0.000854435	0.002083769
Scimp	1.109371269	0.33269334	0.00085448	0.002083769
Tas1r2	-1.087966187	0.32640123	0.000858479	0.002092896
Tcf19	1.852915239	0.55603706	0.00086113	0.002099045
Senp1	1.18296332	0.35579464	0.000884666	0.002153836

Cenpa	1.711820816	0.51491372	0.000885833	0.002156356
Cyp2d4	-1.410222976	0.42443564	0.000891879	0.002169777
Efcab6	-5.237435506	1.57655564	0.000893508	0.002173416
Kif26a	1.289327129	0.38827579	0.000898088	0.002183579
Myo9a	1.468270216	0.44231749	0.000901808	0.002191712
Rn50_13_0841.1	3.833890367	1.15497991	0.000901971	0.002191712
Ndr3	-1.007192774	0.30342183	0.000901958	0.002191712
Dlgap1	2.813914587	0.84790793	0.000904518	0.002196919
Rgcc	2.800362046	0.8439489	0.000906108	0.002199141
Garnl3	-1.167962189	0.35200629	0.000906596	0.002199996
Fam160b1	1.00759883	0.30370286	0.000907578	0.002201086
Prkar1b	4.048430654	1.22024832	0.000907585	0.002201086
Dcxr	-1.57056394	0.47337836	0.000907368	0.002201086
Kntc1	3.288160224	0.99189154	0.0009163	0.00222156
Cebpz	-1.044892834	0.31549752	0.000926682	0.002245062
Gen1	-1.833720255	0.55371242	0.000927364	0.00224638
Epha2	1.102715692	0.33305175	0.000929818	0.002250652
Lrrc73	3.166617086	0.9568133	0.000934476	0.002261254
Scnn1a	-1.428811288	0.43199966	0.000941542	0.002276999
LOC102556347	1.380851065	0.41760638	0.000944406	0.002283249
Piezo2	1.929407836	0.58356273	0.000945516	0.002285594
Golt1a	-1.249184068	0.37803242	0.000951676	0.002299801
Slc15a1	3.218342945	0.97448383	0.000957885	0.002314462
LOC103690319	-5.008700879	1.51686549	0.000959956	0.002318779
Ccdc14	-1.244863401	0.37710306	0.000962988	0.002325758
RGD1310209	-2.787540282	0.84452992	0.000964438	0.00232857
Enpp3	-1.059804742	0.32113232	0.000966118	0.002332281
Liph	3.453361605	1.04704057	0.000973027	0.002347649
Fam169b	-1.813521186	0.54999655	0.000976081	0.002354239
AABR07032751.1	2.128277502	0.64546885	0.000976337	0.002354507
Erfe	4.669340674	1.41625408	0.000977355	0.002356615
Nr4a2	1.271883581	0.38587702	0.000980422	0.002363661
Ush2a	-2.156398352	0.65429162	0.000981504	0.002365797
Polr2l	2.065545014	0.62757594	0.000997231	0.002402406
Coch	-4.690576488	1.42523475	0.000997998	0.0024039
Arhgap6	1.151233078	0.34990316	0.001001348	0.002410899
Xkr5	3.084067096	0.93740601	0.001001869	0.002411797
Fgg	-1.042067294	0.31681513	0.001004738	0.002417988
LOC684762	1.093528425	0.33248623	0.001005642	0.002419808
Cenpn	1.506824397	0.45941959	0.001038647	0.002496644
AABR07045071.1	2.765123803	0.84331307	0.001042193	0.002504799
Hopx	1.20920427	0.36890895	0.00104625	0.002513808
Hist1h4b	4.680240455	1.42846975	0.00105139	0.00252473
Pstk	-1.200088165	0.3666277	0.001062937	0.002550518
Pkp1	4.23736966	1.29489564	0.001066522	0.002558366
Cys1	1.49750668	0.45769638	0.001068522	0.002562409

Spp1	3.072513629	0.93909335	0.0010687	0.002562458
Irak1bp1	-1.146070914	0.35037495	0.001071739	0.002569367
Lama3	-1.233521836	0.37712048	0.001072074	0.002569791
LOC691354	-1.913690649	0.58517563	0.001074395	0.002574976
Syt2	-3.042203265	0.93032419	0.001075299	0.002576763
Mex3b	1.14755413	0.35114343	0.001082914	0.002593868
Selp	2.34696683	0.71817438	0.001083248	0.002594286
Hr	1.246681657	0.38220696	0.001107083	0.002647866
Exo1	3.319655511	1.01780512	0.001107921	0.002649483
Ceacam9	2.12207167	0.65087133	0.001112728	0.002660197
Sema3f	1.027560171	0.31518566	0.001113438	0.002661504
Apob	-1.062706303	0.32612342	0.001119628	0.002675123
Galnt7	1.35927424	0.41720909	0.001121938	0.002679855
Mycn	4.424993829	1.35867955	0.001126623	0.002689863
Rpl9	-1.015079732	0.31179748	0.001131635	0.002700247
MGC105567	-1.811826914	0.55662347	0.001133798	0.002704617
Orc1	2.829284893	0.86929705	0.001135197	0.002707557
AABR07006451.1	4.465099413	1.37299799	0.001145637	0.00273086
RGD1565131	4.382502313	1.34801685	0.0011497	0.002739743
Rpgrip1l	-1.103165629	0.33938129	0.001151942	0.002744565
Hecw2	1.401738184	0.43123895	0.001152061	0.002744565
Trim24	1.672506043	0.5148282	0.001159466	0.002760593
AC119015.1	-1.010750005	0.31113149	0.001159636	0.002760595
Fbln7	4.53866494	1.39755235	0.001163904	0.002769541
RGD1304622	2.975674259	0.916477	0.00116685	0.002776145
Ppp1r3g	2.646283159	0.81518463	0.001169411	0.002781833
Erc2	2.161211541	0.66624035	0.001179086	0.002803668
LOC103690035	8.660014802	2.66964154	0.001179106	0.002803668
LOC102552527	-1.60316121	0.49420167	0.00117888	0.002803668
AABR07046778.1	-4.045398879	1.24738016	0.0011823	0.002810851
Tsku	1.383698351	0.42705792	0.001194996	0.002840621
Tlr8	1.345520826	0.4152902	0.001195493	0.002841305
Rbm12b	-2.61093009	0.80639468	0.001204629	0.002861432
Rbm12b	-2.61093009	0.80639468	0.001204629	0.002861432
LOC367746	-3.665659334	1.13229512	0.001206365	0.002865139
Ubald1	1.876429438	0.57973224	0.001209131	0.002869617
Trem1l	1.873419518	0.5789149	0.0012118	0.002875115
Sla	1.261849121	0.39011589	0.001218348	0.002889388
Ccl27	-1.424324333	0.44038901	0.001219664	0.002892087
Arid3a	2.092514609	0.64708231	0.001221683	0.002896032
Lhx1	-3.947605728	1.22146685	0.001229887	0.00291296
Osm	1.918359291	0.59357849	0.001229897	0.00291296
Rusc2	1.068167609	0.33054897	0.001231441	0.002916195
Zfp275	1.026715937	0.31774972	0.001232675	0.002918605
Car12	-4.356433562	1.35043519	0.001255562	0.002969863
Zfp654	-1.234022417	0.38261355	0.001258649	0.002976733

Efcab7	-1.828275053	0.56688449	0.001259163	0.002977517
Sh3kbp1	1.076948617	0.33409322	0.001266355	0.002992784
Zfp560	-1.885548989	0.58500414	0.001267945	0.002996109
Cyp26b1	1.627586793	0.50503697	0.001269848	0.002999736
Loxl4	-1.032762643	0.32060277	0.001276036	0.003012998
Usp49	-1.328749312	0.41264907	0.001281697	0.003024178
Zmym5	-1.240157843	0.38514111	0.001281866	0.003024178
Cdkn2a	4.37452487	1.35910471	0.001287815	0.003037336
Arsi	3.183348262	0.99003068	0.001302612	0.003069669
Zcchc3	1.325459009	0.41228276	0.001304777	0.003072891
St6galnac2	1.677299672	0.52184132	0.001308109	0.003079849
Kansl1l	-1.121645999	0.34902074	0.001310391	0.00308433
Msi1	1.829004547	0.56936335	0.001316457	0.00309816
Zfp612	-1.471978516	0.45837438	0.00132135	0.003108779
Mycl	1.01757511	0.3170978	0.001331854	0.003131231
Rn50_19_0706.2	-1.534998695	0.47836949	0.001332837	0.003132638
Dmbt1	1.834214517	0.57187635	0.001339583	0.003146678
Slc45a3	-1.298828774	0.40500261	0.001341438	0.003150581
Tbx10	-2.44775457	0.76353185	0.001346728	0.003162093
Macrodl	-1.25308857	0.39092855	0.001348675	0.003166209
Ccdc158	-2.492500601	0.7777131	0.001351047	0.00317132
Mga	1.009192782	0.31498869	0.001355788	0.003181533
Ttc26	1.014286274	0.31659633	0.001356639	0.003182614
Cngb1	-2.660530275	0.83161828	0.001377997	0.003230393
AABR07007997.1	-1.510767036	0.47223863	0.001378285	0.003230604
Cd36	1.611035667	0.50373176	0.001382876	0.003240433
Arhgap11a	1.567993937	0.49055995	0.001391854	0.003259126
Unc5d	-1.581811849	0.49487916	0.001391734	0.003259126
Fgfbp3	-2.370044529	0.74172168	0.001396717	0.003270035
Egln3	1.418538052	0.44405182	0.001400574	0.003277483
Hist1h2bo	1.887286029	0.59088107	0.001403063	0.003282073
Hsbp1l1	-3.706398224	1.16091426	0.001409715	0.003296212
Fanca	2.124083818	0.66540859	0.001412181	0.003301032
Slc16a9	2.049443754	0.64268687	0.00142831	0.003337775
Fbxl8	1.043012274	0.32714539	0.001431503	0.003344279
Dtl	3.317349636	1.04143565	0.00144573	0.003376547
Clec2d	4.768024042	1.49747589	0.001452346	0.003391514
Prim1	-1.328645983	0.41733813	0.001454459	0.00339596
Kif14	4.912370244	1.54365303	0.001461093	0.003410962
Adgrb2	3.43962656	1.08151681	0.001470857	0.003431299
Reep2	2.639319697	0.82994949	0.001472259	0.003434076
LOC102547287	-1.184079688	0.3723737	0.001473688	0.003436918
Ncoa2	1.032984629	0.3249883	0.001480246	0.003451225
Sac3d1	1.016791262	0.31998405	0.001484836	0.00346143
Cyp2d2	-1.109662709	0.34925801	0.001487042	0.003466078
Apod	4.399568649	1.38650607	0.001508032	0.003512993

Slc5a11	4.506104002	1.42050741	0.001512996	0.003523046
Lmntd2	-3.471717768	1.09493913	0.001520748	0.003540089
Gstm7	-1.086851951	0.34278042	0.00152075	0.003540089
Syt3	-1.437432607	0.45338966	0.001522222	0.00354301
Acaa1b	-1.013302604	0.31966216	0.001524823	0.003548557
Zcchc11	-1.092778498	0.34475928	0.00152604	0.003550881
Dhdh	-1.628305333	0.51387541	0.001531343	0.003562204
Zfp709l1	-2.460306893	0.77655843	0.001533761	0.003566811
Ndufv3	-1.224665413	0.3866991	0.001540349	0.003580526
Fam126b	-1.172449596	0.37025669	0.001542398	0.003584338
Enah	1.558185677	0.49231068	0.001550587	0.003602341
Grb7	-1.173845987	0.3710148	0.001556814	0.00361412
Pnoc	1.814777422	0.57360195	0.001557092	0.00361412
Mgst2	-1.105748977	0.34949971	0.00155721	0.00361412
RGD1566138	-4.234435268	1.33898582	0.001564638	0.003630326
Sall1	1.190658126	0.37655836	0.001567173	0.00363569
Vstm4	1.186504571	0.37555115	0.001581113	0.003665941
Dcp2	4.197255803	1.32865428	0.001582964	0.003669711
Adra1b	-1.255440702	0.39748558	0.001586073	0.003676394
Dgat2	-1.189335336	0.3765736	0.001586879	0.00367774
AABR07033324.1	1.30874718	0.41439487	0.001587397	0.003678417
Gins1	1.699280864	0.53822683	0.001593011	0.003690901
Pcp4	-5.31971087	1.68582992	0.00160199	0.003709596
Snx10	1.116745267	0.35390976	0.001602496	0.003710241
Slc25a10	-1.024094532	0.32467601	0.001609363	0.003724023
Slco4a1	2.089708907	0.66259086	0.001611346	0.003727553
Tmprss6	-1.061449395	0.33665775	0.001616553	0.003738536
Prr11	3.169787364	1.00555235	0.001619982	0.003745404
Nkx2-1	-4.11315393	1.30490706	0.001621193	0.003747141
Da2-19	-2.240581818	0.71102056	0.001625903	0.003757494
Tm7sf2	-1.327333095	0.42143231	0.001635076	0.003777085
Golga7b	4.612150073	1.46549212	0.001648601	0.003806711
LOC680920	4.626034982	1.46998965	0.001649636	0.00380856
Trem1	1.884958261	0.59907837	0.001652767	0.003815249
Naprt	-1.137627415	0.36160513	0.001654923	0.003819685
Hs3st5	5.176087469	1.6466716	0.001670183	0.003853813
Slc38a5	4.109503701	1.30756791	0.001673055	0.003859347
Ephb1	2.096105195	0.66698583	0.00167424	0.003861535
Rn50_10_0644.1	-1.936463727	0.61624612	0.00167595	0.003864932
Tmem86b	-1.276240913	0.40619346	0.001678248	0.003869683
Ncaph	3.266084801	1.0398084	0.001683463	0.003880609
Abi2	1.27040813	0.4045271	0.001686728	0.003887587
Fam110d	1.275127559	0.40619146	0.001693936	0.003901441
Sertad4	1.895162225	0.60370286	0.001693923	0.003901441
Klri1	-2.576901877	0.82090015	0.001694576	0.003902137
AABR07025328.1	1.451157513	0.46241611	0.001699847	0.003913395

Klhl30	3.282067995	1.04673816	0.0017155	0.0039472
LOC108348118	2.974478391	0.94874626	0.00171756	0.003950825
Orc4	-1.140870716	0.36392828	0.001719257	0.003953611
Cd200	2.203909772	0.70309975	0.001721109	0.003957312
Otub2	-1.420887936	0.45342375	0.001726251	0.003967456
Izumo1r	4.115006507	1.3136491	0.001733241	0.003982397
AABR07058831.1	2.677912014	0.85508861	0.001737759	0.003991652
Arhgef16	1.311630758	0.41894586	0.001743379	0.004003996
Dok7	5.350402122	1.70973355	0.001751769	0.004022134
Acrbp	-1.761498964	0.56325373	0.001763819	0.004048659
Cxcl2	4.624465725	1.4797726	0.00177733	0.004077376
Prr22	-1.283851819	0.4109061	0.001781433	0.004085062
LOC100910934	6.040665851	1.93360611	0.001783853	0.004089937
Orai2	1.132207819	0.36247418	0.001786808	0.004094507
Vamp5	-1.029407743	0.3296157	0.001789847	0.004100317
Extl1	-1.268431795	0.40641773	0.001802349	0.004126638
Foxc2	4.467395682	1.43308543	0.001824991	0.004174959
Slc39a10	1.314461909	0.42202705	0.001841702	0.004211413
Cdkn2c	1.523899661	0.4893908	0.001846504	0.004221802
LOC102547056	2.047960319	0.65805646	0.001857397	0.004244922
Pbk	3.115124011	1.00129097	0.00186387	0.004257922
Kcna3	2.561005224	0.82374046	0.001877247	0.004285478
Slco5a1	1.040741644	0.33489606	0.001885777	0.004303141
Chd9	2.785548733	0.89661099	0.001891545	0.004315699
Car7	-1.01960161	0.32828056	0.001897106	0.004327175
LOC100911932	2.365019191	0.76158736	0.001900338	0.004333335
Sct	4.663353078	1.50180219	0.001901688	0.004335807
Rbl1	1.353471901	0.43592184	0.001903756	0.004338092
Rn60_12_0108.1	-4.040210516	1.30120682	0.001902972	0.004338092
Rn60_16_0588.3	1.772659039	0.57144376	0.001921719	0.004375355
Col15a1	3.256162621	1.04985946	0.001925283	0.004382857
Gfra1	-1.415729979	0.45663592	0.001932938	0.004399053
Cd274	-1.658381696	0.5353198	0.001948794	0.004432662
Slc25a36	1.727844499	0.55798962	0.001957848	0.004451393
Slc6a11	5.586893974	1.80437675	0.001959512	0.004454554
Ccdc88a	1.619442604	0.52324738	0.001968231	0.004473751
Rgs2	1.430419178	0.46220519	0.00196965	0.004476352
Cux2	2.380281644	0.76918566	0.001971133	0.004479098
Ryr2	-3.159773887	1.02205137	0.00199081	0.004521919
Cd46	-1.935038586	0.62606084	0.001996076	0.004532617
Senp1	-5.875728567	1.90128992	0.001998934	0.00453721
Tnfrsf18	1.900688365	0.61546382	0.002013586	0.004566015
Cd6	1.257734493	0.4075455	0.002027867	0.004597119
Rcor2	5.872456771	1.90312444	0.002030787	0.004602459
Cntf	-1.442417244	0.46764298	0.00203935	0.004621221
LOC500712	-1.164934332	0.37810269	0.002063068	0.004671442

Bcl2l14	1.96738805	0.63855998	0.002063232	0.004671442
AABR07060588.2	-4.284740102	1.39084541	0.002065332	0.004675548
Tspan33	-1.11888924	0.36320817	0.002066028	0.004676472
Mef2b	2.581463259	0.83806932	0.002068267	0.004680891
LOC100911186	-2.789551563	0.90622919	0.002082575	0.004710002
Myo16	5.206346292	1.69237041	0.002095423	0.004737087
Carmil1	1.052643838	0.34228076	0.002102336	0.004750737
Esrrg	-1.41378067	0.45997844	0.002115067	0.004778182
Nabp1	1.483961151	0.48320024	0.002132645	0.004814553
Gnal	2.023398332	0.65939792	0.002150972	0.004853911
Hspb2	2.024179865	0.65969959	0.002152546	0.00485679
Dnase2b	1.960489887	0.63940493	0.002168589	0.00489028
Pcdhga2	2.767454736	0.90270716	0.002171407	0.004895955
Apln	2.140146238	0.69811245	0.002172205	0.004897078
Fut1	1.719127577	0.56101457	0.002181662	0.004917717
Prdm11	1.128963287	0.36845722	0.002183783	0.004919778
Elmod2	-1.012819697	0.33067478	0.002192123	0.004937201
Zfp955a	-1.639210575	0.53519225	0.00219244	0.004937233
Klb	-1.1208166	0.3661042	0.002202539	0.004957235
AABR07010609.1	-1.604347975	0.52437455	0.002216729	0.004987793
Mtx3	1.369239883	0.4483583	0.002258899	0.005074971
LOC102555635	-1.401790442	0.4590403	0.002260067	0.005076894
Rnase2	5.555031139	1.82055457	0.002278641	0.005114387
Ncapg	2.774031793	0.90918642	0.002279937	0.005116591
LOC102553760	-1.575789253	0.51659635	0.002285902	0.005127859
Spata33	1.75679461	0.57633727	0.002302122	0.005162824
Lingo1	3.366313744	1.10470383	0.002309421	0.00517848
Metrn	1.107139845	0.36343863	0.002316835	0.00519296
AC111632.2	-2.101159162	0.69016308	0.00233115	0.005223609
Crb2	4.48874306	1.47495669	0.00233995	0.005242609
RT1-M2	-1.391643553	0.45738694	0.002345472	0.005254257
Ikzf2	4.161520671	1.36784077	0.002346987	0.005256928
Itgb7	1.291767546	0.42489553	0.002364208	0.005294046
Cpg1	-1.454935391	0.47867817	0.002369825	0.005305895
AABR07045454.1	3.784280758	1.2456697	0.002381944	0.005330831
Bmp4	-2.35730135	0.77613701	0.002387686	0.005342946
Pcdhgb4	1.690033302	0.556588	0.00239408	0.005356519
Setmar	-1.026999265	0.33825182	0.002395825	0.005358217
Tipin	-1.641542587	0.54064591	0.002395312	0.005358217
Pla1a	1.132770608	0.37308618	0.002395669	0.005358217
AC113785.2	-3.186192398	1.05042793	0.002419489	0.005407431
Anln	3.745468367	1.23485469	0.002420355	0.005408624
Chka	-1.016638469	0.33524747	0.002425358	0.005418318
LOC685067	-1.571518729	0.51827022	0.002427476	0.005421748
R3hcc1l	-1.171991297	0.38651162	0.002427559	0.005421748
Nnmt	-1.088897211	0.35918011	0.002432461	0.005431952

Usp2	1.700253026	0.56090274	0.002435197	0.00543657
Olr1644	-3.62507915	1.19657316	0.002449177	0.005464788
Gxylt2	4.5417271	1.49956859	0.002456173	0.005478146
Zfp462	1.377871354	0.45498342	0.002458532	0.005482658
Clec2d	-1.355486025	0.44781623	0.00247092	0.005508022
Aox1	-1.503756804	0.49685437	0.002473583	0.005513203
Tmem218	-1.050534572	0.34759772	0.002508857	0.005584948
Mb21d1	1.854479468	0.61384454	0.002518667	0.005604757
Mastl	2.580722955	0.85423944	0.002518775	0.005604757
Slc5a8	5.935767846	1.9663517	0.002538865	0.005643269
Ppp2r3b	1.027864695	0.34053763	0.002541479	0.005647539
Prrx1	3.811512556	1.26365831	0.0025592	0.005684592
Rnase13	-2.680025501	0.88989522	0.002598584	0.00576657
LOC500350	-1.73186621	0.57507655	0.002599259	0.005767283
Urad	-1.282778534	0.42613299	0.002610091	0.005790529
Rn50_17_0381.1	3.155961442	1.04866026	0.00261663	0.005802665
Pik3ip1	1.691430171	0.5622098	0.00262507	0.005820249
Atp8a1	2.082445457	0.69269938	0.002644689	0.005860262
LOC257642	2.482068161	0.82565952	0.00264566	0.005861459
Arhgef26	-1.108081302	0.36868581	0.002651538	0.00587359
Arl5c	1.246448913	0.41472914	0.002651857	0.00587359
Rai2	1.100473	0.36649147	0.002675743	0.005920863
Hmcn1	1.761898004	0.58773795	0.002719707	0.006014063
Rbbp8nl	-3.180410694	1.06200709	0.002746996	0.006070287
Asb1	1.074133337	0.35871815	0.002750161	0.006075633
Matk	1.425396095	0.47606823	0.002752553	0.006080095
Hamp	-1.2079892	0.40367364	0.00276712	0.006110615
Bank1	-1.360024763	0.45471319	0.002781103	0.006139829
Dgki	4.860135767	1.62589972	0.00279711	0.006170988
Zfp35	-1.204531165	0.40306966	0.002804473	0.006185555
Nim1k	-2.048297563	0.68547039	0.002806594	0.006189397
Lmnb2	1.334234528	0.44671158	0.002819216	0.006215549
RT1-S2	1.758027007	0.58872987	0.002825277	0.006227227
Bcl11b	2.133137921	0.71453186	0.002832408	0.0062421
Aldh1a2	1.800776282	0.60321202	0.002832889	0.006242316
P2rx5	3.388075841	1.13544439	0.002845807	0.006268289
Adam1a	-1.37850778	0.46211934	0.002854263	0.006286014
Gpr50	5.070145942	1.70079275	0.002872631	0.006323903
Trpv1	-1.537095875	0.51566401	0.002874881	0.006328001
LOC365238	-1.344805819	0.45165417	0.002905981	0.006393
Coro6	-1.498244696	0.50346113	0.002921401	0.006423456
Pibf1	-1.170502908	0.39361378	0.002941994	0.006464374
LOC102551340	-1.330916845	0.44755456	0.002941815	0.006464374
RT1-CE16	1.661413161	0.55877815	0.002946196	0.006472734
Tbc1d19	1.06478782	0.35822579	0.002954882	0.006490067
Selenbp1	-5.75932144	1.93881595	0.002972811	0.006527686

Hdx	4.824247088	1.62451785	0.002981406	0.006545677
Pcm1	-1.076305817	0.36245622	0.00298306	0.006548426
AABR07065823.2	3.878280732	1.30629455	0.002988508	0.006558619
Etv4	3.655658851	1.23193715	0.003003232	0.006589156
Atp7a	1.163806023	0.3922506	0.003007247	0.00659619
Enox1	-2.209248659	0.74464824	0.003008821	0.006598754
Ehhadh	-1.242481998	0.41885791	0.003013507	0.006607251
Jph2	2.613026954	0.88129599	0.003027004	0.006633275
Bag2	1.126563209	0.38041803	0.003062616	0.006704101
Aspn	5.077756851	1.71463586	0.003062241	0.006704101
Pcdhga7	1.796396215	0.60671246	0.003067722	0.006713475
Cbln3	-1.553652602	0.52479175	0.003071275	0.006720348
Rbms3	1.631877624	0.55170882	0.003097824	0.006772984
Fa2h	4.497192776	1.52047398	0.003098862	0.006774343
RGD1562690	-1.250305422	0.42275418	0.003101211	0.00677857
Rn50_X_0604.1	3.940542749	1.33245414	0.003102885	0.006781319
F12	-1.071815351	0.36247066	0.00310677	0.006787988
Znf750	-1.40656064	0.47574346	0.00311099	0.006796298
Slc7a2	1.042949989	0.35285419	0.003119063	0.006811195
Prpf39	-1.303912738	0.44136703	0.003134204	0.006841507
Nov	2.150237124	0.72802401	0.003141671	0.006855053
Lrfn1	1.23169259	0.41740051	0.003168853	0.006909736
Cemip	1.081186484	0.36663244	0.003188394	0.006950486
Il1b	-1.238577536	0.42027387	0.003207981	0.006991313
Bbs7	1.285975932	0.43647214	0.00321605	0.00700796
LOC680121	1.118139894	0.37953396	0.003218223	0.007011759
Brms1l	-3.561059888	1.20886385	0.003221303	0.007016985
AABR07041604.1	3.921989772	1.33187118	0.003232454	0.007039001
Smim24	-1.157508952	0.39348529	0.00326434	0.007100843
Slc6a13	-1.099847372	0.37398887	0.003273068	0.007116978
Cilp	1.97968842	0.67345887	0.003286539	0.007143412
Krt76	-3.260352079	1.11034198	0.003321	0.00721254
Epb41l3	1.34654422	0.45875539	0.003333201	0.007238074
Nqo1	1.26285562	0.43043161	0.003347012	0.007264578
Dixdc1	-1.134806963	0.38690404	0.003356552	0.007282958
Nemf	-1.223215457	0.41706185	0.003357737	0.00728456
Ell3	-2.633448426	0.89831478	0.003372826	0.007316321
Pmepa1	1.092385485	0.37318793	0.00342059	0.007414008
Ccdc138	-1.886312066	0.64480005	0.003439897	0.007454865
Slc47a1	4.528293863	1.54808774	0.003443581	0.007461856
Pik3c2a	-1.078249654	0.36876236	0.003455993	0.007485765
Ccl24	-1.159253021	0.39670379	0.003475536	0.007527095
Pcdhga6	1.927289271	0.65969334	0.003483585	0.007543523
Fancm	-1.546245855	0.52971349	0.003511303	0.007599507
Prss35	3.830308128	1.31232005	0.003514603	0.007604628
Cnksr1	1.583731261	0.54270698	0.003520507	0.007616391

Hhat	1.338489799	0.45921903	0.003560204	0.007694102
Osbp16	-1.522749445	0.52248291	0.003563178	0.007699507
Dpysl5	1.485809348	0.51002369	0.003577266	0.007724829
Clstn3	-1.82548471	0.62696652	0.003595663	0.007763525
AABR07010878.1	-1.746630396	0.60001016	0.003602724	0.007776712
Rbm12	9.023991676	3.10412582	0.003648013	0.007867174
Abhd14a	-1.107036914	0.38109711	0.003674076	0.00791919
Sh3bgr	1.889351877	0.65083124	0.00369627	0.007962812
Ambp	-1.037574758	0.35742367	0.003696931	0.007963183
Tnnt1	-1.477239889	0.50907135	0.003709866	0.007988934
Mapk13	1.478123554	0.51003594	0.003754581	0.00808202
Incenp	1.500097548	0.5188224	0.003835897	0.00825052
LOC100909878	1.794222941	0.62064359	0.003841317	0.008259998
Tmem30b	1.214169014	0.42002794	0.003844016	0.008264711
RatNP-3b	-5.647702327	1.95426763	0.003853241	0.008281266
Zfp518a	-1.214529978	0.42048988	0.003872452	0.008318165
Ccne2	2.433453525	0.84258628	0.003876058	0.008324813
Rhbg	1.243087437	0.4304654	0.003879767	0.008330584
RGD1563323	-2.143204919	0.74223957	0.003883363	0.008336108
RGD1564937	-2.392107863	0.82866246	0.003892934	0.008354453
Sobp	1.930200114	0.66870536	0.003895859	0.008359629
Morn5	-4.390135933	1.52153803	0.003910063	0.008387899
Gins2	-1.093464105	0.37920383	0.003931844	0.008431293
Eif4ebp3	-1.228628323	0.42624577	0.003946069	0.008460684
Figl1	1.655913345	0.57515889	0.003988704	0.008543103
Zfp605	-1.373851313	0.47739617	0.004004573	0.008575965
Opcml	3.835282295	1.33277917	0.004006396	0.008578741
AABR07060886.1	2.534947081	0.88095731	0.004008508	0.008582137
LOC103694210	-1.338488628	0.4652055	0.00401223	0.008587847
Wfdc2	-1.998440515	0.69475167	0.004021354	0.008603987
Zfp112	-1.315779657	0.45765015	0.004039283	0.008639381
Irx3	3.935511155	1.36907102	0.004045587	0.008651292
Slc4a3	2.563710481	0.8920011	0.004051661	0.008662007
Mrgprx3	2.407408563	0.83838419	0.004085467	0.008731989
Col11a2	-2.105174801	0.73326871	0.004092455	0.008743485
Dnah17	-1.23617103	0.43058728	0.004093109	0.008743736
RGD1565767	4.27352898	1.48893741	0.00410229	0.008758754
LOC103693189	2.574607702	0.89726757	0.004112685	0.008778649
Trove2	1.173711577	0.40927187	0.004133313	0.008821523
Hsd11b2	-1.864602155	0.65032051	0.004141148	0.008834774
Pcdhga10	1.281763131	0.44729267	0.004162161	0.008874955
Akap5	-1.18480523	0.41396598	0.004208659	0.008971756
AABR07000156.1	4.116045814	1.43850134	0.004218503	0.008990388
Aox3	-4.18463029	1.46254268	0.004220378	0.008993208
Cfap70	-1.748815935	0.61124082	0.004221851	0.008994444
Phf6	-1.054496911	0.36862425	0.004228026	0.009005972

LOC497963	3.120958075	1.09173826	0.004253736	0.009053635
AABR07027096.1	5.317630486	1.86051881	0.004261271	0.009067872
Paxbp1	-1.014341803	0.35509471	0.004282877	0.009109709
AABR07050848.1	5.326537892	1.86493915	0.004288183	0.009119805
Cyp2d1	-1.000984424	0.35065758	0.004309211	0.009162134
Cyp2d1	-1.000984424	0.35065758	0.004309211	0.009162134
Fam167a	1.319033198	0.46246243	0.004341841	0.009226695
LOC100912585	1.385099484	0.4857567	0.004352356	0.009247835
Pdzd3	-3.319660099	1.16479766	0.004372079	0.00928732
Bche	-1.43391025	0.50314615	0.00437346	0.009289043
Gpr18	2.059252681	0.72283093	0.004387455	0.009317553
Gpbar1	4.534771048	1.5918051	0.004388128	0.009317767
Pgr	5.385768148	1.89273926	0.004434334	0.009408524
Prr5l	1.174255333	0.41292638	0.004458739	0.009455382
Catsperg	-1.0346672	0.36386055	0.004460957	0.009458854
Unc79	3.048456127	1.07216415	0.004465271	0.009465538
Lgi3	4.94976118	1.74122775	0.004473533	0.009481818
AC128901.1	1.535300471	0.54048108	0.004502617	0.00954098
Clec1a	-1.454415656	0.51201708	0.004503429	0.00954146
Tesc	2.495680522	0.8786039	0.004504188	0.009541829
Dnajc28	-1.373353712	0.48359979	0.004513391	0.00955884
Adamdec1	-1.923526229	0.67768286	0.004534217	0.009599203
RGD1565472	7.396547269	2.60814863	0.004569134	0.009669357
LOC100909836	2.545126513	0.89793368	0.00459081	0.009711443
Abo	1.334111005	0.47101395	0.004619661	0.009767404
Usp18	1.248170293	0.44080128	0.004631661	0.009791504
Plpp4	1.925397482	0.68043732	0.004659938	0.009848727
Rdh14	-1.142041784	0.4038709	0.004687791	0.00990374
Ntsr1	-1.804011436	0.63814337	0.00469909	0.009925038
Nsun6	-1.024517482	0.36247466	0.00470667	0.009938893
Tnfrsf4	1.720408493	0.60868409	0.00470687	0.009938893
C2cd4c	1.692521961	0.59907468	0.004724713	0.009973986
Socs3	1.374037444	0.4863896	0.004728462	0.009980606
Bckdhb	-1.010770384	0.35804049	0.004756742	0.010037456
Mctp2	-1.289093109	0.45663491	0.004757243	0.010037456
Syn3	-2.177433108	0.77156634	0.004771112	0.010065416
Ncam2	-1.885594958	0.66818289	0.0047729	0.010067884
Npas2	-1.10448347	0.3915791	0.004793566	0.010104937
S100b	-4.305706453	1.52767292	0.004825251	0.010166469
Pigb	1.171401503	0.41581342	0.004845453	0.010205075
Sphkap	1.401950586	0.49795623	0.004871515	0.010255987
Gipc3	2.024989845	0.71936239	0.004878046	0.010268409
Sntg2	4.321294964	1.53526427	0.004882411	0.010276271
Scara5	1.773415682	0.63012262	0.004886872	0.010284332
Resp18	-2.553552547	0.90787719	0.004913312	0.010335969
Rab37	3.186706614	1.13307969	0.004916882	0.010342144

Cers3	-2.609606905	0.92799212	0.004921916	0.01035006
Sell	1.335689301	0.47505004	0.004928331	0.010362214
Rn50_13_0836.2	4.355837427	1.54930004	0.004931303	0.010367125
Gadd45g	-2.236942932	0.79579034	0.004939236	0.010382463
Cyp4f18	1.975472234	0.7031126	0.004960156	0.010419716
AC109096.1	1.128020153	0.40147648	0.004959088	0.010419716
Nhs	3.835905309	1.36598435	0.004982516	0.010462204
AABR07029863.3	1.184889401	0.42194903	0.00498295	0.010462204
Eml6	2.324349015	0.8277837	0.004986287	0.010467863
LOC685203	2.800034486	0.9974072	0.004995663	0.010484844
Mcm2	1.117670351	0.39815356	0.004998446	0.010489334
Cenpf	2.556882418	0.91102231	0.005006614	0.010502417
Gnao1	1.9281732	0.68760354	0.005044266	0.010575954
AC105662.1	-1.462056907	0.52186543	0.005085026	0.010653189
PCOLCE2	2.257356598	0.80583808	0.005090454	0.010663189
Colq	3.991758182	1.42507493	0.005093086	0.010665961
Diaph3	3.353472885	1.19733609	0.005097954	0.010674782
Zfp827	3.310207737	1.18242031	0.005117886	0.010715142
Cldn34a	5.620651	2.00794955	0.00512295	0.010724368
Gjc1	1.563966205	0.55895568	0.005141778	0.010762398
Arntl	-1.08340607	0.38740485	0.005164769	0.010806358
Skida1	-1.353849874	0.48427401	0.005179902	0.010832458
LOC502176	-3.124275474	1.11779164	0.005189284	0.010850685
Gimap1	-1.534945441	0.54930578	0.005200626	0.010873005
Syt9	3.407538335	1.21947744	0.005201846	0.010874161
Fam78b	4.01832922	1.43878127	0.005224266	0.010912629
Ppip5k2	-1.010489924	0.36184333	0.005228352	0.010919763
Scn4b	4.136109273	1.48276577	0.005279673	0.01101989
Espnl	3.622215916	1.29866113	0.005283964	0.011027433
Rp1	-2.786753213	0.99984134	0.00531664	0.011092786
Nlgn3	1.766778717	0.63407606	0.005329987	0.011117784
Klhl29	1.387434186	0.4979636	0.005332732	0.011122086
Cenpe	3.031124012	1.08807744	0.005340218	0.011133426
Agxt2	-1.151512245	0.41345229	0.005350872	0.01115421
Gimap9	-1.25553353	0.45087318	0.005358204	0.011168066
Mdga1	2.469746723	0.88715373	0.005370969	0.011187517
Cyp46a1	-1.778397809	0.63889703	0.005376862	0.011197191
Hdac9	1.479035998	0.53160755	0.005399255	0.011239251
Itgb3bp	-1.21493971	0.43680257	0.00541185	0.01126141
LOC680200	-1.119333693	0.40242237	0.005411004	0.01126141
Cyp2t1	-1.061580538	0.38169153	0.00541496	0.011266186
Ammechr1	1.303496301	0.46872377	0.005420046	0.011275329
Syp	2.731995598	0.98308966	0.005452833	0.011336299
Rslcan18	-1.118305492	0.40263887	0.005478888	0.011386108
Sbpl	-2.802321951	1.00953412	0.005505649	0.011437346
AABR07058884.2	1.295901206	0.46710473	0.005531607	0.011482488

Rbm41	-1.008481365	0.36373163	0.005561088	0.011539275
Glt1d1	-1.376941957	0.49673043	0.005571124	0.011555685
LOC100910838	2.293043625	0.8274712	0.005585935	0.011583458
RGD1562963	-1.60769945	0.58054879	0.005618114	0.01164574
Cyp2c23	-1.039222274	0.37542557	0.005638104	0.011682718
Rfx2	2.26372059	0.81783722	0.005641264	0.01168778
Hoxa4	1.507139381	0.54471854	0.005660561	0.011721799
Hoxa4	1.507139381	0.54471854	0.005660561	0.011721799
Elf1	3.543674381	1.28096746	0.005667815	0.011732349
Pif1	5.741536754	2.07592598	0.005678832	0.011753661
Kbtbd11	1.497866685	0.54161436	0.005682526	0.011758346
Thap6	-1.165426054	0.4214071	0.005682539	0.011758346
AC131360.1	2.319530159	0.83908597	0.005703573	0.011798873
Gprin2	2.457252612	0.88895846	0.00570638	0.011801683
Gprc5d	2.740470937	0.99193574	0.005731656	0.011846441
Nufip2	1.097162797	0.39721654	0.005742602	0.011866053
G6b	3.874980916	1.403244	0.005754623	0.011888534
Twf2	1.029220354	0.37271324	0.00575494	0.011888534
Eps8l1	3.09829022	1.1220952	0.005759554	0.011896555
Bbof1	-1.705666955	0.61775169	0.00576091	0.011897849
AABR07014239.1	1.50771813	0.54628514	0.005781071	0.011933436
Lmo3	-1.487111258	0.53903079	0.005800312	0.011971638
AC133265.1	1.120688043	0.40623701	0.005803091	0.011975857
Disc1	2.515924568	0.91235188	0.00582229	0.012010916
RGD1562378	-1.220290253	0.44278203	0.005851987	0.012069122
Rn60_1_0253.2	3.870032594	1.40451475	0.005861626	0.012085941
Pdlim3	1.60724354	0.58337308	0.005867655	0.012096841
Trank1	-3.092137508	1.12272694	0.005884814	0.012129148
Zfp709	-1.018342289	0.36988096	0.005902264	0.01215825
LOC102552659	5.469218344	1.98648036	0.005901215	0.01215825
Casp12	1.545493061	0.56169451	0.005932604	0.012215288
AABR07024742.1	2.958336902	1.07580159	0.005961513	0.012270159
Cacna1h	-2.785185621	1.0135659	0.005997687	0.012336824
LOC100910829	-1.549140567	0.56384696	0.006006091	0.012352551
Cacng6	2.727072181	0.99275793	0.006014939	0.012369186
Kcnk10	4.752088626	1.73087123	0.006042072	0.01242028
Cenpc	-1.2199552	0.444498	0.006059052	0.012453613
AABR07065815.1	4.776214513	1.74038899	0.006063319	0.012460813
LOC100364457	-3.152221662	1.14907616	0.006083137	0.012496812
Gpr161	4.829684195	1.76063531	0.006085315	0.012499711
Cldn6	2.278514752	0.83103902	0.006110981	0.012544525
Rflnb	1.610083531	0.58732916	0.006118452	0.012556697
LOC100910882	1.967958305	0.71814073	0.006137343	0.012592295
Mup4	-7.376843668	2.69200622	0.006138736	0.012593567
Rn60_1_1877.2	3.611568072	1.31910933	0.006183592	0.012680799
Tm4sf20	5.206453221	1.90174514	0.006186598	0.012685368

AC096601.1	1.113579702	0.40711153	0.006231994	0.012775236
Ltc4s	-3.084939605	1.12839475	0.006258548	0.012823216
Cacnb2	-1.684283564	0.61652324	0.006296909	0.012896951
Sh3rf3	3.538585835	1.29755323	0.006388943	0.013069022
AABR07037645.1	-3.010688098	1.10404777	0.006392184	0.013072369
Slc25a30	-1.749688204	0.64164849	0.006393937	0.013074314
LOC103691005	-1.690409655	0.62008771	0.006409116	0.013102064
Rel	1.066678606	0.39151587	0.006440211	0.013157376
Ccdc189	-1.128483837	0.41422805	0.006443683	0.01316282
Ccnb1	2.410442915	0.88504326	0.006458812	0.013188765
Tlcd1	1.004090395	0.3687053	0.006463586	0.013196858
LOC100363372	-1.340394628	0.49223878	0.006468075	0.013204369
S100a4	1.457540653	0.53547483	0.006489615	0.013246684
Clec3b	1.848855979	0.67954819	0.006514118	0.013291704
Pknox2	2.409833831	0.88602478	0.006531614	0.0133224
Il27	2.351207203	0.86456799	0.006537737	0.013331551
Aoah	1.739945428	0.63983808	0.006540982	0.013336499
Smc2	1.190817851	0.43804439	0.006558129	0.013369788
Xpnpep2	-1.326047106	0.4883742	0.006623024	0.013488486
Prr32	2.54348629	0.93677757	0.00662469	0.013488486
Reps2	1.097494285	0.40431179	0.00663809	0.013512513
Vangl2	4.030179136	1.48485878	0.006643936	0.013522726
Sned1	-1.078214527	0.39726171	0.006645281	0.013523774
Rn50_1_0959.1	-2.376918844	0.87608221	0.006665235	0.013560994
Sox9	1.204554877	0.44444969	0.006723931	0.013673587
Ccdc66	-1.257099844	0.46402079	0.006745674	0.013714381
Fsip1	1.737635512	0.64197299	0.006795333	0.013808449
Pms1	-1.256503791	0.4650123	0.006890569	0.013994991
Cd209d	4.402084506	1.6293519	0.006897777	0.014007885
Srgap3	2.02408393	0.74968372	0.006935675	0.01407783
Cbln2	3.626905811	1.34418186	0.00697102	0.014142526
Tusc5	4.555706525	1.68847204	0.006973151	0.014145089
AABR07054264.1	-2.165043304	0.80250611	0.006978831	0.014153086
Atp6v1c2	-1.622178963	0.60139237	0.006988914	0.014170008
Iqub	-2.15818501	0.80040141	0.0070098	0.014208574
Adgb	-1.744390805	0.64746113	0.007055747	0.014289511
Adgra1	3.755422176	1.39400767	0.007060541	0.014297441
Cryl1	-1.283349618	0.47645302	0.007069573	0.014312175
AABR07058102.1	-3.056558696	1.13520242	0.007091363	0.014354504
S1pr4	1.209744703	0.44937285	0.007100931	0.014372086
LOC100910252	2.428754733	0.90279935	0.00713988	0.014447329
LOC102549852	2.268877781	0.84400592	0.007183298	0.014527969
LOC100911403	-5.405913834	2.01099762	0.00718437	0.014528333
Hist1h2ah	4.369993896	1.62681217	0.007226303	0.014611317
Avil	2.232473224	0.8314364	0.007251245	0.014658112
RGD1562399	-1.073577779	0.39994209	0.007267466	0.014687258

Hhla1	5.13688196	1.91380887	0.007272222	0.014695046
Mzb1	1.438974796	0.53655996	0.007321568	0.014789258
Tcaf1	1.109636268	0.41377027	0.007323401	0.014791128
MGC105649	1.222063616	0.45578827	0.007335668	0.014812232
Ly75	1.729657988	0.64515977	0.007340774	0.014820706
Tacr1	2.608484908	0.97308415	0.007348228	0.014833917
Hnrnpab	2.343026994	0.87487989	0.007403829	0.014935058
Ccdc62	-1.316630562	0.4916671	0.007408748	0.01494313
Napepld	-1.223493192	0.45696581	0.007418973	0.0149582
AABR07009572.1	4.692115094	1.75382483	0.007464875	0.015032148
A2ml1	-1.857754906	0.69461686	0.007484009	0.015068817
Dnajb3	3.887499373	1.45368041	0.007489743	0.015078499
Trim59	1.419530888	0.53090883	0.00750027	0.015095961
Upk3b	2.530574814	0.94649535	0.007503603	0.015100804
Bag5	-1.691330956	0.63261913	0.007505588	0.015102935
Bag5	-1.691330956	0.63261913	0.007505588	0.015102935
Ticam2	-1.042524026	0.39017323	0.007541149	0.015168101
Hist2h4a	3.168577674	1.18615247	0.007555646	0.01519428
Tgif2-ps1	5.843290908	2.18773655	0.007564145	0.015207617
Adrb1	1.520707963	0.5694094	0.00756987	0.015215373
Fndc5	-1.364169968	0.51136869	0.00763761	0.015345852
Sema4d	1.402580717	0.52579574	0.007640898	0.015350566
LOC288978	-1.163370176	0.43617959	0.007649033	0.01536312
LOC102550314	-4.259627293	1.59725359	0.007656704	0.015376632
Hba-a2	1.140682883	0.4278542	0.00767471	0.015405199
RGD1566189	1.313929735	0.49329745	0.007731752	0.015512053
Kn1	2.365675082	0.88820723	0.00773492	0.0155165
Rn60_10_0648.2	3.7005176	1.39001447	0.007762824	0.015566726
Hunk	3.924686028	1.4749425	0.007793029	0.015619608
Rgs9bp	-1.944520045	0.73103551	0.007815157	0.015660106
LOC100910636	-2.160140366	0.81235635	0.007834867	0.015693812
Katnal2	-1.643551537	0.61815266	0.007841677	0.015705522
Cyp4f37	6.008993716	2.26022096	0.007846912	0.015714076
Ptgr1	-1.008641492	0.37978606	0.007911701	0.015839145
Ccdc146	-1.493066225	0.56238212	0.007933279	0.015875326
AABR07034573.3	-2.004818285	0.75516806	0.007935603	0.015878027
Trim15	2.14552753	0.80862842	0.007971082	0.015939625
Serpnb8	1.069337828	0.40312369	0.007986747	0.015968594
Rnf24	3.016950081	1.1382175	0.008035086	0.016063272
Fam212a	1.274509086	0.4810257	0.008059536	0.016110174
Mboat2	3.262714854	1.2315318	0.008065528	0.01611622
Rn60_X_0634.2	3.409167159	1.28703106	0.00807634	0.016135846
LOC102546809	2.044792428	0.77290411	0.008154702	0.016270263
Mdn1	1.017101985	0.38455125	0.008171356	0.016297705
AABR07025284.1	-1.485951528	0.56196819	0.008188631	0.01633016
Fam198a	-1.872353012	0.7083913	0.008214941	0.016380624

Rmi2	5.246388806	1.98717606	0.008287599	0.016510816
AC132740.1	-1.290322484	0.48874905	0.008289352	0.016510816
Cd79b	-1.514616385	0.57404581	0.008327519	0.016582784
Rasgef1b	1.10049984	0.41723055	0.008348761	0.016623052
Col11a1	3.555226906	1.34857043	0.00838173	0.016686658
Slc28a2	-1.086123304	0.41223073	0.008420025	0.016752663
Pdpn	2.632550479	0.99991209	0.008468871	0.016845733
AABR07051708.1	2.750804926	1.04556926	0.008515507	0.016932299
AABR07034637.1	-8.308267751	3.16334415	0.008628848	0.017134667
LOC100362751	4.451849345	1.69556015	0.00864984	0.017172167
RGD1310335	2.736294847	1.04271423	0.008685175	0.017240215
Rhpn1	1.311077667	0.49972744	0.00870096	0.01726524
Mrgprx1	1.732007079	0.6602317	0.008707433	0.017273876
AABR07027450.1	4.671084619	1.78113029	0.008727714	0.017309895
Pkp3	-1.05394067	0.40242019	0.008818653	0.017468995
Dnah2	4.521452564	1.72729149	0.008853637	0.01752764
Retsat	-1.688669964	0.64522149	0.008865588	0.017549169
Rn60_18_0172.2	3.222968867	1.23269405	0.008933901	0.017675803
LOC100910978	5.1757103	1.98154231	0.009002465	0.017802811
RT1-M6-2	3.280247851	1.25607281	0.009014311	0.017821912
AABR07020537.1	-4.158568962	1.5927642	0.009030083	0.017846598
Spag5	-1.08321702	0.41508098	0.009063429	0.017901646
Slc6a1	-2.294227053	0.87917569	0.009066919	0.017906368
AABR07031734.3	1.009348427	0.38682853	0.009072989	0.017916185
Ncr1	-1.85043923	0.70963901	0.009118523	0.017999556
Upf3b	-1.285859319	0.49341382	0.009159404	0.018073685
Slc36a3	3.059405785	1.17400327	0.009161711	0.018076048
Piwil2	2.763527801	1.06097063	0.009195028	0.018139587
Xkr4	2.56772611	0.98688265	0.009272089	0.018276121
AABR07065778.3	3.736874216	1.43663445	0.0092917	0.018305919
Hdgfrp3	1.34332126	0.51658558	0.009311929	0.018343554
Sez6	-2.184417935	0.84085764	0.009381079	0.018470841
Gmpr	1.00409816	0.38650774	0.009380308	0.018470841
Nova1	1.124608347	0.43338066	0.009460011	0.018619505
Bcl2l1-ps1	2.4152805	0.93112658	0.009488482	0.018670762
Mkrn2os	-2.238777979	0.86417184	0.009579126	0.018835749
Cd80	2.152666727	0.83162202	0.009639053	0.018944442
AABR07014259.1	-2.786010357	1.07636644	0.009643764	0.01894913
Ccr1	1.782875238	0.68955792	0.009722837	0.019090689
LOC498675	-1.141654616	0.44156429	0.009724417	0.01909149
Ctsw	1.191094684	0.46098354	0.009771511	0.019179327
Tmsbl1	3.331994595	1.29030961	0.009813804	0.0192569
Ndn	1.317338388	0.51016512	0.009817824	0.019260948
Mysm1	-1.038432057	0.40230106	0.009844862	0.01930702
Cct6b	-1.865289992	0.72264869	0.009846179	0.019307279
AABR07027088.1	1.309079093	0.50746278	0.009889895	0.019386003

Ctnnd2	2.359571389	0.91518652	0.009930472	0.0194632
LOC684871	1.343435763	0.52121309	0.00995129	0.019501657
RGD1309621	-1.031466574	0.4003044	0.009974688	0.01954516
AABR07060293.1	4.180138968	1.62308574	0.010011638	0.019610487
Gnrh1	-2.719395979	1.0569719	0.010087433	0.019749457
Zfp606	-3.006573791	1.16866581	0.010092179	0.019756374
LOC100911994	-2.490563248	0.96859491	0.010131294	0.019821039
Radil	2.845949768	1.10715706	0.010155115	0.019862874
Fstl4	4.034330235	1.56971121	0.010166627	0.019880946
LOC691254	-2.855064902	1.11149443	0.010208896	0.019953695
Igsf6	-1.151377144	0.44843789	0.010242632	0.020005236
Mad2l1	1.19846299	0.46686741	0.010257351	0.020030377
C1qtnf3	-4.357638044	1.69765628	0.010262542	0.020036919
Cldn15	1.969651729	0.76815941	0.010343823	0.020183522
Plcl1	1.273691924	0.49711431	0.010402006	0.020289763
AC129753.1	3.335854738	1.30229815	0.010421709	0.020325762
Adssl1	-1.149202562	0.44878078	0.010445507	0.020364865
Mamdc4	-1.801524074	0.7036269	0.010456981	0.020382356
Krt10	-1.414796434	0.55278904	0.010485948	0.020434016
LOC100912489	3.574077126	1.39646365	0.010485992	0.020434016
Lao1	4.463971642	1.74441834	0.010497285	0.020453577
Lmx1b	-1.420751079	0.55563401	0.0105582	0.020564889
Trim43a	-3.799177339	1.48678195	0.010609561	0.020657522
Gng7	-1.994607231	0.78071769	0.010623722	0.020681546
Scn3b	3.78968499	1.48359341	0.010637222	0.020701484
Mcpt1l4	-3.095380677	1.21333009	0.010736972	0.020883142
Zfp192	-1.319965641	0.51769406	0.010781499	0.020962239
Msln	2.552225108	1.00170755	0.010838146	0.021067349
C2cd4d	-1.529172526	0.60039547	0.010867144	0.021118678
Ar	1.868722766	0.7337949	0.010876077	0.021130996
Exosc6	1.060534407	0.41649543	0.010886252	0.021148244
Fam69b	1.388730449	0.54572273	0.010935455	0.021231173
Slc16a5	4.120493704	1.6194105	0.010945295	0.021247746
Zfp446	-1.001583033	0.39364846	0.010947848	0.02125017
Cbr1	2.337045908	0.91892094	0.010982654	0.021310114
Lzts1	-1.418292708	0.55791472	0.011017864	0.0213708
Pappa	3.976285953	1.56482643	0.01105234	0.02143512
Cdc45	1.442274162	0.56783615	0.011086903	0.021499593
Ckap2	2.030598286	0.7994899	0.011089453	0.021500786
Lpar1	1.568258296	0.61775533	0.011128432	0.021567292
Raver2	2.34531713	0.92445613	0.011181665	0.021657582
Kcnh1	-1.730834869	0.68244393	0.011205307	0.021699264
Cenph	1.972047541	0.77767404	0.011218185	0.02171799
LOC100360573	2.32146639	0.91548393	0.0112197	0.021718343
Ednra	-1.215761689	0.47946255	0.011223051	0.02172225
Prune2	1.446005737	0.57068817	0.011283533	0.021834126

RGD1305928	-3.319473473	1.3107172	0.011323212	0.021903103
LOC688765	-2.148885064	0.84852091	0.011325014	0.021903988
Ifit3	1.384515825	0.54705269	0.011378204	0.021996422
Tlk1	1.381467061	0.54641227	0.011463256	0.02214508
Dbh	4.902559517	1.94111503	0.011548746	0.022297016
Lrrc52	3.255500871	1.28942571	0.011577467	0.022341879
Dkk2	-1.639268542	0.64943324	0.011597761	0.022375741
Prss12	2.73898649	1.08595786	0.011662839	0.022482665
Cox6b2	1.426474015	0.56607584	0.011737669	0.022616213
LOC500028	7.989043535	3.17094783	0.011753843	0.022638292
Car6	-1.281267829	0.50905861	0.01183804	0.022788052
Tmem40	4.779232528	1.89902216	0.011846612	0.022801859
Igdcc3	-2.170820373	0.86314222	0.011902547	0.022906815
Slfn4	1.333882047	0.53040237	0.011908326	0.022915231
RGD1560771	-4.626856515	1.84068896	0.011948735	0.022977842
LOC100911558	-2.561108248	1.01900082	0.011958978	0.02299098
Sh2d2a	1.237579699	0.49271267	0.012012819	0.023086316
Cdhr1	2.289446408	0.91195596	0.012056745	0.02316527
Dennd2c	1.062711989	0.42399625	0.012196121	0.023416495
RGD1308117	-1.695271171	0.67641006	0.012200989	0.023420323
AABR07035375.1	5.049413893	2.01469319	0.012200405	0.023420323
Rnf182	4.217996736	1.68436127	0.012272467	0.023549205
LOC685767	-3.145360464	1.25638543	0.012297181	0.023591072
LOC100911215	1.068560851	0.42747679	0.012430088	0.023820802
Npff	-3.17320631	1.26961742	0.012442468	0.023841723
Trim45	-1.108472386	0.44355664	0.012452502	0.023858144
Ddx60	1.436210917	0.57527408	0.012540158	0.02400915
Cd207	3.817142584	1.52991245	0.012595457	0.024103697
Atad2	1.091397844	0.43748861	0.012606771	0.024122514
AABR07024795.1	-1.74225325	0.69867646	0.012643782	0.024187653
AABR07004812.1	-2.137062163	0.85764515	0.01271051	0.024309597
Rn60_2_0036.1	2.538714536	1.01897203	0.012722404	0.02432949
Slc10a5	-1.190630406	0.47810147	0.012762456	0.024400354
Ns5atp9	2.582050493	1.03763899	0.012832292	0.024525241
Art2b	-2.668209703	1.0724849	0.012850844	0.024554938
Gprc5b	2.375417792	0.95514702	0.012883785	0.024612108
LOC100912026	-1.856140024	0.74667053	0.012922828	0.024680905
Rn50_20_0048.4	-4.866291149	1.95813583	0.01294913	0.024725343
Nrgn	1.19259404	0.47992546	0.012956716	0.024736929
Zfp37	-2.714299225	1.09253335	0.012976683	0.024772147
AABR07065420.1	-1.366766411	0.55038713	0.013017801	0.02484773
Klf15	-1.087718469	0.43855846	0.013130385	0.025042091
Nkpd1	4.616459438	1.86356337	0.013240966	0.025241173
AABR07013566.1	-1.761304372	0.71106874	0.013249863	0.025255178
Adcy2	2.059960631	0.83166993	0.01325302	0.02525824
Tnnc1	-1.767715388	0.71387983	0.013278597	0.025304027

Crygs	-2.92221489	1.18033718	0.013295818	0.025333882
AABR07013111.1	1.263043801	0.51054418	0.013364084	0.025458002
Bub1b	2.733872973	1.10662458	0.0134939	0.02569328
LOC103690020	1.452027554	0.58784573	0.013508182	0.02571747
Rad54l	2.12003541	0.85861138	0.013543658	0.025775976
Cdh18	-3.794847439	1.53709288	0.013554909	0.025791363
Padi2	1.555841459	0.63046856	0.013596363	0.0258642
Cgref1	1.192028505	0.48348976	0.013683441	0.026017698
LOC103691261	1.943082048	0.7881674	0.01368923	0.026025668
AABR07012323.1	5.480451974	2.22480069	0.013764734	0.02616311
Page1	-1.057062052	0.42916868	0.013776236	0.026181919
Abca16	-1.422524314	0.57802829	0.013855258	0.026319822
Rorb	4.711770365	1.91849932	0.014050619	0.026659856
Il17re	1.308804332	0.53322619	0.014108019	0.02676565
Kcns3	1.367533803	0.55724996	0.014124709	0.026791076
AC128582.1	4.379796303	1.78467832	0.01412339	0.026791076
Hmnr	2.368818936	0.96611407	0.014210258	0.026931397
Kcnj15	-2.61826273	1.06858302	0.014276923	0.027042016
Emc9	-1.031404708	0.42135813	0.014372737	0.027210847
Gstm3	1.182411679	0.48325602	0.014414663	0.027287052
Zfp541	-1.679907419	0.68682526	0.014449018	0.027348909
Kif20a	2.169197297	0.88743457	0.014511495	0.02745122
Pde6c	-2.333790043	0.95658703	0.014699265	0.027787067
Igfn1	-4.924078082	2.01942338	0.014754135	0.027877857
Csrp2	1.369589137	0.56177647	0.014770366	0.027905289
Ppp2r3a	-1.086501856	0.44567668	0.014774081	0.027909071
Smpd3	-1.029522853	0.4226713	0.014860832	0.028063188
Kif5a	-1.109249273	0.45559268	0.014902534	0.028133511
Rn50_X_0652.2	2.878403644	1.18346928	0.01500848	0.028315756
AABR07037923.1	-3.281180987	1.34935426	0.015029494	0.02835212
Rbpjl	1.135011438	0.46718474	0.015120905	0.028508059
Dclre1c	-1.019211329	0.41987485	0.015206769	0.028655844
LOC691670	3.418388017	1.41058282	0.015376538	0.028953164
Ube2t	3.085340406	1.27394425	0.015440438	0.029063409
Fpr2	2.861596221	1.18171984	0.015454383	0.029082939
Lrrn4cl	1.822194305	0.75292691	0.015514205	0.029188775
LOC100911225	-2.222495682	0.91884796	0.01557244	0.029288194
AABR07060963.2	4.412030164	1.82417028	0.015578204	0.029295654
Irf7	1.067564999	0.44147841	0.015599258	0.029331862
AABR07054716.1	-2.400743345	0.99347983	0.015670555	0.029455727
Qpct	1.697981957	0.70305745	0.015729175	0.029552278
Eomes	1.493584605	0.61848054	0.015738417	0.029566232
Cd19	-1.497010879	0.62026743	0.015800447	0.029672501
Zbtb7c	-1.734423388	0.71875359	0.015817534	0.029694322
Shisa7	1.46400341	0.60691647	0.015856616	0.029757407
F3	-1.273440764	0.5279927	0.01587168	0.029782245

RGD1312005	2.493916357	1.03408947	0.015878224	0.029787665
Atp6ap1l	-1.19555661	0.49586224	0.015905968	0.029829411
Bmp3	2.441589207	1.01303877	0.015945367	0.029899856
RGD1560513	3.99751733	1.65933834	0.015991775	0.029979978
Diras1	4.170100856	1.73247911	0.016083569	0.030133528
Pcdha4	1.930460044	0.80207435	0.01609147	0.030142602
Ckap2l	2.103135798	0.87537005	0.016280421	0.03046153
H2afy2	1.783592132	0.74239474	0.016284108	0.03046493
Lmo1	2.464604181	1.02698276	0.016401809	0.030678085
Mcoln3	3.199020809	1.33354546	0.016445125	0.030748516
AABR07051665.1	3.963176494	1.65279061	0.016490731	0.030830251
Zglp1	2.354714749	0.98245885	0.016540906	0.030916961
Setbp1	1.092429824	0.45627914	0.016656035	0.03111074
Zfp786	1.221380097	0.5108307	0.016803996	0.03135117
Senp8	-1.346088913	0.56334842	0.016873944	0.031470861
AC108588.1	-1.679925957	0.70318017	0.016892437	0.031494538
AABR07001926.3	-2.117464267	0.88641015	0.016903102	0.031507211
AC124205.1	8.220303893	3.44172014	0.016920581	0.031532579
Tmem246	1.014813392	0.42493036	0.016931698	0.031549688
Fam199x	1.248736659	0.52289071	0.016933851	0.031550092
Spc25	2.471291263	1.03631502	0.017093465	0.031832916
Haus3	-1.106643804	0.46408248	0.01709843	0.03183649
Hbq1b	2.937800276	1.2329689	0.017185993	0.031972344
Anxa8	-1.7160107	0.72105962	0.017319885	0.032214077
LOC103690006	-1.068965906	0.44955919	0.017415843	0.032370384
Ppef2	3.514164317	1.47792967	0.017418086	0.032370861
RGD1311744	1.765177692	0.74243465	0.01742794	0.032381789
LOC103694872	-3.248569388	1.36633482	0.017426696	0.032381789
Slc12a8	1.921569112	0.80970171	0.017635596	0.032726573
Hmgb2l1	-1.03410822	0.43667409	0.017877454	0.033152739
Sspn	1.587902472	0.67061549	0.017892828	0.033177472
Mcpt4	4.83080739	2.04031193	0.017899972	0.033183811
Medag	3.016329933	1.27416961	0.01791885	0.033210607
Tex15	3.840163555	1.62544672	0.018150765	0.033609854
Syt13	2.411898053	1.02132966	0.018199824	0.033689211
Ak9	-2.262612973	0.95811226	0.01819959	0.033689211
Wnt7b	2.198232464	0.93117529	0.018240112	0.033759954
LOC100910150	1.101320121	0.46667061	0.018277313	0.033813445
Gpr25	3.294773095	1.3970461	0.018354627	0.033948768
Adcy8	3.860978591	1.63719147	0.018359153	0.03395066
P4htm	2.164583292	0.91786509	0.018359817	0.03395066
AABR07038021.1	-1.407904095	0.59715653	0.018389531	0.033994034
Kcnq1	1.227460666	0.52070278	0.018407607	0.034023589
AABR07002001.1	1.70867361	0.72495116	0.01842573	0.034053223
FAM120C	1.904849275	0.80847032	0.018467185	0.034118229
Mamstr	3.263195034	1.38605085	0.018557068	0.034264864

Pcdh8	3.913063698	1.66229838	0.018572211	0.034285054
Upk1b	3.03611377	1.29001808	0.018595428	0.034324025
Tbx1	2.655904321	1.12931423	0.018683568	0.034471098
AABR07003241.1	5.113873291	2.1780364	0.018878155	0.034774987
LOC100911365	1.694068492	0.72168249	0.018905579	0.034821567
Zfp580	1.146839579	0.48875586	0.018953377	0.034897772
Chst9	-1.348401488	0.57475324	0.018973417	0.034922831
Tnfrsf17	2.53088364	1.07915292	0.019014313	0.034990201
AABR07053185.1	-1.104069169	0.47110558	0.01910015	0.03514419
Pdzd4	-1.621123923	0.69245911	0.019226429	0.035348602
Tspoap1	-1.881402765	0.80445601	0.019349581	0.035558974
Parp8	-1.086515618	0.46497036	0.019452619	0.035724155
Wdr97	-2.058014971	0.88071392	0.01945179	0.035724155
Pmf1	1.051335285	0.4499411	0.019459656	0.035733051
Irx2	1.492255333	0.63874373	0.019479007	0.035764554
Zfp82	-1.413475446	0.60513423	0.019501417	0.035797633
Zfp296	1.955728421	0.83897023	0.019747778	0.03621315
AABR07029467.2	-2.078612784	0.89188941	0.019775922	0.036260678
Hist2h3c2	2.499173746	1.07238506	0.019780707	0.036265372
Prr15l	2.048086707	0.87924207	0.019839075	0.036364198
Dlk1	4.54095637	1.94961612	0.019850904	0.036381788
Prdm16	1.297681326	0.55721506	0.019865965	0.036401203
Trmt13	-1.106040767	0.47502162	0.019890825	0.036442657
AABR07067246.1	-4.065059809	1.7465076	0.01993674	0.03651036
Cenpw	2.259305992	0.97166953	0.020062368	0.036723914
Spint1	-1.034277192	0.44489989	0.020085793	0.036757708
Cdh23	1.624141109	0.69957528	0.020253935	0.037041287
Lilrb3	-1.524345082	0.65682017	0.020297902	0.037109201
Clec12a	1.236592062	0.533241	0.020394408	0.037273091
LOC108351936	2.611110683	1.1261917	0.020420465	0.037312343
LOC100362110	-2.693548003	1.16213033	0.020461956	0.037375584
Slx4ip	-1.05034274	0.45360688	0.020583654	0.037576815
AABR07053500.1	1.148727832	0.49612754	0.0205917	0.037583081
Ecm2	-3.681934489	1.59268605	0.020789992	0.037889825
Enpp5	-1.093111876	0.47306739	0.020850009	0.037982214
Ccdc142	-3.396314466	1.46980886	0.020848411	0.037982214
AABR07018556.1	-1.421067035	0.61531816	0.020916776	0.03808681
Lrtm2	-2.137003762	0.92564607	0.020962354	0.03815701
Slc39a5	1.429140651	0.61975263	0.021111436	0.038419795
Apobec3b	1.142491829	0.49566496	0.021168372	0.038510508
Cd34	1.096662488	0.47578012	0.021167833	0.038510508
Zpbp	-1.936721801	0.84055843	0.021217624	0.038587185
Zfp2	-1.253689768	0.54423439	0.021245992	0.038634465
Krt71	4.343805797	1.8863664	0.021293642	0.038703837
Rn50_5_0814.17	-3.060412286	1.32901629	0.021292065	0.038703837
Ido2	-1.060101848	0.46044769	0.021316653	0.038741341

Tmem253	4.615181747	2.00517041	0.021355445	0.038803187
Rn50_13_0873.1	3.306025057	1.43783351	0.021487339	0.039025434
Hey1	-1.17489009	0.51105924	0.02150884	0.039055778
Slc25a52	-3.448750536	1.50037991	0.021528524	0.039087164
Cep72	2.104083733	0.91543962	0.021536717	0.039097683
Ankrd34a	2.108943794	0.91759846	0.021543031	0.039104789
Kifc2	-1.338975554	0.58261537	0.021549538	0.039112243
LOC108348771	3.046831266	1.32587636	0.021563189	0.039132661
Hsd3b2	-1.547236873	0.67355381	0.021611675	0.039216285
Dusp26	-2.59217908	1.13017909	0.021813469	0.039569239
AC096404.1	3.106629025	1.35452018	0.021817665	0.039572445
Bst1	1.053496767	0.45965427	0.021909512	0.039730191
Csmd2	2.200496298	0.9606848	0.02198947	0.039866312
Oca2	-1.979029404	0.86439213	0.022050075	0.039967294
Abcg2	1.25469103	0.54840623	0.022144151	0.040118777
Ppp4r4	-1.233075887	0.53896589	0.022145959	0.040118777
AABR07059632.3	1.311711116	0.57376561	0.022245805	0.040272791
Ephx2	-1.938407237	0.84890533	0.022405653	0.040539653
Isg15	1.56434707	0.68559773	0.022505444	0.04070665
Wnt9a	2.554447902	1.11961679	0.02251665	0.040722398
LOC100360940	-1.869352612	0.82023158	0.022663815	0.04096582
Ppargc1a	1.088760444	0.47810069	0.022770597	0.041140578
P2rx1	1.038831267	0.4562806	0.02280189	0.041192549
Depdc1b	2.79824803	1.22968808	0.022871431	0.04130444
Hoxa1	2.598731939	1.14242909	0.022921385	0.04138548
Efna2	1.813318178	0.79731819	0.022949657	0.041427347
Adamts6	2.045322022	0.89956008	0.022984548	0.041485734
Hist1h2bl	3.313836936	1.46020291	0.02324183	0.041903698
Dsg3	1.74533955	0.76932103	0.023288083	0.041982445
Lrrc75a	1.066039537	0.46995835	0.023306649	0.042011267
RGD1561520	3.328706664	1.46935983	0.023487355	0.042299564
Ank1	2.010232869	0.88760453	0.023525915	0.042359645
Socs2	-1.25168914	0.55280839	0.023559551	0.042410836
Irx1	-1.17628404	0.51952573	0.023564907	0.042415792
Samd14	1.673880537	0.74010455	0.023717108	0.042675605
Duoxa1	-1.875000348	0.82924988	0.023754302	0.042737811
Melk	1.790426285	0.79200182	0.023781927	0.042782789
Grpr	-3.873912421	1.7148561	0.023881481	0.042952398
Clec4a	1.297618143	0.57448603	0.023899176	0.042969996
Znf354b	-1.450646969	0.64300451	0.024067828	0.043254136
Ervfrd-1	1.670073006	0.74094702	0.024198001	0.043468903
Gabpb1l	3.219116261	1.42924117	0.024301713	0.043626353
Spata3	-1.526099071	0.67761616	0.02431225	0.043640462
Efcab3	-3.614858195	1.60973051	0.024727754	0.044317944
Tmem71	1.714413546	0.763935	0.024820326	0.044474072
AABR07062268.1	3.265874084	1.45619892	0.024913651	0.04462167

AABR07051733.2	2.48350542	1.10749112	0.024931607	0.044644015
Mcmdc2	-1.126679895	0.50260252	0.024981306	0.044728093
Fez1	-1.41511098	0.63141559	0.025014932	0.044773542
Lexm	4.132224086	1.84453022	0.025074161	0.044869696
Lca5	-1.356162342	0.60549405	0.025106403	0.044922459
Accsl	3.50157219	1.56538816	0.025294739	0.045219722
Begain	1.225659403	0.54800242	0.025312831	0.045247102
Fgf21	1.045136488	0.46739055	0.025344594	0.04529891
Nradd	1.370920101	0.61351653	0.025448326	0.045454399
Tctex1d1	4.434426548	1.98559451	0.025529223	0.045588897
Shisa3	1.184055336	0.5302161	0.025538649	0.045600732
Gabrd	4.083123803	1.82946426	0.02562365	0.045712434
Acot6	3.544166279	1.58793145	0.025618988	0.045712434
Dnaaf1	-1.959433207	0.87831711	0.025688088	0.045817359
Ripk3	1.001870957	0.44920718	0.025726915	0.045876569
AABR07030729.1	2.47203568	1.10953822	0.025881445	0.046121844
Best1	2.348791903	1.05454622	0.025927161	0.046193208
RGD1563294	2.13243019	0.95750377	0.025942438	0.046215374
RGD1307461	-1.24550454	0.55972587	0.02606751	0.046407744
Ccdc113	-2.598955413	1.16831588	0.02611271	0.046483134
Thbs3	1.135207104	0.51037438	0.026130722	0.046510116
Nlrp10	-2.571098529	1.15702186	0.026271862	0.046735807
AC118490.1	4.279252972	1.92657277	0.026339191	0.04684024
Slc35f2	1.291241554	0.5813713	0.02634911	0.046852767
Arap2	2.022219814	0.9110234	0.026437561	0.047004916
Matn4	2.253921828	1.01573527	0.026486371	0.047081425
Dlgap5	1.687719322	0.76080155	0.026531407	0.047146049
LOC100912707	1.822835076	0.82213792	0.026610185	0.047260269
Slc2a3	1.349458666	0.6088997	0.026676104	0.047372179
Slc2a3	1.349458666	0.6088997	0.026676104	0.047372179
Il20rb	3.23499331	1.46021241	0.026730802	0.047453799
Agbl1	-2.810888657	1.26909339	0.026768352	0.047510107
Ackr2	-1.338916201	0.60636504	0.027237124	0.048300026
Cdca7l	1.559435428	0.70688459	0.027379243	0.048541482
Slc8a3	-2.340459453	1.06201419	0.027538904	0.04880331
AABR07045047.1	-1.482829913	0.67312643	0.027601828	0.048909503
Nat8f3	2.586963864	1.17530485	0.027728923	0.049113348
Gpr65	1.255908475	0.57061935	0.02773909	0.049120678
Rimbp3	3.071537333	1.3955314	0.027737408	0.049120678
Slc25a2	-1.461011049	0.66412536	0.027813813	0.049247646
Kif11	1.526472119	0.69420305	0.027886157	0.049370374
Rec8	1.617033823	0.73578204	0.027969946	0.04949183
LOC100911374	6.149883149	2.79873676	0.027993447	0.04952653
Slc13a2	-1.618251158	0.73691884	0.028094139	0.049695397
Cyp8b1	-1.144996465	0.52164786	0.02816643	0.049796243
S100a8	1.437191755	0.65486328	0.028189147	0.049830998

Sult1c2

-4.004476862 1.82562059 0.028272238 0.049967041

Appendix 5.B

RNA sequencing comparison between FOF1F2 and FOF1

Gene	log2FoldChange	lfcSE	p-value	p-adjust
AABR07067267.1	8.903480958	0.49895446	3.20E-71	4.99E-67
AABR07004894.1	6.988362895	0.44333876	5.59E-56	4.35E-52
RGD1559972	3.534772532	0.23494022	3.70E-51	1.92E-47
Spag7	-2.775825175	0.20646892	3.33E-41	1.30E-37
AABR07073181.1	4.084543527	0.30819316	4.32E-40	1.35E-36
Mrps9	-1.740432903	0.13246912	1.98E-39	5.09E-36
Pin4	-2.426985175	0.18501991	2.62E-39	5.09E-36
LOC688815	3.973286045	0.30267493	2.30E-39	5.09E-36
Creb3l2	2.215633669	0.1707064	1.61E-38	2.78E-35
Naca	-1.966990743	0.15175672	2.02E-38	3.15E-35
Phgdh	6.235203348	0.48247302	3.32E-38	4.70E-35
Ensa	-1.220953977	0.09498311	8.12E-38	1.05E-34
Rab9a	-2.5968518	0.20260185	1.31E-37	1.57E-34
Dnajc1	-1.723556644	0.13587152	7.14E-37	7.95E-34
Ablim3	2.911182202	0.23260432	6.13E-36	6.37E-33
Sarnp	-2.893606201	0.23169129	8.57E-36	8.34E-33
Sec31a	1.737697694	0.13998538	2.21E-35	2.02E-32
Rn60_1_1138.1	3.857985389	0.31181367	3.67E-35	3.18E-32
Bcas2	-1.482013905	0.11997746	4.73E-35	3.87E-32
LOC103690018	6.439121019	0.52242061	6.60E-35	5.14E-32
Rbm8a	-1.335190705	0.10850762	8.51E-35	6.31E-32
Pop4	-1.838364951	0.1495896	1.03E-34	7.31E-32
Cmip	2.044871531	0.16835536	6.01E-34	4.07E-31
Psm4	-1.411934405	0.11635863	6.95E-34	4.51E-31
Ddost	1.813643269	0.14986017	1.03E-33	6.40E-31
Ssr1	2.01628886	0.16667541	1.09E-33	6.55E-31
Eny2	-1.418292159	0.11764928	1.82E-33	1.05E-30
Derl3	5.561790922	0.46907618	1.98E-32	1.03E-29
RGD1565641	-2.951532779	0.24889722	1.95E-32	1.03E-29
Prpf31	-1.592642289	0.13431167	1.96E-32	1.03E-29
Polr2k	-2.799915459	0.23981643	1.71E-31	8.30E-29
Ssbp1	-2.298578757	0.19767183	2.96E-31	1.40E-28
Cirbp	-2.54968396	0.21945924	3.34E-31	1.53E-28
Nol7	-1.762817298	0.1518272	3.64E-31	1.62E-28
Sdhaf2	-1.795018977	0.1549759	5.05E-31	2.18E-28
Slc40a1	11.94573395	1.03803709	1.20E-30	5.06E-28
Zmat2	-1.697925815	0.14786528	1.61E-30	6.59E-28
Sdc3	2.144630418	0.18703063	1.94E-30	7.74E-28
Klf16	2.732297395	0.23834864	2.01E-30	7.84E-28
Cox7b	-2.958671123	0.26047427	6.71E-30	2.55E-27
LOC100363502	-1.647182798	0.14639114	2.27E-29	8.40E-27
Bid	-1.831540638	0.16294838	2.59E-29	9.39E-27
Gna11	1.826533305	0.16297981	3.76E-29	1.33E-26

Tra2b	-2.081842861	0.18667342	6.98E-29	2.41E-26
Rere	1.287105236	0.11565055	9.04E-29	3.06E-26
Chtf8	1.242634712	0.11167755	9.27E-29	3.07E-26
Nudc	-1.764730087	0.15889668	1.17E-28	3.80E-26
Col4a2	3.348887877	0.30346341	2.57E-28	8.18E-26
Cnbp	-1.430106873	0.12983332	3.24E-28	1.01E-25
Hexdc	-2.740858873	0.25096818	9.13E-28	2.74E-25
Eif2s3y	-2.460706771	0.22531133	9.11E-28	2.74E-25
Hid1	4.375558136	0.40321997	1.96E-27	5.76E-25
Col3a1	3.071661071	0.28317617	2.06E-27	5.93E-25
Cfap36	-2.740320453	0.25266899	2.09E-27	5.93E-25
Tnfrsf21	4.402060894	0.40624781	2.33E-27	6.37E-25
Zfhx3	2.272305184	0.20970413	2.33E-27	6.37E-25
Nup88	-1.245727531	0.11522759	3.05E-27	8.20E-25
Slc7a1	6.236805446	0.58109452	7.14E-27	1.88E-24
LOC100911672	11.59060369	1.08083962	7.88E-27	2.04E-24
Lmf2	1.634102788	0.15266439	9.76E-27	2.49E-24
Cdc123	-1.005163221	0.09419804	1.40E-26	3.45E-24
Akap8l	-2.938439661	0.27579831	1.66E-26	4.05E-24
Rreb1	1.643535951	0.15455844	2.08E-26	4.97E-24
AABR07017110.1	8.003603093	0.75488446	2.90E-26	6.85E-24
AABR07044273.1	10.95471675	1.03439075	3.30E-26	7.59E-24
Nsfl1c	-1.117579098	0.10553085	3.31E-26	7.59E-24
AC128212.1	5.270415624	0.49809469	3.64E-26	8.23E-24
AABR07013776.1	4.624548611	0.43754069	4.13E-26	9.19E-24
Fam193b	-2.97163955	0.28168665	5.11E-26	1.12E-23
Dchs1	2.167006445	0.20565882	5.84E-26	1.26E-23
Cops5	-1.145040944	0.10868859	5.95E-26	1.27E-23
Klf11	2.081208304	0.19776942	6.74E-26	1.42E-23
Psmc6	-2.380389569	0.22623038	6.84E-26	1.42E-23
Sec61-ps	9.032149726	0.85874764	7.15E-26	1.47E-23
Pcdh10	11.20695821	1.06660467	8.01E-26	1.62E-23
LOC100910575	10.98888325	1.04730555	9.35E-26	1.87E-23
RGD1304884	1.861219306	0.1784752	1.84E-25	3.62E-23
Selenon	2.493199286	0.23921452	1.96E-25	3.81E-23
Csde1	-2.344797667	0.22511939	2.10E-25	4.04E-23
Syvn1	1.701161555	0.1636618	2.63E-25	4.93E-23
Bhlha15	3.517111668	0.33836648	2.63E-25	4.93E-23
Pxn	1.0553443	0.10167795	3.08E-25	5.66E-23
Ube2k	-1.350249474	0.13009445	3.09E-25	5.66E-23
Map3k7	10.83374791	1.04712744	4.36E-25	7.80E-23
Txndc17	-2.175165318	0.21041716	4.77E-25	8.45E-23
Nrxn2	1.953273636	0.18914581	5.33E-25	9.22E-23
Gemin6	-2.071665389	0.20060156	5.31E-25	9.22E-23
Mterf4	-2.377809384	0.23122219	8.35E-25	1.43E-22
Psm2	-1.25469668	0.12205499	8.69E-25	1.47E-22
Ndufa5	-1.927615996	0.18760066	9.12E-25	1.53E-22
Hm13	1.994747292	0.19471653	1.25E-24	2.08E-22

Wfs1	1.839850786	0.1801276	1.71E-24	2.81E-22
Kdelr1	1.462138536	0.14342618	2.10E-24	3.41E-22
Tmem186	-1.883175429	0.18481063	2.20E-24	3.54E-22
Prkrip1	-1.670836979	0.16434307	2.79E-24	4.43E-22
Cln6	1.968580962	0.19416568	3.72E-24	5.85E-22
Rn60_4_0065.1	10.9913668	1.09080159	7.02E-24	1.09E-21
Snrnp70	-1.569793996	0.15633358	1.00E-23	1.53E-21
Tbca	-1.539870714	0.15336701	1.01E-23	1.53E-21
Phf13	1.328876082	0.13257248	1.20E-23	1.79E-21
Prpf3	-1.825157506	0.1824643	1.48E-23	2.20E-21
Pigo	1.667626526	0.16709508	1.86E-23	2.74E-21
H3f3c	-1.718449278	0.17234204	2.04E-23	2.97E-21
Bccip	-2.055983036	0.20631259	2.16E-23	3.12E-21
Ppp1r9b	1.817204476	0.18251523	2.36E-23	3.38E-21
Exosc10	-1.38194573	0.13891627	2.57E-23	3.64E-21
Ciart	6.107085182	0.61557514	3.38E-23	4.74E-21
Aph1a	1.560887655	0.15765876	4.15E-23	5.76E-21
Chmp3	-1.444713378	0.14595379	4.23E-23	5.83E-21
LOC100912042	-1.364509882	0.1380577	4.90E-23	6.70E-21
Cfdp1	-1.859611309	0.18833936	5.41E-23	7.33E-21
Rbm5	-1.836873274	0.1861034	5.61E-23	7.53E-21
Chpf	4.157763673	0.42246228	7.44E-23	9.90E-21
Soat1	3.757363039	0.38324841	1.08E-22	1.43E-20
Rps27a	-2.365713656	0.24135751	1.11E-22	1.45E-20
Slc6a9	2.56007767	0.26150645	1.25E-22	1.62E-20
Atg13	1.676656499	0.17133448	1.29E-22	1.67E-20
Herpud1	2.070993243	0.21175144	1.37E-22	1.75E-20
Alg3	1.721389721	0.17611828	1.46E-22	1.84E-20
Denr	-2.016520769	0.20662207	1.68E-22	2.09E-20
lqsec1	1.706371888	0.17499179	1.82E-22	2.25E-20
Heg1	1.678072029	0.17212118	1.86E-22	2.28E-20
Zcchc17	-1.414107137	0.1450866	1.91E-22	2.32E-20
Nmnat1	-1.851530726	0.19005602	2.00E-22	2.40E-20
Tmem104	1.774030778	0.18210728	2.00E-22	2.40E-20
Ckap4	4.005367498	0.41134484	2.09E-22	2.49E-20
Tgfb1	2.677453632	0.27520442	2.27E-22	2.68E-20
Slc7a5	3.750376906	0.38560866	2.34E-22	2.74E-20
Capza2	-1.982655712	0.20422767	2.79E-22	3.24E-20
Klf13	3.122642798	0.32283401	3.94E-22	4.55E-20
Pld3	1.845351543	0.19106815	4.54E-22	5.20E-20
Eif2s2	-1.593226601	0.16540332	5.84E-22	6.63E-20
Dnajc7	-2.117548013	0.22006945	6.45E-22	7.27E-20
Rab7a	-1.306685863	0.13585868	6.71E-22	7.52E-20
Gpaa1	1.725992647	0.17949796	6.87E-22	7.64E-20
RGD1561149	2.45690998	0.25556084	6.99E-22	7.72E-20
ldh3B	-1.503822487	0.1564857	7.26E-22	7.96E-20
Reep5	2.357214212	0.2459837	9.44E-22	1.03E-19
Slc38a7	1.580284736	0.16529554	1.17E-21	1.26E-19

Mrpl18	-1.615076782	0.16893024	1.17E-21	1.26E-19
Tmem248	2.043865944	0.21397833	1.28E-21	1.36E-19
Cwc15	-1.295416813	0.13564976	1.30E-21	1.38E-19
Synpo	2.86715901	0.30039299	1.37E-21	1.44E-19
Tom5	-1.632806232	0.17159263	1.81E-21	1.89E-19
Myadm	2.689943632	0.28281472	1.88E-21	1.95E-19
Asns	4.296975498	0.45220325	2.05E-21	2.12E-19
Hdac1	-1.247128537	0.13140827	2.30E-21	2.36E-19
Trim30c	-2.973849616	0.31399581	2.77E-21	2.82E-19
Ptdss1	1.171771766	0.12387771	3.11E-21	3.14E-19
Immt	-1.899650749	0.20088976	3.19E-21	3.19E-19
Chchd3	-1.398559604	0.1479007	3.20E-21	3.19E-19
Gtf3c6	-2.143781511	0.22685335	3.39E-21	3.36E-19
Clec2g	-2.41824828	0.25598304	3.49E-21	3.44E-19
Desi1	1.80693017	0.19143629	3.77E-21	3.69E-19
Rpl5	-2.11390317	0.2241045	4.00E-21	3.89E-19
LOC100364509	-2.542066292	0.26981907	4.45E-21	4.31E-19
Slc15a4	1.51648425	0.16133234	5.47E-21	5.26E-19
Fbxw8	1.51684419	0.16146621	5.77E-21	5.51E-19
Zcchc9	-2.163759055	0.23051799	6.20E-21	5.89E-19
Pfkfb3	3.74457864	0.3992742	6.69E-21	6.32E-19
Dpagt1	1.743113281	0.18590946	6.84E-21	6.42E-19
LOC102557117	-2.932739866	0.31284495	6.96E-21	6.49E-19
Cnm2	1.654235586	0.17651286	7.13E-21	6.61E-19
Sdpr	-2.474326722	0.26425079	7.71E-21	7.10E-19
Mkks	-1.277879388	0.13684198	9.78E-21	8.96E-19
Lgals5	3.959032214	0.42445887	1.09E-20	9.90E-19
Ttc1	-1.277362861	0.13709788	1.19E-20	1.08E-18
Zfp703	2.661274145	0.28574965	1.24E-20	1.12E-18
RGD1311745	-1.877342658	0.20194427	1.45E-20	1.30E-18
Tpmt	-2.075967718	0.22353248	1.59E-20	1.41E-18
Snrpd2l	6.72415809	0.72483426	1.75E-20	1.54E-18
Unc5b	3.940043245	0.42538479	2.00E-20	1.75E-18
Mesdc1	1.966525361	0.2123157	2.00E-20	1.75E-18
Tmed3	3.093400396	0.33461485	2.36E-20	2.05E-18
Clptm1	1.558063699	0.16855263	2.38E-20	2.06E-18
Sucla2	-2.227994691	0.24150019	2.82E-20	2.43E-18
Magee1	2.449743656	0.26555413	2.83E-20	2.43E-18
Gfm1	-1.709137289	0.18550524	3.16E-20	2.69E-18
Anks3	-2.703749712	0.29361515	3.31E-20	2.79E-18
Cnksr3	1.35848117	0.1475299	3.32E-20	2.79E-18
Cbfa2t3	2.90256804	0.31580749	3.89E-20	3.26E-18
Ndufaf2	-3.053751761	0.33227896	3.92E-20	3.26E-18
Grn	1.831460471	0.19932315	3.99E-20	3.30E-18
Col5a1	3.101796202	0.3376092	4.02E-20	3.31E-18
AABR07000398.1	3.819302934	0.41573872	4.05E-20	3.32E-18
Rnaseh1	-2.079271704	0.2263989	4.15E-20	3.38E-18
Psm1	-1.156508426	0.12599928	4.36E-20	3.54E-18

Rtn3	1.202728083	0.13145665	5.73E-20	4.63E-18
RGD1310127	1.501982159	0.16432109	6.21E-20	4.99E-18
Twf1	-1.298619916	0.14208653	6.27E-20	5.00E-18
lft20	-2.457567713	0.26894131	6.37E-20	5.06E-18
Trappc13	-1.071397333	0.11748623	7.56E-20	5.97E-18
Ddx23	-1.323284498	0.14540994	9.00E-20	7.08E-18
Zfp874b	-2.345019033	0.25798978	9.94E-20	7.78E-18
AABR07061902.1	1.894326668	0.20845929	1.02E-19	7.91E-18
Tbc1d13	1.270410486	0.13987878	1.06E-19	8.24E-18
AABR07065406.1	-2.39505156	0.26390097	1.13E-19	8.72E-18
Nipal3	2.061402329	0.22716756	1.14E-19	8.77E-18
Etf1	-1.040362686	0.11476565	1.24E-19	9.50E-18
Ythdc1	-1.676469499	0.1849629	1.26E-19	9.57E-18
Slc35c1	1.223708066	0.13502219	1.27E-19	9.59E-18
Dnaja3	-1.244822412	0.13741358	1.32E-19	9.91E-18
Cops9	-1.618705552	0.17884157	1.42E-19	1.06E-17
Med6	-1.35521693	0.14979134	1.46E-19	1.09E-17
Mrps18c	-1.656620853	0.18330714	1.60E-19	1.19E-17
Soga1	3.721260672	0.41257308	1.89E-19	1.39E-17
Stx4	-1.376843067	0.15267727	1.92E-19	1.41E-17
Ybx3	2.573918567	0.28551717	1.97E-19	1.44E-17
Mtif3	-1.829616198	0.20306163	2.06E-19	1.50E-17
LOC103694910	9.523508083	1.05743102	2.13E-19	1.54E-17
Arhgef17	1.924418042	0.21389238	2.32E-19	1.67E-17
Erc3	-1.235675813	0.13736908	2.36E-19	1.69E-17
B4galt1	2.208654273	0.2456994	2.49E-19	1.78E-17
Abcc4	2.401275408	0.26726151	2.59E-19	1.84E-17
Leng1	-2.539237037	0.28292657	2.84E-19	2.01E-17
Atg3	-1.21322739	0.13524566	2.95E-19	2.08E-17
LOC103689975	1.644294869	0.18333496	3.00E-19	2.10E-17
Fam32a	-1.291666	0.14436532	3.65E-19	2.53E-17
Reln	2.173882961	0.24342523	4.24E-19	2.94E-17
Wasf2	2.800918983	0.31368792	4.30E-19	2.96E-17
Zscan21	-2.039962788	0.22861476	4.53E-19	3.11E-17
Slc7a7	1.77294615	0.19879966	4.74E-19	3.24E-17
Polr3c	-1.335776121	0.15002719	5.41E-19	3.68E-17
Dstn	-1.20481161	0.13540576	5.70E-19	3.86E-17
Uqcrc2	-1.631582953	0.18339985	5.77E-19	3.89E-17
Lcn2	4.729982406	0.53206881	6.12E-19	4.11E-17
Cad	2.020399926	0.22733801	6.27E-19	4.19E-17
Sco1	-1.490673669	0.16798674	7.07E-19	4.71E-17
Sub1	-1.47858294	0.16687199	7.96E-19	5.27E-17
Fam220a	1.690417008	0.19098156	8.66E-19	5.71E-17
Wee1	3.084066134	0.34861887	9.03E-19	5.93E-17
Itga9	2.433128856	0.27516681	9.37E-19	6.13E-17
Apool	-2.816454041	0.31863576	9.65E-19	6.29E-17
Rufy3	-1.624475652	0.1838949	1.01E-18	6.57E-17
Tns2	1.459484436	0.16523532	1.02E-18	6.60E-17

Pdap1	-1.129300119	0.12787271	1.03E-18	6.65E-17
Gripap1	-1.433204852	0.16272918	1.28E-18	8.20E-17
Ldah	-1.319283599	0.14979957	1.29E-18	8.20E-17
Plrg1	-1.626875698	0.18484526	1.35E-18	8.60E-17
RGD735029	-1.713336182	0.1949034	1.49E-18	9.41E-17
Srsf1	-1.249481886	0.14227565	1.60E-18	1.01E-16
Col4a1	2.988187166	0.34035558	1.64E-18	1.03E-16
Zfand3	1.119222002	0.12753687	1.70E-18	1.06E-16
Igbp1	-1.978160013	0.22570195	1.88E-18	1.16E-16
Gpatch11	-1.74270702	0.19915583	2.12E-18	1.31E-16
Ttyh3	1.598203944	0.18266828	2.15E-18	1.32E-16
Prpf38b	-1.64278545	0.18784483	2.22E-18	1.36E-16
Fbxl18	1.742810087	0.1993233	2.26E-18	1.37E-16
Pycr1	3.711029879	0.42443838	2.26E-18	1.37E-16
Nfic	1.76659787	0.20208702	2.29E-18	1.39E-16
Nsmce2	-1.995451463	0.22829242	2.32E-18	1.39E-16
Rpl4	-1.559274276	0.1784989	2.43E-18	1.45E-16
Det1	1.422380954	0.16296158	2.58E-18	1.54E-16
Tmem5	-1.198338475	0.13734144	2.66E-18	1.58E-16
Coq3	-1.2599693	0.14442704	2.69E-18	1.59E-16
Mrpl13	-1.2571809	0.14426153	2.92E-18	1.72E-16
Ctnna3	-3.480116317	0.39948481	3.00E-18	1.76E-16
Rcan3	3.258596163	0.3742304	3.11E-18	1.82E-16
Trpv2	3.416840648	0.39249922	3.17E-18	1.85E-16
Aifm1	-1.771664515	0.20354441	3.20E-18	1.86E-16
Prr12	1.275343674	0.1466478	3.42E-18	1.98E-16
Psmc4	-1.448827431	0.1666195	3.46E-18	1.99E-16
Agpat1	1.705219546	0.19626511	3.68E-18	2.11E-16
Ccdc12	-1.260070982	0.14504077	3.70E-18	2.12E-16
Dld	-2.119172703	0.24464991	4.63E-18	2.64E-16
Spop	-1.51946078	0.17555696	4.93E-18	2.80E-16
Fiz1	1.30764788	0.15122781	5.29E-18	3.00E-16
Igsf8	2.638916244	0.30528198	5.42E-18	3.05E-16
Akt2	1.266469411	0.1465095	5.41E-18	3.05E-16
Trappc9	1.276536696	0.14786486	5.97E-18	3.34E-16
Plod3	1.36180154	0.15782325	6.21E-18	3.47E-16
Eloc	-1.589766772	0.18458934	7.15E-18	3.96E-16
Acin1	-1.154628606	0.13408444	7.23E-18	3.99E-16
Lbp	2.8340992	0.32931435	7.56E-18	4.16E-16
AABR07073038.1	1.77848485	0.20689795	8.26E-18	4.53E-16
Fez2	-1.188590164	0.13832807	8.51E-18	4.65E-16
Thumpd1	-1.97250726	0.22976208	9.08E-18	4.95E-16
Smarce1	-1.5976398	0.18613024	9.21E-18	5.00E-16
Rida	-3.171997067	0.36969425	9.48E-18	5.13E-16
Prrc2b	1.867797082	0.21773038	9.61E-18	5.18E-16
Grk2	1.150675318	0.13417948	9.85E-18	5.29E-16
Ap2a1	1.467028987	0.17109738	9.97E-18	5.34E-16
Snrnp35	-1.437034421	0.16798841	1.19E-17	6.30E-16

Itgal	2.197047977	0.25682709	1.18E-17	6.30E-16
Nav1	2.570490952	0.30077024	1.27E-17	6.73E-16
Adgra2	2.354586143	0.27568102	1.33E-17	7.00E-16
Tstd3	-2.667859868	0.31234919	1.33E-17	7.00E-16
Prelp	1.633931353	0.19157265	1.48E-17	7.74E-16
Pcdhgc3	1.867244495	0.21899827	1.51E-17	7.90E-16
Clptm1l	1.343411715	0.15761028	1.55E-17	8.05E-16
Btn2a2	-2.174776382	0.25541154	1.67E-17	8.66E-16
Tec	-2.072864608	0.2439616	1.95E-17	1.01E-15
Syf2	-1.122700987	0.13218334	2.00E-17	1.03E-15
Ctns	1.836352367	0.21637491	2.12E-17	1.09E-15
Sun2	1.709912462	0.20153898	2.17E-17	1.11E-15
Cox16	-1.644026153	0.19391151	2.29E-17	1.17E-15
Tars	-1.26548638	0.14933483	2.37E-17	1.20E-15
Adm2	5.767319287	0.68059321	2.37E-17	1.20E-15
Lgals3	3.761077648	0.44408824	2.47E-17	1.25E-15
Ppp1r18	1.721785111	0.20334281	2.51E-17	1.26E-15
Tfb2m	-1.357865228	0.16071749	2.94E-17	1.48E-15
Anks1a	1.139837259	0.13495326	3.01E-17	1.51E-15
Impad1	9.555604913	1.13237236	3.21E-17	1.60E-15
Slc3a2	2.375657861	0.28183198	3.48E-17	1.73E-15
Rbm39	-2.966800581	0.35211634	3.59E-17	1.78E-15
Irgq	1.882419352	0.2234328	3.61E-17	1.78E-15
Fbxo18	-1.053814532	0.12516888	3.79E-17	1.87E-15
Atp5f1	-1.34145946	0.15944728	3.99E-17	1.96E-15
Gpkow	-1.596438637	0.18986257	4.16E-17	2.04E-15
Mafk	2.108773885	0.250851	4.22E-17	2.06E-15
Lars2	-1.488361224	0.17705547	4.24E-17	2.06E-15
Foxo3	1.973507389	0.23491579	4.43E-17	2.15E-15
Erf	1.29216724	0.15382978	4.47E-17	2.16E-15
Rab11fip5	2.200618396	0.26209479	4.61E-17	2.22E-15
Mrps7	-1.335746812	0.15913112	4.70E-17	2.25E-15
Zbtb42	1.454078893	0.17322641	4.69E-17	2.25E-15
Zfp277	-1.774429135	0.21145829	4.80E-17	2.29E-15
Trib3	4.027313735	0.48021488	5.01E-17	2.39E-15
Timm9	-1.900974068	0.22679144	5.20E-17	2.47E-15
Tmsb4x	-1.886335534	0.22508787	5.27E-17	2.50E-15
Lap3	-1.718601973	0.20511079	5.34E-17	2.51E-15
St3gal2	2.145649015	0.25607321	5.34E-17	2.51E-15
Prrc1	1.237905388	0.14782191	5.56E-17	2.61E-15
Alg11	-1.333281908	0.15922344	5.59E-17	2.61E-15
RGD1564698	-6.041161181	0.72160213	5.67E-17	2.64E-15
Cir1	-2.101724086	0.25131315	6.12E-17	2.84E-15
Gsk3b	1.220999995	0.1461147	6.46E-17	2.99E-15
Impdh1	3.374933773	0.40387981	6.47E-17	2.99E-15
Klhl21	1.989180213	0.23816528	6.71E-17	3.09E-15
Myo1c	2.638332918	0.3159049	6.73E-17	3.09E-15
Alox15	3.995861677	0.47863573	6.92E-17	3.17E-15

Elovl1	1.504035984	0.18018642	7.00E-17	3.19E-15
Snw1	-1.835915899	0.2199889	7.09E-17	3.23E-15
Elf4	2.973045387	0.35628635	7.15E-17	3.25E-15
R3hcc1	-1.251857691	0.15004219	7.22E-17	3.27E-15
Pom121	1.799052602	0.21567605	7.34E-17	3.31E-15
Serbp1	-1.310583397	0.15725904	7.82E-17	3.52E-15
Slc39a11	1.484443115	0.17831605	8.45E-17	3.79E-15
Tab1	-1.475230391	0.17732942	8.86E-17	3.96E-15
Metap2	-1.642036042	0.19748031	9.18E-17	4.10E-15
C1qbp	1.537496948	0.18505547	9.71E-17	4.32E-15
Tm9sf1	1.12852509	0.1358817	9.96E-17	4.40E-15
Dhx8	-1.055898472	0.12713111	9.93E-17	4.40E-15
Zfp958	-2.994738278	0.36057998	9.95E-17	4.40E-15
Tmem164	1.886572431	0.22721318	1.01E-16	4.46E-15
Ccdc91	-1.005546018	0.12111178	1.02E-16	4.46E-15
Fam136a	-1.130173505	0.13612586	1.02E-16	4.46E-15
Eif3el1	-1.519216234	0.18330013	1.15E-16	5.02E-15
Zdhhc18	2.182772389	0.26356042	1.21E-16	5.27E-15
Ltbp2	3.842747509	0.46410177	1.23E-16	5.34E-15
Zbtb8os	-1.331409467	0.16085023	1.26E-16	5.45E-15
Wiz	1.160878345	0.14026067	1.27E-16	5.45E-15
Dag1	1.293477095	0.1562762	1.26E-16	5.45E-15
Pcsk6	1.164349628	0.14073137	1.30E-16	5.57E-15
Ncdn	2.120071688	0.25624905	1.30E-16	5.57E-15
Rcc2	1.755492256	0.21225154	1.33E-16	5.68E-15
Tmem185b	2.101113128	0.25405087	1.33E-16	5.68E-15
Vasp	1.92061885	0.23241802	1.41E-16	6.00E-15
Basp1	3.702335758	0.44842405	1.50E-16	6.36E-15
Antxr1	2.793961521	0.33862967	1.57E-16	6.62E-15
Svep1	3.829366212	0.46417498	1.59E-16	6.66E-15
Fhl3	2.601428285	0.31543494	1.62E-16	6.79E-15
Gpnmb	3.813744458	0.46268035	1.68E-16	7.03E-15
Mnt	2.157375731	0.26174813	1.69E-16	7.04E-15
Adsl	-1.54461498	0.18743277	1.71E-16	7.10E-15
Ip6k1	1.500197524	0.18217821	1.80E-16	7.43E-15
Slc38a2	1.350595727	0.16408006	1.85E-16	7.63E-15
Adamts2	2.932655517	0.35631109	1.86E-16	7.65E-15
Ptpn1	1.59382789	0.19376771	1.94E-16	7.95E-15
Ppt2	1.359967888	0.16543729	2.03E-16	8.27E-15
Rhbdf2	2.539422631	0.30901357	2.07E-16	8.43E-15
Gatb	-1.845863853	0.22465544	2.10E-16	8.50E-15
Thoc7	-1.610763721	0.19609817	2.14E-16	8.65E-15
Rpap3	-2.393030554	0.29142016	2.18E-16	8.80E-15
Ctdspl	1.724935281	0.210081	2.20E-16	8.84E-15
Cdadcl1	-1.923600137	0.23446441	2.32E-16	9.31E-15
Mef2d	1.493015944	0.18218759	2.51E-16	1.00E-14
Ccdc71	1.176515104	0.14365763	2.62E-16	1.05E-14
GImp	1.584094925	0.19365491	2.84E-16	1.13E-14

Gkap1	-1.757713841	0.2150011	2.95E-16	1.17E-14
Dnaja2	-1.188927971	0.14545211	2.98E-16	1.18E-14
Loxl2	2.768056205	0.33869715	3.02E-16	1.19E-14
Glod4	-1.542279757	0.1889884	3.33E-16	1.31E-14
Jtb	-1.170949229	0.1435097	3.37E-16	1.32E-14
Leo1	-1.91097224	0.23443485	3.60E-16	1.41E-14
Ficd	2.115641809	0.2595838	3.64E-16	1.42E-14
Commd8	-1.358379699	0.16683254	3.88E-16	1.52E-14
Cd86	-1.968747059	0.24201199	4.12E-16	1.60E-14
Kcng4	-2.877392442	0.3538147	4.21E-16	1.63E-14
Exosc7	-1.24556	0.15323633	4.35E-16	1.69E-14
Elavl1	-1.304932409	0.16055819	4.38E-16	1.69E-14
Lsg1	-1.144923838	0.14092833	4.50E-16	1.74E-14
RGD1311345	-1.625494324	0.20013982	4.59E-16	1.77E-14
Cox7c	-1.472199648	0.18127483	4.61E-16	1.77E-14
Spsb1	2.555114914	0.31464553	4.64E-16	1.77E-14
Cd59	-2.368530715	0.29169872	4.67E-16	1.78E-14
Nomo1	1.285769386	0.15837516	4.72E-16	1.80E-14
Tmem64	1.685986379	0.20776154	4.86E-16	1.85E-14
Dctn5	-1.104440606	0.13620795	5.13E-16	1.94E-14
G0s2	-2.157623268	0.2661289	5.17E-16	1.95E-14
Ucp2	1.910953453	0.23580225	5.32E-16	2.00E-14
Wars2	-1.664610132	0.20542542	5.35E-16	2.01E-14
Sh3bp4	1.703303754	0.21026588	5.46E-16	2.05E-14
Tmcc2	3.861648647	0.47675782	5.50E-16	2.05E-14
Ppil2	-1.434723336	0.17713196	5.51E-16	2.05E-14
Arhgap27	2.147399338	0.26510529	5.49E-16	2.05E-14
Arglu1	-1.103083033	0.13631271	5.85E-16	2.17E-14
Spata2	1.536400229	0.18987125	5.88E-16	2.17E-14
Uqcc1	-1.172902715	0.14501505	6.06E-16	2.24E-14
Cln8	1.804045291	0.22320177	6.34E-16	2.33E-14
Pabpc4	1.773865314	0.21947868	6.36E-16	2.34E-14
Ssb	-1.78377932	0.22090024	6.75E-16	2.47E-14
Nudt2	-1.619758973	0.20070387	7.01E-16	2.56E-14
Gas2l1	1.723161928	0.21365837	7.32E-16	2.66E-14
Snx2	-1.968626698	0.24428472	7.71E-16	2.80E-14
NEWGENE_621351	4.018164318	0.49881825	7.92E-16	2.87E-14
Ehd2	2.331796206	0.28950768	7.99E-16	2.89E-14
Calhm2	2.031125903	0.25246521	8.61E-16	3.10E-14
Tmem115	1.364567639	0.16961864	8.63E-16	3.10E-14
Fkbp3	-2.14460368	0.26663624	8.75E-16	3.14E-14
Lym2	-1.587526058	0.1974742	9.05E-16	3.24E-14
Sbds	-2.011125836	0.25018243	9.08E-16	3.24E-14
Adora2a	1.542845424	0.1920054	9.33E-16	3.32E-14
Scamp2	1.114543683	0.13886267	1.01E-15	3.57E-14
Fh	-2.040870243	0.25431746	1.02E-15	3.60E-14
Snpc5	-2.204373708	0.27483689	1.05E-15	3.71E-14
Slc35e1	2.076319086	0.2588628	1.05E-15	3.71E-14

Rgp1	1.626414739	0.20284746	1.08E-15	3.78E-14
LOC100911305	1.97394986	0.24619014	1.07E-15	3.78E-14
Polr2b	-1.590282438	0.19857806	1.16E-15	4.08E-14
Snrpb2	-1.539917635	0.19231293	1.17E-15	4.10E-14
Pnrc2	-1.854504183	0.23167602	1.20E-15	4.18E-14
Tmem109	1.309699465	0.16364628	1.21E-15	4.22E-14
Fam53c	1.860443272	0.23260453	1.26E-15	4.38E-14
Arl8a	1.257828446	0.15736519	1.32E-15	4.57E-14
Nploc4	1.584467481	0.19827882	1.34E-15	4.63E-14
Gsk3a	1.058583172	0.13254134	1.38E-15	4.78E-14
Tpk1	-1.37216692	0.171842	1.40E-15	4.84E-14
Tfe3	1.470044989	0.18413587	1.42E-15	4.89E-14
Rnf8	-1.734180642	0.21729923	1.46E-15	4.98E-14
Sec24d	1.659783243	0.20801066	1.47E-15	5.03E-14
Serpinh1	2.437426542	0.30551876	1.49E-15	5.07E-14
Ptcd1	-1.151518629	0.14436827	1.51E-15	5.13E-14
Sec16a	1.050734275	0.13174252	1.52E-15	5.14E-14
Bhlhe41	6.72029358	0.84381157	1.66E-15	5.63E-14
Mrpl46	-1.574961249	0.19787932	1.73E-15	5.85E-14
Rtcb	-1.063347099	0.13375474	1.87E-15	6.27E-14
Anapc16	-1.467231538	0.18458277	1.88E-15	6.32E-14
Slc4a2	1.161060596	0.14609819	1.91E-15	6.39E-14
Exoc1	-1.485900927	0.18722203	2.08E-15	6.93E-14
Axl	1.587414233	0.20020037	2.21E-15	7.34E-14
Lin7a	-2.9147512	0.36762207	2.22E-15	7.36E-14
Stom	1.618292614	0.20412172	2.23E-15	7.37E-14
Nol3	3.612141115	0.45605086	2.37E-15	7.82E-14
Vat1	1.721683427	0.21739676	2.38E-15	7.87E-14
Tubb6	4.128877977	0.52144534	2.41E-15	7.94E-14
Mterf1	-2.108259779	0.26627063	2.42E-15	7.95E-14
Bbs4	-2.620909784	0.33112937	2.47E-15	8.10E-14
Dnaaf5	1.700677465	0.21492102	2.51E-15	8.22E-14
Mark4	1.278952408	0.16167648	2.56E-15	8.37E-14
Nxf1	-1.146920068	0.14509003	2.68E-15	8.74E-14
Cnot10	-1.292591143	0.16357561	2.74E-15	8.92E-14
Naa35	-1.197352333	0.15154955	2.77E-15	9.00E-14
Tyw5	-2.415694006	0.30587492	2.84E-15	9.20E-14
Tatdn1	-2.050864349	0.25972624	2.87E-15	9.29E-14
Dusp8	3.744925076	0.47435866	2.91E-15	9.38E-14
AABR07004112.1	9.495368324	1.20367148	3.05E-15	9.83E-14
Ndufa1	-2.141206549	0.27144546	3.07E-15	9.85E-14
Ptk2b	2.041158566	0.25895625	3.22E-15	1.03E-13
Zdhhc8	1.750072563	0.22222247	3.40E-15	1.09E-13
Extl3	1.752247879	0.22280203	3.70E-15	1.18E-13
Zfp68	-2.722940766	0.34624779	3.72E-15	1.18E-13
LOC103692171	1.458852825	0.18570248	3.97E-15	1.26E-13
Ttll12	1.616357646	0.20576245	3.98E-15	1.26E-13
Pla2g12a	1.587471499	0.20214596	4.06E-15	1.28E-13

Acp1	-1.000779038	0.12746039	4.10E-15	1.30E-13
Fam110a	2.773264007	0.35328408	4.16E-15	1.31E-13
Zfp687	1.129467569	0.14394818	4.28E-15	1.35E-13
Ccdc59	-2.342275174	0.29855695	4.32E-15	1.35E-13
Itpkb	1.829149829	0.23320032	4.38E-15	1.37E-13
Lime1	-2.381191787	0.30357826	4.37E-15	1.37E-13
Gimd1	-4.398877817	0.56083796	4.38E-15	1.37E-13
Arl3	-1.46656413	0.18710395	4.57E-15	1.42E-13
Cog4	-2.140752545	0.27325048	4.71E-15	1.46E-13
Srsf11	-1.411823561	0.18030117	4.86E-15	1.51E-13
LOC100125368	-2.849067227	0.36424694	5.21E-15	1.61E-13
Gmpr2	-1.434709084	0.18343854	5.23E-15	1.61E-13
Cops2	-1.941674376	0.24836298	5.37E-15	1.65E-13
Ints5	1.300364125	0.16644707	5.61E-15	1.72E-13
Ccdc92	4.202993096	0.53802689	5.63E-15	1.73E-13
Tti1	-1.472611189	0.18855919	5.73E-15	1.75E-13
Parvb	2.138300939	0.27385831	5.81E-15	1.77E-13
Sdf2l1	2.009144568	0.25767197	6.32E-15	1.92E-13
Matr3	-2.401800563	0.30818251	6.52E-15	1.98E-13
Ccdc94	-1.929226164	0.24765453	6.70E-15	2.03E-13
Snu13	1.899942747	0.24401898	6.91E-15	2.09E-13
Cd276	2.783996254	0.35763577	7.00E-15	2.11E-13
Dnajc19	-1.819894929	0.23381338	7.05E-15	2.12E-13
Syap1	-1.693186307	0.21757734	7.14E-15	2.15E-13
Tex9	-2.537830288	0.3261453	7.18E-15	2.15E-13
Bri3bp	2.743523894	0.35303794	7.78E-15	2.33E-13
Ddx1	-1.322557541	0.1702477	7.95E-15	2.38E-13
Tpcn2	-1.58427876	0.20395646	7.99E-15	2.38E-13
Tbc1d20	1.279192514	0.16482533	8.43E-15	2.51E-13
Adipoq	-2.690974966	0.34675856	8.47E-15	2.52E-13
Emc2	-2.182852853	0.28156089	9.00E-15	2.67E-13
Dirc2	1.252220307	0.16152804	9.02E-15	2.67E-13
Tmem229b	2.001361954	0.25833001	9.39E-15	2.77E-13
Ndufs4	-1.395725931	0.18019652	9.51E-15	2.81E-13
Limk1	1.865226556	0.24084573	9.60E-15	2.83E-13
Gm5471	1.665459455	0.21512083	9.79E-15	2.88E-13
Tubb5	2.677974661	0.34592171	9.82E-15	2.88E-13
Mex3d	2.613262676	0.33763287	9.95E-15	2.91E-13
Phax	-1.22695963	0.15862455	1.03E-14	3.02E-13
Slc9a1	1.010687944	0.13074988	1.08E-14	3.14E-13
Nostrin	-2.476786092	0.32056271	1.11E-14	3.22E-13
Slc25a46	-1.617146957	0.2094104	1.14E-14	3.32E-13
Atg16l1	-1.177851339	0.15259294	1.17E-14	3.40E-13
Ints8	-1.119073057	0.14505989	1.21E-14	3.51E-13
Nfatc2	2.283408222	0.29604289	1.23E-14	3.55E-13
Gtf2f1	-1.724584276	0.22369646	1.26E-14	3.64E-13
LOC103689983	-1.05802794	0.13725828	1.28E-14	3.67E-13
Fra10ac1	-2.074863044	0.26925005	1.30E-14	3.73E-13

Cd300e	-3.154809446	0.40944574	1.31E-14	3.75E-13
LOC100362980	-1.370776547	0.17793062	1.32E-14	3.78E-13
Rpl21	-2.026383801	0.26306594	1.33E-14	3.80E-13
Hspb8	2.010309499	0.26109673	1.37E-14	3.89E-13
Slc12a9	1.73957114	0.22592902	1.36E-14	3.89E-13
Pigq	1.217262476	0.15810365	1.37E-14	3.89E-13
Eapp	-1.168976039	0.15187848	1.40E-14	3.96E-13
Nelfcd	-1.204871162	0.15657557	1.41E-14	4.00E-13
Vhl	1.538917561	0.20005751	1.44E-14	4.08E-13
Tlk2	-1.443962893	0.18776409	1.47E-14	4.12E-13
C3ar1	2.480114494	0.32249789	1.47E-14	4.12E-13
Ube4b	1.003431519	0.13047748	1.47E-14	4.12E-13
Camk2n2	3.198747378	0.41593291	1.47E-14	4.12E-13
Ppp2r5b	1.40613668	0.18291746	1.50E-14	4.21E-13
LOC100912604	2.057026172	0.26765249	1.52E-14	4.26E-13
Bms1	-1.668682291	0.21754394	1.71E-14	4.78E-13
Ccdc58	-1.270861777	0.1657443	1.75E-14	4.88E-13
Fam129a	3.989478701	0.52097471	1.89E-14	5.26E-13
Shisa5	1.13976575	0.14885235	1.90E-14	5.28E-13
Rwdd2b	-1.454020041	0.18990595	1.91E-14	5.29E-13
Commd1	-1.207518249	0.15776329	1.95E-14	5.39E-13
Stn1	-1.537818035	0.20098684	1.99E-14	5.49E-13
Acer2	1.934569891	0.25287727	2.01E-14	5.53E-13
Ncbp2	-1.28976041	0.16866113	2.06E-14	5.66E-13
Gnai1	2.652097435	0.34688293	2.08E-14	5.72E-13
Mrps31	-1.589989859	0.20798954	2.10E-14	5.75E-13
LOC100911440	1.101963749	0.14418339	2.13E-14	5.82E-13
Anp32a	-1.533709355	0.20084129	2.23E-14	6.10E-13
Pold3	-1.297204842	0.16990564	2.26E-14	6.17E-13
Fbxo46	1.09645776	0.14364279	2.29E-14	6.23E-13
Tsc22d4	2.076343561	0.27208255	2.32E-14	6.32E-13
Degs1	1.428726935	0.18731961	2.40E-14	6.51E-13
Zfp69	-3.00190504	0.39368585	2.44E-14	6.60E-13
N4bp2l2	-1.6472326	0.2160513	2.45E-14	6.64E-13
Casp3	-1.817536375	0.23849888	2.52E-14	6.81E-13
Wdfy3	1.760788109	0.23107112	2.53E-14	6.83E-13
Rpl21	-1.352053023	0.17745741	2.56E-14	6.87E-13
Ddx28	-1.570215898	0.20615103	2.60E-14	6.98E-13
Tmem41a	1.627748543	0.21400468	2.82E-14	7.56E-13
Wdr83	-1.663912422	0.21877414	2.84E-14	7.57E-13
Slirp	-1.652339164	0.21739549	2.95E-14	7.86E-13
Dis3l	-1.234135144	0.16237807	2.95E-14	7.86E-13
Rhbdd2	2.158401684	0.28402951	2.98E-14	7.92E-13
Derl1	1.205454951	0.15870024	3.06E-14	8.12E-13
Vwf	1.820836043	0.23973882	3.08E-14	8.15E-13
Pml	1.752019939	0.23095278	3.30E-14	8.72E-13
Timm44	-1.834491446	0.2418583	3.33E-14	8.77E-13
Ptafr	1.77504588	0.23402505	3.33E-14	8.77E-13

Cul1	-1.682732415	0.22205436	3.51E-14	9.21E-13
Rps24	-1.740850741	0.22975918	3.54E-14	9.28E-13
Lrprrc	-1.682366345	0.22246486	3.96E-14	1.04E-12
Chst14	2.3340751	0.30869888	4.00E-14	1.05E-12
Cul2	-1.798246809	0.23822043	4.40E-14	1.15E-12
Mthfd1l	3.84850631	0.51034296	4.66E-14	1.21E-12
Cxcl16	2.105009137	0.27927744	4.80E-14	1.25E-12
Prmt9	-1.37893965	0.18296516	4.82E-14	1.25E-12
Dnaja1	-1.493800807	0.19821524	4.84E-14	1.25E-12
Hars2	-1.445510844	0.19199545	5.12E-14	1.32E-12
Abcg1	1.962970072	0.26078616	5.19E-14	1.34E-12
Kif21b	2.614856451	0.34762967	5.40E-14	1.39E-12
RGD1562758	6.504314651	0.86483204	5.44E-14	1.40E-12
Dmap1	-1.589553698	0.21136466	5.46E-14	1.40E-12
Lpp	2.483087169	0.330208	5.49E-14	1.41E-12
Scfd1	-1.487226885	0.19780802	5.54E-14	1.42E-12
Tm9sf4	1.186452236	0.15782826	5.59E-14	1.43E-12
Emilin2	3.146502442	0.41868298	5.68E-14	1.45E-12
Paqr8	3.40168581	0.45334256	6.21E-14	1.58E-12
Gaa	1.277486623	0.17026537	6.24E-14	1.59E-12
AABR07001435.1	-1.950784548	0.26001331	6.25E-14	1.59E-12
Mmp19	1.296523698	0.17283298	6.30E-14	1.60E-12
Slc39a7	1.509792068	0.20133462	6.43E-14	1.63E-12
Crcp	-2.074664097	0.27672835	6.52E-14	1.65E-12
LOC100911295	1.985788073	0.26487255	6.52E-14	1.65E-12
AABR07000902.1	-7.809534879	1.04197429	6.63E-14	1.67E-12
Ctsd	1.11808524	0.14929151	6.93E-14	1.74E-12
Rexo4	-1.215302605	0.16231526	7.03E-14	1.77E-12
Xpc	-2.150663325	0.28737328	7.22E-14	1.81E-12
Ift57	-1.19398578	0.15955497	7.25E-14	1.82E-12
Luc7l2	-1.421922189	0.19005464	7.34E-14	1.83E-12
Rars2	-1.622465862	0.21690671	7.43E-14	1.85E-12
Il5ra	7.335841538	0.98086413	7.49E-14	1.87E-12
Micu2	-1.564522399	0.20924958	7.61E-14	1.89E-12
Brcc3	-2.002802319	0.2678909	7.65E-14	1.90E-12
Ermard	-2.384230418	0.31933399	8.25E-14	2.05E-12
Pms2	-1.654806695	0.22174368	8.48E-14	2.10E-12
C1galt1c1	-1.720030556	0.23048626	8.48E-14	2.10E-12
Cluap1	-1.657173908	0.22215864	8.69E-14	2.14E-12
Hyou1	1.686367642	0.22608517	8.72E-14	2.15E-12
MGC95210	-1.840510696	0.24677152	8.76E-14	2.16E-12
RGD1309730	-1.751652921	0.23488584	8.82E-14	2.17E-12
Rmi1	-1.985742704	0.26639023	9.04E-14	2.22E-12
Hvcn1	3.217227356	0.43161821	9.06E-14	2.22E-12
Cep95	-2.50220703	0.33605762	9.64E-14	2.36E-12
Ube2v2	-2.015858196	0.27087459	9.91E-14	2.42E-12
Ano6	1.390469158	0.18690825	1.01E-13	2.47E-12
Higd2a1	7.310649429	0.98275064	1.01E-13	2.47E-12

Tmem131	1.133857876	0.15242818	1.02E-13	2.47E-12
Hibch	-1.919134097	0.25804403	1.03E-13	2.49E-12
Cerk	1.373666739	0.18492149	1.10E-13	2.66E-12
Ctnnbl1	-1.328373606	0.17885136	1.11E-13	2.68E-12
Hnrnpa1	-1.899430291	0.25576174	1.11E-13	2.69E-12
Taf8	-1.114271549	0.15010048	1.14E-13	2.74E-12
Aknad1	-2.914230724	0.39257185	1.14E-13	2.74E-12
Sdccag3	-1.053434375	0.14193679	1.15E-13	2.77E-12
Cutc	-1.269494765	0.17108852	1.17E-13	2.80E-12
Hnrnmpm	-1.035850339	0.13966088	1.20E-13	2.86E-12
AABR07006049.2	4.51195243	0.60911219	1.29E-13	3.07E-12
Sem1	-1.213045863	0.16378391	1.30E-13	3.09E-12
Spen	1.1974126	0.16172361	1.32E-13	3.14E-12
Dusp12	-2.477108224	0.33457183	1.32E-13	3.14E-12
Sp2	1.66942994	0.2255394	1.34E-13	3.18E-12
Slc30a7	1.364284539	0.1843206	1.34E-13	3.18E-12
Mrpl42	-1.501247329	0.20286462	1.36E-13	3.21E-12
Ptbp1	1.863723813	0.25201818	1.41E-13	3.33E-12
Alas2	3.257604531	0.44063508	1.44E-13	3.38E-12
Med4	-1.959691226	0.26514029	1.46E-13	3.42E-12
AABR07003537.1	8.370095419	1.13315666	1.51E-13	3.54E-12
Clpx	-2.819139039	0.38169611	1.52E-13	3.55E-12
Cldn2	-1.703552064	0.23079376	1.57E-13	3.67E-12
Nkiras2	1.342259848	0.181882	1.58E-13	3.71E-12
Timm21	-2.196188438	0.29770847	1.62E-13	3.78E-12
Zfp18	-1.409292485	0.19137875	1.79E-13	4.16E-12
Mocs3	1.246602034	0.16932718	1.81E-13	4.21E-12
Dmgdh	-2.242721777	0.30465305	1.82E-13	4.23E-12
Saraf	1.432635137	0.19463608	1.83E-13	4.25E-12
Slc45a4	1.28195657	0.17423059	1.87E-13	4.33E-12
Vps45	-1.604808364	0.21815788	1.89E-13	4.38E-12
N6amt1	-1.760748731	0.23944122	1.93E-13	4.46E-12
Gnai2	1.315101126	0.17886292	1.94E-13	4.49E-12
Dpcd	-1.64132554	0.22323703	1.95E-13	4.49E-12
Adgre5	1.387096945	0.18867164	1.95E-13	4.49E-12
Ggcx	1.306328618	0.17772229	1.98E-13	4.53E-12
LOC680875	-2.926071837	0.39807223	1.97E-13	4.53E-12
Tp53inp1	2.344537851	0.3189917	1.98E-13	4.54E-12
Ikzf1	2.459865292	0.33477625	2.02E-13	4.59E-12
Slc25a39	1.36589332	0.18588707	2.01E-13	4.59E-12
Zfp574	1.157882567	0.15767777	2.08E-13	4.74E-12
Dopey2	1.156148077	0.15746283	2.10E-13	4.77E-12
Rtel1	-1.224982189	0.16685599	2.11E-13	4.79E-12
Unc93b1	1.266046005	0.17246553	2.12E-13	4.81E-12
Grina	1.35246564	0.18428649	2.15E-13	4.87E-12
Hnrnph1	-2.09800908	0.28599334	2.20E-13	4.97E-12
Tmem258b	1.723426151	0.23495228	2.21E-13	4.99E-12
Prpf40b	-1.199134907	0.16351841	2.24E-13	5.05E-12

Sdk2	2.38951424	0.32589175	2.26E-13	5.09E-12
RGD1359158	-2.070863125	0.28246121	2.28E-13	5.11E-12
Atp2a3	1.417646224	0.19338345	2.29E-13	5.13E-12
Rpap2	-1.969275211	0.26864525	2.29E-13	5.13E-12
Tm9sf2	1.196201013	0.16329471	2.38E-13	5.31E-12
Mkl1	1.356105692	0.18515811	2.41E-13	5.36E-12
Cdk5rap1	-1.56385497	0.21353705	2.41E-13	5.37E-12
NEWGENE_1586233	-1.865597062	0.25505532	2.58E-13	5.74E-12
Pinx1	-1.721992341	0.23554691	2.66E-13	5.90E-12
Zfp692	-2.409022415	0.32965457	2.72E-13	6.02E-12
Cdc16	-1.062743685	0.14549026	2.78E-13	6.15E-12
Tgfbr2	1.204032124	0.16486534	2.81E-13	6.20E-12
Polr2a	1.088641728	0.14906732	2.81E-13	6.20E-12
Usmg5	-1.615998451	0.22130078	2.83E-13	6.22E-12
Rangap1	1.650750229	0.2261066	2.86E-13	6.29E-12
Ptgr2	-1.281928265	0.17571721	2.98E-13	6.53E-12
Hist1h2bcl1	-1.218382836	0.16715398	3.12E-13	6.84E-12
Rpp14	-1.269650402	0.17421486	3.15E-13	6.89E-12
Rsrc2	-2.074669272	0.28468385	3.15E-13	6.89E-12
Ahsa2	-1.682484398	0.23096489	3.23E-13	7.04E-12
Timm8b	-1.242029465	0.17054788	3.27E-13	7.13E-12
Ccdc130	-1.692500623	0.23242445	3.29E-13	7.16E-12
Ddx39b	-1.308931529	0.17990469	3.45E-13	7.49E-12
Cryz1	-2.36039417	0.3244893	3.49E-13	7.56E-12
Tmem120a	2.1206581	0.2915624	3.50E-13	7.59E-12
Ubqln2	1.096160206	0.15071301	3.51E-13	7.60E-12
AABR07019083.1	3.595132357	0.49431718	3.52E-13	7.60E-12
RGD1562218	-1.055097232	0.14509806	3.55E-13	7.66E-12
Opa1	-1.546947868	0.21284486	3.65E-13	7.86E-12
Cd47	1.042226274	0.14344602	3.71E-13	7.99E-12
Slc35a4	1.327076328	0.18266051	3.72E-13	7.99E-12
Cep63	-1.60418819	0.22080483	3.73E-13	7.99E-12
PsmA6	-1.053420105	0.14501041	3.75E-13	8.02E-12
Rapgef1	2.042069554	0.28119194	3.81E-13	8.15E-12
Acadl	-1.742367706	0.24006994	3.94E-13	8.40E-12
Fem1a	1.117880062	0.15405617	3.98E-13	8.47E-12
Ormdl3	1.276399766	0.17594012	4.02E-13	8.56E-12
Taf7	-1.69261741	0.23332939	4.04E-13	8.58E-12
Palmd	-1.865717595	0.25726689	4.10E-13	8.71E-12
Atp6v1e1	-1.00310701	0.13837996	4.20E-13	8.90E-12
Cdc25b	3.750563368	0.51749064	4.24E-13	8.98E-12
Zcchc4	-1.611423094	0.22241918	4.32E-13	9.14E-12
Cox6c	-1.629349813	0.22493867	4.37E-13	9.22E-12
Rmnd1	-2.112136469	0.29167161	4.44E-13	9.35E-12
Crlf2	1.995820266	0.27564862	4.47E-13	9.41E-12
Vps18	1.121023603	0.15489926	4.58E-13	9.63E-12
Ilkap	-1.252813821	0.17319121	4.70E-13	9.86E-12
Rmdn2	-1.773673592	0.24534851	4.86E-13	1.02E-11

Dek	-2.026406138	0.2803721	4.92E-13	1.03E-11
Kdelr3	2.482613996	0.34370198	5.08E-13	1.06E-11
Mrpl33	-2.02701042	0.28065602	5.11E-13	1.06E-11
Usp2	4.037691578	0.55919363	5.18E-13	1.08E-11
Med8	-1.469155675	0.20350465	5.23E-13	1.09E-11
LOC100909474	8.4208712	1.16657146	5.26E-13	1.09E-11
Chsy1	2.13696974	0.29619139	5.40E-13	1.12E-11
Clk1	-2.034519722	0.28199107	5.40E-13	1.12E-11
Irf3	-1.476736352	0.20479887	5.57E-13	1.15E-11
Nfe2l2	-1.824866586	0.25322149	5.74E-13	1.18E-11
Nsa2	-1.27323629	0.17670326	5.78E-13	1.19E-11
Gpalpp1	-1.33221686	0.18492107	5.84E-13	1.20E-11
Synj2bp	-1.301571514	0.18072104	5.93E-13	1.22E-11
Uprt	3.059144719	0.42484531	5.99E-13	1.23E-11
Sugt1	-1.23819544	0.17200272	6.08E-13	1.25E-11
Tmem184b	1.824983116	0.25369513	6.31E-13	1.29E-11
Fancg	2.077480431	0.28900238	6.55E-13	1.34E-11
Atg14	-1.264896722	0.17602345	6.67E-13	1.36E-11
Gsta5	-3.136810581	0.43657539	6.72E-13	1.37E-11
Grb10	2.443880503	0.34014178	6.73E-13	1.37E-11
Tdp2	-1.760038141	0.2450193	6.81E-13	1.39E-11
Nf1x	2.164142411	0.30139468	6.95E-13	1.41E-11
Scmh1	1.685518008	0.23488896	7.19E-13	1.46E-11
Maff	4.28582597	0.59821619	7.82E-13	1.58E-11
Dcbld2	3.614710473	0.50452962	7.81E-13	1.58E-11
Arfip2	-1.931533548	0.26968705	7.94E-13	1.61E-11
Pnpt1	-1.746457113	0.24386383	7.97E-13	1.61E-11
B3gnt7	2.687869971	0.3757073	8.42E-13	1.70E-11
Uimc1	-1.167202594	0.16320675	8.57E-13	1.72E-11
Pfdn1	-1.488678889	0.20815641	8.57E-13	1.72E-11
Hipk2	2.11961426	0.29643042	8.65E-13	1.74E-11
Lrrc45	-1.480502867	0.20707182	8.70E-13	1.74E-11
Grin2d	2.799567283	0.39167669	8.83E-13	1.77E-11
Slc44a2	1.344472053	0.1881254	8.89E-13	1.78E-11
A3galt2	3.540462311	0.4957844	9.26E-13	1.85E-11
Zfp717	-2.249488125	0.31529139	9.70E-13	1.93E-11
Col1a1	5.020392197	0.70387728	9.86E-13	1.96E-11
Ndufs5	-1.49910107	0.21023295	9.99E-13	1.98E-11
Ccar1	-1.865573989	0.26173115	1.02E-12	2.02E-11
Abhd4	1.162527441	0.16310392	1.02E-12	2.02E-11
Hadha	-1.301881897	0.18267803	1.03E-12	2.03E-11
Cdk7	-1.470820907	0.20661008	1.09E-12	2.15E-11
Srd5a3	2.057460291	0.28909009	1.10E-12	2.17E-11
Iqcg	-2.540612246	0.3569869	1.10E-12	2.17E-11
Dtnbp1	-1.420429431	0.19958736	1.10E-12	2.17E-11
Mtrr	-1.351989011	0.19006136	1.13E-12	2.22E-11
Ehbp1	-1.603720329	0.22552753	1.15E-12	2.26E-11
Hba-a2	2.885468728	0.4058237	1.16E-12	2.27E-11

Dgkq	-1.041639253	0.14650673	1.16E-12	2.27E-11
Snrnp48	-2.364321291	0.33264383	1.18E-12	2.31E-11
Ctnnal1	-1.962978932	0.27623247	1.19E-12	2.33E-11
Arf6	1.237128427	0.17410888	1.20E-12	2.34E-11
Serpine1	4.69761672	0.6616145	1.25E-12	2.42E-11
Ggnbp2	-1.99773996	0.28141525	1.26E-12	2.44E-11
Fbn1	2.61012172	0.36770052	1.26E-12	2.45E-11
Tceal8	-1.250658835	0.17624083	1.28E-12	2.49E-11
Mfsd5	1.339154721	0.1887191	1.28E-12	2.49E-11
Papss1	1.432768368	0.20192	1.29E-12	2.49E-11
Mkln1	-1.592527744	0.22478321	1.39E-12	2.69E-11
Mettl14	-1.585639247	0.22403781	1.47E-12	2.83E-11
Kirrel	2.256646412	0.31887048	1.47E-12	2.84E-11
RGD1311899	-1.499376473	0.2118803	1.48E-12	2.84E-11
Ubp2	2.079379874	0.29398084	1.51E-12	2.91E-11
Plscr3	1.25925709	0.1780587	1.53E-12	2.93E-11
Nrip2	4.647646025	0.65723551	1.53E-12	2.94E-11
Ints10	-1.400418833	0.19804552	1.54E-12	2.94E-11
Prdm9	-3.204403905	0.45325266	1.55E-12	2.96E-11
Klf2	1.913467324	0.27067211	1.56E-12	2.97E-11
Irf5	1.786984041	0.25286028	1.58E-12	3.02E-11
Herc4	-1.685437949	0.23864025	1.63E-12	3.11E-11
Ppp1r15a	3.090379329	0.4376054	1.64E-12	3.12E-11
Srsf5	-1.266336944	0.1793365	1.65E-12	3.13E-11
Mettl6	-1.614243178	0.22860794	1.65E-12	3.13E-11
Ngrn	-1.156125734	0.16377489	1.67E-12	3.17E-11
Atp1a3	6.46816661	0.91634724	1.68E-12	3.18E-11
Csnk2a2	1.140099033	0.16153574	1.69E-12	3.20E-11
Zbtb7a	1.433170279	0.20323758	1.77E-12	3.33E-11
Chmp2b	-1.276430285	0.1810427	1.78E-12	3.36E-11
C1qtnf6	2.640499321	0.37457236	1.80E-12	3.38E-11
LOC100359687	-1.469658678	0.20850017	1.81E-12	3.39E-11
Rassf6	-1.489382266	0.21138847	1.85E-12	3.46E-11
Ero1b	1.850483557	0.26269314	1.86E-12	3.49E-11
Eif4ebp2	1.485667862	0.21097238	1.89E-12	3.55E-11
Tmem70	-1.614943014	0.22937682	1.91E-12	3.58E-11
Scap	1.016616209	0.1444577	1.96E-12	3.65E-11
Gpr153	3.071645519	0.43649564	1.96E-12	3.66E-11
Bag6	1.115985125	0.15860529	1.97E-12	3.67E-11
Rps3a	-1.73682876	0.24689532	2.00E-12	3.71E-11
Manf	1.397490315	0.19866536	2.00E-12	3.71E-11
Ndufaf1	-1.542326238	0.21930191	2.02E-12	3.75E-11
Nbn	-2.199213364	0.31279789	2.05E-12	3.80E-11
Vkorc1l1	4.593132312	0.65339468	2.07E-12	3.83E-11
Pspc1	-1.939441336	0.27589812	2.07E-12	3.83E-11
Cdc42se1	1.512798026	0.21524246	2.09E-12	3.86E-11
Zrsr2	-1.558459232	0.22186276	2.15E-12	3.96E-11
Ube3b	1.181933471	0.16842322	2.26E-12	4.15E-11

Vash1	2.181494175	0.31096666	2.30E-12	4.22E-11
Midn	1.422322945	0.20281803	2.34E-12	4.29E-11
Psmas3	-1.013126168	0.14447294	2.34E-12	4.29E-11
Smim15	-1.54728567	0.22069001	2.36E-12	4.33E-11
Gucy1b2	-3.04138993	0.43409459	2.45E-12	4.48E-11
Tap1	1.733983831	0.24753985	2.47E-12	4.52E-11
Sec63	-1.294927208	0.18497036	2.55E-12	4.65E-11
Pyroxd1	-2.097380888	0.29959768	2.55E-12	4.65E-11
Pofut1	1.4303076	0.20434341	2.57E-12	4.68E-11
Plod1	1.046126629	0.14949666	2.60E-12	4.74E-11
Dynll1	2.019431052	0.28863621	2.63E-12	4.77E-11
Sar1b	-1.187433137	0.1697504	2.65E-12	4.81E-11
Ubiad1	1.345236603	0.19233577	2.67E-12	4.84E-11
Clcn7	1.484704319	0.21232407	2.70E-12	4.89E-11
Spsb4	4.02176254	0.57532672	2.74E-12	4.96E-11
Rps25	-1.533937116	0.21944327	2.75E-12	4.96E-11
Rrp15	-1.283127753	0.18357456	2.76E-12	4.97E-11
Sh3bgrl3	1.792428508	0.25678723	2.95E-12	5.30E-11
Zfp330	-1.555805783	0.2230334	3.04E-12	5.46E-11
Tns1	1.637057871	0.23468064	3.04E-12	5.46E-11
Acadvl	-1.384432334	0.19857473	3.13E-12	5.60E-11
Slc35b1	1.539989319	0.22090235	3.14E-12	5.61E-11
Mpc2	-1.619200313	0.23230043	3.16E-12	5.65E-11
Mrpl45	-1.324162101	0.19020878	3.36E-12	6.00E-11
Rab6a	1.462512901	0.21012915	3.40E-12	6.05E-11
Cep170b	1.557140257	0.2239838	3.60E-12	6.40E-11
Bcr	1.542138124	0.22185963	3.63E-12	6.44E-11
Chchd1	-1.462462871	0.21040021	3.63E-12	6.44E-11
Pip4k2b	1.563692826	0.22505874	3.71E-12	6.56E-11
Gabpb1	-1.165946493	0.16787986	3.78E-12	6.68E-11
Dars	-1.343449575	0.19357373	3.91E-12	6.91E-11
Plec	1.288574028	0.18577105	4.02E-12	7.10E-11
Hcfc1	1.313490489	0.18942687	4.09E-12	7.21E-11
Zfp105	-1.913164519	0.27595051	4.12E-12	7.25E-11
Slc9a8	1.177339058	0.16983863	4.15E-12	7.29E-11
Tmco6	1.14695333	0.16554249	4.25E-12	7.47E-11
Crim1	1.827154546	0.26377285	4.30E-12	7.54E-11
Tead1	2.012165523	0.29079106	4.53E-12	7.93E-11
Pccb	-1.679056417	0.24275455	4.62E-12	8.09E-11
Rbm6	-1.692259593	0.24469452	4.65E-12	8.13E-11
Plpp5	1.248669662	0.18060552	4.72E-12	8.24E-11
Smarcal1	-1.198992272	0.17347028	4.79E-12	8.35E-11
Bcorl1	1.38705023	0.20068365	4.79E-12	8.35E-11
Ctdnep1	1.146838947	0.16600716	4.90E-12	8.53E-11
Pfdn5	-1.123332542	0.16271889	5.07E-12	8.82E-11
Hnrnpa2b1	-1.262149331	0.18289741	5.17E-12	8.97E-11
Sec24b	1.248408794	0.18096659	5.25E-12	9.11E-11
Npc1l1	8.113739484	1.17650331	5.33E-12	9.23E-11

Lbh	2.668589735	0.38696727	5.34E-12	9.24E-11
Dnajb11	1.362777492	0.19764726	5.39E-12	9.29E-11
Rfc1	-2.005413088	0.29084021	5.38E-12	9.29E-11
Hddc2	-2.351215963	0.34099768	5.38E-12	9.29E-11
Slc11a2	1.053570009	0.15289561	5.55E-12	9.56E-11
Mob3a	1.69702094	0.24631346	5.59E-12	9.62E-11
Trnt1	-1.89485913	0.27503928	5.60E-12	9.63E-11
LOC100365062	-1.527130064	0.22174426	5.70E-12	9.79E-11
Taf11	-1.061645562	0.154203	5.79E-12	9.93E-11
Tmem181	1.292639471	0.1878069	5.87E-12	1.01E-10
RGD1307704	1.418775468	0.20616479	5.91E-12	1.01E-10
Eml4	-1.453483817	0.21125967	5.98E-12	1.02E-10
Cxcr4	2.024955439	0.29446901	6.13E-12	1.05E-10
Krtcap2	1.553847224	0.22603936	6.23E-12	1.06E-10
Arfgef3	3.616100653	0.52606027	6.25E-12	1.06E-10
Hs6st1	1.129335325	0.16429359	6.25E-12	1.06E-10
Mettl21b	3.926864553	0.57153666	6.39E-12	1.09E-10
Atg2a	1.097110675	0.15974811	6.52E-12	1.11E-10
Pomt1	1.214660295	0.17687398	6.54E-12	1.11E-10
AABR07007730.1	24.33375791	3.54398543	6.59E-12	1.12E-10
RGD1306954	-1.267893981	0.1846705	6.62E-12	1.12E-10
Pan2	-1.259137435	0.18351199	6.82E-12	1.15E-10
Wdr55	-1.278800424	0.18644797	6.95E-12	1.17E-10
Cmtm7	1.971296517	0.28748206	7.03E-12	1.18E-10
Snrpe	-1.036670376	0.15120595	7.08E-12	1.19E-10
Dcaf7	1.246382547	0.18179408	7.08E-12	1.19E-10
Atf3	4.662956545	0.6801566	7.10E-12	1.19E-10
Decr1	-1.548830967	0.2259239	7.10E-12	1.19E-10
Map3k3	1.04091879	0.15192109	7.30E-12	1.22E-10
Rhbdd3	1.302562396	0.19011223	7.31E-12	1.22E-10
Ing2	-1.180666399	0.17240607	7.48E-12	1.25E-10
Rnf10	1.193725344	0.17437591	7.61E-12	1.27E-10
Trmu	-1.936043066	0.28295273	7.79E-12	1.30E-10
Ankrd52	1.441681418	0.21070823	7.81E-12	1.30E-10
Lonp2	-1.775156517	0.25952753	7.92E-12	1.32E-10
Tm6sf2	1.413130184	0.20661129	7.94E-12	1.32E-10
Cic	1.114019239	0.16289521	7.98E-12	1.33E-10
Zfp94	-1.88349891	0.27545605	8.04E-12	1.33E-10
LOC683674	1.243069859	0.18179282	8.04E-12	1.33E-10
Ddx50	-1.660891411	0.24294421	8.11E-12	1.34E-10
Copb2	-1.334980477	0.19535893	8.29E-12	1.37E-10
Enc1	2.512645145	0.36783461	8.44E-12	1.39E-10
Gpn3	-1.657312551	0.24263462	8.46E-12	1.40E-10
Riok1	-1.898506802	0.27795951	8.48E-12	1.40E-10
Cdc5l	-1.63172783	0.23895297	8.57E-12	1.41E-10
Nol9	2.009652783	0.29443191	8.76E-12	1.44E-10
Rn50_X_0677.1	8.266117088	1.2110372	8.75E-12	1.44E-10
Ppp2r3c	-1.491933998	0.21859596	8.79E-12	1.44E-10

Ttpal	1.417684933	0.2078181	8.99E-12	1.47E-10
Fgfr1op2	-1.214334506	0.17804741	9.09E-12	1.49E-10
Tmem245	1.809275386	0.26528814	9.10E-12	1.49E-10
Mettl25	-1.366354737	0.20042548	9.28E-12	1.52E-10
Fam57a	3.667720219	0.53812402	9.38E-12	1.53E-10
LOC103693430	-1.192395294	0.17494542	9.37E-12	1.53E-10
Lias	-1.732955544	0.25429859	9.45E-12	1.54E-10
Ccnd3	1.2969552	0.19038075	9.60E-12	1.56E-10
Tstd1	-4.365810247	0.64094635	9.66E-12	1.57E-10
Anxa7	2.759148579	0.40519642	9.80E-12	1.59E-10
Fam149b1	-1.215935316	0.17858902	9.86E-12	1.60E-10
Scd2	1.93147038	0.28385801	1.02E-11	1.64E-10
Ufm1	-1.07992957	0.15874614	1.03E-11	1.66E-10
Ttc28	1.858004981	0.27335869	1.07E-11	1.73E-10
Lfng	2.054875334	0.30237756	1.08E-11	1.74E-10
Gmcl1	-1.014136589	0.14924402	1.08E-11	1.75E-10
Bcat1	7.145920067	1.05180567	1.09E-11	1.76E-10
Mycbp	-1.039753947	0.15304022	1.09E-11	1.76E-10
Arhgap18	-1.90052081	0.27974392	1.09E-11	1.76E-10
Tmbim4	1.091622785	0.1607659	1.12E-11	1.80E-10
Trmt10c	-1.319651428	0.19434573	1.12E-11	1.80E-10
Wdr60	-1.371734662	0.20209851	1.14E-11	1.83E-10
Thoc1	-2.00344815	0.29516895	1.14E-11	1.83E-10
Prss53	-2.828580142	0.41694644	1.17E-11	1.87E-10
Sh3d19	1.261121949	0.18590962	1.17E-11	1.87E-10
Slc25a37	1.543261563	0.22757314	1.19E-11	1.90E-10
Clec4a1	1.454224855	0.21448934	1.20E-11	1.92E-10
Mrps26	-1.239223743	0.18280975	1.21E-11	1.93E-10
Vps53	-1.259978571	0.18593265	1.23E-11	1.96E-10
Actr1a	1.036755155	0.153018	1.24E-11	1.97E-10
Ctla2a	-1.950401788	0.28795585	1.26E-11	2.00E-10
Washc3	-1.483443724	0.21918598	1.31E-11	2.07E-10
Qsox2	1.781668587	0.26334289	1.33E-11	2.10E-10
Cks1l	1.734864148	0.25647758	1.34E-11	2.12E-10
Pdcd4	-1.673790354	0.24749249	1.35E-11	2.13E-10
Ankzf1	-1.078856406	0.15958048	1.37E-11	2.17E-10
Itgb3	2.116467138	0.31319785	1.40E-11	2.21E-10
Cul3	-1.432116937	0.21193309	1.40E-11	2.21E-10
Clec4f	-2.06831392	0.30609154	1.41E-11	2.21E-10
Qsox1	1.606766135	0.23783674	1.42E-11	2.23E-10
Mnat1	-1.394207715	0.20649336	1.46E-11	2.29E-10
AABR07026997.1	5.61049254	0.83127636	1.49E-11	2.33E-10
Rasd1	-3.153406127	0.46741556	1.51E-11	2.37E-10
Zfp110	-1.753004656	0.25988302	1.53E-11	2.39E-10
Pcca	-1.522208238	0.225679	1.53E-11	2.39E-10
NEWGENE_1308612	-1.231939394	0.18265323	1.53E-11	2.39E-10
Nt5dc3	2.286149216	0.33898199	1.54E-11	2.40E-10
Rpa3	-1.183155681	0.17547093	1.55E-11	2.42E-10

Slc36a1	1.276781022	0.18935903	1.56E-11	2.42E-10
Igsf23	7.748235746	1.14929036	1.56E-11	2.43E-10
Sgms2	1.898708719	0.28180981	1.61E-11	2.50E-10
Slc41a1	1.089591593	0.16171872	1.61E-11	2.50E-10
Mrpl47	-1.181587504	0.17540866	1.63E-11	2.52E-10
Dhrs4	-1.397923143	0.20753086	1.63E-11	2.52E-10
Slc35a1	-1.139048133	0.16910791	1.63E-11	2.52E-10
LOC679823	1.543057221	0.22908962	1.63E-11	2.52E-10
Rpl36al	-1.3372657	0.19870265	1.70E-11	2.62E-10
Hsp90aa1	7.744732646	1.15084529	1.70E-11	2.62E-10
Zkscan3	-1.429145411	0.21240768	1.72E-11	2.64E-10
Zdhhc9	1.097367204	0.16310129	1.72E-11	2.64E-10
Atxn7l3	1.625223342	0.24162426	1.74E-11	2.68E-10
Idua	-1.437667325	0.21382293	1.77E-11	2.72E-10
Secisbp2	-1.571610961	0.23375564	1.78E-11	2.73E-10
Guf1	-1.47620876	0.21960812	1.79E-11	2.74E-10
Ptcd3	-2.134624457	0.31755544	1.79E-11	2.74E-10
Tmem120b	1.975407814	0.29389352	1.80E-11	2.75E-10
Etv5	1.655607657	0.24633459	1.81E-11	2.76E-10
Phf2	1.39309473	0.20733535	1.83E-11	2.79E-10
Wasf1	1.200125748	0.17862206	1.83E-11	2.79E-10
Sf3a3	-1.60582071	0.2392051	1.90E-11	2.90E-10
Cyb561	1.562944969	0.23285772	1.92E-11	2.92E-10
Ube2j1	1.266414667	0.18868351	1.92E-11	2.92E-10
Ergic2	-1.102265999	0.1642465	1.93E-11	2.94E-10
LOC103690343	-3.070338307	0.45778047	1.99E-11	3.02E-10
Mcoln1	1.180777099	0.17606671	1.99E-11	3.02E-10
Elp3	-1.08470262	0.16175176	2.00E-11	3.03E-10
Igdcc4	4.045628178	0.60356915	2.04E-11	3.09E-10
Chi3l1	3.618159302	0.53978881	2.04E-11	3.09E-10
Naglu	1.268010411	0.18926095	2.09E-11	3.15E-10
Ddx5	-1.492618666	0.22286274	2.12E-11	3.20E-10
Pja1	-1.748414061	0.26105836	2.12E-11	3.20E-10
Lrch4	1.171412362	0.17497245	2.16E-11	3.25E-10
Pxdn	2.302541986	0.34398798	2.18E-11	3.27E-10
Fam134b	3.400751403	0.50812779	2.19E-11	3.29E-10
Cct8	-1.083939903	0.16204417	2.24E-11	3.37E-10
St7l	-1.441900006	0.21559305	2.26E-11	3.39E-10
Ccdc28b	-1.975749918	0.29553438	2.30E-11	3.45E-10
Tap2	1.004895872	0.15031993	2.31E-11	3.45E-10
Ipo4	1.602733382	0.23992875	2.39E-11	3.56E-10
Notch3	2.225864526	0.33326259	2.41E-11	3.58E-10
Birc2	-1.568729961	0.23504638	2.49E-11	3.70E-10
Lrpap1	-1.496755482	0.22436762	2.54E-11	3.78E-10
Spred2	1.719989307	0.25785979	2.55E-11	3.79E-10
Ttc7b	1.092147095	0.16373073	2.55E-11	3.79E-10
Htatsf1	-1.659746227	0.24886219	2.57E-11	3.81E-10
Cox6a2	7.548452902	1.13187492	2.58E-11	3.81E-10

Dus1l	-1.082246489	0.16234609	2.62E-11	3.88E-10
LOC108348098	-1.223908396	0.18365243	2.66E-11	3.93E-10
Creb3l1	2.119167881	0.31806511	2.69E-11	3.96E-10
Las1l	-1.703025941	0.25560448	2.69E-11	3.96E-10
Fkbp11	1.362979352	0.2045631	2.69E-11	3.96E-10
Mfsd12	2.321886575	0.34884133	2.81E-11	4.13E-10
Eif4g1	1.524257991	0.22904957	2.84E-11	4.17E-10
Igf2r	1.250650456	0.18804017	2.91E-11	4.27E-10
Zfp710	1.645520994	0.2474609	2.94E-11	4.30E-10
LOC100910979	-3.315314641	0.49871971	2.98E-11	4.35E-10
Plcx2	2.565317086	0.38604043	3.03E-11	4.42E-10
LOC100174910	-1.65228953	0.24889794	3.17E-11	4.62E-10
Ndufs1	-1.53382158	0.23142423	3.41E-11	4.97E-10
Iffo1	-1.37470897	0.20745403	3.44E-11	5.00E-10
Ptk7	2.906563717	0.43873519	3.48E-11	5.05E-10
Mrps33	-1.392160104	0.21024847	3.56E-11	5.17E-10
Tbrg1	1.475106338	0.22282509	3.59E-11	5.21E-10
Ctdsp2	1.803681778	0.27258539	3.67E-11	5.32E-10
Gsap	-1.594687773	0.24111103	3.74E-11	5.42E-10
Rn50_2_1408.1	-1.661028517	0.25124383	3.81E-11	5.51E-10
Elk4	1.032884938	0.15626722	3.85E-11	5.56E-10
Rela	1.175349046	0.17782709	3.86E-11	5.57E-10
Chrna7	7.292982947	1.10345598	3.86E-11	5.57E-10
Pskh1	1.095769423	0.16581348	3.88E-11	5.59E-10
Dffb	-1.474065386	0.22308	3.90E-11	5.61E-10
Prex1	1.868873348	0.28303382	4.03E-11	5.79E-10
Anks4b	-2.58209607	0.39148006	4.23E-11	6.08E-10
Dvl3	1.328198714	0.20141444	4.27E-11	6.13E-10
Plk3	2.514067485	0.38147466	4.39E-11	6.28E-10
AABR07030494.1	7.219247112	1.0955161	4.40E-11	6.30E-10
Oas3	3.415892897	0.51863653	4.51E-11	6.45E-10
Usp22	1.426583051	0.21663648	4.54E-11	6.49E-10
Hectd4	1.316858949	0.20012598	4.70E-11	6.70E-10
RGD1597339	-1.15236677	0.17512406	4.70E-11	6.70E-10
Atmin	1.752515453	0.26633473	4.70E-11	6.70E-10
Rtn4	1.777410231	0.27017998	4.75E-11	6.76E-10
Trem2	4.59447661	0.6984162	4.75E-11	6.76E-10
Ccdc25	-1.581841164	0.24049237	4.78E-11	6.80E-10
Ccdc90b	-1.558525158	0.23729501	5.10E-11	7.25E-10
Abcg3l1	-1.984395353	0.30218645	5.14E-11	7.29E-10
Cmya5	-2.741267572	0.4175635	5.21E-11	7.38E-10
Brd9	-1.746580157	0.26623558	5.37E-11	7.60E-10
Tnks	1.761270323	0.26849273	5.39E-11	7.62E-10
Hba-a2	2.80503379	0.42781031	5.50E-11	7.77E-10
Rbbp9	-2.158404018	0.32933048	5.60E-11	7.91E-10
Egr3	5.327389434	0.81315206	5.70E-11	8.03E-10
App	1.902808505	0.29051213	5.76E-11	8.11E-10
Bcl2l1	1.43388822	0.21891789	5.76E-11	8.11E-10

Fam65a	1.242326913	0.18976625	5.89E-11	8.28E-10
Slc37a2	2.466796507	0.37689658	5.95E-11	8.36E-10
Sdcbp2	7.927653782	1.21165979	6.04E-11	8.48E-10
Kcnab2	2.32444815	0.35531693	6.07E-11	8.52E-10
Ints13	-1.450954653	0.22195795	6.27E-11	8.79E-10
LOC108348151	1.969715101	0.3016185	6.56E-11	9.17E-10
Ncor2	1.07625676	0.16486724	6.66E-11	9.32E-10
Prkcdbp	2.217835687	0.33978094	6.70E-11	9.36E-10
Sbf1	1.147537015	0.17584921	6.77E-11	9.45E-10
Hk1	1.851095278	0.28378982	6.90E-11	9.62E-10
LOC100910875	1.472256874	0.22575354	6.96E-11	9.69E-10
Timd2	-1.720752892	0.26393457	7.05E-11	9.81E-10
Efhd2	1.032353872	0.15835184	7.06E-11	9.82E-10
Eif4g2	-1.147344983	0.176144	7.33E-11	1.02E-09
Hnrnpr	-1.626674478	0.24978997	7.41E-11	1.03E-09
Ube2o	1.57488659	0.24199289	7.62E-11	1.06E-09
Runx1	3.585016337	0.55114614	7.79E-11	1.08E-09
Marcks11	1.520432563	0.2338504	7.94E-11	1.10E-09
Ifrd2	1.527703906	0.23499173	7.97E-11	1.10E-09
Ssr2	1.573439983	0.24204121	7.99E-11	1.10E-09
Vldlr	3.344882727	0.5146014	8.03E-11	1.11E-09
Mrpl16	-1.018409398	0.15669014	8.06E-11	1.11E-09
Gpat3	4.871736983	0.74974929	8.15E-11	1.12E-09
Per1	2.953613606	0.45463083	8.21E-11	1.13E-09
Wdr77	1.432998787	0.22058173	8.22E-11	1.13E-09
Wdr77	1.432998787	0.22058173	8.22E-11	1.13E-09
LOC100909712	-1.907366408	0.29374052	8.39E-11	1.15E-09
Dhfr	-1.743621504	0.26860121	8.50E-11	1.17E-09
LOC100910143	-30.70559991	4.73036073	8.52E-11	1.17E-09
Zfp386	-3.015308542	0.46455404	8.54E-11	1.17E-09
Gnpat	-1.035473483	0.15954351	8.57E-11	1.17E-09
Cers5	1.401273921	0.21599852	8.73E-11	1.19E-09
Tbce	-1.579967659	0.24355694	8.75E-11	1.20E-09
Pik3c3	-2.112579202	0.32570028	8.80E-11	1.20E-09
Bak1	1.809564934	0.27915747	9.04E-11	1.23E-09
Rpl26	-1.416807594	0.21861907	9.13E-11	1.24E-09
Ranbp17	-2.142970882	0.33084855	9.34E-11	1.27E-09
Scarb2	1.512181126	0.23350685	9.42E-11	1.28E-09
Ltbp3	2.012938069	0.31099077	9.63E-11	1.31E-09
Csmd1	2.605940315	0.40265337	9.68E-11	1.31E-09
Map3k9	1.17321767	0.18134997	9.84E-11	1.34E-09
Haus7	-1.500208046	0.23203478	1.01E-10	1.37E-09
Caskin2	1.070366161	0.16560047	1.02E-10	1.38E-09
Rpf2	-1.379019356	0.21338252	1.03E-10	1.39E-09
Brpf3	1.993238903	0.30865772	1.06E-10	1.43E-09
Edem1	1.571522193	0.24335155	1.06E-10	1.43E-09
Zcchc7	-2.281966023	0.3536206	1.10E-10	1.47E-09
Slc7a8	1.922115586	0.29786571	1.10E-10	1.47E-09

Svip	-1.640715371	0.25427585	1.10E-10	1.48E-09
Foxp3	4.748366244	0.73609951	1.11E-10	1.49E-09
Rfxapl1	-30.51815055	4.73099672	1.11E-10	1.49E-09
Kdelc2	-1.394891756	0.21632299	1.13E-10	1.52E-09
Cacl1	1.205525341	0.1869578	1.13E-10	1.52E-09
LOC100911337	-1.865209628	0.28927355	1.13E-10	1.52E-09
Hs3st3b1	1.069996155	0.16601278	1.15E-10	1.54E-09
Rhog	1.345920519	0.20888965	1.17E-10	1.56E-09
Bcl3	1.93286618	0.30003439	1.18E-10	1.57E-09
Dram1	1.806571861	0.2804851	1.19E-10	1.58E-09
Map3k11	1.067737374	0.16586048	1.21E-10	1.62E-09
Gtpbp10	-1.865857691	0.28998805	1.24E-10	1.65E-09
Cmklr1	1.68264582	0.26161178	1.26E-10	1.67E-09
Sfr1	-1.81636745	0.28244226	1.27E-10	1.68E-09
Mrpl39	-1.016631356	0.158102	1.27E-10	1.69E-09
E4f1	-1.262599999	0.19642579	1.29E-10	1.71E-09
Srpra	1.057807185	0.16469844	1.34E-10	1.77E-09
Fam53b	1.190598575	0.18538448	1.34E-10	1.77E-09
Zscan29	-2.634938569	0.41031527	1.35E-10	1.78E-09
Tesk1	1.05371784	0.16413063	1.36E-10	1.80E-09
Vsir	1.408293026	0.21943473	1.38E-10	1.82E-09
RGD1309808	-2.184576753	0.34048631	1.40E-10	1.84E-09
Il15ra	-2.166685116	0.33783948	1.42E-10	1.87E-09
Pde3a	2.128205229	0.33184345	1.42E-10	1.87E-09
Abca3	1.245288076	0.19428985	1.46E-10	1.92E-09
Hivep3	2.570187544	0.40102505	1.46E-10	1.92E-09
RGD1308147	-1.931724125	0.30139997	1.46E-10	1.92E-09
Naxd	-1.212510752	0.18919414	1.47E-10	1.92E-09
Emp3	2.514405464	0.39236129	1.47E-10	1.92E-09
Pck2	2.136922129	0.33361978	1.50E-10	1.96E-09
Pnir	-2.613267524	0.40801231	1.50E-10	1.96E-09
Anks6	3.537117244	0.55242943	1.53E-10	1.99E-09
Dip2b	1.494987483	0.2334987	1.53E-10	1.99E-09
Bloc1s5	-1.830826419	0.28600812	1.54E-10	2.01E-09
Pqlc3	2.826072888	0.44156606	1.55E-10	2.02E-09
Fxr1	-1.521088172	0.23773441	1.57E-10	2.04E-09
Prorsd1	-1.696599211	0.26518297	1.58E-10	2.05E-09
Trmt1l	-1.09035735	0.1704335	1.58E-10	2.05E-09
Ltn1	-1.476867303	0.2309055	1.60E-10	2.07E-09
Vasn	1.118360908	0.17487943	1.61E-10	2.08E-09
Arid5a	2.528637849	0.39552804	1.63E-10	2.10E-09
Nadsyn1	-1.180572954	0.18468626	1.63E-10	2.11E-09
Lactb2	-1.357178186	0.212383	1.66E-10	2.14E-09
LOC108348078	-2.050627351	0.32095935	1.67E-10	2.16E-09
Optn	-1.535407909	0.24033597	1.67E-10	2.16E-09
Cwc27	-1.448286129	0.22672702	1.68E-10	2.17E-09
Exosc9	-1.519801321	0.23794747	1.69E-10	2.18E-09
Gpr146	1.614941641	0.25285553	1.69E-10	2.18E-09

Pias3	1.088340421	0.17057106	1.76E-10	2.27E-09
Tspan4	1.651050221	0.25875813	1.76E-10	2.27E-09
Ksr1	1.300264844	0.20388937	1.80E-10	2.31E-09
Acat1	-1.768394906	0.27737865	1.83E-10	2.34E-09
Anapc4	-1.45267646	0.22794527	1.85E-10	2.38E-09
Coro2b	2.501602038	0.39269604	1.89E-10	2.42E-09
Ski	1.522042536	0.23898497	1.91E-10	2.44E-09
Pkd1	1.100317969	0.17284673	1.94E-10	2.48E-09
Rps6	-1.452603919	0.22828138	1.98E-10	2.52E-09
Mtrf1	-2.660833686	0.41829175	2.00E-10	2.55E-09
Gapdh	1.454450004	0.22871089	2.03E-10	2.58E-09
Apbb1ip	1.72880016	0.27188693	2.04E-10	2.59E-09
Maz	1.176803953	0.18512511	2.06E-10	2.62E-09
Nol6	1.250710822	0.19686291	2.11E-10	2.68E-09
Fam213a	-1.804454708	0.28410646	2.13E-10	2.71E-09
Brix1	-1.686148293	0.26551101	2.15E-10	2.72E-09
Hypk	-1.251906687	0.19716957	2.16E-10	2.74E-09
Mrps22	-1.400216748	0.22053658	2.17E-10	2.74E-09
B3galnt1	3.771617986	0.59411326	2.18E-10	2.75E-09
Hba-a3	3.039114829	0.47877901	2.19E-10	2.76E-09
Prmt3	1.4505417	0.22869111	2.26E-10	2.85E-09
Tnrc18	1.317130981	0.20767054	2.26E-10	2.85E-09
Rsad2	3.727882852	0.58827347	2.34E-10	2.95E-09
Map3k6	3.354258693	0.52931606	2.34E-10	2.95E-09
Narf	-1.22003975	0.19256974	2.36E-10	2.97E-09
Rars	-1.221441194	0.19288894	2.41E-10	3.03E-09
Dusp7	1.206080731	0.19055099	2.46E-10	3.09E-09
Fads3	2.442102918	0.38601736	2.51E-10	3.14E-09
Cdyl	1.886317654	0.29823655	2.53E-10	3.17E-09
Eva1a	-1.486673851	0.23511275	2.56E-10	3.20E-09
Cd38	1.514292867	0.23950666	2.57E-10	3.21E-09
Pkmyt1	3.069036659	0.48563851	2.62E-10	3.27E-09
Mphosph6	-1.783375316	0.28221727	2.63E-10	3.27E-09
Surf4	1.086457233	0.17197786	2.66E-10	3.31E-09
Mansc1	1.933549748	0.30607211	2.66E-10	3.31E-09
Metap1d	-1.394891286	0.22082934	2.67E-10	3.32E-09
AABR07013065.1	-3.15410663	0.49963582	2.74E-10	3.40E-09
Rab43	1.126060443	0.17839352	2.75E-10	3.41E-09
Fam160a2	1.245900244	0.19742067	2.77E-10	3.43E-09
Stxbp3	-1.504454703	0.23850248	2.83E-10	3.50E-09
Tmem107	3.495874702	0.55422537	2.83E-10	3.50E-09
Phf14	-1.3574966	0.21523205	2.84E-10	3.51E-09
Ndufa6	-1.394269182	0.2210744	2.85E-10	3.52E-09
Fn1	1.48123637	0.23508102	2.96E-10	3.64E-09
Was	1.75048375	0.27781944	2.96E-10	3.65E-09
Pitpnm2	1.084148885	0.17211205	2.99E-10	3.68E-09
LOC499770	-1.620493505	0.25726895	3.00E-10	3.69E-09
Paox	1.338124985	0.2124784	3.02E-10	3.71E-09

Mtif2	-2.408813246	0.38261219	3.06E-10	3.76E-09
Itpripl2	2.419263796	0.38428979	3.07E-10	3.76E-09
Sqstm1	1.532766993	0.2435032	3.08E-10	3.77E-09
Triap1	-1.609556929	0.25573512	3.10E-10	3.79E-09
Cspp1	-1.60185748	0.25464483	3.16E-10	3.86E-09
Tgfb1i1	2.248433281	0.35760559	3.23E-10	3.94E-09
Ephb4	1.012606373	0.1610564	3.23E-10	3.94E-09
Parvg	1.677809241	0.266864	3.23E-10	3.94E-09
Qpctl	1.127918906	0.17947087	3.29E-10	4.00E-09
Gbas	-1.303217176	0.20743744	3.33E-10	4.05E-09
Ofd1	-2.074895807	0.33031215	3.35E-10	4.07E-09
Rgmb	1.848502182	0.29451326	3.46E-10	4.20E-09
Adcy3	1.792433533	0.28561862	3.48E-10	4.22E-09
Isyna1	2.027551428	0.32316592	3.52E-10	4.26E-09
Cwf19l2	-1.972011926	0.31461811	3.66E-10	4.43E-09
Slc7a11	6.155093361	0.98205649	3.67E-10	4.43E-09
Ice2	-1.874217937	0.29904791	3.67E-10	4.44E-09
Phyh	-2.007908436	0.32042037	3.69E-10	4.45E-09
Mto1	-1.05905347	0.1690312	3.72E-10	4.48E-09
Col5a2	2.511682934	0.40097733	3.75E-10	4.52E-09
Tbxas1	1.878711092	0.29996691	3.77E-10	4.54E-09
LOC100361492	4.183934871	0.66813365	3.80E-10	4.57E-09
Ntn1	1.830744336	0.29247533	3.86E-10	4.64E-09
Spire2	3.564522993	0.56981254	3.96E-10	4.75E-09
Syngn2	1.18417202	0.18939438	4.04E-10	4.85E-09
Efna1	-1.524982604	0.24391966	4.05E-10	4.86E-09
Atp5j	-1.182557951	0.18920648	4.10E-10	4.91E-09
Dmwd	1.238789821	0.19824937	4.14E-10	4.95E-09
Ddx52	-1.865431692	0.29857051	4.16E-10	4.97E-09
Atp2a2	1.147359807	0.18368634	4.20E-10	5.02E-09
Dbi	-1.891303496	0.30289382	4.26E-10	5.09E-09
Zfp933	-2.780129956	0.44528976	4.28E-10	5.10E-09
Vamp1	-2.185595115	0.35014005	4.32E-10	5.15E-09
Egr2	4.232033269	0.6780617	4.34E-10	5.16E-09
Sdhd	-1.208875916	0.19370342	4.35E-10	5.18E-09
Vps51	1.176580768	0.18856564	4.39E-10	5.21E-09
Ptgfrn	1.260576852	0.20204129	4.40E-10	5.22E-09
LOC100911575	1.391749304	0.22306831	4.40E-10	5.22E-09
Aldh8a1	-2.030865246	0.32566963	4.49E-10	5.33E-09
Sh2d4a	-1.337107306	0.21457745	4.62E-10	5.48E-09
Uchl5	-1.213854289	0.19488682	4.71E-10	5.57E-09
Rxra	1.760726492	0.28284394	4.81E-10	5.68E-09
Fabp1	-2.288492222	0.36767166	4.84E-10	5.70E-09
Trmt2a	-1.075500752	0.17279702	4.84E-10	5.71E-09
Rabep1	-1.763097719	0.28362958	5.09E-10	5.98E-09
Adck1	1.299152069	0.20898941	5.09E-10	5.98E-09
Fosl2	2.829219451	0.4551358	5.09E-10	5.98E-09
Cdc26	-1.014645224	0.16327119	5.15E-10	6.04E-09

Mad111	-1.12473939	0.18099832	5.16E-10	6.05E-09
Tspan12	-1.470051532	0.23656697	5.16E-10	6.05E-09
Colec11	-1.158497943	0.18652661	5.27E-10	6.17E-09
Frg1	-1.561887582	0.2518259	5.57E-10	6.51E-09
Frg1	-1.561887582	0.2518259	5.57E-10	6.51E-09
Tom1l2	1.502521291	0.24226898	5.58E-10	6.52E-09
Mgrn1	1.102669844	0.17781984	5.61E-10	6.54E-09
Paqr4	1.92897809	0.31106987	5.61E-10	6.54E-09
Stat3	1.374885281	0.22188417	5.78E-10	6.72E-09
Rpl35a	-1.483889608	0.23951379	5.81E-10	6.76E-09
RT1-CE4	1.015283818	0.16389219	5.83E-10	6.78E-09
Nacc1	1.153773709	0.18628149	5.88E-10	6.82E-09
Syn1	2.712210806	0.43794954	5.90E-10	6.85E-09
Glmn	-2.367647862	0.3823547	5.93E-10	6.87E-09
Insig2	-2.303204026	0.37195024	5.93E-10	6.87E-09
Uck2	2.132336396	0.34460848	6.10E-10	7.06E-09
Pdrg1	-1.459964618	0.2360071	6.17E-10	7.12E-09
LOC100909505	9.219836052	1.49080307	6.23E-10	7.19E-09
Tspan9	1.139450878	0.1842457	6.23E-10	7.19E-09
Mettl3	-1.196013248	0.19346248	6.32E-10	7.29E-09
Stk3	-1.602602934	0.25923873	6.33E-10	7.29E-09
Copg2	-1.262354389	0.20424732	6.39E-10	7.35E-09
Lmf1	1.036013227	0.16764001	6.41E-10	7.37E-09
Cotl1	2.361998511	0.38250489	6.61E-10	7.59E-09
Bloc1s1	-2.14961436	0.34812458	6.62E-10	7.59E-09
Shc1	1.018794731	0.16499102	6.62E-10	7.59E-09
Sec14l1	1.537614574	0.2490459	6.66E-10	7.62E-09
Krr1	-1.727097806	0.27991103	6.82E-10	7.80E-09
Irf2bp1	1.266993109	0.20534683	6.83E-10	7.80E-09
LOC688583	-1.366011674	0.2214737	6.92E-10	7.90E-09
B4galt3	1.196075988	0.19397161	6.99E-10	7.97E-09
Gpatch1	-1.566881278	0.25417349	7.07E-10	8.05E-09
Rnf146	-1.3851354	0.22483389	7.24E-10	8.24E-09
RGD1306148	-1.233123376	0.20032829	7.48E-10	8.51E-09
LOC100912538	-1.531516607	0.24883062	7.51E-10	8.53E-09
Chst1	3.280553548	0.53356817	7.83E-10	8.88E-09
Tanc2	1.571730951	0.25567172	7.87E-10	8.92E-09
Atp1b1	1.587176751	0.25820794	7.90E-10	8.95E-09
Acad11	-1.802938364	0.29335265	7.95E-10	8.99E-09
Tgs1	-1.721761781	0.28016142	7.97E-10	9.00E-09
Gas2	-1.533512804	0.24953149	7.97E-10	9.00E-09
Vsig10l	1.625251733	0.26457525	8.10E-10	9.15E-09
Ndufaf5	-1.279498153	0.20836152	8.21E-10	9.25E-09
Dbt	-1.546951779	0.25201845	8.34E-10	9.39E-09
Igfbp1	3.012766758	0.49090049	8.40E-10	9.44E-09
Itfg2	-1.281080155	0.20875452	8.42E-10	9.46E-09
RGD1311251	-2.06639802	0.33677323	8.47E-10	9.51E-09
Zmiz1	1.16586142	0.19002342	8.50E-10	9.53E-09

Ica1	2.411987106	0.39322929	8.58E-10	9.62E-09
Pnn	-2.185830805	0.3563959	8.62E-10	9.65E-09
Tmem201	1.240675057	0.20229765	8.63E-10	9.66E-09
Xrcc6	-1.216126625	0.19831144	8.66E-10	9.68E-09
Cyp3a9	-1.958347996	0.31945241	8.77E-10	9.80E-09
Rps8	-1.178999734	0.19236533	8.85E-10	9.87E-09
Nob1	-1.296617735	0.21166364	9.02E-10	1.01E-08
Cbr4	-1.289868321	0.21058825	9.06E-10	1.01E-08
Exo5	-1.555145039	0.25403336	9.25E-10	1.03E-08
Trim30c	-2.016655381	0.32944182	9.27E-10	1.03E-08
Rbm34	-1.34549627	0.2198912	9.42E-10	1.05E-08
Angptl3	-2.95743289	0.48337136	9.46E-10	1.05E-08
Uhrf1bp1	1.545608121	0.25273219	9.62E-10	1.07E-08
Csf1r	1.365251064	0.22324597	9.63E-10	1.07E-08
Nsrp1	-1.787289423	0.29233089	9.72E-10	1.08E-08
Nol10	-1.377824917	0.22539124	9.78E-10	1.08E-08
Lrrc58	2.108833324	0.34501801	9.82E-10	1.09E-08
Dnajc9	-1.696533359	0.27767945	9.98E-10	1.10E-08
Zbtb45	1.239775488	0.20292883	1.00E-09	1.10E-08
Zfp260	-1.668136948	0.27308889	1.01E-09	1.11E-08
LOC102554034	7.352323932	1.20367369	1.01E-09	1.11E-08
Nckap5l	1.498359425	0.24533858	1.01E-09	1.12E-08
Rnf25	-1.105050935	0.18095379	1.02E-09	1.12E-08
Tefm	-1.458672286	0.23896139	1.03E-09	1.14E-08
Dad1	1.486778046	0.24358922	1.04E-09	1.14E-08
Cd63	1.72481234	0.28263615	1.04E-09	1.15E-08
Crem	-1.248668022	0.20470097	1.06E-09	1.17E-08
Haus5	-1.178491472	0.19328246	1.08E-09	1.18E-08
Cetn2	-1.76884292	0.29023261	1.10E-09	1.20E-08
Trap1	-1.350998288	0.22169766	1.10E-09	1.21E-08
Xrcc5	-1.059878459	0.17393674	1.10E-09	1.21E-08
Dpysl2	1.739804891	0.28553394	1.11E-09	1.21E-08
Lrrc8a	1.211098485	0.19881432	1.12E-09	1.22E-08
LOC108348298	-1.341779507	0.22031576	1.13E-09	1.23E-08
Nid2	1.685192541	0.27679768	1.14E-09	1.24E-08
Ctp	1.00953862	0.16582006	1.14E-09	1.24E-08
Tapbp	1.065848678	0.17507288	1.14E-09	1.24E-08
Engase	1.154991663	0.18974538	1.15E-09	1.25E-08
Trmt10b	-1.152982769	0.18943253	1.15E-09	1.25E-08
RGD1559896	1.012505346	0.16636011	1.16E-09	1.26E-08
Zmiz2	10.455454	1.71797256	1.16E-09	1.26E-08
Zmiz2	10.455454	1.71797256	1.16E-09	1.26E-08
Dnajc17	-1.921057092	0.31566961	1.16E-09	1.26E-08
Pgrmc1	-1.316736595	0.21646733	1.18E-09	1.28E-08
Golga5	-1.319280829	0.21689164	1.18E-09	1.28E-08
Zmat3	2.17327792	0.35734781	1.19E-09	1.29E-08
Pex13	-1.223728065	0.20127643	1.20E-09	1.30E-08
sept07	-1.520410588	0.25011237	1.21E-09	1.30E-08

Ufsp2	-1.225132967	0.20158995	1.22E-09	1.32E-08
Dusp2	3.574986277	0.5883894	1.23E-09	1.33E-08
Rmdn1	-1.997240504	0.32871063	1.23E-09	1.33E-08
Eln	2.860480837	0.47080215	1.23E-09	1.33E-08
Akr1cl	-1.59367569	0.26240357	1.25E-09	1.35E-08
Snupn	-1.515232153	0.24950275	1.26E-09	1.35E-08
Hao2	-2.833081187	0.46657832	1.26E-09	1.35E-08
Elmsan1	1.253929126	0.20651641	1.26E-09	1.35E-08
Adat1	-1.460905632	0.24065393	1.27E-09	1.36E-08
Rnf19a	-1.425221892	0.23478792	1.28E-09	1.37E-08
Nkain1	4.980501998	0.82067304	1.29E-09	1.38E-08
Cd37	1.596392022	0.26306822	1.29E-09	1.38E-08
Pls3	-1.456855078	0.24021761	1.32E-09	1.41E-08
Clec7a	2.224491855	0.3668621	1.33E-09	1.42E-08
Fahd1	-1.865649554	0.30783732	1.36E-09	1.44E-08
Fnta	-1.029952633	0.16994915	1.36E-09	1.44E-08
LOC100911545	28.80417092	4.75341246	1.36E-09	1.45E-08
Rest	1.68895697	0.27876214	1.37E-09	1.46E-08
Elk1	1.156751363	0.19092781	1.37E-09	1.46E-08
Osmr	2.918201108	0.48195686	1.41E-09	1.49E-08
Gucy2c	5.565557275	0.9192994	1.41E-09	1.50E-08
Shank3	1.439247933	0.23773538	1.41E-09	1.50E-08
Zfp382	-2.746231963	0.45397367	1.45E-09	1.54E-08
Etfa	-1.544441212	0.25541214	1.48E-09	1.56E-08
Mitd1	-2.116034417	0.34999741	1.49E-09	1.57E-08
Irak3	2.179021779	0.36044942	1.49E-09	1.58E-08
Ttf1	-1.652367965	0.27336244	1.50E-09	1.58E-08
AABR07021823.1	-1.219633956	0.2018312	1.51E-09	1.60E-08
Plekha3	1.364897861	0.22603539	1.56E-09	1.64E-08
C5ar1	2.080098258	0.34451229	1.56E-09	1.65E-08
Cald1	-1.386979509	0.22977436	1.58E-09	1.66E-08
Sh3pxd2a	1.399636815	0.23192616	1.59E-09	1.67E-08
Cpz	2.149332768	0.3562616	1.61E-09	1.69E-08
Cacybp	-1.516923403	0.25144223	1.61E-09	1.69E-08
Sept09	1.056642517	0.17514991	1.61E-09	1.69E-08
Dnajc2	-1.77882232	0.29512145	1.67E-09	1.75E-08
Apip	-1.439364846	0.23881269	1.67E-09	1.75E-08
Brox	-1.106593492	0.18367909	1.70E-09	1.78E-08
Mllt3	-1.900505085	0.31555362	1.71E-09	1.79E-08
Tnc	5.62302419	0.93478027	1.80E-09	1.87E-08
Tbc1d22b	1.494662883	0.24849821	1.80E-09	1.88E-08
Fancl	-1.724672114	0.2868632	1.83E-09	1.91E-08
Enoph1	1.088119088	0.18112515	1.88E-09	1.96E-08
RGD1566320	-1.349446777	0.22470213	1.91E-09	1.99E-08
Upf2	-1.985978002	0.33085751	1.94E-09	2.02E-08
Larp7	-1.630214919	0.27173655	1.98E-09	2.06E-08
Sept11	1.606452305	0.26782486	2.00E-09	2.07E-08
Faap20	1.832978236	0.30566954	2.01E-09	2.09E-08

Scarf2	1.893732442	0.31588295	2.03E-09	2.11E-08
Etfhdh	-2.016998497	0.33644375	2.03E-09	2.11E-08
Clasp1	1.104076483	0.18429296	2.09E-09	2.16E-08
Cpeb3	1.624848754	0.27123084	2.09E-09	2.16E-08
Hipk3	1.337188017	0.22325034	2.10E-09	2.18E-08
Olr1	4.564527763	0.76209574	2.11E-09	2.18E-08
Stac2	6.482738637	1.08250279	2.12E-09	2.19E-08
H2afx	1.797875598	0.30024193	2.12E-09	2.19E-08
Lgalsl	-1.521548984	0.25411108	2.13E-09	2.20E-08
Top1	1.186743982	0.1982557	2.15E-09	2.22E-08
NEWGENE_619861	-1.069392976	0.17871283	2.18E-09	2.24E-08
Fmnl1	1.709850982	0.28592996	2.23E-09	2.30E-08
Hs1bp3	1.109055827	0.18552251	2.26E-09	2.32E-08
Runx3	3.21997627	0.53869909	2.27E-09	2.33E-08
Gm29106	-3.392714572	0.56783175	2.30E-09	2.36E-08
St14	1.492207684	0.2497655	2.31E-09	2.37E-08
Arfgap3	1.233390485	0.206549	2.35E-09	2.41E-08
Fam84b	1.913137087	0.32040921	2.36E-09	2.41E-08
Mfap1a	-1.190221979	0.19943474	2.40E-09	2.46E-08
Zscan26	-2.004831655	0.33599734	2.42E-09	2.47E-08
Ado	1.211006958	0.20297577	2.43E-09	2.48E-08
Wipf2	1.640876019	0.27503617	2.43E-09	2.48E-08
Pear1	1.242827713	0.20833073	2.44E-09	2.48E-08
Swsap1	2.034698751	0.34125746	2.49E-09	2.53E-08
Rasgrp3	-1.998853165	0.33527302	2.49E-09	2.54E-08
Zscan12	-1.997831601	0.33522412	2.53E-09	2.57E-08
Fndc3b	1.881404744	0.31589984	2.59E-09	2.63E-08
Zcchc8	-1.294513726	0.21754532	2.67E-09	2.71E-08
LOC108348072	2.02301819	0.33996901	2.67E-09	2.71E-08
Txnl4b	-1.352010497	0.22722552	2.68E-09	2.72E-08
Ttc23	-1.735104462	0.29168629	2.71E-09	2.74E-08
Fkbp10	3.30259458	0.55518456	2.70E-09	2.74E-08
Fabp5	2.093000281	0.35199035	2.74E-09	2.78E-08
Pcdh1	1.376495495	0.23157664	2.78E-09	2.81E-08
Prpf38a	-1.272491074	0.21413912	2.81E-09	2.83E-08
Gsdma	-3.106730013	0.52288144	2.82E-09	2.84E-08
C4b	1.77385911	0.29855852	2.83E-09	2.84E-08
Cyp2a1	-2.048219056	0.34476735	2.84E-09	2.85E-08
Kank1	-1.561314922	0.2628674	2.86E-09	2.87E-08
RGD1305455	1.3444353	0.22642897	2.89E-09	2.90E-08
Plxnd1	1.133692849	0.19095849	2.91E-09	2.92E-08
Chd3	-1.073955386	0.18095239	2.94E-09	2.95E-08
Cdr2	2.996322298	0.50525874	3.02E-09	3.03E-08
Dynlt3	-1.795294897	0.30276114	3.03E-09	3.04E-08
Nif3l1	-1.291370131	0.21781843	3.05E-09	3.05E-08
Osbpl1a	-1.07259386	0.18095682	3.08E-09	3.08E-08
Zkscan5	-1.739926172	0.29385296	3.20E-09	3.19E-08
Metrn1	1.689373961	0.28541205	3.24E-09	3.23E-08

Scamp4	1.38862514	0.23473671	3.31E-09	3.30E-08
Bcap29	-1.534617329	0.25945713	3.32E-09	3.31E-08
Mapre2	1.859583394	0.31441394	3.33E-09	3.32E-08
Fan1	-1.324810382	0.22400942	3.34E-09	3.32E-08
Ndufb3	-1.399197758	0.23684185	3.47E-09	3.45E-08
Por	1.900014456	0.3217336	3.51E-09	3.49E-08
C2cd2l	1.143041789	0.19356552	3.52E-09	3.49E-08
Chkb	-1.071801313	0.18152236	3.54E-09	3.50E-08
Orc2	-1.308915682	0.22167795	3.54E-09	3.50E-08
Tram2	1.931371098	0.32712091	3.54E-09	3.51E-08
March03	1.183424793	0.20044987	3.55E-09	3.51E-08
Selplg	1.632386145	0.27660914	3.60E-09	3.56E-08
Coro1a	2.082589747	0.35298113	3.63E-09	3.59E-08
RGD1564614	-2.307372679	0.39118312	3.67E-09	3.62E-08
Ier3	1.660128192	0.28151743	3.70E-09	3.65E-08
Lats2	1.313448986	0.22287786	3.79E-09	3.73E-08
Lancl1	1.315938639	0.2233638	3.83E-09	3.77E-08
Utp3	-1.663720551	0.28241513	3.84E-09	3.78E-08
Zfp3	-1.964373568	0.33352079	3.87E-09	3.80E-08
Mob3c	-1.034358453	0.17568898	3.92E-09	3.85E-08
LOC100912068	2.8731187	0.48808329	3.94E-09	3.87E-08
mrpl9	-1.111758245	0.18889163	3.96E-09	3.89E-08
Zfp316	1.266525974	0.21520347	3.97E-09	3.90E-08
Ddx10	-1.668015119	0.28347302	4.00E-09	3.92E-08
Gpx2	4.5052196	0.76644711	4.15E-09	4.07E-08
Sdha	-1.496470794	0.25460831	4.16E-09	4.08E-08
Zbtb48	-1.548097677	0.26354035	4.25E-09	4.15E-08
Hspa1a	7.152045302	1.2175218	4.25E-09	4.15E-08
Dbp	3.973687571	0.67658091	4.27E-09	4.17E-08
Dnajc16	1.043209823	0.17763499	4.29E-09	4.18E-08
Nln	-1.047903796	0.17846982	4.32E-09	4.21E-08
Olr36	-4.157957778	0.7081741	4.32E-09	4.21E-08
Pnpla2	1.074387028	0.18322406	4.52E-09	4.40E-08
Rasl11b	4.302398276	0.73375921	4.53E-09	4.41E-08
Fcer1g	1.33453144	0.22761908	4.55E-09	4.42E-08
Col12a1	2.795844265	0.47688601	4.55E-09	4.42E-08
Tmem242	-1.064066365	0.18163225	4.67E-09	4.54E-08
LOC100360413	-1.107052283	0.18901487	4.71E-09	4.57E-08
Pcbp2	1.265972142	0.2161879	4.74E-09	4.60E-08
Inpp5d	1.356039932	0.23162739	4.79E-09	4.63E-08
Trerf1	1.742704366	0.29767583	4.79E-09	4.63E-08
Sh3pxd2b	3.47086536	0.59295642	4.81E-09	4.65E-08
Rpf1	-1.370633028	0.23418716	4.84E-09	4.67E-08
Ptpn23	1.561742003	0.26693116	4.89E-09	4.72E-08
Acad9	-1.384437625	0.23671184	4.96E-09	4.78E-08
Robo1	1.653314066	0.28268938	4.96E-09	4.78E-08
Rn60_X_0641.1	1.063926992	0.18192818	4.97E-09	4.79E-08
Nfam1	1.350480024	0.23100052	5.03E-09	4.83E-08

Ptbp3	1.999365466	0.3420881	5.08E-09	4.88E-08
Rhob	1.410816004	0.24153607	5.19E-09	4.98E-08
Rgs19	1.4223216	0.24351385	5.19E-09	4.98E-08
RGD1310951	1.050028699	0.17981953	5.24E-09	5.03E-08
Cat	-2.340863246	0.40091939	5.26E-09	5.04E-08
Tes	2.968344249	0.5084119	5.27E-09	5.05E-08
Arhgap23	1.691796512	0.28980825	5.29E-09	5.07E-08
Kmt5c	-1.079419308	0.18493989	5.33E-09	5.10E-08
Foxk1	1.012963165	0.17357112	5.35E-09	5.11E-08
Srfbp1	-1.411115112	0.24182371	5.37E-09	5.13E-08
AABR07005549.1	2.528878667	0.43338896	5.38E-09	5.13E-08
AC117869.1	4.639292982	0.79516995	5.40E-09	5.15E-08
Pygb	1.717461456	0.29445072	5.45E-09	5.20E-08
Slc15a3	1.521633736	0.26104272	5.57E-09	5.31E-08
Zfp358	1.487815067	0.25527691	5.60E-09	5.34E-08
Aimp1	-1.027827419	0.17641039	5.67E-09	5.39E-08
Gnl2	-1.467412669	0.25192819	5.72E-09	5.44E-08
Chrne	-2.719626995	0.46696021	5.74E-09	5.46E-08
Arhgap22	3.117535857	0.53534709	5.77E-09	5.48E-08
Srek1	-1.75310157	0.30122915	5.89E-09	5.59E-08
Itga3	1.675146728	0.28785956	5.91E-09	5.60E-08
Zfp830	-1.72071931	0.29581402	6.00E-09	5.68E-08
Loxl1	2.766327548	0.47570978	6.06E-09	5.73E-08
Tln1	1.117856325	0.19233765	6.18E-09	5.83E-08
Tpbg	1.273796306	0.21927863	6.28E-09	5.92E-08
Cyr61	1.624182646	0.2797049	6.37E-09	6.00E-08
Toe1	-1.241964475	0.21389819	6.39E-09	6.01E-08
Akna	2.002043505	0.34508338	6.57E-09	6.18E-08
Ccdc6	1.600783354	0.27596921	6.61E-09	6.21E-08
Ncoa3	1.203850752	0.20755726	6.63E-09	6.23E-08
Papln	1.591246026	0.2743622	6.64E-09	6.23E-08
RGD1359290	2.559115844	0.44130838	6.67E-09	6.26E-08
RGD1359508	-2.445688794	0.42182137	6.71E-09	6.29E-08
Pmvk	-1.4885898	0.25677623	6.74E-09	6.32E-08
Lpxn	1.0338173	0.17836981	6.79E-09	6.36E-08
Lbr	1.662068833	0.28678456	6.81E-09	6.37E-08
AC114460.1	1.356016259	0.23399132	6.83E-09	6.38E-08
Uba3	-1.373723459	0.23718626	6.97E-09	6.51E-08
Tm4sf19	4.092569553	0.70667896	6.99E-09	6.53E-08
AC106663.1	7.307383175	1.26198634	7.02E-09	6.55E-08
Slc48a1	1.075465388	0.18574506	7.04E-09	6.56E-08
Git2	-1.056781268	0.18253377	7.06E-09	6.58E-08
Atf6	1.260989071	0.21789198	7.16E-09	6.66E-08
Rpp40	-1.068737333	0.18475369	7.27E-09	6.76E-08
Rpl22	-1.078138224	0.18644423	7.35E-09	6.84E-08
Lpcat2	1.339113093	0.23173836	7.53E-09	7.00E-08
Peo1	-1.119922506	0.19392041	7.69E-09	7.13E-08
Sap25	-2.736126635	0.47384209	7.73E-09	7.16E-08

Strbp	-1.463095824	0.25341631	7.76E-09	7.19E-08
Fer1l5	-2.064792019	0.35773577	7.84E-09	7.26E-08
Rn60_14_0076.1	2.13499184	0.36996627	7.89E-09	7.29E-08
Afap1	1.942583145	0.33681326	8.04E-09	7.43E-08
Sdccag8	-2.055246115	0.35656529	8.21E-09	7.58E-08
Tlk1	-1.62900542	0.28267763	8.27E-09	7.63E-08
Grpel1	-1.118698421	0.19440258	8.69E-09	8.01E-08
Tmem43	1.312056499	0.22807138	8.78E-09	8.08E-08
LOC681410	1.272742769	0.22136017	8.94E-09	8.23E-08
Yipf2	1.182382261	0.20566678	8.98E-09	8.25E-08
AABR07040855.1	-1.597383612	0.2778865	9.01E-09	8.28E-08
RGD1562339	3.456311839	0.60156723	9.16E-09	8.41E-08
Rin3	1.074302077	0.18702555	9.24E-09	8.48E-08
Spns1	1.17192168	0.20403269	9.26E-09	8.49E-08
Trappc11	-1.097392807	0.19117574	9.45E-09	8.66E-08
Slc12a4	1.066525984	0.1858808	9.60E-09	8.78E-08
LOC102550456	1.560951047	0.27206051	9.61E-09	8.79E-08
LOC108348144	-1.188448893	0.20726157	9.81E-09	8.96E-08
Rras2	1.25862577	0.21952868	9.85E-09	9.00E-08
Tax1bp1	-1.457600634	0.25425822	9.88E-09	9.02E-08
Fam162a	-1.279443316	0.22320287	9.91E-09	9.04E-08
Chka	-1.926079209	0.33616942	1.01E-08	9.18E-08
Rn60_2_1877.6	-3.591838207	0.62695494	1.01E-08	9.20E-08
Klra2	-2.322487827	0.40548663	1.02E-08	9.27E-08
Cbx6	1.574231798	0.27492385	1.03E-08	9.36E-08
Nxn	1.087510015	0.18997705	1.04E-08	9.44E-08
Mss51	-3.876078977	0.67712966	1.04E-08	9.44E-08
Anxa5	2.034520397	0.35549277	1.05E-08	9.49E-08
Ppp1r13l	2.195145843	0.38356195	1.05E-08	9.49E-08
AC135696.1	-1.121423924	0.19594752	1.05E-08	9.49E-08
Samd1	1.437404794	0.25127048	1.06E-08	9.63E-08
C1qtnf1	1.36177461	0.23808964	1.07E-08	9.68E-08
Agpat4	1.580702903	0.27641916	1.07E-08	9.74E-08
N4bp1	1.501892087	0.26273546	1.09E-08	9.85E-08
Asb16	-2.825980476	0.4943931	1.09E-08	9.86E-08
Cd180	1.658438257	0.2901595	1.09E-08	9.87E-08
Cd68	1.262520564	0.22089258	1.09E-08	9.87E-08
RGD1562378	-1.801355445	0.31525058	1.10E-08	9.95E-08
Aif1	-1.187244148	0.20784831	1.12E-08	1.01E-07
Abcd3	-1.347179917	0.23595621	1.13E-08	1.02E-07
Inpp5f	-1.198606879	0.2099418	1.13E-08	1.02E-07
Prkx	1.298745138	0.22749018	1.14E-08	1.02E-07
Mocs2	-1.388989867	0.24333968	1.14E-08	1.03E-07
March06	1.718735178	0.30111504	1.14E-08	1.03E-07
Fam13b	-1.369865536	0.2400155	1.15E-08	1.03E-07
Inpp1	1.025593688	0.17973837	1.16E-08	1.04E-07
Tle2	-1.405871615	0.24639758	1.16E-08	1.04E-07
Vwa5a	-2.667320785	0.4676667	1.17E-08	1.05E-07

Zswim3	-1.280505282	0.22451603	1.17E-08	1.05E-07
Rbfox2	1.030108241	0.18066844	1.19E-08	1.06E-07
Rn60_4_1636.2	1.811951888	0.31783665	1.19E-08	1.07E-07
Rnf44	1.403256899	0.24623734	1.21E-08	1.08E-07
Prkra	-1.110594801	0.19493608	1.22E-08	1.09E-07
Capn1	1.217525429	0.21370883	1.22E-08	1.09E-07
Fkrp	1.287127115	0.22595633	1.22E-08	1.09E-07
Tmem119	2.42637109	0.42607379	1.24E-08	1.10E-07
Wbp2	1.052125184	0.18476102	1.24E-08	1.10E-07
Tenm4	5.976366098	1.04970147	1.25E-08	1.11E-07
Rpl27a	-1.28144325	0.22507862	1.25E-08	1.11E-07
Amz1	2.147257309	0.37727203	1.26E-08	1.12E-07
Slc35g1	1.60329585	0.28180793	1.28E-08	1.13E-07
Lrp10	1.238884124	0.21777895	1.28E-08	1.14E-07
Entpd7	1.814448584	0.31899618	1.29E-08	1.14E-07
Cadps2	-1.24398705	0.21873748	1.29E-08	1.15E-07
Slc1a5	2.803325019	0.49298562	1.30E-08	1.15E-07
Mphosph10	-2.087367613	0.36725236	1.32E-08	1.17E-07
LOC103692719	1.827654272	0.32161941	1.33E-08	1.17E-07
Ccdc107	-1.440715093	0.25353179	1.33E-08	1.17E-07
Cbl	2.097498277	0.36911934	1.33E-08	1.17E-07
Hsd11b1	-2.035609922	0.35825537	1.33E-08	1.18E-07
Ss18	-1.157098947	0.20365382	1.33E-08	1.18E-07
LOC100360781	-2.800522053	0.49298557	1.34E-08	1.18E-07
Zcchc14	1.337461014	0.23545331	1.34E-08	1.18E-07
Terf1	-1.955676475	0.34434447	1.35E-08	1.19E-07
Zmynd10	-3.711596611	0.65381705	1.37E-08	1.21E-07
Ahnak2	4.991744648	0.87962587	1.39E-08	1.22E-07
LOC689757	-2.857017249	0.50346245	1.39E-08	1.22E-07
Akr7a3	2.352699694	0.41463744	1.39E-08	1.22E-07
Lptm5	1.253820989	0.2209878	1.40E-08	1.23E-07
Uaca	-1.244249934	0.21930325	1.40E-08	1.23E-07
Mkrn1	-1.044632541	0.1841374	1.40E-08	1.23E-07
Gpbp1	-1.566251788	0.27608377	1.40E-08	1.23E-07
Rnf6	-1.368173289	0.24121713	1.41E-08	1.24E-07
Sirpa	1.237951664	0.218367	1.44E-08	1.25E-07
Cd300lb	3.682030925	0.6494908	1.44E-08	1.25E-07
Luc7l3	-2.213134153	0.3904695	1.45E-08	1.26E-07
Fnbp4	-1.905514364	0.33620335	1.45E-08	1.26E-07
Trim28	1.01784075	0.17965537	1.47E-08	1.28E-07
Abhd11	-1.357275873	0.23959764	1.47E-08	1.28E-07
LOC100910577	-2.82030377	0.49803447	1.49E-08	1.30E-07
Micall1	1.031086876	0.18219157	1.52E-08	1.32E-07
Nop9	1.070880958	0.18924222	1.52E-08	1.33E-07
Vps41	-1.589679123	0.28108768	1.55E-08	1.35E-07
Mlkl	-1.772195194	0.31343121	1.57E-08	1.36E-07
Zfp644	-1.016186194	0.1797568	1.58E-08	1.37E-07
Cwc22	-1.826377886	0.3230838	1.58E-08	1.37E-07

Itgad	2.520100616	0.44589827	1.59E-08	1.38E-07
Itgad	2.520100616	0.44589827	1.59E-08	1.38E-07
Azgp1	-1.911291985	0.33842053	1.63E-08	1.41E-07
Gtpbp2	1.52195394	0.26949813	1.63E-08	1.41E-07
Zfp524	1.295795338	0.22946876	1.63E-08	1.41E-07
Pi16	2.714910125	0.48120976	1.68E-08	1.45E-07
Ydjc	3.340256188	0.59225683	1.70E-08	1.47E-07
Plxna1	1.498642697	0.26585673	1.73E-08	1.49E-07
AABR07007905.2	-2.175789383	0.38611731	1.75E-08	1.51E-07
Pcmttd1	-1.577604724	0.28009368	1.78E-08	1.53E-07
Mrgprf	2.731919859	0.48504784	1.78E-08	1.53E-07
LOC102555377	-3.049650209	0.54151589	1.78E-08	1.53E-07
Lyar	-1.476737981	0.26225805	1.79E-08	1.54E-07
Pigr	-1.872872671	0.33271612	1.81E-08	1.55E-07
Srf	1.096941751	0.19488204	1.82E-08	1.56E-07
Rnf186	2.492670334	0.44288893	1.82E-08	1.56E-07
Srp72	-1.090700407	0.19383741	1.83E-08	1.57E-07
Vav1	1.578596413	0.28058375	1.84E-08	1.58E-07
Idi1	-2.464319493	0.43803122	1.85E-08	1.58E-07
Wdfy4	1.036220506	0.18421832	1.86E-08	1.59E-07
Slu7	-1.400927335	0.24908238	1.86E-08	1.59E-07
Myl12a	1.490367656	0.2650351	1.87E-08	1.60E-07
Acadm	-2.026077162	0.36032457	1.88E-08	1.60E-07
Sdr9c7	-1.807145231	0.32146723	1.89E-08	1.61E-07
Dnajc21	-1.499717175	0.26678229	1.89E-08	1.61E-07
Rbpms	1.031195401	0.18344471	1.90E-08	1.61E-07
Slc5a6	1.034374287	0.18402852	1.90E-08	1.62E-07
Disp1	2.325280388	0.41409975	1.96E-08	1.67E-07
Suclg2	-1.436031343	0.25595115	2.02E-08	1.71E-07
Cela1	-3.776944527	0.67328847	2.03E-08	1.72E-07
Dennd5a	1.306936395	0.23299345	2.03E-08	1.72E-07
Spi1	1.547519072	0.27593561	2.04E-08	1.73E-07
Aldoa	1.744926058	0.31125479	2.07E-08	1.75E-07
Slc35a2	1.041472972	0.18594639	2.13E-08	1.80E-07
Egfl8	-3.751935979	0.67011759	2.16E-08	1.82E-07
Anapc10	-1.013852045	0.18109965	2.16E-08	1.82E-07
Setd1b	1.765653987	0.31552227	2.19E-08	1.85E-07
LOC100910771	-3.516380501	0.62843779	2.20E-08	1.85E-07
Mafb	1.570424179	0.28066448	2.20E-08	1.85E-07
Ltbp1	1.548769621	0.2768888	2.23E-08	1.87E-07
Cx3cr1	3.004267559	0.53713438	2.23E-08	1.87E-07
Podn	-1.843171701	0.32955821	2.23E-08	1.88E-07
Klhl12	-1.369265461	0.24493568	2.27E-08	1.90E-07
Gfer	-1.000099173	0.17890199	2.27E-08	1.90E-07
Ccnd1	1.737680577	0.31089005	2.28E-08	1.91E-07
Fam3c	1.495591225	0.26768343	2.31E-08	1.93E-07
Ednrb	1.999726544	0.35804315	2.33E-08	1.95E-07
Zfp319	1.054392227	0.18879246	2.34E-08	1.96E-07

Ckb	1.710694728	0.30632256	2.34E-08	1.96E-07
Pdcd5	-1.101542845	0.19725365	2.35E-08	1.96E-07
Apc2	1.959391231	0.35102368	2.38E-08	1.99E-07
Abcc1	2.196236115	0.3934965	2.39E-08	1.99E-07
Fam133b	-2.087890879	0.37415566	2.40E-08	2.00E-07
Rbm48	-1.635913542	0.29320939	2.41E-08	2.01E-07
RT1-Da	1.433847296	0.25708148	2.44E-08	2.03E-07
Gfod1	2.200395625	0.39457033	2.45E-08	2.04E-07
Il23a	4.47309164	0.80258205	2.50E-08	2.07E-07
Ppp6r3	-1.103292629	0.19798035	2.51E-08	2.08E-07
Fbxo21	1.05323262	0.18902312	2.52E-08	2.09E-07
Slc36a2	3.710662219	0.66667787	2.61E-08	2.16E-07
Sytl2	-2.714859527	0.48777283	2.61E-08	2.16E-07
Afmid	-2.113328146	0.37982259	2.64E-08	2.18E-07
Sufu	1.50562516	0.27067228	2.66E-08	2.20E-07
B2m	-1.117574576	0.20092212	2.66E-08	2.20E-07
Nek3	-1.579689371	0.28411895	2.70E-08	2.23E-07
Sf3b1	-1.319513082	0.23734709	2.71E-08	2.23E-07
Aptx	-1.00933619	0.18169634	2.77E-08	2.29E-07
Gtpbp1	1.140854993	0.20537251	2.78E-08	2.29E-07
Gpc1	4.113347299	0.74057899	2.79E-08	2.30E-07
Pard3b	1.561155324	0.28111294	2.80E-08	2.30E-07
Dcun1d3	1.446683936	0.26062207	2.84E-08	2.34E-07
Ankrd49	-1.223074765	0.22035208	2.85E-08	2.34E-07
Ppme1	1.082480803	0.19504991	2.86E-08	2.35E-07
Ip6k2	-1.236219958	0.22279432	2.88E-08	2.36E-07
Scyl3	-1.463456545	0.26374376	2.88E-08	2.36E-07
Hmox1	1.429671563	0.25773395	2.90E-08	2.38E-07
LOC100910163	-1.692361053	0.30512002	2.91E-08	2.39E-07
Cables2	1.166996043	0.21042986	2.93E-08	2.40E-07
Brd4	1.092839692	0.19710611	2.95E-08	2.41E-07
Rabl2a	-1.082093272	0.19526527	3.00E-08	2.45E-07
Tcp1l1l	1.961089101	0.35396225	3.02E-08	2.47E-07
Acsl3	-1.504166175	0.27164785	3.07E-08	2.51E-07
Anp32a	-1.344547872	0.24282009	3.07E-08	2.51E-07
Stmn1	1.624234317	0.29333167	3.07E-08	2.51E-07
Fam53a	1.050428373	0.18971541	3.08E-08	2.51E-07
Sult1c2a	-2.313494946	0.41794498	3.11E-08	2.53E-07
Mapk1ip1	-1.261162018	0.22786827	3.12E-08	2.54E-07
LOC103690013	1.563979149	0.28258457	3.12E-08	2.54E-07
Slain2	1.042282064	0.18835994	3.14E-08	2.55E-07
Ftl1l1	1.965577001	0.35538167	3.19E-08	2.59E-07
Ufl1	-1.486061963	0.26878754	3.23E-08	2.62E-07
Hspb1	5.223393211	0.94506752	3.26E-08	2.65E-07
Golga1	-1.593788204	0.28844929	3.29E-08	2.67E-07
Ttc27	-1.224718166	0.22165168	3.29E-08	2.67E-07
Ddx20	-1.4197635	0.25710221	3.35E-08	2.71E-07
Hsc70-ps2	2.221307279	0.40240088	3.39E-08	2.74E-07

Necap2	1.003520053	0.18188963	3.44E-08	2.79E-07
Btg3	2.630917207	0.47700883	3.48E-08	2.81E-07
Lrrc25	1.312248279	0.23792406	3.48E-08	2.81E-07
Fabp4	3.559568264	0.64546383	3.49E-08	2.82E-07
Stk35	1.209715359	0.2194208	3.52E-08	2.85E-07
LOC100910540	1.026177729	0.18614416	3.53E-08	2.85E-07
Pex10	-1.263828696	0.22929021	3.55E-08	2.86E-07
Susd6	1.391975921	0.25259147	3.57E-08	2.88E-07
Rpe	-1.297019788	0.23540235	3.59E-08	2.89E-07
Ago2	1.776537768	0.3226108	3.66E-08	2.94E-07
Tbk1	-1.447128089	0.26279641	3.66E-08	2.94E-07
Hsd17b4	-1.370641166	0.24913007	3.76E-08	3.02E-07
Arg1	-1.883451584	0.34237487	3.77E-08	3.03E-07
RGD1561277	-1.967534797	0.35772737	3.80E-08	3.05E-07
Galk2	-1.029012036	0.18713303	3.82E-08	3.07E-07
Map3k5	1.658969651	0.301755	3.85E-08	3.08E-07
Ddr1	2.482019918	0.45164408	3.90E-08	3.12E-07
Nrg1	2.114839191	0.38486358	3.91E-08	3.13E-07
Pigv	1.003996861	0.18271807	3.91E-08	3.13E-07
Lipc	-1.866960003	0.3397949	3.92E-08	3.14E-07
LOC100909715	3.323681959	0.60536275	4.01E-08	3.21E-07
Zfp964	-2.458795351	0.44807542	4.08E-08	3.26E-07
Timp1	2.826588941	0.51513434	4.09E-08	3.26E-07
Csf2rb	1.856929412	0.33842726	4.09E-08	3.26E-07
NEWGENE_1309258	1.373706757	0.25044426	4.13E-08	3.30E-07
Zfp157	-2.12498356	0.38761145	4.20E-08	3.35E-07
Usp31	2.301905823	0.4198961	4.20E-08	3.35E-07
Slco3a1	2.367351155	0.43194954	4.24E-08	3.37E-07
NEWGENE_1582994	-1.278105713	0.23322141	4.25E-08	3.38E-07
Arrb1	1.846236372	0.33693273	4.26E-08	3.39E-07
Cep89	-1.229374557	0.22440205	4.29E-08	3.41E-07
Zfp133	-1.636160408	0.29866019	4.29E-08	3.41E-07
Etfrf1	-1.789299146	0.32668953	4.32E-08	3.43E-07
Chrn1	1.845896878	0.33703874	4.33E-08	3.43E-07
Pgm3	-1.043853675	0.19061099	4.34E-08	3.44E-07
Ppp4r3b	-1.735640503	0.31719781	4.46E-08	3.53E-07
Nsmaf	-1.052757291	0.19245324	4.50E-08	3.55E-07
lqcc	-2.127916664	0.38910103	4.53E-08	3.58E-07
Uqcrh	-1.132124645	0.20703344	4.54E-08	3.59E-07
Hip1	1.136163935	0.20779293	4.56E-08	3.60E-07
Card19	1.60121626	0.29293295	4.60E-08	3.63E-07
Foxp4	1.05576333	0.1931871	4.63E-08	3.65E-07
Bbs2	-1.092587968	0.19995316	4.65E-08	3.66E-07
Rnf19b	1.219317359	0.22319704	4.68E-08	3.69E-07
Cct6a	-1.38456724	0.25348075	4.70E-08	3.70E-07
Tmem39a	1.097417857	0.20093054	4.72E-08	3.71E-07
lqcb1	-1.920806486	0.35168893	4.72E-08	3.71E-07
LOC500124	-1.602747925	0.29351139	4.75E-08	3.73E-07

Apbb3	-1.091620936	0.19995482	4.78E-08	3.76E-07
Col6a1	1.888207879	0.34588997	4.79E-08	3.76E-07
Tusc3	1.909004462	0.34980773	4.83E-08	3.79E-07
Cblb	1.05758424	0.19386425	4.89E-08	3.83E-07
Hnrnpa3	-1.583759649	0.2903123	4.89E-08	3.83E-07
Snx12	1.73550742	0.31829732	4.97E-08	3.89E-07
Cd83	1.773908626	0.32542618	5.01E-08	3.92E-07
Crnk1	-1.48422467	0.27232543	5.03E-08	3.93E-07
Nat1	-1.401040464	0.25711883	5.07E-08	3.96E-07
LOC100363537	6.125840376	1.12490977	5.16E-08	4.03E-07
Clk4	-2.1168675	0.38897666	5.26E-08	4.10E-07
Map4k1	1.434517144	0.26360323	5.27E-08	4.11E-07
Dars2	-1.021278585	0.18773973	5.33E-08	4.15E-07
Zbtb20	1.736037775	0.31914526	5.34E-08	4.15E-07
Eif3f	1.105996656	0.2033905	5.39E-08	4.19E-07
Tsen15	-1.080674547	0.19877769	5.43E-08	4.22E-07
Uspl1	-1.398518362	0.25726777	5.45E-08	4.23E-07
Ankmy2	-1.219626862	0.2243712	5.46E-08	4.23E-07
Hmox2	-1.142249458	0.21019719	5.50E-08	4.27E-07
Snrpa1	-1.29143765	0.23774988	5.58E-08	4.32E-07
Tmem25	-1.770658646	0.32599809	5.59E-08	4.33E-07
Cbarp	2.596808482	0.47844947	5.71E-08	4.42E-07
Pf4	2.092727801	0.38562071	5.73E-08	4.43E-07
Exosc8	-1.287755736	0.23734619	5.77E-08	4.46E-07
Snx14	-1.725806807	0.31809427	5.78E-08	4.46E-07
Ccdc17	-1.259985294	0.23224595	5.79E-08	4.46E-07
RGD1306474	-3.358450523	0.61934633	5.87E-08	4.53E-07
Trim27	1.322242593	0.24385667	5.89E-08	4.54E-07
Flna	1.991076739	0.36737756	5.97E-08	4.60E-07
Mut	-2.123641976	0.3918749	5.99E-08	4.60E-07
Siglec1	1.928452988	0.35590307	6.01E-08	4.62E-07
Hhip	1.982200257	0.36593054	6.06E-08	4.65E-07
Pus10	-1.574213743	0.29076921	6.16E-08	4.73E-07
Mmp9	3.629964862	0.67094236	6.29E-08	4.82E-07
Pum3	-1.181123319	0.21832891	6.31E-08	4.83E-07
Supt20h	-1.400192028	0.25885577	6.33E-08	4.85E-07
Pprc1	1.701569633	0.31461374	6.36E-08	4.87E-07
Nfkbie	1.472160878	0.27222712	6.38E-08	4.88E-07
Znrd1as1	-1.899513547	0.35132689	6.42E-08	4.91E-07
Pigz	2.981931334	0.55154064	6.43E-08	4.91E-07
Ccdc124	-1.21693794	0.22511123	6.45E-08	4.92E-07
LOC500584	-2.291013616	0.42381463	6.46E-08	4.93E-07
Fblim1	2.508292626	0.46404945	6.47E-08	4.94E-07
Nup214	1.727451512	0.31959033	6.47E-08	4.94E-07
Arhgdia	1.19223789	0.22070089	6.59E-08	5.02E-07
Ptger2	2.819776401	0.52200885	6.60E-08	5.02E-07
Mapkbp1	-1.143202415	0.21172305	6.68E-08	5.08E-07
Elovl7	5.731406089	1.06171002	6.73E-08	5.11E-07

Sh3tc1	1.087383492	0.20153753	6.84E-08	5.18E-07
Clip2	1.741785773	0.32282466	6.84E-08	5.18E-07
Il2rb	1.319734209	0.24460835	6.84E-08	5.18E-07
Wdr54	2.510068373	0.46530854	6.87E-08	5.20E-07
Wdr54	2.510068373	0.46530854	6.87E-08	5.20E-07
Ngdn	-1.241487336	0.23024999	6.97E-08	5.27E-07
Ndrgr1	2.811347681	0.52150555	7.01E-08	5.30E-07
Cd28	4.04177753	0.75011529	7.12E-08	5.38E-07
Rspo3	-1.636296141	0.30372386	7.15E-08	5.40E-07
Ppp1r3c	-2.133538464	0.39620219	7.25E-08	5.47E-07
Neurl1b	3.190723273	0.59262736	7.28E-08	5.50E-07
Slc35e4	2.719574266	0.50517597	7.31E-08	5.51E-07
Mlxip	1.684978234	0.31306152	7.36E-08	5.54E-07
Tfpi	-1.034387929	0.19221988	7.40E-08	5.57E-07
Sort1	1.074476998	0.19968839	7.42E-08	5.58E-07
Ptges3l1	1.285444686	0.23889484	7.42E-08	5.58E-07
Mum1	-1.117512261	0.20778796	7.53E-08	5.66E-07
Ifitm1	1.325888728	0.24663251	7.62E-08	5.73E-07
Fam171a2	1.497679324	0.27863059	7.65E-08	5.75E-07
Nasp	-1.410768443	0.2625412	7.72E-08	5.80E-07
Zfr	-1.506184385	0.2803476	7.76E-08	5.82E-07
Ccdc125	-1.588315301	0.29571427	7.83E-08	5.86E-07
Prag1	2.036746857	0.37930928	7.89E-08	5.91E-07
Crtc1	1.003285997	0.18692418	7.99E-08	5.98E-07
Aldob	-1.516654696	0.2826305	8.04E-08	6.01E-07
Wdr59	-1.106815148	0.20626136	8.05E-08	6.01E-07
Itgav	1.77334917	0.33059378	8.13E-08	6.07E-07
PVR	2.881985535	0.53736625	8.18E-08	6.10E-07
Wdsub1	-1.660054653	0.30954254	8.19E-08	6.11E-07
Vegfd	2.687462902	0.5012543	8.25E-08	6.15E-07
Ebag9	-1.000220648	0.18661333	8.33E-08	6.20E-07
Ndufa2	-1.56263572	0.29154105	8.33E-08	6.20E-07
Junb	1.734135849	0.32356762	8.35E-08	6.21E-07
Usp47	-1.116903991	0.20840593	8.36E-08	6.21E-07
Ppid	-1.221123823	0.22788551	8.39E-08	6.24E-07
Dxo	1.113773168	0.20798662	8.55E-08	6.36E-07
Mphosph8	-1.882976272	0.35172136	8.62E-08	6.40E-07
AABR07063855.1	-1.336044224	0.24958235	8.65E-08	6.42E-07
Creg1	-1.743058579	0.3257282	8.73E-08	6.48E-07
Topors	-1.467957365	0.27436741	8.78E-08	6.51E-07
Frs3	-1.608906387	0.3009222	8.96E-08	6.63E-07
Ndufb7	-1.249622644	0.23372336	8.96E-08	6.63E-07
Bspry	2.454381978	0.45931731	9.11E-08	6.74E-07
Nr4a1	2.410218368	0.45125715	9.24E-08	6.82E-07
Ndufa10	-1.307528166	0.24480746	9.24E-08	6.82E-07
Idnk	-1.802867031	0.33758069	9.27E-08	6.84E-07
LOC102553866	1.027569129	0.19248962	9.38E-08	6.92E-07
Mbip	-1.885512959	0.35322019	9.39E-08	6.92E-07

Nrm	2.529464045	0.47392535	9.44E-08	6.95E-07
Hddc3	-1.151448234	0.21574828	9.45E-08	6.96E-07
Fau	1.197090019	0.22431801	9.47E-08	6.97E-07
Sdhaf3	-1.398762961	0.26214535	9.51E-08	7.00E-07
Gnl3	-1.277571924	0.23948526	9.57E-08	7.04E-07
Mob4	-1.046794027	0.19629818	9.68E-08	7.11E-07
Fcna	-1.62893035	0.30556141	9.77E-08	7.17E-07
Zc3h7a	-1.577661511	0.29594967	9.78E-08	7.17E-07
Nfkb2	1.637330484	0.30717556	9.81E-08	7.19E-07
Ccdc174	-1.400408665	0.26278302	9.87E-08	7.22E-07
Yod1	1.715746634	0.3220443	9.95E-08	7.28E-07
Slc29a3	1.109761694	0.20835025	1.00E-07	7.33E-07
Arhgap31	1.414337383	0.2655607	1.00E-07	7.35E-07
Git1	1.092893121	0.20529206	1.02E-07	7.43E-07
Emp2	2.086862916	0.39210074	1.02E-07	7.49E-07
Ndst1	1.521713074	0.28593689	1.03E-07	7.50E-07
Msantd4	-1.36941178	0.25731818	1.03E-07	7.50E-07
Arl6ip4	-1.002036636	0.18837323	1.04E-07	7.59E-07
Parg	-1.254813168	0.2359356	1.05E-07	7.63E-07
Lipo1	-2.562598103	0.48199135	1.06E-07	7.70E-07
Zfp498	1.210278752	0.2278117	1.08E-07	7.87E-07
LOC684762	1.758463281	0.33101034	1.08E-07	7.88E-07
AABR07058464.1	-1.776748509	0.33452008	1.09E-07	7.92E-07
Dhx36	-1.627395423	0.30646816	1.10E-07	7.96E-07
Pex11a	-1.693692748	0.31895181	1.10E-07	7.96E-07
Abcc3	2.463667085	0.46429893	1.12E-07	8.13E-07
Eepd1	-1.034038811	0.19491277	1.13E-07	8.17E-07
Cd44	4.141282405	0.78066495	1.13E-07	8.18E-07
Zfhx2	1.550688667	0.29242905	1.14E-07	8.27E-07
H2afv	-1.239681947	0.23379049	1.14E-07	8.28E-07
Piezo1	1.82350352	0.34394371	1.15E-07	8.31E-07
Myc	2.428263549	0.45803309	1.15E-07	8.32E-07
Mrc2	2.203883172	0.41573608	1.15E-07	8.33E-07
Tmem189	1.109104171	0.20922597	1.15E-07	8.33E-07
Id1	2.039354564	0.38475	1.16E-07	8.35E-07
Elmo1	1.785827844	0.3370488	1.17E-07	8.44E-07
Nkd1	1.454463946	0.27452704	1.17E-07	8.45E-07
Mlh3	-1.449973155	0.27372569	1.18E-07	8.49E-07
Vegfb	1.109397399	0.20944219	1.18E-07	8.50E-07
Arid1a	1.112684247	0.21013495	1.19E-07	8.58E-07
Fosl1	7.736303266	1.46201986	1.21E-07	8.74E-07
Abr	1.901154905	0.35928791	1.21E-07	8.74E-07
Slc43a2	1.266152657	0.23942197	1.23E-07	8.88E-07
Eno2	2.968548485	0.56152001	1.25E-07	8.96E-07
Ugcg	1.862588286	0.35242328	1.26E-07	9.03E-07
Hspa9	-1.06279546	0.20116314	1.27E-07	9.12E-07
Peak1	1.291954803	0.24455188	1.27E-07	9.13E-07
Sltm	-1.605508999	0.30394621	1.28E-07	9.16E-07

Sptssa	-1.296549694	0.24549922	1.28E-07	9.21E-07
Ankrd13c	-1.194162968	0.226127	1.29E-07	9.22E-07
Tgfbr3	1.078172181	0.20422624	1.30E-07	9.30E-07
Lrrc59	1.229202973	0.23288694	1.31E-07	9.35E-07
Atp5e	-1.655798555	0.31377904	1.31E-07	9.40E-07
Rpl31	-1.258979853	0.2386202	1.32E-07	9.44E-07
Amer1	1.689348642	0.32023516	1.33E-07	9.47E-07
Taf13	-1.333933385	0.25290497	1.33E-07	9.51E-07
Rbm28	-1.253420834	0.23767385	1.34E-07	9.54E-07
Hck	1.554858363	0.29487119	1.34E-07	9.57E-07
Rn50_X_0752.1	7.316496514	1.3876358	1.34E-07	9.58E-07
Cgnl1	-1.124237604	0.2132188	1.34E-07	9.58E-07
Kcnn4	2.536912762	0.48123174	1.35E-07	9.62E-07
Gpsm3	1.196542106	0.22702362	1.36E-07	9.68E-07
Tbc1d23	-1.107063307	0.2100839	1.37E-07	9.72E-07
Endod1	2.247868605	0.42672974	1.38E-07	9.82E-07
Ids	1.702488735	0.32358685	1.43E-07	1.02E-06
Ppig	-1.568184317	0.29809976	1.44E-07	1.02E-06
Syngap1	1.950622343	0.37084189	1.44E-07	1.02E-06
Atp6v0c	1.110659433	0.21124609	1.46E-07	1.03E-06
Tbcel	1.408590582	0.26816623	1.50E-07	1.06E-06
Med31	-1.156067877	0.22023432	1.53E-07	1.08E-06
Slc39a8	-1.588077122	0.30254454	1.53E-07	1.08E-06
Zfp868	-1.704806287	0.32482761	1.53E-07	1.08E-06
Rnf38	1.582050364	0.30148544	1.54E-07	1.09E-06
Kdm3a	-1.405992482	0.2679448	1.54E-07	1.09E-06
Pym1	-1.16977842	0.2229289	1.54E-07	1.09E-06
Epcam	-1.684310475	0.32105748	1.55E-07	1.09E-06
Thumpd3	-1.324845697	0.25267757	1.58E-07	1.11E-06
Usp46	-1.068203419	0.20378131	1.59E-07	1.12E-06
RGD1305178	-1.436041425	0.27395652	1.59E-07	1.12E-06
Mrpl54	-1.152801067	0.21993654	1.59E-07	1.12E-06
Sec61a2	1.097017201	0.20929825	1.59E-07	1.12E-06
Daam1	-1.166905292	0.22264761	1.60E-07	1.12E-06
Sat2	-1.433418498	0.27353988	1.60E-07	1.12E-06
LOC100910678	-1.379860626	0.26340929	1.62E-07	1.13E-06
Kcnk13	1.784382332	0.34074409	1.63E-07	1.14E-06
Dhrs13	1.201711829	0.22949116	1.64E-07	1.15E-06
Nr1h4	-1.598860034	0.30535756	1.64E-07	1.15E-06
Nr3c1	-1.439391841	0.27522357	1.70E-07	1.19E-06
Lyc2	-2.876432594	0.55014964	1.71E-07	1.19E-06
Slc52a2	1.145396695	0.21907633	1.71E-07	1.19E-06
LOC100361907	-2.116244132	0.40477222	1.71E-07	1.19E-06
RGD1562699	-2.209756129	0.42267491	1.71E-07	1.19E-06
Clcn6	1.116243474	0.21352431	1.72E-07	1.20E-06
Rbm14	1.164426702	0.22278902	1.73E-07	1.20E-06
Echdc1	-2.092984235	0.40065208	1.75E-07	1.22E-06
Cpd	1.532230315	0.29337127	1.76E-07	1.23E-06

Hdac2	-1.161350342	0.22246758	1.79E-07	1.24E-06
Vps50	-1.573496117	0.30146867	1.79E-07	1.25E-06
Cxcl9	-1.69426878	0.32463035	1.80E-07	1.25E-06
Aloxe3	3.991862358	0.76495821	1.80E-07	1.25E-06
Zfp821	-1.707987475	0.32742706	1.82E-07	1.27E-06
Aaas	1.034029311	0.19827633	1.84E-07	1.27E-06
Cdc42ep2	1.33660429	0.25636869	1.85E-07	1.28E-06
Fcnb	3.325033221	0.63809076	1.88E-07	1.30E-06
RGD1307315	1.777820939	0.34124107	1.89E-07	1.31E-06
Frmd4b	-1.27637416	0.24510675	1.91E-07	1.32E-06
Nae1	-1.466008452	0.28155556	1.92E-07	1.33E-06
LOC500956	-1.041182689	0.20004897	1.94E-07	1.34E-06
Rilp	-1.984893554	0.38153043	1.97E-07	1.36E-06
AABR07057196.1	-1.315117131	0.25279594	1.97E-07	1.36E-06
Rarg	1.282544941	0.24655118	1.97E-07	1.36E-06
Slc35d1	1.014238915	0.19501578	1.98E-07	1.37E-06
Apol9a	-1.524303849	0.29317778	2.00E-07	1.38E-06
Pts	-1.265862473	0.24348715	2.00E-07	1.38E-06
Mettl18	-1.2450307	0.23957703	2.03E-07	1.39E-06
Tmod3	-1.131568141	0.2179104	2.07E-07	1.42E-06
Slc35f6	1.429360964	0.27526747	2.07E-07	1.42E-06
S100a11	2.72285041	0.52437668	2.07E-07	1.42E-06
Mapk7	1.196123388	0.2303562	2.07E-07	1.42E-06
Plcl2	-1.084111697	0.20887322	2.10E-07	1.44E-06
Gprc5a	4.602011081	0.88690928	2.12E-07	1.45E-06
Tmem47	-1.498869422	0.28887423	2.12E-07	1.45E-06
Adamts10	-1.038157641	0.20019525	2.15E-07	1.47E-06
Actn1	1.793900656	0.34599637	2.16E-07	1.48E-06
Nid1	1.477686251	0.28501287	2.16E-07	1.48E-06
Itga4	2.230020383	0.43021985	2.18E-07	1.48E-06
Slc16a3	3.840293083	0.74086697	2.18E-07	1.48E-06
Upp1	1.904309795	0.36741988	2.18E-07	1.49E-06
Dnhd1	-1.842737093	0.35567265	2.21E-07	1.50E-06
Smox	2.069336526	0.39949412	2.22E-07	1.51E-06
Nipsnap1	-1.487826498	0.28733923	2.24E-07	1.52E-06
LOC102555672	-2.666689364	0.51501093	2.24E-07	1.52E-06
Hmga1	2.546778519	0.49187484	2.25E-07	1.53E-06
Bend3	1.834825221	0.35437879	2.25E-07	1.53E-06
Hpcal1	1.282469541	0.24772297	2.25E-07	1.53E-06
Ncam1	3.678894799	0.71075886	2.27E-07	1.54E-06
Angptl8	-1.823533853	0.35236019	2.28E-07	1.54E-06
Sh2b2	2.01046298	0.38849085	2.28E-07	1.54E-06
Gfra3	1.214755035	0.23480444	2.30E-07	1.55E-06
Csrnp1	1.686295994	0.32594798	2.30E-07	1.55E-06
Fbxo9	-1.380383345	0.26707752	2.36E-07	1.59E-06
Lyl1	1.566814017	0.30315711	2.36E-07	1.59E-06
Prickle4	-2.146067987	0.41532968	2.38E-07	1.60E-06
LOC684270	-1.636814364	0.31687868	2.40E-07	1.62E-06

Syde1	2.133505439	0.41322076	2.43E-07	1.64E-06
Rhbdf1	1.212191385	0.23485177	2.45E-07	1.65E-06
LOC688906	-1.125919295	0.21817303	2.46E-07	1.66E-06
Tnk2	1.278758909	0.24787585	2.48E-07	1.67E-06
Chst15	1.459188509	0.28285703	2.49E-07	1.67E-06
Gem	3.670576979	0.71179335	2.51E-07	1.69E-06
Cdc42ep1	1.129519925	0.21904263	2.51E-07	1.69E-06
Mthfr	1.424938015	0.2763918	2.53E-07	1.70E-06
Usp40	-1.059175351	0.20546253	2.54E-07	1.70E-06
Sipa1l3	1.329103343	0.25789866	2.56E-07	1.71E-06
Mcee	-1.613645813	0.31327002	2.59E-07	1.74E-06
Hsd3b5	-2.156156057	0.41874241	2.62E-07	1.75E-06
Lurap1l	1.556810271	0.30236089	2.62E-07	1.75E-06
Ube2g2	1.006580366	0.19550041	2.62E-07	1.75E-06
Gatad2b	1.054484616	0.20481096	2.62E-07	1.76E-06
LOC108348175	1.259318806	0.24461595	2.63E-07	1.76E-06
Mccc1	-1.833446312	0.35614355	2.63E-07	1.76E-06
Tmem126a	-1.069766264	0.20781606	2.64E-07	1.76E-06
Edem2	1.011007763	0.19654301	2.69E-07	1.79E-06
Hat1	-1.116210398	0.21720975	2.76E-07	1.84E-06
Spa17	-1.836350475	0.35756598	2.81E-07	1.87E-06
Jmy	1.244400059	0.2424829	2.87E-07	1.91E-06
Sc1t1	-1.79330269	0.34951298	2.88E-07	1.92E-06
RGD1560687	2.740756785	0.53436816	2.91E-07	1.93E-06
Zfp472	-2.195720224	0.42833008	2.96E-07	1.96E-06
Asb7	1.050671996	0.20505446	2.99E-07	1.99E-06
Gtf2h1	-1.204529157	0.23515292	3.02E-07	2.00E-06
LOC100910046	-1.587747997	0.30999177	3.02E-07	2.00E-06
Hmgcl	-1.098376501	0.21446887	3.03E-07	2.01E-06
Agap1	1.138443035	0.22229559	3.03E-07	2.01E-06
Otulin	-1.005941338	0.19654466	3.09E-07	2.04E-06
Tnip2	-1.322416075	0.25841465	3.10E-07	2.05E-06
Ly86	1.140412932	0.22291461	3.12E-07	2.06E-06
Skiv2l2	-1.230771827	0.24063045	3.14E-07	2.07E-06
Exosc3	-1.240996128	0.2427456	3.18E-07	2.10E-06
Gle1	-1.217514966	0.23819032	3.20E-07	2.10E-06
Smtnl2	1.681959681	0.32909724	3.21E-07	2.11E-06
Parp9	-1.279337312	0.25046394	3.26E-07	2.14E-06
Snopc4	-1.13186962	0.22164951	3.28E-07	2.15E-06
Cst6	3.552652009	0.69570884	3.28E-07	2.15E-06
Papss2	-1.092086171	0.21386696	3.28E-07	2.15E-06
Cav2	-1.761476821	0.34498861	3.29E-07	2.16E-06
Gin1	-1.574974054	0.30847193	3.30E-07	2.16E-06
Swt1	-1.7515931	0.3431096	3.31E-07	2.17E-06
Slamf9	2.240386008	0.43899344	3.33E-07	2.18E-06
Stk16	-1.247097261	0.24436593	3.34E-07	2.18E-06
Immp1l	-1.231853022	0.2414001	3.34E-07	2.19E-06
Eml5	-2.319310698	0.45454619	3.35E-07	2.19E-06

Dph5	-1.553294897	0.3045753	3.40E-07	2.22E-06
Hdac4	1.250072413	0.24512288	3.40E-07	2.22E-06
Cep19	-1.270406966	0.2491617	3.42E-07	2.23E-06
Slc35e3	1.032142882	0.20243624	3.42E-07	2.23E-06
Glrx3	-1.034471072	0.20296169	3.45E-07	2.25E-06
Klh9	-1.184299616	0.23238211	3.46E-07	2.25E-06
Plcg2	1.696771539	0.33294659	3.46E-07	2.25E-06
LOC108348080	-1.290945842	0.25337837	3.49E-07	2.27E-06
Nxt2	-1.515550343	0.29751012	3.50E-07	2.28E-06
Clcc1	-1.052333805	0.20661747	3.52E-07	2.29E-06
Gon7	-1.174762237	0.23069093	3.54E-07	2.30E-06
Meox2	-2.862708857	0.56236779	3.57E-07	2.32E-06
Zufsp	-1.319637601	0.25925373	3.58E-07	2.32E-06
Aplp1	1.192879558	0.23437984	3.59E-07	2.33E-06
Dock11	-1.646315695	0.32360631	3.63E-07	2.35E-06
Rnf217	1.296260685	0.25484338	3.65E-07	2.36E-06
Clcn5	2.096857769	0.41225667	3.65E-07	2.36E-06
LOC100360117	1.56926193	0.30856933	3.66E-07	2.37E-06
Dact3	2.079243311	0.40888353	3.67E-07	2.37E-06
Pag1	1.881821009	0.37012696	3.69E-07	2.38E-06
Tor4a	1.268166074	0.24959415	3.76E-07	2.42E-06
Cnn2	1.778039619	0.34999525	3.77E-07	2.43E-06
Btd	1.108107347	0.21825525	3.83E-07	2.47E-06
Il6st	1.25684084	0.2477126	3.90E-07	2.51E-06
Timmdc1	-1.063295224	0.20957546	3.90E-07	2.51E-06
Cmtr2	1.393191691	0.27463962	3.92E-07	2.52E-06
Dnajc24	-1.525092638	0.30068714	3.94E-07	2.53E-06
Snapc1	-1.257577419	0.24795222	3.94E-07	2.53E-06
RGD1306063	-1.219985844	0.24059805	3.96E-07	2.55E-06
Sapcd2	4.266913778	0.84166653	3.99E-07	2.56E-06
Doc2a	5.940304223	1.17224152	4.03E-07	2.58E-06
Nek6	-1.116257019	0.22034491	4.06E-07	2.60E-06
Adrm1	1.09792616	0.21676096	4.08E-07	2.61E-06
AABR07034657.1	1.544424032	0.30493357	4.09E-07	2.61E-06
Naa15	-1.369881615	0.27048589	4.09E-07	2.62E-06
Col6a2	1.789852933	0.35349381	4.12E-07	2.63E-06
Ngly1	-1.270318912	0.25102036	4.18E-07	2.67E-06
F11	-1.989919757	0.39329016	4.20E-07	2.68E-06
Spag1	-2.348120336	0.46426846	4.24E-07	2.71E-06
Gli3	2.422258143	0.47916124	4.30E-07	2.74E-06
Zranb2	-1.251973064	0.24767082	4.30E-07	2.74E-06
Coq10b	1.125908431	0.22287035	4.38E-07	2.79E-06
Cln5	1.42698596	0.28249757	4.39E-07	2.79E-06
Usp16	-1.262527661	0.25001114	4.42E-07	2.81E-06
Polr2e	-1.305659292	0.25871786	4.50E-07	2.85E-06
Ier5l	2.231939397	0.4422869	4.50E-07	2.86E-06
Itpr3	2.698307521	0.53489538	4.55E-07	2.88E-06
F9	-2.034997509	0.40343397	4.55E-07	2.89E-06

LOC681367	-1.438961954	0.28535805	4.59E-07	2.91E-06
AC118165.1	-1.821984427	0.36137608	4.61E-07	2.92E-06
Agl	-1.299118173	0.25788745	4.72E-07	2.98E-06
Nhsl1	1.027157965	0.20402378	4.79E-07	3.03E-06
Frmd6	1.636275856	0.32513992	4.84E-07	3.06E-06
Efemp2	1.832654434	0.36418084	4.85E-07	3.06E-06
Ipcef1	6.217082893	1.23570813	4.87E-07	3.08E-06
Alox5ap	1.390268137	0.27636959	4.89E-07	3.09E-06
Mrps28	-1.015609507	0.20191412	4.91E-07	3.10E-06
Tc2n	-2.153401608	0.42820906	4.93E-07	3.11E-06
RGD1564171	-2.574545119	0.51197161	4.94E-07	3.11E-06
Dact2	2.177237903	0.43301711	4.95E-07	3.12E-06
Tbc1d16	1.961117227	0.39005116	4.96E-07	3.12E-06
Arntl	-1.962886786	0.39051872	5.00E-07	3.14E-06
Gab2	2.118839845	0.42159881	5.02E-07	3.15E-06
Cltb	1.100854024	0.21905012	5.02E-07	3.15E-06
Lmbrd2	1.504958395	0.29947551	5.03E-07	3.16E-06
Uhmk1	1.200332199	0.2388797	5.04E-07	3.16E-06
Hsd17b13	-1.507947568	0.30016266	5.07E-07	3.18E-06
Cebpd	1.927419303	0.38366988	5.07E-07	3.18E-06
AABR07026893.1	-1.521868157	0.30303951	5.11E-07	3.21E-06
Rab3d	1.839955203	0.36650775	5.16E-07	3.23E-06
Ctdsp1	1.017207145	0.20265187	5.18E-07	3.24E-06
Lama5	1.868147993	0.37237628	5.25E-07	3.29E-06
Nckap1l	1.04091779	0.20759182	5.32E-07	3.33E-06
Crtc3	1.091513407	0.21771348	5.34E-07	3.34E-06
Rnaseh2b	-1.078300223	0.21513071	5.38E-07	3.36E-06
Uchl3	-2.031013832	0.40524681	5.39E-07	3.37E-06
Mvb12b	1.279261451	0.25530769	5.42E-07	3.38E-06
Rps21-ps1	-1.242368425	0.24797012	5.44E-07	3.39E-06
Ercc6	-1.271973851	0.25391754	5.46E-07	3.40E-06
Prdm15	-1.148033669	0.22922381	5.49E-07	3.42E-06
Plekhm2	1.218671912	0.24334255	5.50E-07	3.43E-06
Ajuba	1.202615295	0.24016541	5.52E-07	3.43E-06
Slc52a3	1.737492887	0.34702674	5.53E-07	3.44E-06
Rbmx2	-2.059235902	0.41132105	5.55E-07	3.45E-06
Pcdhgb8	2.923157072	0.58389398	5.55E-07	3.45E-06
AABR07055280.1	5.057201529	1.01044755	5.59E-07	3.47E-06
Sertad2	1.452542715	0.2903023	5.63E-07	3.49E-06
RGD1562420	3.52539168	0.70476258	5.67E-07	3.52E-06
Gnpda1	1.57636849	0.31540263	5.79E-07	3.59E-06
C8b	-1.65646689	0.33144298	5.80E-07	3.60E-06
Akip1	-1.110327296	0.22219146	5.82E-07	3.61E-06
Zfp11	-1.813825839	0.36302164	5.84E-07	3.62E-06
Rlbp1	5.938542283	1.18912193	5.91E-07	3.66E-06
Cdc25a	1.23865386	0.24804984	5.93E-07	3.67E-06
Mafg	1.011274027	0.20255837	5.96E-07	3.68E-06
NEWGENE_1306714	2.538874581	0.50888185	6.07E-07	3.75E-06

Anxa2	2.709340135	0.54308428	6.08E-07	3.75E-06
Rpain	-1.232744557	0.24714798	6.10E-07	3.77E-06
Bdh2	-1.766067556	0.35411089	6.12E-07	3.78E-06
Plaur	3.308311055	0.66341135	6.14E-07	3.78E-06
Pmp22	2.482894451	0.49809204	6.20E-07	3.82E-06
Dnttip2	-1.719943245	0.34504057	6.20E-07	3.82E-06
C9	-1.634708711	0.32811529	6.29E-07	3.86E-06
March09	1.591003494	0.31950285	6.37E-07	3.91E-06
Acvr1	1.224088502	0.24584461	6.39E-07	3.92E-06
Pdzd4	-4.137298886	0.83101879	6.41E-07	3.93E-06
Tmem259	1.04020099	0.20914781	6.57E-07	4.02E-06
Egr1	2.557258186	0.51422366	6.59E-07	4.03E-06
Sypl1	1.209000966	0.24311448	6.59E-07	4.03E-06
Ppp1r14b	1.369909025	0.27553625	6.63E-07	4.05E-06
Entpd6	1.135559692	0.22844849	6.67E-07	4.07E-06
Rbm38	1.261720498	0.25383539	6.67E-07	4.07E-06
Kdm6b	1.248001425	0.25108102	6.68E-07	4.07E-06
Mapkapk2	1.072835855	0.21584781	6.68E-07	4.08E-06
Setdb2	-1.554841015	0.31301462	6.79E-07	4.13E-06
Csnk1e	1.004532302	0.20224536	6.80E-07	4.14E-06
Fscn1	2.403555557	0.48421913	6.91E-07	4.20E-06
Gpr183	2.536121628	0.51093844	6.92E-07	4.20E-06
Samd4a	1.172269519	0.2362586	6.98E-07	4.24E-06
Gpd1l	1.047757684	0.21111708	6.99E-07	4.24E-06
Psat1	2.182486308	0.44003139	7.06E-07	4.28E-06
Crbn	-1.28834476	0.25984538	7.12E-07	4.31E-06
Tmem151a	2.460793058	0.49631395	7.12E-07	4.31E-06
Ccne1	2.702902877	0.54521053	7.14E-07	4.32E-06
Flvcr1	2.447080522	0.49369557	7.17E-07	4.34E-06
Max	1.083673648	0.2186349	7.18E-07	4.34E-06
Vegfa	-1.09285198	0.22048968	7.18E-07	4.34E-06
Map3k2	1.665220531	0.33615204	7.28E-07	4.40E-06
Rpl18a	1.332660936	0.26901906	7.28E-07	4.40E-06
Hk3	1.721959321	0.34765124	7.30E-07	4.41E-06
AABR07003049.1	1.927149145	0.38913557	7.33E-07	4.43E-06
Ppp2cb	1.057109182	0.21345829	7.33E-07	4.43E-06
Washc2c	-1.05542494	0.21313692	7.35E-07	4.44E-06
Chst12	1.667222753	0.33688652	7.46E-07	4.50E-06
Vmac	1.358728183	0.27454868	7.46E-07	4.50E-06
Ddx3	-1.92171944	0.38842485	7.52E-07	4.53E-06
Klf6	1.95613648	0.3954504	7.55E-07	4.54E-06
Slc4a1ap	-1.430347838	0.28917315	7.56E-07	4.55E-06
Smc1a	-1.269543423	0.2566679	7.57E-07	4.55E-06
Atp8b2	1.732022985	0.35023414	7.60E-07	4.57E-06
Cybrd1	1.146248099	0.23182717	7.64E-07	4.59E-06
Dhx58	-1.167120877	0.23608782	7.67E-07	4.60E-06
Hmgb2l1	-2.351607418	0.47597836	7.79E-07	4.67E-06
Oit3	1.172094115	0.23724837	7.80E-07	4.67E-06

Cfb	-3.571522314	0.72301752	7.82E-07	4.69E-06
Tp53	1.172904215	0.23746707	7.84E-07	4.70E-06
Chac1	2.268041073	0.45926091	7.87E-07	4.71E-06
Adamdec1	-4.343969927	0.88019279	8.00E-07	4.78E-06
Asb2	-2.719607163	0.55115536	8.04E-07	4.80E-06
Aurkc	-2.798179858	0.56730539	8.12E-07	4.85E-06
Plekhg2	1.065081147	0.21593946	8.13E-07	4.85E-06
Mpdz	-1.439284614	0.291932	8.21E-07	4.90E-06
Phtf1	-1.449095997	0.29396137	8.24E-07	4.91E-06
Xpr1	1.190871005	0.2417197	8.36E-07	4.98E-06
Cyp4b1	2.784301984	0.5652528	8.40E-07	5.00E-06
LOC501110	-1.940214759	0.39394818	8.43E-07	5.02E-06
Pet100	-1.165762088	0.23689124	8.61E-07	5.12E-06
Utp15	1.102693803	0.22412767	8.66E-07	5.15E-06
Kctd18	-1.03122701	0.20960598	8.66E-07	5.15E-06
Mier1	-1.197401079	0.24345065	8.72E-07	5.18E-06
Irs2	1.656896355	0.33708683	8.86E-07	5.26E-06
G6pc3	1.188640896	0.24189155	8.93E-07	5.29E-06
Lysmd2	1.122918148	0.22862678	9.03E-07	5.35E-06
Nphp1	-1.228783413	0.25017795	9.03E-07	5.35E-06
Msrb2	-1.095145789	0.22298043	9.04E-07	5.35E-06
Fam19a4	5.827798499	1.18699445	9.12E-07	5.39E-06
Mthfd2	2.641042238	0.53812459	9.21E-07	5.44E-06
Mtss1l	1.134345759	0.23121593	9.30E-07	5.48E-06
Crtapl1	1.042640732	0.2125317	9.30E-07	5.49E-06
Ebi3	2.087558043	0.42577941	9.44E-07	5.56E-06
Otud4	1.370731243	0.27958148	9.45E-07	5.56E-06
Ldlrad1	-2.64666867	0.53984595	9.46E-07	5.57E-06
Sgsh	1.239091442	0.25276289	9.48E-07	5.58E-06
Lag3	-1.934485556	0.3947158	9.54E-07	5.61E-06
Crym	-2.391181154	0.48801646	9.59E-07	5.64E-06
Myh10	1.525013044	0.31124993	9.60E-07	5.64E-06
RGD1307100	-1.617903942	0.33023009	9.62E-07	5.65E-06
Endov	-1.45298736	0.29658916	9.63E-07	5.66E-06
Stxbp1	1.446043556	0.29518743	9.65E-07	5.66E-06
Cdc23	-1.020664599	0.208395	9.69E-07	5.69E-06
Hand2	1.440459049	0.29417486	9.75E-07	5.72E-06
Pop1	-1.289693166	0.26340359	9.77E-07	5.73E-06
Fzr1	1.058665883	0.21641189	9.99E-07	5.85E-06
Il2rg	1.883533204	0.38508677	1.00E-06	5.87E-06
Otud3	1.20303724	0.24598524	1.00E-06	5.89E-06
Pla2g4b	-1.659591558	0.33950494	1.02E-06	5.96E-06
Ndufaf7	-1.009094509	0.206443	1.02E-06	5.96E-06
Slc38a1	3.070639461	0.62832565	1.02E-06	5.99E-06
Pdk3	1.862834247	0.38120831	1.03E-06	6.00E-06
Naaa	1.577725846	0.32290337	1.03E-06	6.01E-06
Rn50_5_0814.30	-4.478877029	0.91668636	1.03E-06	6.01E-06
Zfp869	-1.483938467	0.30389983	1.04E-06	6.09E-06

Mios	-1.358538243	0.27827168	1.05E-06	6.12E-06
Mmp23	2.099449983	0.43012559	1.06E-06	6.15E-06
Kyat3	-1.851794067	0.37938261	1.06E-06	6.15E-06
LOC100359574	1.163237664	0.23839033	1.06E-06	6.19E-06
Tm2d3	1.096752988	0.22482122	1.07E-06	6.23E-06
Npdc1	1.479607861	0.3035885	1.10E-06	6.37E-06
Zfyve21	-1.012805595	0.20782222	1.10E-06	6.38E-06
LOC103694855	1.985869509	0.4075652	1.10E-06	6.40E-06
Csf2ra	1.38390022	0.28401708	1.10E-06	6.40E-06
Lrg1	1.372949229	0.28178532	1.10E-06	6.40E-06
Vps36	-1.136842646	0.23344173	1.12E-06	6.48E-06
Socs7	1.028175044	0.21114359	1.12E-06	6.49E-06
Ly6g6c	6.866850841	1.41054268	1.13E-06	6.53E-06
Arhgef2	1.272129309	0.26137115	1.13E-06	6.56E-06
Wnt5a	2.288682585	0.47036511	1.14E-06	6.60E-06
Fgfr1op	-1.028865539	0.21149973	1.15E-06	6.64E-06
Igtp	-1.387113842	0.28523422	1.16E-06	6.69E-06
Manba	1.39162017	0.28616788	1.16E-06	6.69E-06
Gsta4	-1.408078517	0.28957068	1.16E-06	6.70E-06
Iqgap1	1.521510358	0.31294884	1.16E-06	6.72E-06
RGD1565033	1.207529275	0.24871081	1.20E-06	6.94E-06
Map2k1	1.14382162	0.23566777	1.21E-06	6.99E-06
Lonrf1	1.411230031	0.29078501	1.22E-06	7.00E-06
Adgrg1	1.200004511	0.24730411	1.22E-06	7.02E-06
Arl16	-1.233346045	0.25420508	1.22E-06	7.04E-06
Eif4a2	-1.090246109	0.22482169	1.24E-06	7.12E-06
Smc6	-1.815535993	0.3744017	1.24E-06	7.13E-06
Utp14a	-1.277403996	0.2634354	1.24E-06	7.13E-06
LOC103694857	1.941264035	0.40040995	1.25E-06	7.16E-06
Ccdc43	-1.200308388	0.24759024	1.25E-06	7.17E-06
Jchain	2.108056833	0.43487442	1.25E-06	7.18E-06
Rnf150	1.66001202	0.34259544	1.26E-06	7.25E-06
Stag1	-1.2006725	0.24784755	1.27E-06	7.28E-06
Gapdh-ps2	1.676280856	0.34612209	1.28E-06	7.33E-06
Plekhm3	1.265847012	0.26155033	1.30E-06	7.44E-06
LOC108348052	1.790592901	0.37010572	1.31E-06	7.50E-06
Slc2a6	3.238580237	0.66960183	1.32E-06	7.55E-06
Larp1	1.137949229	0.23533103	1.33E-06	7.58E-06
Rnf20	-1.081733428	0.22383879	1.35E-06	7.68E-06
Casp6	-1.370174882	0.28356626	1.35E-06	7.71E-06
Casp6	-1.370174882	0.28356626	1.35E-06	7.71E-06
Utp18	-1.258471865	0.26051396	1.36E-06	7.75E-06
Ift74	-2.234275803	0.46263685	1.37E-06	7.80E-06
Myh11	-2.610008178	0.54046163	1.37E-06	7.80E-06
LOC108348287	-1.189209238	0.24628755	1.38E-06	7.82E-06
LOC103689964	-1.250340456	0.2589693	1.38E-06	7.83E-06
Mras	1.535203206	0.3180421	1.39E-06	7.87E-06
Nr1d1	2.043514055	0.4234044	1.39E-06	7.90E-06

Pdcd10	-1.059068934	0.21950157	1.40E-06	7.95E-06
Grhl1	3.05141459	0.63244866	1.40E-06	7.96E-06
Taf4	1.12980703	0.23418863	1.40E-06	7.97E-06
Ccl2	3.363719433	0.69735463	1.41E-06	8.00E-06
Tmc6	1.444227144	0.2994146	1.41E-06	8.00E-06
Lgals1	2.473691554	0.5132207	1.44E-06	8.14E-06
Piga	1.634290455	0.33919353	1.45E-06	8.20E-06
RGD1305733	-2.838572278	0.58918137	1.45E-06	8.21E-06
Cib2	-3.598444536	0.7471109	1.46E-06	8.27E-06
Eif2ak2	-1.614451708	0.3352188	1.46E-06	8.28E-06
AABR07058124.4	1.522267854	0.3161049	1.47E-06	8.29E-06
Zfp397	-1.812461258	0.37642504	1.47E-06	8.32E-06
Relb	1.948148366	0.40482699	1.49E-06	8.41E-06
Klhl20	-1.376300299	0.28601972	1.49E-06	8.43E-06
Hsf2	-1.031528932	0.21444078	1.51E-06	8.49E-06
Fam35a	-1.382357033	0.28746192	1.52E-06	8.54E-06
LOC100911068	1.397826336	0.29069388	1.52E-06	8.55E-06
Synj2	1.575016243	0.32760663	1.53E-06	8.59E-06
Cdv3	1.163255646	0.24197378	1.53E-06	8.59E-06
Nr1i2	-1.341204031	0.27906526	1.54E-06	8.65E-06
Tra2a	-1.020386519	0.21237525	1.55E-06	8.70E-06
Mia2	-1.162568993	0.24202796	1.56E-06	8.75E-06
Mpc1	-1.489584681	0.31013134	1.56E-06	8.76E-06
Rad51d	-1.172758241	0.24419016	1.57E-06	8.77E-06
Rpl3	-1.018489582	0.21213322	1.58E-06	8.83E-06
Acot13	-1.369771036	0.28541406	1.59E-06	8.91E-06
Tipin1	-1.422717103	0.29645734	1.59E-06	8.92E-06
Ms4a6c	2.962087174	0.61734275	1.60E-06	8.96E-06
Foxq1	4.683398329	0.9762497	1.61E-06	8.99E-06
Spock1	-3.034175061	0.63268359	1.62E-06	9.05E-06
Adcy9	1.159430286	0.24176592	1.62E-06	9.05E-06
Smyd4	-1.7124483	0.35727867	1.64E-06	9.17E-06
Wls	1.386197029	0.28923215	1.65E-06	9.18E-06
Supt16h	-1.305895078	0.27293709	1.71E-06	9.55E-06
Cep57	-1.545012247	0.32295828	1.72E-06	9.57E-06
Msr1	-1.268086638	0.2651386	1.73E-06	9.63E-06
LOC100363112	-6.932713069	1.44959889	1.73E-06	9.64E-06
Lcmt2	1.0974787	0.22951148	1.74E-06	9.67E-06
Hirip3	-1.201993012	0.25140463	1.74E-06	9.70E-06
LOC100360449	-19.66093346	4.11375896	1.76E-06	9.78E-06
Hcls1	1.262324489	0.26423465	1.78E-06	9.86E-06
Rpl26-ps2	-1.117528462	0.23392319	1.78E-06	9.86E-06
Shc4	3.825870329	0.80114838	1.79E-06	9.94E-06
Zfp426	-1.782026787	0.37318619	1.80E-06	9.95E-06
Itgb1bp2	-2.128683221	0.44585027	1.80E-06	9.97E-06
Mgat5	1.591199885	0.33327123	1.80E-06	9.97E-06
Erg	-1.31791936	0.27622886	1.83E-06	1.01E-05
LOC103690067	-1.408062066	0.29511802	1.83E-06	1.01E-05

Atf7	1.327626199	0.27847627	1.87E-06	1.03E-05
Tulp4	1.332403101	0.27951735	1.87E-06	1.03E-05
Erc5	-2.105925883	0.44182378	1.88E-06	1.04E-05
Hpf1	-1.009191463	0.21175221	1.88E-06	1.04E-05
Fnip2	1.171161476	0.24578143	1.89E-06	1.04E-05
Tuba1a	1.600045491	0.33581679	1.89E-06	1.04E-05
Ago1	1.19661366	0.25131452	1.92E-06	1.06E-05
Rngtt	-1.213111055	0.25481052	1.93E-06	1.06E-05
Slco1a6	-2.433422482	0.51112012	1.93E-06	1.06E-05
LOC103689996	3.798033601	0.79776643	1.93E-06	1.06E-05
Fam120a	1.114145275	0.23404759	1.93E-06	1.06E-05
Mest	2.073427709	0.43556842	1.93E-06	1.06E-05
Ppp1r21	-1.052406399	0.22110535	1.94E-06	1.07E-05
Gzma	-2.418744718	0.50821864	1.94E-06	1.07E-05
LOC100909441	3.485788612	0.73244323	1.94E-06	1.07E-05
Znrd1	1.068084981	0.22444448	1.95E-06	1.07E-05
Pdp2	-1.182456316	0.2486249	1.97E-06	1.08E-05
Tnfrsf12a	2.226904129	0.46831227	1.98E-06	1.09E-05
Creb5	5.688307034	1.19637404	1.99E-06	1.09E-05
Pfdn4	-1.150265572	0.24193823	1.99E-06	1.09E-05
Lmna	1.264065826	0.26604169	2.02E-06	1.11E-05
Cep70	-2.180160634	0.45886609	2.02E-06	1.11E-05
RGD1310587	-1.392548555	0.29311507	2.03E-06	1.11E-05
Eef1a2	-4.195243459	0.88324637	2.04E-06	1.11E-05
Kiz	-1.756819659	0.36996552	2.05E-06	1.12E-05
Rab11fip1	1.092542421	0.23010311	2.05E-06	1.12E-05
Casp2	1.173457887	0.24715326	2.06E-06	1.12E-05
Prrt1	2.030235923	0.42782798	2.08E-06	1.13E-05
LOC100363268	-1.257559182	0.26502796	2.09E-06	1.14E-05
Kctd19	5.21063015	1.0982199	2.09E-06	1.14E-05
Map6	2.560858853	0.54001654	2.11E-06	1.15E-05
Fndc1	4.24281725	0.8947853	2.12E-06	1.15E-05
Zfp407	-1.210960859	0.25543981	2.13E-06	1.16E-05
Ndufa4	-1.206666279	0.25459861	2.14E-06	1.17E-05
Slc8a1	1.830451685	0.38671183	2.21E-06	1.20E-05
Bcor	1.197234158	0.25295656	2.21E-06	1.20E-05
Calml4	-2.323913526	0.49121983	2.24E-06	1.21E-05
Hmbox1	1.168189891	0.24694075	2.24E-06	1.21E-05
Sfxn3	1.240523163	0.26224066	2.24E-06	1.21E-05
Rbks	-1.059203743	0.22391626	2.24E-06	1.21E-05
Tgm1	2.148170503	0.45416538	2.25E-06	1.22E-05
Kin	-1.306239551	0.2761882	2.25E-06	1.22E-05
Rin1	3.474354867	0.73462254	2.25E-06	1.22E-05
Rnmt	-1.333760068	0.28203955	2.26E-06	1.22E-05
Limk2	1.082025381	0.22880468	2.26E-06	1.22E-05
Msantd3	3.195379687	0.67577631	2.26E-06	1.22E-05
Pcgf5	1.094300336	0.23150054	2.28E-06	1.23E-05
Strn	1.190425717	0.25195781	2.30E-06	1.24E-05

Rpgr	-1.647669381	0.34882347	2.32E-06	1.25E-05
Snx25	-1.042410522	0.22075734	2.34E-06	1.26E-05
Rad52	-1.581896147	0.33504704	2.34E-06	1.26E-05
Mfsd14a	2.063005594	0.43695735	2.34E-06	1.26E-05
Prr13	1.120298349	0.23729509	2.35E-06	1.26E-05
Lrrc8c	1.050327837	0.2225132	2.36E-06	1.27E-05
LOC102550396	-2.1512838	0.45588489	2.37E-06	1.28E-05
Tshz1	1.210467512	0.25653048	2.37E-06	1.28E-05
Akr1e2	-1.296747748	0.27485554	2.38E-06	1.28E-05
Ttc33	-1.074896667	0.2278508	2.39E-06	1.28E-05
Arsb	1.012406129	0.21476234	2.43E-06	1.30E-05
Smarca5	-1.191506314	0.25275377	2.43E-06	1.30E-05
Nup210	1.020945007	0.21662187	2.44E-06	1.31E-05
Insc	-1.087488001	0.23076548	2.45E-06	1.31E-05
Klf4	2.780070268	0.59027595	2.48E-06	1.33E-05
Zfp57	1.599078448	0.33971733	2.51E-06	1.35E-05
RGD1566386	-2.287967501	0.48633628	2.54E-06	1.36E-05
Cfi	-1.668183864	0.3546837	2.56E-06	1.37E-05
Zfp516	1.808389563	0.38457717	2.57E-06	1.38E-05
Rpp38	1.285797132	0.27352735	2.59E-06	1.39E-05
Polr2l	2.941404504	0.62575043	2.59E-06	1.39E-05
Cyrr1	-1.96696465	0.41858168	2.61E-06	1.40E-05
Gldc	-1.365854056	0.29066746	2.61E-06	1.40E-05
Grk6	1.056305304	0.22481313	2.62E-06	1.40E-05
Nynrin	1.52371373	0.32437585	2.64E-06	1.40E-05
Fam83d	4.404931548	0.93828098	2.67E-06	1.42E-05
Usp33	-1.162208362	0.24756905	2.67E-06	1.42E-05
Ddx27	-1.012585336	0.21575844	2.69E-06	1.43E-05
Fmo6	4.645204155	0.99010454	2.71E-06	1.44E-05
Alb	-1.769245565	0.3771265	2.71E-06	1.44E-05
Galm	-1.415294851	0.30168118	2.71E-06	1.44E-05
Rn50_6_0926.2	2.856443985	0.60896358	2.72E-06	1.45E-05
Wdr3	-1.076875645	0.22968099	2.75E-06	1.46E-05
Alg2	1.167356283	0.24903397	2.77E-06	1.47E-05
Zfp347	-2.472312331	0.52772444	2.80E-06	1.48E-05
Rpl32	-1.377325487	0.29411438	2.83E-06	1.50E-05
Sec62	-1.169485851	0.2497925	2.84E-06	1.50E-05
Pbdc1	-1.035925597	0.22144254	2.90E-06	1.53E-05
Il1rn	1.456339443	0.31139844	2.91E-06	1.54E-05
Cbx4	1.150859	0.24608452	2.92E-06	1.54E-05
Trib2	1.501922916	0.32130883	2.95E-06	1.56E-05
Rps6kb1	-1.215285483	0.26002285	2.96E-06	1.56E-05
Mfap2	2.451483996	0.52467345	2.98E-06	1.57E-05
Mfhas1	1.655198143	0.35426519	2.98E-06	1.57E-05
Celf2	1.28515363	0.2750958	2.99E-06	1.58E-05
Pcdh18	1.222324811	0.26165452	2.99E-06	1.58E-05
Cnpy4	-1.226669824	0.26278388	3.04E-06	1.60E-05
Cyba	1.392182535	0.29834311	3.07E-06	1.61E-05

AABR07058091.2	-2.770682692	0.59378244	3.07E-06	1.61E-05
Tmem173	1.713998882	0.36748257	3.10E-06	1.63E-05
Usp15	-1.206856494	0.25880219	3.11E-06	1.64E-05
Cpq	-1.944394246	0.41701134	3.12E-06	1.64E-05
LOC102555183	-1.324149531	0.28410436	3.15E-06	1.65E-05
Zfp451	-1.016286979	0.21811409	3.17E-06	1.66E-05
Col16a1	1.816747015	0.38993513	3.18E-06	1.67E-05
Hbq1b	5.4978855	1.18013106	3.18E-06	1.67E-05
Rad9b	-2.151719108	0.46198956	3.20E-06	1.68E-05
AABR07007121.1	-1.91944718	0.41216982	3.21E-06	1.68E-05
Trim35	1.659820789	0.3566211	3.25E-06	1.70E-05
Zfp36	1.386371951	0.29792179	3.26E-06	1.71E-05
AABR07066529.1	1.47939927	0.31796434	3.28E-06	1.71E-05
Lman1	1.15059661	0.24732713	3.29E-06	1.72E-05
Tspan5	1.942798834	0.41763816	3.29E-06	1.72E-05
Irs3	-1.766568518	0.37983344	3.30E-06	1.73E-05
AABR07070599.1	4.250272943	0.91384582	3.30E-06	1.73E-05
Lsm4	-1.271886639	0.27359746	3.34E-06	1.74E-05
Ccdc77	-2.747881923	0.59111489	3.34E-06	1.74E-05
Hpx	1.440969373	0.31002815	3.35E-06	1.75E-05
Gm17067	-2.002521875	0.43087259	3.36E-06	1.75E-05
Smc3	-1.54054583	0.33159371	3.39E-06	1.77E-05
Cpeb1	5.484898872	1.1806006	3.39E-06	1.77E-05
Ptar1	1.278268317	0.27514756	3.39E-06	1.77E-05
Fut4	1.424454155	0.30664507	3.40E-06	1.77E-05
Lrrc8e	2.145823916	0.46219486	3.44E-06	1.79E-05
Chid1	1.018484751	0.21948164	3.48E-06	1.81E-05
Bace2	1.068924021	0.2303549	3.48E-06	1.81E-05
AABR07043748.1	-1.371164747	0.29552917	3.49E-06	1.81E-05
LOC100158225	-1.738093193	0.37478164	3.52E-06	1.83E-05
Mfsd11	1.133153837	0.24438309	3.54E-06	1.84E-05
Faim	-1.404655944	0.30293572	3.54E-06	1.84E-05
Dok1	1.311241349	0.28298242	3.59E-06	1.86E-05
Rwdd3	-2.248566526	0.48538306	3.61E-06	1.87E-05
Mettl10	-1.226687791	0.2649284	3.65E-06	1.89E-05
Tdrd15	-2.093666526	0.45217782	3.65E-06	1.89E-05
Emb	1.658388962	0.35823252	3.67E-06	1.89E-05
Tmem86a	1.451046612	0.31348392	3.68E-06	1.90E-05
Wipf1	1.126610648	0.24342089	3.69E-06	1.90E-05
Eprs	-1.049605911	0.22683802	3.71E-06	1.91E-05
Tmsb10	2.017213749	0.43597981	3.71E-06	1.91E-05
Msh6	-1.316169794	0.2845314	3.73E-06	1.92E-05
Dcaf4	-1.110804657	0.24014038	3.73E-06	1.92E-05
Bmp6	1.380890496	0.29868047	3.78E-06	1.94E-05
Nos1	1.774848285	0.38410921	3.82E-06	1.97E-05
Otud1	2.085811044	0.45142966	3.83E-06	1.97E-05
Map1a	2.692491612	0.58277132	3.83E-06	1.97E-05
Krt75	5.759182184	1.24690882	3.86E-06	1.98E-05

Ccdc191	-2.196504181	0.4756118	3.87E-06	1.99E-05
Fxyd5	2.119081732	0.45888205	3.88E-06	1.99E-05
AC117058.1	-2.688952882	0.58260683	3.92E-06	2.01E-05
Sox18	1.213463317	0.26297635	3.94E-06	2.02E-05
Mmp14	1.073444601	0.23265845	3.95E-06	2.03E-05
Arntl2	-2.175023173	0.47149142	3.97E-06	2.03E-05
Abcd4	-1.163565262	0.25223227	3.97E-06	2.03E-05
Gan	1.453132297	0.31503904	3.98E-06	2.04E-05
Vma21	1.245351277	0.27031666	4.09E-06	2.09E-05
Tdrkh	-1.972161769	0.42816509	4.10E-06	2.10E-05
Ccdc181	-1.832767113	0.39819719	4.17E-06	2.13E-05
Stk40	1.111478718	0.24149039	4.17E-06	2.13E-05
Cd3e	2.134694817	0.46381971	4.18E-06	2.13E-05
Slc2a2	1.053030699	0.22880884	4.18E-06	2.13E-05
Paqr7	-1.570588383	0.341285	4.18E-06	2.14E-05
Reck	1.154409635	0.25089375	4.20E-06	2.14E-05
Glb1l2	2.193916114	0.47689485	4.22E-06	2.15E-05
Aimp2	1.165502497	0.25354688	4.29E-06	2.19E-05
Rhbg	1.977523951	0.43048063	4.35E-06	2.22E-05
Wnt4	1.810044728	0.39407409	4.37E-06	2.22E-05
Senp6	-1.190436761	0.25919349	4.37E-06	2.23E-05
Cst7	2.305553667	0.50225905	4.42E-06	2.25E-05
Cox7a2	-1.027590051	0.22392427	4.45E-06	2.26E-05
E2f1	2.749151307	0.59923777	4.48E-06	2.28E-05
Fyn	1.351442271	0.29482657	4.56E-06	2.32E-05
Acsm1	-1.509384046	0.32929759	4.57E-06	2.32E-05
Cdbl	-1.354774253	0.29568183	4.61E-06	2.34E-05
LOC100912405	-2.359708917	0.51506097	4.62E-06	2.34E-05
Bbs10	-1.170644529	0.25559774	4.65E-06	2.35E-05
Inhba	-2.009052647	0.43866838	4.65E-06	2.36E-05
Ripply1	-2.629796279	0.57426536	4.66E-06	2.36E-05
Msh3	-1.247857479	0.27251481	4.67E-06	2.36E-05
Fstl1	1.041113784	0.22761782	4.79E-06	2.42E-05
Zfp28	-1.243726176	0.27191886	4.79E-06	2.42E-05
Fam83a	5.330156278	1.16549511	4.80E-06	2.42E-05
Wdpcp	-1.802007219	0.3942253	4.85E-06	2.45E-05
Cebpz	-1.453904237	0.31811683	4.87E-06	2.45E-05
Adi1	-1.018738009	0.22296393	4.90E-06	2.47E-05
Rps6ka2	1.396536488	0.30592256	4.99E-06	2.51E-05
Chst2	1.860959507	0.40797007	5.08E-06	2.55E-05
Map2k7	1.162498327	0.25492638	5.11E-06	2.57E-05
Fam207a	-1.092322679	0.23958074	5.13E-06	2.58E-05
Mfap3	1.1831895	0.25959192	5.17E-06	2.59E-05
Sp5	2.758931355	0.60545504	5.19E-06	2.61E-05
Ogt	-1.224736656	0.26877843	5.20E-06	2.61E-05
Sult1c2	-1.810485071	0.39748343	5.24E-06	2.62E-05
Slc30a3	2.169079677	0.47625437	5.25E-06	2.63E-05
Casz1	2.592545618	0.56939831	5.29E-06	2.64E-05

Numb1	2.378485381	0.5223792	5.28E-06	2.64E-05
Mmp12	3.996211601	0.8784342	5.38E-06	2.69E-05
Sepsec8	-1.23915936	0.27252003	5.44E-06	2.71E-05
Rbbp8	-1.38054366	0.30362578	5.45E-06	2.71E-05
Rbm41	-1.728889525	0.38029887	5.46E-06	2.72E-05
Tnfsf18	5.921267419	1.30323934	5.53E-06	2.75E-05
Mt-nd1	1.343363279	0.29567071	5.53E-06	2.75E-05
Klhl42	1.210884063	0.26674584	5.64E-06	2.81E-05
Ssc5d	2.279962295	0.50228702	5.65E-06	2.81E-05
Ddx55	-1.286763213	0.2836445	5.72E-06	2.84E-05
LOC100361457	3.365761938	0.74210557	5.75E-06	2.86E-05
I134	1.127264145	0.24857194	5.76E-06	2.86E-05
Tada2a	-1.088199886	0.23999071	5.78E-06	2.87E-05
Ppwd1	-1.504881891	0.33188896	5.78E-06	2.87E-05
Tmem65	1.506872418	0.33252127	5.85E-06	2.90E-05
Tet3	1.553905128	0.34297842	5.88E-06	2.92E-05
Exoc8	1.335336289	0.29496501	5.98E-06	2.96E-05
Cstf3	-2.389121159	0.52782648	6.00E-06	2.97E-05
Dagla	1.451964759	0.32085846	6.03E-06	2.99E-05
Pla2g7	2.41015076	0.5326125	6.04E-06	2.99E-05
Stag2	-1.30419714	0.28821344	6.04E-06	2.99E-05
LOC257650	-2.316576264	0.51204646	6.06E-06	3.00E-05
Myh9l1	1.289430908	0.28506865	6.09E-06	3.01E-05
Fmr1	-1.361567264	0.30117904	6.16E-06	3.04E-05
Acadsb	-2.033885278	0.44994596	6.18E-06	3.05E-05
AABR07000261.1	-3.928645036	0.86919538	6.19E-06	3.05E-05
Oard1	-1.297943322	0.28719818	6.20E-06	3.06E-05
Pus3	-1.24544124	0.27583704	6.33E-06	3.12E-05
Ldha	-1.011228774	0.2239931	6.35E-06	3.12E-05
Tigd2	-1.456715173	0.32274895	6.38E-06	3.14E-05
Acsl5	-1.216788195	0.26975111	6.46E-06	3.18E-05
Esco1	-1.638557714	0.36411394	6.79E-06	3.34E-05
Hr	1.731699553	0.38498627	6.86E-06	3.37E-05
Myof	1.892803594	0.42082	6.86E-06	3.37E-05
Ceacam9	2.902756193	0.64575411	6.95E-06	3.41E-05
Dcst1	-1.482025076	0.32981169	7.00E-06	3.43E-05
LOC103694863	1.951936972	0.43438706	7.00E-06	3.43E-05
Zyx	1.537348894	0.34245774	7.15E-06	3.50E-05
Ttpa	-1.866176829	0.41574276	7.16E-06	3.51E-05
Serinc2	2.78942948	0.62167006	7.22E-06	3.53E-05
Selenom	1.680980311	0.37468423	7.24E-06	3.54E-05
Capn5	1.000516767	0.22306346	7.28E-06	3.55E-05
Cystm1	1.409372369	0.31423764	7.29E-06	3.56E-05
Cdc25c	-1.420969698	0.31721368	7.48E-06	3.65E-05
Mcoln2	2.745311719	0.61312041	7.55E-06	3.68E-05
Lrrc31	3.212299622	0.71741132	7.55E-06	3.68E-05
Setd7	2.407934506	0.53781483	7.56E-06	3.68E-05
Cpeb2	1.483261213	0.33133687	7.58E-06	3.69E-05

RGD1564074	-1.299261273	0.29025544	7.60E-06	3.70E-05
Cacna2d2	1.333224016	0.29790113	7.63E-06	3.71E-05
Pbx2	1.320633408	0.29518065	7.68E-06	3.73E-05
L2hgdh	-1.137129875	0.25416511	7.68E-06	3.73E-05
Iqgap3	2.726419651	0.60939274	7.68E-06	3.73E-05
Zfp949	-1.578838705	0.35292642	7.69E-06	3.73E-05
Ptprh	-2.980411528	0.6662891	7.71E-06	3.74E-05
LOC100911660	-2.020262561	0.45169766	7.73E-06	3.75E-05
Wfdc3	-1.337693384	0.2991235	7.75E-06	3.76E-05
Col8a1	2.194209565	0.49068197	7.76E-06	3.76E-05
Plp2	1.528487206	0.34185105	7.78E-06	3.77E-05
Blnk	2.010099962	0.44960854	7.79E-06	3.77E-05
Noct	2.348713829	0.52563873	7.88E-06	3.82E-05
LOC100911562	-1.746843269	0.39097239	7.90E-06	3.82E-05
Abcg3l3	-1.370035888	0.30665375	7.91E-06	3.82E-05
RGD1561849	-2.419941913	0.5418048	7.95E-06	3.84E-05
Pacs1	1.116064769	0.24999246	8.03E-06	3.88E-05
Upf3b	-2.224224158	0.49830339	8.06E-06	3.89E-05
Slc16a10	1.580682516	0.35419203	8.09E-06	3.90E-05
Mug1	-2.265196085	0.50796077	8.22E-06	3.96E-05
Cdca4	1.129972696	0.25347143	8.27E-06	3.99E-05
Ccnd2	1.289344246	0.28939924	8.38E-06	4.03E-05
Zscan2	-2.059977069	0.46248597	8.42E-06	4.05E-05
Hspa1b	4.55530126	1.02289705	8.45E-06	4.07E-05
Gsg1	8.444466164	1.89649466	8.48E-06	4.08E-05
Ccdc120	1.107751793	0.24882762	8.51E-06	4.09E-05
Gorab	-1.808433667	0.40630231	8.55E-06	4.11E-05
Als2cr12	-4.050999879	0.9105248	8.62E-06	4.14E-05
LOC100911730	1.656843	0.37265491	8.75E-06	4.20E-05
RGD1564883	-1.487261532	0.33455295	8.77E-06	4.21E-05
Cd1d1	-1.418776021	0.31926758	8.84E-06	4.24E-05
Pzp	-1.430408199	0.32216011	8.99E-06	4.31E-05
Rnasek	1.007937	0.227196	9.15E-06	4.38E-05
Mrps18b	1.006074915	0.22681326	9.18E-06	4.39E-05
Izumo1r	5.715536817	1.28937706	9.30E-06	4.45E-05
AABR07024498.1	1.930569016	0.43560424	9.34E-06	4.46E-05
Src	1.00436611	0.22669901	9.41E-06	4.49E-05
Adap1	2.099859998	0.47424514	9.52E-06	4.54E-05
Foxo1	1.323779027	0.29902261	9.55E-06	4.55E-05
Akr1c19	-2.470233252	0.55808953	9.59E-06	4.57E-05
Gpr37	1.499862605	0.33906455	9.71E-06	4.62E-05
Sfn	2.906300033	0.65717054	9.76E-06	4.64E-05
Pip4k2a	1.013840007	0.22927234	9.78E-06	4.65E-05
Zfp879	-1.892172681	0.42795124	9.80E-06	4.66E-05
Trip12	-1.015939057	0.22985043	9.87E-06	4.69E-05
Zfp667	-2.511438444	0.56821518	9.88E-06	4.69E-05
Fzd5	1.421918282	0.32185356	9.97E-06	4.73E-05
Net1	-1.052380916	0.23823138	9.99E-06	4.73E-05

Atp5s	-1.11959139	0.2536528	1.02E-05	4.81E-05
A2m	3.907951122	0.8860148	1.03E-05	4.88E-05
Zhx1	-1.375787123	0.31201442	1.04E-05	4.90E-05
Tspo	1.513334165	0.34324792	1.04E-05	4.91E-05
Arl11	1.489665647	0.33807907	1.05E-05	4.96E-05
Itgax	2.695605811	0.61203429	1.06E-05	5.01E-05
Rn50_5_0814.6	-4.485260108	1.01870568	1.07E-05	5.04E-05
Ccl7	3.730947998	0.84780122	1.08E-05	5.09E-05
Panx1	1.22214897	0.2778159	1.09E-05	5.12E-05
Mmp24	1.934181093	0.43972095	1.09E-05	5.13E-05
Txndc5	1.474942397	0.33532561	1.09E-05	5.13E-05
St8sia1	-3.00522844	0.68342057	1.10E-05	5.16E-05
Gatsl3	1.184646147	0.26944699	1.10E-05	5.17E-05
Ptpre	1.724521443	0.39234628	1.11E-05	5.20E-05
Nadk2	-1.293941672	0.29438409	1.11E-05	5.20E-05
Hsdl2	-1.390119013	0.31627664	1.11E-05	5.20E-05
Mblac2	-1.321433677	0.30096411	1.13E-05	5.31E-05
Gatsl2	1.478829753	0.33716776	1.15E-05	5.41E-05
Zfp52	-2.757781087	0.62886529	1.16E-05	5.43E-05
Diaph3	5.202476614	1.18658876	1.16E-05	5.45E-05
Sntb2	1.932244023	0.44075421	1.17E-05	5.46E-05
Sfmbt2	1.700828878	0.38797772	1.17E-05	5.46E-05
Tmem178a	1.306246423	0.29800203	1.17E-05	5.47E-05
Slc16a2	1.429169908	0.32607217	1.17E-05	5.48E-05
Rn50_5_0815.7	-5.443582626	1.24207868	1.17E-05	5.48E-05
Gse1	1.086633474	0.2480544	1.18E-05	5.53E-05
Trim62	1.791411448	0.40912146	1.19E-05	5.58E-05
Frzb	1.791786296	0.40944155	1.21E-05	5.63E-05
RGD1561465	6.853521932	1.56612343	1.21E-05	5.63E-05
LOC102553760	-2.529428852	0.57805179	1.21E-05	5.64E-05
Slit3	2.248006107	0.51383547	1.21E-05	5.66E-05
Trip6	1.228470594	0.2810252	1.23E-05	5.75E-05
Orai1	1.35557949	0.31017078	1.24E-05	5.77E-05
Mmp15	1.147999171	0.26283313	1.26E-05	5.84E-05
Aamdc	-1.662917314	0.38080293	1.26E-05	5.86E-05
Fam92a	-1.219695391	0.27939142	1.27E-05	5.89E-05
Setd2	-1.153837903	0.2644063	1.28E-05	5.93E-05
lqce	1.168888497	0.26787527	1.28E-05	5.93E-05
Preli2	-1.226579049	0.28109411	1.28E-05	5.93E-05
Prpf39	-1.969698536	0.45163157	1.29E-05	5.99E-05
Gm6576	1.090634973	0.25010771	1.30E-05	6.00E-05
Hlx	1.136694751	0.26071668	1.30E-05	6.02E-05
Rn50_17_0383.1	4.963894767	1.13860432	1.30E-05	6.03E-05
Cyp1a1	4.802967017	1.10183268	1.31E-05	6.04E-05
Cep83	-1.591325276	0.3651088	1.31E-05	6.05E-05
Aqp11	1.107434776	0.25408639	1.31E-05	6.05E-05
Zfp638	-1.51477686	0.34763895	1.32E-05	6.08E-05
Anxa13	-2.920110283	0.67063565	1.34E-05	6.16E-05

Hmgcs1	-1.754220915	0.40304972	1.35E-05	6.20E-05
Pcolce	1.517207192	0.34881463	1.36E-05	6.27E-05
Trem11	2.511536565	0.57753921	1.37E-05	6.30E-05
Fam175a	-1.578053732	0.36289627	1.37E-05	6.30E-05
Myo5a	1.708839479	0.39299179	1.37E-05	6.30E-05
Zfpm1	1.090628913	0.25083697	1.37E-05	6.31E-05
Als2	-1.020287579	0.23470742	1.38E-05	6.33E-05
Daam2	1.597022461	0.36737948	1.38E-05	6.33E-05
Morc3	-1.295902406	0.29812114	1.38E-05	6.33E-05
Mccc2	-1.64182324	0.37772492	1.38E-05	6.34E-05
Znhit2	1.084863578	0.24960323	1.38E-05	6.34E-05
Gfm2	-1.135277643	0.26133583	1.40E-05	6.40E-05
Aak1	1.13146972	0.26065494	1.42E-05	6.49E-05
Srxn1	1.874141362	0.43189683	1.43E-05	6.53E-05
B3gnt9	1.924252235	0.44351319	1.43E-05	6.55E-05
RGD1559482	1.578066603	0.36374458	1.44E-05	6.55E-05
Arhgef37	-1.516373487	0.34967628	1.45E-05	6.61E-05
Ggt5	1.742828258	0.40191992	1.45E-05	6.61E-05
Ftsj3	-1.142887266	0.26359802	1.45E-05	6.62E-05
Amy1a	-1.960139752	0.45208619	1.45E-05	6.62E-05
Sall2	1.459892787	0.33677126	1.46E-05	6.64E-05
AABR07001923.1	-2.740903297	0.63231826	1.46E-05	6.65E-05
Lsm2	1.328511633	0.30659922	1.47E-05	6.69E-05
Map1lc3a	1.032241443	0.23842517	1.50E-05	6.80E-05
Mapkapk3	1.190335698	0.2752499	1.53E-05	6.94E-05
Amotl1	1.383789437	0.32003275	1.53E-05	6.96E-05
Acaa2	-1.180900066	0.27340503	1.57E-05	7.10E-05
Mmd	2.503051973	0.57984375	1.58E-05	7.18E-05
Prkcz	1.146988486	0.26584698	1.60E-05	7.25E-05
Bloc1s2	-1.055804451	0.2447232	1.60E-05	7.25E-05
Lacc1	1.72913233	0.40081699	1.60E-05	7.26E-05
C6	-1.764572681	0.40921792	1.62E-05	7.32E-05
AABR07055826.1	-3.400634351	0.7887922	1.62E-05	7.34E-05
Krcc1	-1.186834719	0.27533633	1.63E-05	7.36E-05
Pgp	1.076438338	0.24992255	1.65E-05	7.46E-05
Alg10	1.217744147	0.28277216	1.66E-05	7.48E-05
Ldoc1l	1.78119888	0.41419589	1.71E-05	7.68E-05
AABR07034393.1	-2.361062761	0.54906407	1.71E-05	7.69E-05
Apba2	-2.795539756	0.65048934	1.73E-05	7.77E-05
Eno1	1.154517271	0.26866816	1.73E-05	7.78E-05
Olfml2b	1.738364413	0.40458577	1.73E-05	7.80E-05
Rcn1	1.736795287	0.40436874	1.75E-05	7.84E-05
Larp1b	-1.045101563	0.24337106	1.75E-05	7.87E-05
LOC501406	-2.844876666	0.6624938	1.75E-05	7.87E-05
Cthrc1	5.412007941	1.26085702	1.77E-05	7.94E-05
Inhbe	-1.306729516	0.30447282	1.77E-05	7.95E-05
Cbx1	-1.103245655	0.25731777	1.81E-05	8.10E-05
Wsb1	-1.703827823	0.39743673	1.81E-05	8.11E-05

Ppfibp2	-1.399997033	0.32658111	1.81E-05	8.12E-05
Dusp16	1.056770574	0.24664357	1.83E-05	8.19E-05
Hbb	1.781411464	0.41578636	1.83E-05	8.20E-05
Ifrd1	1.694267459	0.39580036	1.86E-05	8.33E-05
Slc38a5	5.45252641	1.27450013	1.88E-05	8.42E-05
Bean1	2.709427134	0.63335203	1.89E-05	8.43E-05
Hagh	-1.229929144	0.28755934	1.89E-05	8.45E-05
Cables1	1.259733027	0.29463084	1.91E-05	8.50E-05
Cyp3a18	-1.841666226	0.43097021	1.93E-05	8.59E-05
Osgin1	-1.060917236	0.24836137	1.94E-05	8.65E-05
Lztf11	-1.506257642	0.35264504	1.94E-05	8.66E-05
Cmpk2	1.734839813	0.40617042	1.94E-05	8.66E-05
Cmtm3	1.016844028	0.23808065	1.95E-05	8.67E-05
Tox2	2.204593201	0.51619934	1.95E-05	8.67E-05
Rps5	1.005724662	0.23553357	1.95E-05	8.70E-05
Crmp1	1.802947434	0.4226319	1.99E-05	8.85E-05
ApoH	-1.421002296	0.33320856	2.00E-05	8.90E-05
Pcgf3	1.030416559	0.24170408	2.02E-05	8.95E-05
Ppara	1.744116108	0.40932878	2.04E-05	9.04E-05
Rnpepl1	1.134199709	0.26635239	2.06E-05	9.14E-05
Sox5	-1.346988768	0.31641826	2.07E-05	9.18E-05
Trim7	2.905485645	0.68285703	2.09E-05	9.26E-05
Slc7a2	1.499816967	0.3528782	2.14E-05	9.44E-05
Dapp1	-1.470571879	0.34600481	2.14E-05	9.45E-05
RGD1563482	-1.467540657	0.34532909	2.14E-05	9.46E-05
Phf19	-2.517546616	0.59314671	2.19E-05	9.68E-05
Ctgf	2.151220058	0.5069903	2.20E-05	9.72E-05
Spag8	-2.835943251	0.66850788	2.21E-05	9.76E-05
Per3	2.27297465	0.5358274	2.22E-05	9.77E-05
Cpne2	1.304515463	0.30753407	2.22E-05	9.77E-05
Inhbb	4.06827474	0.95907593	2.22E-05	9.77E-05
Fmnl3	1.215772726	0.28665659	2.22E-05	9.79E-05
Dph7	-1.273923726	0.30038698	2.23E-05	9.80E-05
Rbm15b	1.12380405	0.26524525	2.27E-05	9.97E-05
Kctd13	1.093491027	0.25809293	2.27E-05	9.97E-05
Hdac7	1.052626345	0.24851104	2.28E-05	0.00010016
Fjx1	3.655387455	0.86326496	2.29E-05	0.00010074
Sord	-1.264895787	0.29877937	2.30E-05	0.00010108
Ch25h	3.466991828	0.81913752	2.31E-05	0.00010153
Obsl1	1.593609841	0.37673378	2.34E-05	0.00010257
Hrasls5	4.816272396	1.13876629	2.34E-05	0.00010286
Col27a1	-1.443362471	0.34153566	2.38E-05	0.00010434
Trim23	-1.317750569	0.31184991	2.38E-05	0.00010454
Gmns	1.931389134	0.45713014	2.39E-05	0.00010477
Tsku	1.803795013	0.42706891	2.40E-05	0.0001053
Clec1b	-1.543907045	0.36553893	2.40E-05	0.0001053
Dlg4	1.446959394	0.34281564	2.43E-05	0.00010658
Glis3	2.986926449	0.70776353	2.44E-05	0.00010682

Ankrd44	1.596954894	0.37858549	2.46E-05	0.00010769
Arrdc2	-1.912074531	0.45348145	2.48E-05	0.00010848
Phf11	-1.86309541	0.4420034	2.50E-05	0.00010905
Kremen1	1.092198012	0.25922709	2.52E-05	0.00010991
Hic1	1.332167892	0.31630514	2.54E-05	0.00011062
Atp5j2	-1.059319894	0.2515313	2.54E-05	0.00011067
Sesn3	1.143764673	0.27173966	2.56E-05	0.00011184
Serpina5	-3.635986053	0.86389102	2.57E-05	0.00011119
Ramp2	1.220719154	0.29007483	2.57E-05	0.00011212
S100a10	2.014866324	0.47880538	2.58E-05	0.00011218
Thop1	1.021020716	0.2427356	2.60E-05	0.00011301
Samd11	-1.270857564	0.30215783	2.60E-05	0.00011316
Nat6	-1.424789742	0.33894245	2.63E-05	0.00011429
Tshr	3.864542078	0.91972949	2.65E-05	0.00011505
Abca6	-1.70837422	0.40668308	2.66E-05	0.00011553
Nudt13	-1.262960006	0.30075931	2.68E-05	0.00011626
Plcb2	1.196544785	0.28499737	2.69E-05	0.00011659
RGD1565622	-1.994579295	0.47521473	2.70E-05	0.00011718
Hal	-1.559182463	0.37151779	2.71E-05	0.00011737
Tef	1.191327481	0.28390192	2.71E-05	0.00011761
Adcy7	1.867791521	0.44544363	2.75E-05	0.00011913
Actl10	3.029128378	0.72240158	2.75E-05	0.00011913
Zfp324	-1.150893669	0.27464296	2.78E-05	0.00012047
Rpl22l1	-1.156677751	0.27615015	2.81E-05	0.00012143
Bco1	-1.737288713	0.414801	2.81E-05	0.00012157
Npas2	-1.650563845	0.39428131	2.84E-05	0.00012254
RGD1307182	1.789682986	0.42780646	2.87E-05	0.00012392
LOC687679	-2.483121757	0.59425078	2.93E-05	0.00012637
Ncr3	-1.932873853	0.46263523	2.94E-05	0.0001266
Vill	-1.292015957	0.30932479	2.96E-05	0.00012713
Kifc3	1.275667392	0.30558524	2.99E-05	0.00012843
Ly6e	1.442812234	0.34581101	3.02E-05	0.00012967
Slf1	-2.004503246	0.48048173	3.02E-05	0.00012986
Sult1b1	-1.087335282	0.26081428	3.06E-05	0.00013139
AC130162.1	-2.151117844	0.5160169	3.06E-05	0.0001315
Tyw3	-1.182658201	0.28374565	3.07E-05	0.00013181
Prss46	6.20731851	1.48940084	3.08E-05	0.00013199
Hoga1	-1.320144004	0.31693929	3.11E-05	0.00013322
Tagln2	1.216087532	0.2920022	3.12E-05	0.00013356
Rfesd	-1.230135544	0.29543929	3.13E-05	0.00013401
Tril	1.849886156	0.4443365	3.14E-05	0.00013423
AABR07053741.1	-1.150706223	0.27641961	3.14E-05	0.0001344
Snx13	-1.289233107	0.30971479	3.15E-05	0.00013448
Prickle1	1.395484722	0.33543071	3.18E-05	0.0001358
Dmxl2	-1.506335525	0.36214293	3.19E-05	0.00013623
Tpbgl	5.554787871	1.33857012	3.33E-05	0.0001419
Mmp11	2.305972208	0.55570577	3.33E-05	0.00014197
Lsm11	1.314457677	0.31687741	3.35E-05	0.00014284

Nipal2	1.482474368	0.35759234	3.39E-05	0.0001443
Slc27a4	1.400269981	0.33795041	3.42E-05	0.00014559
Mb21d1	2.532756082	0.61149214	3.44E-05	0.00014646
AABR07054262.1	4.84682342	1.17017506	3.44E-05	0.00014646
Plod2	2.25863237	0.54537487	3.45E-05	0.00014674
Ptpn14	2.410411508	0.58215103	3.47E-05	0.00014728
Atg4a	-1.231752248	0.29756851	3.48E-05	0.00014789
Tlr2	1.265472541	0.30577009	3.49E-05	0.00014833
AABR07040412.1	1.193474151	0.288435	3.51E-05	0.00014886
LOC100362149	-1.006857507	0.24348614	3.55E-05	0.0001504
Naa16	-1.675165414	0.40510494	3.55E-05	0.0001504
Eda2r	4.875281759	1.17917429	3.56E-05	0.00015079
Ccdc84	-1.025078838	0.24801867	3.58E-05	0.00015164
Ifi47	1.651140795	0.3995754	3.59E-05	0.00015215
Tcn2	1.144046356	0.2768832	3.60E-05	0.00015235
Tert	-1.153800948	0.27945415	3.65E-05	0.0001543
Adam1a	-2.102803838	0.50966626	3.69E-05	0.00015616
Mmab	-1.057416887	0.25635128	3.71E-05	0.00015676
P2rx5	4.665073673	1.13119327	3.72E-05	0.00015729
LOC100912218	1.345205189	0.32619681	3.72E-05	0.00015733
Zbtb10	1.592428416	0.38622503	3.74E-05	0.00015783
AABR07021096.1	-1.642732906	0.3984918	3.75E-05	0.00015826
Podxl	1.407186727	0.34142616	3.76E-05	0.00015882
Krit1	-1.089952274	0.26453902	3.79E-05	0.00015967
Nvl	-1.195042284	0.29005352	3.79E-05	0.0001597
Gramd1c	-1.497439375	0.36345309	3.79E-05	0.0001597
Psca	3.063657253	0.74365813	3.79E-05	0.00015988
Gda	1.091628847	0.26503842	3.81E-05	0.00016041
Eif2ak4	-1.098524006	0.26675984	3.82E-05	0.00016084
Fam126a	1.60360726	0.38949089	3.84E-05	0.00016138
Usp20	1.134154679	0.27552811	3.85E-05	0.00016192
Chac2	-1.441870754	0.35040744	3.87E-05	0.00016277
Cplx2	1.373687319	0.33384626	3.88E-05	0.0001628
AABR07006258.2	1.408676551	0.34238168	3.88E-05	0.00016303
Sntb1	2.219968877	0.53971468	3.90E-05	0.00016378
Pwwp2b	1.60255486	0.38970733	3.92E-05	0.00016446
Mrnip	-1.79427518	0.43642818	3.93E-05	0.00016508
Kif16b	-1.054756801	0.25659855	3.95E-05	0.00016552
Pik3r5	1.346878406	0.3276885	3.95E-05	0.00016564
Enox2	-1.13938194	0.2772416	3.96E-05	0.00016598
Otc	-1.927497786	0.46913105	3.98E-05	0.0001666
Phc3	1.273725401	0.3100323	3.98E-05	0.00016672
Zcchc6	-1.242190768	0.30244176	4.00E-05	0.00016751
Prnp	2.178485156	0.53058168	4.03E-05	0.00016842
Gstm6	-2.260420643	0.55100301	4.09E-05	0.00017078
Tsc22d2	1.333504432	0.32511093	4.10E-05	0.00017124
Ktn1	-1.296526085	0.31616817	4.12E-05	0.00017189
Prss36	-1.535409415	0.37443643	4.12E-05	0.00017192

Aff1	1.231015847	0.30032283	4.15E-05	0.00017303
Adamts3	3.202619262	0.78157507	4.17E-05	0.00017388
Shc2	2.643147089	0.64506584	4.18E-05	0.00017396
Rpl36a	-1.259002417	0.3076204	4.26E-05	0.00017739
Ust	2.02867751	0.49575261	4.27E-05	0.00017775
Cdca7	2.224700354	0.54403971	4.33E-05	0.00017993
Cngb1	-4.791916971	1.17196469	4.34E-05	0.00018022
LOC100360856	-1.694269649	0.41437968	4.34E-05	0.00018025
Sp140	-1.148442418	0.28090531	4.34E-05	0.00018046
Zfp182	-2.30077501	0.56281187	4.35E-05	0.00018064
Dedd2	1.1863454	0.2904322	4.41E-05	0.00018309
Tnik	2.74102718	0.67112222	4.42E-05	0.00018344
Ino80d	1.44874722	0.35474779	4.43E-05	0.00018368
Ets2	1.016941896	0.24909307	4.45E-05	0.00018467
Itgb3bp	-1.985828698	0.4865247	4.47E-05	0.00018535
Tmem116	3.032133122	0.7429359	4.48E-05	0.0001856
Sfi1	-1.021835308	0.25048382	4.51E-05	0.00018702
Vcan	3.268910921	0.80194584	4.58E-05	0.00018953
Cpne7	-1.437399636	0.35280487	4.62E-05	0.00019108
Pycr2	1.140578337	0.27998145	4.63E-05	0.00019139
Acss3	-1.398238657	0.3432895	4.64E-05	0.00019187
Acyp1	-1.203371752	0.29546695	4.65E-05	0.00019205
Dennd2a	1.011644009	0.2484701	4.67E-05	0.00019306
Klhl8	-1.156806884	0.28440196	4.75E-05	0.00019624
Nova2	1.932757864	0.47523352	4.76E-05	0.00019664
Map1b	1.775379584	0.4367196	4.80E-05	0.00019793
Bcl2l11	1.484997792	0.36534862	4.81E-05	0.00019843
Ppp2r3a	-1.881372285	0.46293814	4.82E-05	0.00019886
Prkar2a	1.161223284	0.28576597	4.83E-05	0.00019918
Prr36	4.831008674	1.1890866	4.85E-05	0.00019972
Zfp202	-1.413589514	0.34796544	4.86E-05	0.00019996
Hist1h2bk	2.594800169	0.63878438	4.86E-05	0.00020021
Ankrd13b	1.489965931	0.36680728	4.87E-05	0.00020025
Tarbp1	1.212542325	0.29857613	4.88E-05	0.00020092
Arl5b	1.582177079	0.3898413	4.94E-05	0.00020308
Actr6	-1.237165755	0.30488235	4.95E-05	0.00020361
Zfp455	-2.078848916	0.51249725	4.99E-05	0.00020485
Sox6	-1.10200466	0.27175265	5.01E-05	0.00020574
Adh7	-2.511793655	0.61970989	5.05E-05	0.00020739
Timp2	1.195045707	0.29485045	5.06E-05	0.00020745
Tsen2	-1.03252976	0.25476682	5.06E-05	0.00020758
Rhoc	1.240232001	0.30607014	5.08E-05	0.00020806
Zfp329	-2.328047528	0.57466025	5.10E-05	0.00020874
B4galt2	1.593861451	0.39353345	5.12E-05	0.00020962
Esf1	-1.350534064	0.33360843	5.16E-05	0.00021107
Tmem167b	1.286322027	0.31775532	5.16E-05	0.00021112
Tek	-1.050264497	0.25962445	5.23E-05	0.00021363
Rasal2	1.268506329	0.31365667	5.25E-05	0.00021449

Rrp12	1.075925278	0.26610736	5.27E-05	0.00021535
LOC102550729	-1.836291036	0.45430438	5.30E-05	0.00021635
Zfyve27	1.218611114	0.30149863	5.30E-05	0.00021642
Rgs1	2.767859106	0.68506118	5.34E-05	0.00021762
Adamts9	1.071578265	0.26524883	5.35E-05	0.00021794
Rnd1	1.773913071	0.43919937	5.37E-05	0.00021875
Eno3	-1.281690093	0.31735014	5.37E-05	0.00021892
Vep1	-1.37852731	0.34133896	5.38E-05	0.00021899
Afp	-1.444332492	0.3577209	5.40E-05	0.0002198
Tmem30b	1.696236795	0.42025438	5.43E-05	0.00022099
LOC100359951	4.547351881	1.12676762	5.44E-05	0.00022137
Bclaf1	-1.429227207	0.35434429	5.50E-05	0.00022344
LOC100365363	-2.061024864	0.51104682	5.51E-05	0.00022385
Fam105a	1.493418994	0.37035689	5.52E-05	0.00022427
Pradc1	-1.034475309	0.25654187	5.52E-05	0.00022427
Cenpj	-1.595089269	0.39582911	5.58E-05	0.00022674
Kmt2a	1.231839274	0.30577997	5.61E-05	0.00022775
Svbp	-1.236453484	0.30703708	5.65E-05	0.00022906
Hgf	-1.270651755	0.31554982	5.65E-05	0.00022925
Dock2	1.695909543	0.42117338	5.66E-05	0.00022929
Arhgap12	-1.358314871	0.33733039	5.66E-05	0.00022929
Lyz2	1.656459563	0.41146082	5.68E-05	0.00022998
Vim	1.242676545	0.30875047	5.70E-05	0.00023076
Yif1b	1.375718482	0.34180873	5.70E-05	0.00023076
Pwwp2a	-1.277773323	0.31784409	5.82E-05	0.00023504
Napsa	1.193559636	0.29689598	5.82E-05	0.00023504
Rn50_5_0814.4	-3.477029928	0.86502795	5.83E-05	0.00023554
Prob1	1.293684421	0.32185709	5.83E-05	0.0002356
Has1	6.179582741	1.53787695	5.86E-05	0.00023673
Sec14l2	-1.301143494	0.32382031	5.87E-05	0.00023679
Spp1	3.773081158	0.93906533	5.87E-05	0.00023689
LOC680227	-1.274535991	0.3172994	5.90E-05	0.00023786
Spink1l	-1.26708716	0.31557844	5.94E-05	0.00023933
Lcn12	-1.51794094	0.37828586	6.00E-05	0.00024164
Maml2	1.627167436	0.40557208	6.02E-05	0.00024224
Dnah9	-2.565199033	0.63944083	6.03E-05	0.00024259
Cyb561a3	1.004312103	0.25035712	6.03E-05	0.00024264
RGD1304810	2.439966092	0.60832576	6.05E-05	0.0002431
AABR07002768.1	-1.565545644	0.39036548	6.06E-05	0.00024351
Pcmt2	-1.319697562	0.3291351	6.08E-05	0.00024425
AC107531.3	-2.692402784	0.67151603	6.09E-05	0.00024435
Lrrc24	2.227169922	0.55550457	6.09E-05	0.00024446
Hcn2	2.439434386	0.60848963	6.10E-05	0.00024461
Ccl3	2.320636763	0.5789345	6.11E-05	0.00024504
LOC108348302	-2.101679433	0.52438366	6.13E-05	0.00024556
LOC100363469	1.112222816	0.27788402	6.27E-05	0.00025108
Tsc22d1	-1.246194992	0.31155399	6.34E-05	0.00025358
Gls2	-1.508983688	0.37725682	6.34E-05	0.00025358

Ttc39c	-1.064911343	0.26625914	6.35E-05	0.00025389
Pygl	-1.352585109	0.33826886	6.37E-05	0.00025488
Dyrk3	4.801524312	1.20095911	6.39E-05	0.00025519
Ndc1	1.021473619	0.25555256	6.41E-05	0.00025596
LOC303448	-1.628133211	0.40736764	6.42E-05	0.00025633
Rbp1	-1.457408607	0.36471256	6.44E-05	0.00025699
Ptk6	-2.059401855	0.51543736	6.46E-05	0.00025751
Zfp54	-2.614000772	0.65426674	6.46E-05	0.00025759
Rev1	-1.097197646	0.27474841	6.51E-05	0.00025948
Spata2L	1.349989566	0.33808619	6.52E-05	0.00025988
Nat2	-1.650728581	0.41349797	6.55E-05	0.00026077
Zmym1	-1.09439321	0.27426251	6.60E-05	0.00026268
Il10ra	1.22241046	0.30638253	6.61E-05	0.00026309
Vars	1.276075628	0.31984378	6.62E-05	0.00026318
Atp6v1c2	-3.852573941	0.9656751	6.62E-05	0.0002633
Lhx1	-5.122619186	1.28405718	6.62E-05	0.00026335
Klf10	1.151758601	0.2887241	6.63E-05	0.00026359
RGD1303003	-1.084418213	0.2718674	6.64E-05	0.00026391
Fer	-1.215157395	0.30473527	6.67E-05	0.00026504
Ephb3	1.809567968	0.4539845	6.72E-05	0.00026658
Itgae	-1.387570426	0.34827538	6.77E-05	0.00026853
Akr1c12	-1.774733784	0.44581882	6.87E-05	0.00027177
Mzf1	-1.84841633	0.46435088	6.87E-05	0.00027193
Gas2l3	2.562769642	0.64406029	6.92E-05	0.00027358
Mmp3	3.4561214	0.86902631	6.98E-05	0.00027556
Rcbtb2	-1.127032858	0.28342058	6.99E-05	0.00027603
Mn1	1.214781209	0.30549834	7.00E-05	0.00027613
Cfap126	-1.183574736	0.29780372	7.06E-05	0.00027831
Lrif1	-1.530784348	0.38533577	7.11E-05	0.00028021
Dapk2	-1.189013512	0.29932363	7.12E-05	0.00028045
AC133265.1	1.618784097	0.40764497	7.16E-05	0.00028174
Mcm6	2.44466009	0.61582398	7.20E-05	0.00028324
Slc4a4	1.812733023	0.45672012	7.22E-05	0.00028395
Acbd5	-1.469027878	0.37016427	7.23E-05	0.00028433
Ddx3x	-1.032795811	0.26035718	7.28E-05	0.00028634
Postn	3.420344823	0.86281185	7.36E-05	0.00028933
Ccnt2	-1.133687707	0.28618288	7.45E-05	0.00029257
Cyp4a1	1.148935166	0.29007373	7.47E-05	0.00029319
Taok3	1.08536215	0.27408116	7.49E-05	0.00029415
Fam129b	1.26703251	0.31996442	7.50E-05	0.00029418
Rslcan18	-1.696479202	0.42854252	7.54E-05	0.00029551
Slc25a24	2.042255439	0.51591205	7.54E-05	0.00029559
Myo1g	1.404241028	0.35473268	7.54E-05	0.00029559
RGD1307235	-1.002140697	0.25321225	7.57E-05	0.00029654
Pcdhgb6	1.690185155	0.42707204	7.57E-05	0.00029656
Rftn1	1.381742153	0.34916665	7.58E-05	0.00029688
Cfh	-1.404074908	0.35502044	7.66E-05	0.0002995
Tymp	-1.62756141	0.4115439	7.66E-05	0.0002996

Dopey1	-1.064862004	0.26928885	7.67E-05	0.00030002
Il36b	-1.760785625	0.44535598	7.70E-05	0.00030077
Map4k5	-1.084214204	0.27433735	7.75E-05	0.00030264
AC098008.2	-2.936128124	0.7431726	7.79E-05	0.00030423
Mad2l2	1.014682993	0.25687476	7.81E-05	0.00030499
Gucy1a3	-1.105021435	0.27976498	7.82E-05	0.00030523
Scaper	-1.192107963	0.30190115	7.86E-05	0.00030649
Sox12	1.51233552	0.38304139	7.87E-05	0.00030698
St6galnac3	-2.111352895	0.53488128	7.90E-05	0.00030798
Zfp870	-1.736039347	0.43987153	7.92E-05	0.00030872
Prpf40a	-1.298038751	0.32904476	7.98E-05	0.00031085
Cacna1c	2.936006065	0.74425267	7.98E-05	0.00031085
Relt	1.45382401	0.3685299	7.98E-05	0.00031085
Krt14	7.739799335	1.9621337	7.99E-05	0.00031114
Tbc1d31	-1.209906765	0.30676939	8.01E-05	0.00031163
Milr1	-5.344586274	1.35550289	8.05E-05	0.00031305
AC105577.1	-7.672368667	1.94641563	8.09E-05	0.00031439
Eri2	-1.222863621	0.31032975	8.13E-05	0.00031598
Nkg7	1.276311029	0.32395064	8.15E-05	0.00031682
Lgals3bp	1.038252449	0.26353759	8.16E-05	0.00031695
Sema3b	2.245492692	0.57036949	8.25E-05	0.00032022
Bmp8b	5.939597188	1.50876358	8.26E-05	0.00032038
Phldb3	1.236446465	0.3141411	8.29E-05	0.00032133
Fpgt	-1.064538862	0.27057374	8.34E-05	0.00032329
Cdh3	2.178005553	0.55385074	8.41E-05	0.00032545
Ttc8	-1.16696373	0.29683605	8.45E-05	0.00032691
LOC100911766	1.231716704	0.31336552	8.47E-05	0.00032783
Dgkh	3.158163332	0.80361203	8.50E-05	0.00032855
AABR07004876.1	4.558965018	1.1601746	8.51E-05	0.00032895
Cdt1	2.6008861	0.66196777	8.53E-05	0.00032959
Nmnat3	-1.176491964	0.29949252	8.56E-05	0.00033052
R3hcc1l	-1.572261154	0.40052953	8.66E-05	0.00033402
Myo1f	1.240889765	0.31621199	8.70E-05	0.00033548
Orm1	1.494694657	0.38105484	8.76E-05	0.00033778
Pipox	-1.549865907	0.39519106	8.79E-05	0.0003386
AABR07042821.1	-1.078450372	0.27498527	8.79E-05	0.0003386
Unc13b	1.419721911	0.36225018	8.89E-05	0.00034199
Ube2c	3.396950225	0.86697115	8.92E-05	0.00034332
Tbx20	1.850108822	0.47238683	8.98E-05	0.00034554
Poc1a	1.507578282	0.38493396	8.99E-05	0.00034554
Zfp90	-1.569021701	0.4007252	9.02E-05	0.00034688
Fam117b	1.095553155	0.27985002	9.05E-05	0.00034759
Nfatc2ip	1.114694844	0.2848124	9.09E-05	0.00034894
Ncf1	1.142297615	0.29188642	9.10E-05	0.00034927
Zdhhc21	1.512263654	0.38650961	9.13E-05	0.00035047
Sash3	1.134648101	0.29000564	9.13E-05	0.00035054
Rbak	-1.183538649	0.30258221	9.17E-05	0.00035189
Fam76b	-1.050337155	0.2687644	9.31E-05	0.00035658

Rn50_5_0814.28	-2.785286085	0.71273097	9.31E-05	0.00035666
Etnppl	-2.088128045	0.534454	9.34E-05	0.00035787
Giot1	-2.082921178	0.53342468	9.43E-05	0.00036091
Pdgfb	1.521674081	0.38970686	9.44E-05	0.00036104
Igf1r	1.862384338	0.47707484	9.47E-05	0.00036221
Wdr97	-4.685358396	1.20035575	9.49E-05	0.0003628
Atxn1	1.355298069	0.34737884	9.56E-05	0.00036543
U2surp	-1.122794016	0.28787743	9.61E-05	0.00036705
Ptma	1.397875532	0.35848474	9.64E-05	0.00036825
Hivep2	1.591779961	0.40840191	9.72E-05	0.00037066
Ntng2	1.250311528	0.32090897	9.77E-05	0.00037264
Cdca3	3.464255372	0.88966556	9.87E-05	0.00037535
Apoc2	-1.676992766	0.43087747	9.94E-05	0.00037784
Nim1k	-2.711401323	0.69688904	9.99E-05	0.00037981
Arrdc4	1.663464483	0.42762231	0.00010023	0.0003808
Gcc2	-1.25300861	0.32223315	0.00010086	0.00038291
Tmem26	2.092459641	0.53817427	0.00010104	0.00038341
Trim34	-1.277336636	0.32853164	0.00010107	0.00038341
Nhp2	1.314969455	0.33825069	0.00010126	0.00038404
Caps2	-2.180325789	0.56100718	0.00010172	0.00038561
Rbbp8nl	-5.027335282	1.29353871	0.0001017	0.00038561
Casp1	-1.181732679	0.30423267	0.00010262	0.00038884
Rem2	1.311184786	0.33760748	0.00010286	0.00038963
Tuba1b	1.243483854	0.32018506	0.0001029	0.00038972
LOC24906	1.438626759	0.37043953	0.00010294	0.00038974
Zfp322a	-1.286867519	0.33162347	0.00010424	0.00039449
Cd8b	2.21103765	0.56999302	0.00010486	0.00039655
Lrfn1	1.630078135	0.42038475	0.0001055	0.00039886
Atp8b5p	-1.902004317	0.49070555	0.00010616	0.00040108
Rbp7	-2.20392241	0.56886661	0.00010696	0.00040381
Efr3b	3.127977996	0.80818972	0.00010868	0.00040989
Tax1bp3	1.341787985	0.34680352	0.00010928	0.00041179
Mtrf1l	-1.028499809	0.26588499	0.00010964	0.0004128
LOC100909998	-1.810561532	0.46807273	0.00010968	0.00041286
Fos	2.847592518	0.73620529	0.00010976	0.00041308
LOC100911319	2.53857022	0.65703765	0.0001117	0.00041985
Trpm7	-1.342537305	0.34748253	0.00011172	0.00041985
RGD1564854	-1.200090764	0.31074432	0.00011247	0.00042255
LOC100912534	7.656752098	1.98272086	0.00011258	0.00042288
She	1.319605345	0.34175474	0.0001128	0.0004236
Sv2a	1.113311054	0.28839724	0.00011323	0.0004251
Lrfn4	1.489972992	0.38599851	0.00011336	0.00042551
Sp6	3.53202289	0.9151792	0.00011368	0.00042657
LOC689065	-2.908713784	0.75416575	0.00011485	0.00043078
LOC100910130	-1.897515696	0.49212835	0.00011538	0.00043246
Rad50	-1.171600181	0.30388574	0.00011554	0.00043295
Pla2g2d	2.141121057	0.55549542	0.000116	0.00043445
Ushbp1	-1.072053794	0.27831796	0.0001172	0.00043875

Ssbp4	1.193688411	0.30990807	0.00011728	0.00043892
Pbx3	1.083400897	0.28147565	0.0001186	0.00044344
Flrt2	2.432844018	0.63240016	0.00011957	0.00044676
Ptges3l	-2.269046478	0.59031954	0.00012116	0.00045249
NEWGENE_1310139	1.37497195	0.35773877	0.00012129	0.00045284
Ccdc3	2.653413202	0.6904187	0.00012144	0.00045332
Epb41	1.002516164	0.26086561	0.00012152	0.00045346
Osbpl10	1.912483953	0.49765389	0.00012154	0.00045346
Tmem256	-1.145921342	0.29824095	0.0001219	0.0004546
Efcab7	-2.385741165	0.62119812	0.00012276	0.00045746
Add2	2.978281673	0.77566929	0.00012322	0.00045896
Fhl2	1.505801737	0.39244434	0.00012456	0.0004636
Jaml	-1.34890261	0.35162873	0.00012498	0.00046494
Ocstamp	1.755101743	0.4578041	0.00012621	0.0004692
Cage1	-1.847023418	0.48183156	0.00012642	0.00046985
Glis2	1.033382935	0.2697247	0.00012749	0.00047374
AABR07053509.2	-3.050054101	0.79624392	0.00012786	0.00047486
Saa4	-1.429319831	0.37327779	0.00012861	0.00047744
Rac2	1.051024867	0.27467425	0.00013001	0.00048229
Exoc6	-1.191784157	0.3115501	0.00013059	0.00048434
Akr1b10	2.612520891	0.68299001	0.00013071	0.00048453
Ccdc38	-2.419840441	0.6326458	0.0001308	0.00048475
Gtdc1	-1.117809465	0.29230975	0.00013127	0.00048628
Prima1	1.580108212	0.41321427	0.00013133	0.00048639
Cygb	1.319032775	0.34528078	0.00013336	0.00049341
Serf1	-1.110793607	0.29079558	0.00013354	0.00049396
Mcub	2.06614287	0.54101205	0.00013398	0.00049523
Tmem108	1.906241847	0.4992517	0.00013443	0.00049667
F13b	-1.541348654	0.40379728	0.00013501	0.00049858
Fmc1	-1.025658521	0.26877751	0.00013563	0.00050073
LOC100362384	1.623349972	0.42547725	0.00013598	0.00050194
Plpp2	1.041830631	0.27320564	0.00013709	0.00050546
Ccl4	2.117199921	0.55521715	0.00013713	0.00050546
Zfp53	-2.670988064	0.70044302	0.00013713	0.00050546
Fut1	2.149348905	0.56374762	0.00013751	0.00050672
Slc6a12	1.297384075	0.34030502	0.00013762	0.00050697
Tspan15	1.136947452	0.29826467	0.00013792	0.00050787
Ttc21b	-1.565786006	0.41107348	0.00013952	0.00051317
Chchd2	1.397711456	0.36722014	0.00014112	0.00051869
Ppfia1	1.08010681	0.28387357	0.00014187	0.00052107
Acrbp	-2.351663938	0.61816527	0.00014223	0.00052213
Lifr	1.031901258	0.27126024	0.00014232	0.00052236
Rap2b	1.26880249	0.33356922	0.00014254	0.00052304
Wdr35	-1.339885567	0.35227474	0.00014265	0.00052333
H6pd	1.107542776	0.29130207	0.00014351	0.00052622
Rnpc3	-1.233309396	0.32440002	0.00014364	0.00052658
Pon3	-1.276006188	0.33568327	0.00014398	0.00052772
Itpr1	1.764588143	0.46434126	0.00014458	0.00052978

Pttg1	2.793342791	0.73514531	0.00014486	0.00053069
RGD1562399	-1.569142329	0.41301488	0.00014514	0.00053146
RGD1559600	-1.763212117	0.46412344	0.00014527	0.00053181
LOC100910636	-3.814154415	1.00424635	0.00014585	0.00053381
Meiob	-2.33052582	0.61365518	0.000146	0.00053422
Smlr1	-1.11538156	0.29370781	0.00014611	0.0005345
Malt1	-1.140216016	0.30032972	0.00014673	0.0005365
Csf3r	1.631575358	0.4297885	0.00014691	0.00053706
Fbxl7	1.007886398	0.2655197	0.00014711	0.00053765
Eci2	-1.246153584	0.32843695	0.00014812	0.0005411
Ccdc126	-1.044165579	0.27523725	0.00014842	0.00054207
Golm1	-1.404183407	0.37016793	0.00014862	0.00054265
Zfp111	-1.355530542	0.35736062	0.00014873	0.00054283
Rasgrp4	1.334107809	0.35182786	0.00014948	0.00054542
Nkap	-1.263939464	0.33342382	0.00015017	0.00054781
Snai2	-1.454942173	0.3839126	0.00015078	0.00054966
Fam222a	1.623647493	0.42852426	0.0001513	0.00055128
Slc26a1	1.042452927	0.27514894	0.00015145	0.00055169
Baz2b	-1.162683036	0.3068897	0.0001515	0.00055175
Fabp12	-2.309356885	0.60990274	0.00015282	0.00055619
Ngfr	1.869460027	0.49377701	0.00015307	0.00055694
Snx20	1.61168769	0.42574815	0.00015337	0.00055793
Pdlim4	1.432206596	0.37842716	0.00015394	0.00055985
Eif4ebp1	1.214938718	0.32102929	0.00015401	0.00055999
Gcfc2	-1.031185969	0.2726265	0.00015532	0.00056446
Ifi44l	-1.636050385	0.4325407	0.00015531	0.00056446
Akr1c13	-2.257928273	0.59700851	0.00015553	0.00056511
Scamp5	1.205625221	0.31885246	0.00015611	0.0005671
Cdyl2	2.155523203	0.57013506	0.00015637	0.00056791
Rock1	-1.159399208	0.30669936	0.00015667	0.0005686
Blk	1.227899767	0.32487456	0.00015707	0.00056992
Acads	-1.172499087	0.31030175	0.00015773	0.00057216
Depdc7	-1.163854671	0.3081745	0.00015898	0.00057641
LOC100912163	-2.004148349	0.53100246	0.00016047	0.00058132
Gpr137b	1.247310245	0.33054292	0.00016096	0.00058294
Arhgap10	1.543782371	0.40926417	0.00016188	0.00058588
Tmc3	-1.122913406	0.29771341	0.00016208	0.00058644
Acta2	2.983154218	0.7911053	0.00016268	0.00058848
Osbpl6	-2.19975632	0.58355677	0.00016353	0.00059129
Ankrd24	-1.061813059	0.28174631	0.00016411	0.00059324
Osgepl1	-1.166789329	0.30966409	0.00016461	0.00059492
Fktn	-1.216351811	0.32284368	0.00016481	0.0005955
Rn50_10_0644.1	-2.678910914	0.7110689	0.00016493	0.00059579
Klc4	-1.078220136	0.28641333	0.00016684	0.00060242
Cul4b	-1.0635509	0.28253411	0.000167	0.00060284
Espl1	3.210127917	0.85297704	0.00016759	0.00060457
Capg	1.532708757	0.40744626	0.00016873	0.00060826
LOC100912481	-1.143595312	0.30406523	0.00016922	0.00060988

Crct1	7.521963741	2.00017399	0.00016947	0.00061063
Dync1li2	-1.191632739	0.31687702	0.00016954	0.00061074
Usp32	-1.05216389	0.27995106	0.00017101	0.00061566
AABR07010878.1	-2.299896712	0.61194009	0.00017102	0.00061566
Klf5	3.739218423	0.99498649	0.00017124	0.00061628
Pcyox1l	1.621714379	0.43176642	0.00017265	0.00062109
Ep300	1.166274014	0.31052597	0.00017279	0.00062144
Fbln5	1.264596245	0.33680895	0.00017359	0.00062389
Ciita	1.019865436	0.27165361	0.00017384	0.00062463
Gp1bb	2.209892369	0.58878825	0.00017453	0.00062683
Emp1	2.445287838	0.65152177	0.0001746	0.00062692
Tcf15	4.036621272	1.07554817	0.00017467	0.00062706
Fabp7	-2.249807447	0.59963955	0.00017548	0.0006298
Ube3d	1.071913243	0.28591297	0.00017748	0.00063625
Sh3yl1	-1.26467383	0.33751865	0.00017898	0.00064119
Bmp10	1.522087604	0.40622666	0.00017904	0.00064125
Paxbp1	-1.350061382	0.36047775	0.00018025	0.00064515
Bcl6b	-1.075003761	0.28704453	0.00018034	0.00064532
Rprm	-2.009994834	0.53673085	0.00018048	0.00064566
Gnal	2.474712644	0.6611968	0.000182	0.00065095
Mmp2	1.001922228	0.26771804	0.00018223	0.00065164
Pcdh19	5.079660933	1.35754722	0.00018271	0.00065321
Nop56	-1.207391183	0.3226875	0.0001828	0.00065322
Pdzd2	1.361789812	0.36395052	0.00018279	0.00065322
Scimp	1.253777548	0.33526477	0.00018427	0.00065801
LOC103694865	-1.013958669	0.27121811	0.0001851	0.00066082
Sctr	2.392794567	0.64020025	0.00018581	0.00066305
Jak3	1.218739889	0.32643825	0.00018888	0.0006737
Rpgrip1l	-1.322591141	0.35428485	0.00018912	0.00067417
AABR07054189.1	1.585425688	0.42485155	0.00019018	0.00067757
LOC100910270	1.217963056	0.326608	0.00019214	0.00068426
Prkd1	2.177460848	0.58398336	0.00019252	0.00068535
Gins2	-1.442047505	0.38675189	0.00019254	0.00068535
Cdk1	3.275238398	0.87900317	0.00019448	0.00069178
Naf1	1.038492077	0.27902075	0.00019772	0.00070249
Plat	2.016946038	0.54195478	0.00019795	0.00070318
Ppil4	-1.118719363	0.30067834	0.00019871	0.00070538
LOC108348083	2.140319365	0.57531178	0.000199	0.00070627
Kmt5b	-1.011489328	0.27190141	0.00019918	0.00070655
E2f8	4.793236334	1.28847756	0.00019916	0.00070655
AABR07025051.3	4.502967494	1.21116945	0.00020091	0.00071222
Aadac	-1.688871761	0.45471778	0.00020392	0.00072207
AABR07022022.1	4.502391929	1.21226976	0.00020399	0.00072216
Col5a3	2.802166668	0.75473157	0.00020498	0.00072549
Fgfr1	1.061904005	0.28602734	0.00020514	0.0007259
Sh3bgrl	-1.215602053	0.32748524	0.00020569	0.00072732
Cyp51	-1.232308283	0.33199812	0.0002058	0.00072755
Gpr132	1.80854341	0.48730437	0.00020618	0.00072874

Kif18b	3.146927401	0.84805392	0.00020664	0.00073002
Tox3	1.957828596	0.52793861	0.00020854	0.00073642
Plcx1	2.403040314	0.64833543	0.00021016	0.00074147
Cldn23	2.301208796	0.62107037	0.0002112	0.00074462
Zc3h11a	-1.031405651	0.27851605	0.00021288	0.00075005
Abhd18	-1.335048026	0.36052852	0.00021304	0.00075043
Sdcbp	1.034009588	0.27937585	0.00021463	0.0007557
Cldn3	1.213356235	0.32815377	0.00021771	0.00076603
Sh3bgrl2	1.207648025	0.32663518	0.00021796	0.00076672
Msra	-1.219566725	0.33010055	0.00022029	0.00077423
Pdzrn3	-1.29589909	0.35077169	0.00022039	0.00077439
Rpp21	-1.044191274	0.28276323	0.00022179	0.00077914
Dusp18	1.109462517	0.30045208	0.00022193	0.00077947
Dpp4	-1.03076861	0.27920058	0.00022262	0.0007817
Larp4b	1.068244676	0.2893963	0.00022312	0.00078294
Usp43	2.230837246	0.6044898	0.00022386	0.00078535
LOC108351584	-1.371799808	0.37200007	0.00022635	0.00079337
Dclk1	1.755815249	0.47618818	0.00022671	0.00079445
AABR07063893.1	-2.315599334	0.62819821	0.00022772	0.00079745
Trmt13	-1.818916273	0.49352883	0.00022823	0.00079887
Aadat	-1.31049503	0.35578745	0.00023018	0.00080551
Rtn4rl2	1.634470604	0.44379884	0.00023059	0.00080676
Hpgds	-1.329373841	0.36100928	0.00023107	0.0008079
Cdkn2c	1.808090194	0.49100511	0.00023102	0.0008079
Enpep	-1.442824292	0.39185954	0.00023142	0.00080877
Reps2	1.504502334	0.40878103	0.00023281	0.00081328
Gpr84	4.2799814	1.1633563	0.00023416	0.00081742
Tbx2	1.380037484	0.37532826	0.0002361	0.00082403
Cd9	1.540196889	0.41898079	0.00023687	0.00082651
LOC360919	-1.575657705	0.42871443	0.00023756	0.00082857
Aff3	1.529242356	0.41647454	0.00024078	0.00083922
Snx29	1.000563449	0.27250017	0.00024086	0.00083931
Ugt2b37	-1.896804474	0.51659915	0.00024093	0.00083937
AABR07027575.1	3.446073174	0.93929609	0.00024371	0.00084848
Flnc	2.977294461	0.81167527	0.00024437	0.00085061
Mcm5	2.805161965	0.76478441	0.00024454	0.000851
Cuedc1	1.117141388	0.30465161	0.00024546	0.00085402
Mia2	-1.100305331	0.30007243	0.00024561	0.00085433
RGD1561333	1.690154219	0.46133615	0.00024869	0.00086417
Dot1l	1.623370381	0.44313204	0.00024889	0.00086459
Cd14	1.080377346	0.29502232	0.00025024	0.00086849
Prtg	-2.011665008	0.54953638	0.00025157	0.00087253
Clec11a	1.329358876	0.36325164	0.0002526	0.00087553
LOC103692716	-1.373151821	0.37528254	0.00025322	0.0008771
RGD1566085	1.090181682	0.29802518	0.00025417	0.00088019
Pkm	1.292849314	0.35366426	0.0002566	0.00088839
Mup4	-3.376260029	0.92370787	0.00025707	0.00088981
Mup4	-3.376260029	0.92370787	0.00025707	0.00088981

Itgb2	1.161555026	0.31789393	0.00025828	0.00089382
Stx11	1.949068129	0.53377806	0.00026076	0.00090159
Itpkc	1.272718069	0.34863111	0.00026161	0.00090355
Usp13	2.864193919	0.78456106	0.00026153	0.00090355
AABR07005618.1	-1.305223898	0.35802767	0.00026677	0.00092035
LOC100910526	-3.36876296	0.92428594	0.00026768	0.00092329
Rn50_15_0083.1	-5.703372752	1.56545669	0.0002692	0.00092811
LOC681341	1.553744758	0.42654788	0.00026989	0.00093009
AABR07027753.2	2.982454221	0.81881526	0.00027011	0.00093051
Pik3r6	-1.696149292	0.46570465	0.00027041	0.00093124
Stx17	-1.062837948	0.29183197	0.00027058	0.00093162
Ncoa2	1.184283373	0.32540194	0.00027322	0.0009399
Tmem55a	1.412904876	0.38837067	0.00027473	0.00094466
Mlh1	-1.302965072	0.35817904	0.00027503	0.00094549
Nos3	1.032800491	0.28397997	0.00027596	0.00094827
Fosb	2.975853009	0.81860387	0.00027768	0.00095396
Zkscan1	-1.144875351	0.31508913	0.00027961	0.00095994
Alms1	-1.088389544	0.29958859	0.0002802	0.00096137
AABR07025328.1	1.687187947	0.4644134	0.00028021	0.00096137
AABR07030162.1	2.516601814	0.69297432	0.00028168	0.00096577
Fbxo31	1.020596683	0.28118186	0.00028379	0.00097279
B4galnt1	1.088162173	0.29986994	0.00028476	0.0009755
Miip	1.136938493	0.31334572	0.0002852	0.00097678
Cux2	2.792081958	0.76979991	0.00028671	0.00098087
Asrgl1	-1.393987796	0.38436723	0.00028706	0.00098136
Trem1	2.185410588	0.60259482	0.0002871	0.00098136
Tcaf2	-1.288387992	0.35591616	0.00029469	0.00100532
Cep162	-1.621954022	0.4480755	0.0002948	0.00100547
Glyatl1	-1.02761452	0.28391124	0.00029518	0.00100654
Uqcrq	-1.017885293	0.281285	0.00029609	0.00100919
Tcea3	-1.417710868	0.39188579	0.00029727	0.00101301
Chmp4c	-1.107191361	0.3060766	0.00029762	0.00101395
Rpl9	-1.12821248	0.3119526	0.00029848	0.00101668
Pecr	-1.009950458	0.27931063	0.00029934	0.00101939
LOC680406	-1.649667303	0.45653542	0.00030215	0.0010285
Pde10a	3.675043784	1.01734246	0.00030338	0.00103224
Cbwd1	-1.075161468	0.29769002	0.00030422	0.00103435
Btc	1.338743437	0.37096946	0.00030765	0.00104494
Gpr4	1.32628349	0.36765879	0.00030931	0.00105011
LOC103692531	-1.1759593	0.32600843	0.00030959	0.00105082
Set	2.312567895	0.64113493	0.00030977	0.00105121
LOC108348136	-1.388925376	0.38511501	0.00031033	0.00105266
Apba1	1.865167642	0.51729267	0.00031139	0.00105581
Ehd4	1.219312466	0.33819059	0.00031167	0.00105652
F2rl1	2.670147621	0.74085336	0.00031317	0.00106115
Crot	-1.502791308	0.4170215	0.0003138	0.00106282
Csrp2	2.023713972	0.56173275	0.00031502	0.0010664
Plvap	1.050947727	0.29172185	0.00031509	0.0010664

Fat1	1.241626699	0.3446539	0.00031513	0.0010664
LOC103693608	1.42292842	0.39500342	0.00031539	0.00106704
Sorbs1	1.031163795	0.28634696	0.00031687	0.00107183
LOC102551435	1.021321754	0.28375407	0.00031905	0.00107803
Anxa8	-2.937622786	0.81623271	0.00031944	0.0010791
Btg2	1.28826836	0.35804713	0.00032062	0.00108262
Gtf2h2	-1.178907382	0.32779816	0.0003226	0.00108882
Thsd1	1.211888347	0.33704257	0.00032358	0.00109166
Omd	-2.075947631	0.57751724	0.00032488	0.00109558
Bmp8a	5.571203528	1.55004041	0.00032535	0.00109692
Gpr176	2.276119965	0.63337061	0.00032606	0.00109909
Aebp1	1.629883243	0.45371008	0.00032772	0.00110394
Fen1	1.242677416	0.34594268	0.00032796	0.0011043
AABR07034445.1	1.720483428	0.47895166	0.00032792	0.0011043
Ppp1r26	1.212151677	0.33768422	0.00033118	0.0011137
Plxdc1	2.284232249	0.63658131	0.00033287	0.00111911
Xylt1	1.274322697	0.35518484	0.00033351	0.00112105
Mettl16	-1.057610279	0.29483008	0.00033427	0.00112333
AABR07058914.1	1.149835304	0.32062234	0.00033545	0.00112659
Rgs18	-1.648340235	0.45983068	0.00033751	0.00113325
Pdgfa	1.221297831	0.34076964	0.00033845	0.00113617
RGD1564664	1.453728655	0.40574275	0.00033982	0.00114053
Cldn4	2.294888297	0.64059776	0.00034043	0.00114232
Ninl	-1.711870025	0.47787872	0.00034068	0.00114291
Sprr1a	5.803304957	1.62033772	0.00034157	0.00114567
LOC317456	1.065554176	0.29766464	0.00034397	0.00115271
Adam19	1.263211821	0.35296282	0.00034507	0.00115565
Frmf8	1.746087542	0.48797672	0.00034594	0.00115808
Sirt3	-1.151728002	0.32189409	0.00034627	0.00115892
Cd84	1.582810383	0.44243506	0.0003469	0.00116078
LOC297568	-1.931504153	0.54010514	0.00034867	0.00116647
Dclre1c	-1.578851093	0.44155983	0.0003494	0.00116863
Clip3	2.602081141	0.72788364	0.00035042	0.00117179
Dio3	2.258799938	0.63189963	0.00035074	0.00117262
LOC502176	-4.766097214	1.3338445	0.00035264	0.00117873
Ankrd65	-4.152876131	1.1622849	0.00035288	0.00117926
Zcchc3	1.486752625	0.41617197	0.00035366	0.00118162
LOC688655	3.650087834	1.0220128	0.00035498	0.00118554
Ribc1	-1.040075371	0.29127491	0.00035593	0.00118811
Adam28	-1.128131904	0.31593274	0.0003559	0.00118811
Stx1b	-1.840414472	0.51541621	0.00035598	0.00118811
Spred1	1.098468894	0.3077802	0.00035834	0.00119572
Lrrc51	1.519774525	0.42583887	0.00035849	0.00119596
RGD1563365	-1.029053377	0.28838866	0.00035932	0.00119823
Ramp3	3.583672775	1.00462814	0.00036087	0.00120286
Abcg5	-3.219741051	0.90261994	0.00036095	0.00120287
Fbn2	3.093162584	0.86759796	0.00036358	0.00121111
Apoa4	-1.71353991	0.48068951	0.0003642	0.00121267

RGD1309534	-1.524477633	0.42774754	0.00036529	0.00121595
Mpa2l	-2.615904886	0.73432792	0.0003676	0.0012227
Dpf1	4.717455692	1.32470951	0.00036927	0.00122798
Olr59	-1.825061196	0.51273952	0.00037166	0.0012354
AABR07063829.1	2.154567292	0.60543516	0.00037268	0.00123827
Zmym6	-1.295087865	0.3639426	0.00037299	0.00123875
Acyp2	-1.641344286	0.46124048	0.00037292	0.00123875
Ddhd1	-1.545299692	0.4343824	0.00037445	0.00124283
Zfp617	-1.520253606	0.42743202	0.00037552	0.00124611
Rb1cc1	-1.263337942	0.35520424	0.00037561	0.00124614
Neurl3	1.903387546	0.53536865	0.00037757	0.00125211
Tcf19	1.980888488	0.55727794	0.00037858	0.00125521
Tex12	-2.200563077	0.61909153	0.00037869	0.0012553
Zfp503	1.108442925	0.3119841	0.00038103	0.00126225
Ophn1	-1.248854205	0.35152027	0.00038127	0.00126275
Tfdp2	-1.362716047	0.3839402	0.00038627	0.00127905
Ncl	-1.071763887	0.30199535	0.00038678	0.00128045
LOC103690166	-1.552984597	0.43759711	0.00038686	0.00128045
Smim3	1.467628824	0.41376151	0.00038958	0.00128893
AABR07068587.1	-1.201324744	0.33879181	0.00039126	0.00129366
Fcmr	1.440375903	0.40626316	0.00039198	0.00129575
Acot11	2.69004949	0.75885235	0.00039277	0.00129755
Gnat2	-2.426372917	0.68446726	0.00039275	0.00129755
LOC108348085	7.74145588	2.18494182	0.00039546	0.00130588
Slc41a3	1.556054768	0.43933049	0.00039729	0.0013108
Trappc2	-1.217409067	0.34378599	0.00039834	0.00131398
Thbs2	1.140764684	0.32216314	0.00039868	0.00131485
Npff	-5.249893858	1.48284243	0.00039948	0.0013172
Gcnt2	1.223511939	0.34562469	0.00040012	0.00131904
Ccna2	2.967648527	0.83854736	0.00040159	0.00132332
Ivd	-1.377560128	0.389339	0.00040286	0.00132722
Zfp560	-2.162453552	0.61145436	0.00040535	0.00133458
LOC103690175	4.04439885	1.14377228	0.00040621	0.00133683
LOC100910196	2.168193602	0.61319332	0.00040638	0.00133711
Scn5a	1.855621473	0.52503264	0.00040886	0.00134386
Thsd7a	1.635409667	0.4627643	0.00040932	0.00134508
Zfand2a	1.990197353	0.56327929	0.00041051	0.00134842
Gab1	1.134621689	0.32113605	0.00041064	0.00134857
Atp13a5	-1.379008964	0.39084499	0.00041828	0.00137306
Sphk1	2.317880178	0.65696741	0.00041847	0.00137342
Zfand1	-1.131157616	0.32071557	0.00042033	0.00137893
LOC102546648	-1.583972061	0.4494963	0.00042527	0.00139368
Slc3a1	-3.993696363	1.13362003	0.00042676	0.0013981
Ralgds	1.144919902	0.325025	0.0004274	0.00139977
AABR07070796.1	-8.52562877	2.42035087	0.00042754	0.00139992
Mgam	-1.073250866	0.30485262	0.00043064	0.0014095
LOC103690164	-1.271835031	0.36130825	0.00043141	0.00141142
LOC100365810	-5.295013285	1.50438801	0.00043201	0.0014131

Zfp955a	-1.919865277	0.54566075	0.00043412	0.00141939
Arhgap44	2.00001194	0.56846256	0.00043435	0.00141984
Optc	-2.027042608	0.57617641	0.00043466	0.00142045
Pla2g2a	3.93299132	1.11794419	0.00043472	0.00142045
Rn60_12_0107.3	-1.712146303	0.48681224	0.00043636	0.00142552
Apoa5	-1.080388479	0.30728054	0.00043815	0.00143078
Commd6	-1.136033767	0.32310629	0.00043814	0.00143078
AABR07030603.1	1.427069926	0.40615377	0.00044205	0.00144257
Cpne9	4.872910698	1.38766457	0.00044543	0.00145292
LOC100911313	3.268111704	0.93067371	0.00044549	0.00145292
Zfp280d	-1.45453391	0.41423352	0.00044578	0.00145353
Espnl	4.510482202	1.28499359	0.0004479	0.00146016
Ccrl2	1.466009053	0.41775167	0.00044932	0.00146415
Zmym5	-1.369047444	0.390261	0.00045144	0.00147076
Hbegf	1.76627258	0.50351912	0.00045173	0.00147142
Kazn	1.921559785	0.54782712	0.00045216	0.00147251
Rgs4	2.605386094	0.74280108	0.00045231	0.00147269
LOC102546716	2.801228392	0.79873395	0.00045304	0.00147476
Fgf1	-1.006876948	0.28723662	0.00045594	0.00148324
LOC100912427	-1.08656718	0.30998853	0.00045629	0.00148409
Lypd1	2.517404054	0.71897141	0.00046283	0.0015044
Gimap9	-1.696231242	0.48455237	0.00046419	0.00150819
Slc20a1	1.210064961	0.34570264	0.00046472	0.00150931
AABR07024825.1	1.706156521	0.48742335	0.00046463	0.00150931
Kank4	1.469948714	0.42002571	0.00046585	0.00151264
AC080157.1	-2.150797307	0.6149189	0.0004693	0.00152291
Ugp2	-1.296629559	0.37091106	0.00047265	0.00153313
LOC685067	-1.824486161	0.52203263	0.00047412	0.00153671
Apoe	-1.368485044	0.39160037	0.00047478	0.00153844
Ms4a4a	3.001833039	0.85941135	0.00047782	0.00154763
Spib	1.673375707	0.47918515	0.00047919	0.00155176
Sult1c3	-2.39843968	0.6871645	0.0004824	0.00156119
AABR07042859.1	-1.906771489	0.54636424	0.00048315	0.00156329
Csgalnact1	-2.0252932	0.58038258	0.00048377	0.00156498
Cyp2c13	-1.558760876	0.44674114	0.0004845	0.00156701
Gdpd5	1.217053158	0.34906934	0.00048927	0.00158012
Evi5	-1.086818914	0.31181315	0.00049125	0.00158621
Zc3h12c	1.327858014	0.38110516	0.00049356	0.00159265
Rabgap1l	-1.34328582	0.38565091	0.00049552	0.00159867
Hist1h1d	1.772477905	0.50908914	0.00049831	0.00160698
Cdkn1c	-1.221602029	0.35118599	0.00050422	0.00162437
Prpf4b	-1.181741606	0.33989986	0.00050756	0.00163412
Rasgef1b	1.452155734	0.41770995	0.00050806	0.0016354
Map1s	1.405977227	0.40475642	0.00051345	0.00165104
Fam160b1	1.058890321	0.30506702	0.00051851	0.00166592
Gpat2	-1.699145414	0.48959966	0.00051953	0.00166818
Tnfrsf8	3.642441944	1.04971421	0.00052058	0.00167086
Ubap1l	-2.092631375	0.60317162	0.00052166	0.00167364

Fam189a2	3.695903572	1.06537941	0.00052221	0.00167506
Atp8b1	-1.043307626	0.30082544	0.00052406	0.00167915
Edem3	1.062019131	0.30622427	0.00052413	0.00167915
Aurkb	2.507123108	0.72303136	0.00052529	0.00168216
Zfp292	-1.447638987	0.41772575	0.0005292	0.00169258
Ace	1.626183095	0.46928954	0.00052983	0.00169427
Spice1	-1.272470452	0.3672207	0.00052996	0.00169432
Vgf	5.826918457	1.68226131	0.00053272	0.00170175
Tcf7	1.191480415	0.34407212	0.00053443	0.00170686
Ccdc152	-3.723016087	1.07529422	0.00053553	0.00171004
Slc13a4	-1.803899866	0.52130102	0.00053941	0.00172172
Pid1	-1.085000923	0.31357423	0.00053996	0.00172311
Oasl	1.735293894	0.50164122	0.00054172	0.00172801
Xylt1	2.376127814	0.68717103	0.00054452	0.00173625
Cenpc	-1.57538683	0.45581362	0.00054783	0.00174609
AABR07028381.1	5.014809324	1.45145991	0.00055027	0.00175315
Praf2	1.146728254	0.33193611	0.00055098	0.00175431
Pthr1	1.386807225	0.40143674	0.00055109	0.00175432
Chaf1b	2.598930796	0.7528273	0.00055598	0.00176808
LOC100911486	1.478737859	0.42866268	0.00056131	0.00178356
Rfc5	-1.042846961	0.30234814	0.00056233	0.00178646
AABR07007997.1	-1.636497969	0.47470275	0.00056598	0.0017962
Fcrl2	3.864108555	1.12108201	0.00056734	0.00180015
Lef1	3.241683851	0.94062123	0.00056827	0.00180275
Rbm26	-1.0198115	0.29593243	0.00056875	0.00180389
Pms1	-1.688911042	0.49017875	0.00057	0.00180714
Qtrt1	1.008014553	0.29257398	0.00057036	0.00180789
Gen1	-2.008567102	0.58317725	0.0005728	0.00181451
Smoc2	1.312938484	0.38121655	0.00057302	0.00181484
Rn50_X_0744.1	1.021721878	0.2967118	0.00057427	0.00181809
Polr3f	-1.047819127	0.30442913	0.00057761	0.00182828
Camk2d	1.293841349	0.375981	0.00057905	0.00183172
Fam169b	-1.929701672	0.56144818	0.00058818	0.00185871
AC113785.2	-4.268192453	1.24213748	0.00059001	0.00186368
Nupr1	1.815183947	0.52847721	0.00059311	0.00187278
LOC691170	-1.611680156	0.46930221	0.00059429	0.00187613
Abl1	2.40877811	0.70235991	0.00060458	0.00190707
Gimap4	-1.612383351	0.47016343	0.00060489	0.00190727
Dkk3	1.190885163	0.34725181	0.00060479	0.00190727
RGD1309621	-1.387945887	0.40479886	0.00060641	0.00191167
Ing3	-1.354331653	0.39548427	0.00061596	0.00194019
Pot1b	-1.551455955	0.4532399	0.00061926	0.00194981
AC242863.1	-5.333387928	1.55812785	0.00061946	0.00195005
Tnfsf9	2.930850547	0.85646713	0.00062157	0.00195521
Adgb	-2.274601574	0.66478131	0.00062259	0.00195791
Fstl3	1.943621798	0.56822645	0.00062505	0.00196525
Cacna2d1	2.057277863	0.6015159	0.00062585	0.00196738
Slc6a8	1.34866173	0.3944073	0.00062745	0.00197199

Sts	1.046405711	0.30609039	0.0006294	0.00197774
Rnf125	-1.799850505	0.52656945	0.00063067	0.00198133
Bdh1	-1.184418893	0.34655587	0.00063156	0.00198332
Cdh13	1.639693608	0.47978468	0.00063185	0.00198383
Dmtf1	-1.170034125	0.34295712	0.00064582	0.00202605
Slc4a5	2.409997775	0.7065047	0.00064688	0.00202857
Rgs5	1.059352762	0.3105953	0.00064792	0.00203143
LOC100911225	-3.386369562	0.99294472	0.0006486	0.00203315
RGD1559960	-2.695664587	0.79045264	0.00064896	0.00203387
Slc22a18	1.069092795	0.3135854	0.0006514	0.00204111
Zfp263	-1.171499011	0.34365498	0.00065216	0.00204307
Maob	-1.454899756	0.42686227	0.00065355	0.00204701
Usp35	1.781283383	0.52269312	0.00065466	0.00204966
Sfrp1	1.935477198	0.56814165	0.00065758	0.00205767
Trpm6	-2.392061534	0.70229187	0.00065903	0.00206169
Sema7a	2.479548344	0.72808229	0.00066022	0.00206499
Eml1	1.018961444	0.29926798	0.00066201	0.00207019
Rab17	-1.045287524	0.30707389	0.000664	0.002076
Heyl	1.082498056	0.31814753	0.00066772	0.00208634
Mctp2	-1.574603556	0.46294183	0.00067066	0.00209472
Cachd1	1.337055565	0.39322198	0.00067323	0.00210103
Arid3a	2.206890001	0.6493333	0.00067707	0.00211217
LOC100362366	-1.031529327	0.30350469	0.000677	0.00211217
Phldb1	1.180206412	0.34730775	0.00067841	0.00211595
Chchd4	1.961824342	0.57747095	0.00068062	0.0021224
Tmbim1	1.680548849	0.49474975	0.00068187	0.00212574
Mgat3	2.218456442	0.65314901	0.0006824	0.00212625
Trib1	1.284660585	0.37839146	0.00068614	0.00213663
Chtf18	1.585792147	0.46779586	0.00069912	0.00217444
Mt2A	2.841330087	0.83833859	0.00070087	0.002179
Ubtd1	1.08197505	0.31927258	0.0007018	0.00218146
Flvcr2	1.125374282	0.33213965	0.00070338	0.00218595
Padi3	4.622488712	1.36445763	0.0007046	0.00218928
Ptgir	1.094926107	0.32328635	0.00070697	0.00219534
Tuba1c	1.138235708	0.33615118	0.00070898	0.00220115
Dusp5	1.186527129	0.35044842	0.00070987	0.00220302
AABR07066510.1	-1.031636207	0.30474744	0.00071122	0.00220634
Tonsl	1.951889607	0.5766313	0.00071182	0.00220775
RT1-DOa	-1.904410572	0.56286185	0.00071583	0.00221844
Ccl27	-1.543545308	0.45621502	0.00071601	0.00221856
AABR07027902.1	-2.454188965	0.72542531	0.00071672	0.00222029
Rbm25	-1.038454588	0.30707987	0.00072037	0.00222975
Rab12	1.028930509	0.30425926	0.00072024	0.00222975
Ifitm10	2.104600025	0.62248408	0.0007223	0.00223405
Pbld1	-1.118989539	0.3310066	0.00072337	0.0022369
Il7	-1.463224095	0.43297951	0.00072636	0.00224526
Xpa	-1.403781644	0.41539936	0.00072656	0.00224544
Sh3d21	-1.932099702	0.57179304	0.00072745	0.00224773

Rn50_13_0873.1	4.673391004	1.38372221	0.00073173	0.00225962
AC103024.2	1.035712221	0.30669595	0.00073281	0.00226205
Spn	1.367944592	0.4055139	0.00074257	0.0022899
Ghr	-1.030708249	0.30558197	0.00074371	0.00229298
Adamts8	2.550832957	0.75695747	0.00075209	0.00231606
Haus1	5.969789313	1.77199834	0.00075453	0.00232142
Zfp575	2.406703276	0.71437984	0.00075458	0.00232142
Pik3c2g	-1.288079395	0.38246873	0.0007577	0.00233056
Reg4	-1.750773416	0.520237	0.0007645	0.00235009
Cd55	3.406151234	1.0124327	0.00076732	0.00235735
Adgrv1	-1.426413338	0.42405146	0.00076884	0.00236158
Kif12	1.434227981	0.42639548	0.0007693	0.00236252
Tspan17	3.065460566	0.91143416	0.00077006	0.00236439
Bmp7	1.028302669	0.30583204	0.00077293	0.00237132
Rusc2	1.112375838	0.33089784	0.00077467	0.00237573
Akr1c14	-1.179903899	0.35109076	0.00077751	0.00238302
Tbx15	4.503686529	1.34043176	0.00077977	0.00238949
Slc10a6	2.136052213	0.6357818	0.0007802	0.00239033
Lpo	1.686771	0.50234012	0.00078558	0.00240502
Lingo4	-2.543376981	0.75744992	0.00078561	0.00240502
Jmjd1c	-1.088514951	0.32437599	0.00079159	0.00242085
Tex12	-1.57799122	0.47022399	0.00079128	0.00242085
Mmp13	4.044448483	1.20571365	0.00079537	0.00243011
C4a	1.166077809	0.34764892	0.000796	0.00243156
Abcb11	-1.18145959	0.35234117	0.00079892	0.00243952
Mamdc4	-2.998637196	0.89442176	0.00080057	0.00244408
Tnnt1	-1.828836215	0.5458412	0.00080668	0.00246227
Fam25a	3.242829864	0.96853626	0.00081345	0.00248147
Cpt1b	-1.256879705	0.37562545	0.00081957	0.00249788
Uhrf1	2.645315905	0.79123053	0.0008279	0.0025211
Csdc2	3.897376227	1.16592717	0.00082959	0.00252576
Ptn	-1.17405046	0.35124678	0.0008302	0.00252713
Asgr2	-1.022681297	0.30600869	0.00083177	0.00253139
Etaa1	-1.363383031	0.40820098	0.00083784	0.00254889
Sec31b	-1.829362017	0.54803215	0.00084367	0.0025651
Ptgis	1.873161158	0.56138316	0.00084783	0.00257719
Tbx10	-2.693735775	0.80754143	0.00085077	0.00258469
Gas7	1.788978905	0.53646207	0.00085369	0.00259305
LOC100910235	-2.282261913	0.68461277	0.00085713	0.00260096
Gstz1	-1.389975925	0.41722382	0.00086383	0.00261925
Bicc1	1.335107767	0.40091403	0.00086796	0.00262921
Nop58	-1.191840884	0.35798216	0.00087055	0.00263654
LOC679894	-1.740926452	0.52345134	0.00088146	0.00266698
Nkx2-1	-4.620129262	1.38918552	0.00088171	0.00266721
Lepr	2.8615491	0.860633	0.00088439	0.00267429
Gnb4	1.051398113	0.31626918	0.00088616	0.00267913
Ddit4l	3.109098043	0.93548271	0.00088888	0.00268683
Rn50_5_0814.15	-2.459931763	0.74023932	0.00089005	0.00268931

Cd36	1.674067304	0.50396696	0.00089445	0.00270105
Ugt2b35	-1.143494699	0.34445639	0.00090112	0.00271959
Piezo2	1.94578135	0.58622575	0.00090286	0.00272433
Tlr9	1.888241742	0.56896447	0.00090427	0.00272804
Zrsr1	-1.001649163	0.30209769	0.00091431	0.00275622
G6b	4.619401841	1.39332215	0.00091516	0.00275771
Gjc2	1.55882942	0.47024224	0.0009166	0.00276096
LOC257642	2.736950768	0.82578011	0.00091846	0.00276497
Tubb3	2.904922527	0.8767752	0.00092238	0.00277571
Kctd7	1.005793278	0.30380906	0.00093093	0.00280034
Prrg1	-1.487828004	0.44948435	0.0009327	0.00280405
Mtf2	-1.10041537	0.33251716	0.00093513	0.00280973
LOC100362751	5.560382322	1.68073675	0.00093864	0.00281864
Stap1	1.759108981	0.53175017	0.00093915	0.00281919
Zfp605	-1.709371301	0.51671707	0.00093919	0.00281919
Zfp605	-1.709371301	0.51671707	0.00093919	0.00281919
Top1	2.477960446	0.74915966	0.00094081	0.00282298
Ccr8	4.11405163	1.24386672	0.00094143	0.00282429
LOC102552527	-1.685295879	0.50962188	0.00094317	0.00282895
Adamts1	2.679050508	0.81034066	0.00094611	0.0028367
Fam227b	-1.625477784	0.49185151	0.00095039	0.00284789
Fam110c	-1.234990064	0.37373573	0.00095164	0.00285107
Taf1b	-1.407787326	0.42605698	0.0009524	0.0028528
Rad51	2.204833986	0.66736437	0.00095386	0.00285663
Coch	-4.71007748	1.42606536	0.00095708	0.00286572
Adhfe1	-1.495139379	0.45272627	0.00095819	0.00286849
Fam83g	3.080047443	0.9326808	0.00095875	0.00286907
Cyp39a1	-1.256523013	0.38054711	0.00096037	0.00287337
Pcdhgb5	1.305739143	0.39548365	0.00096126	0.00287547
Bag3	1.33383581	0.40422336	0.00096771	0.0028931
AABR07009715.1	1.13333606	0.34348973	0.00096866	0.00289537
Spatc1	2.168906264	0.6576191	0.00097335	0.00290772
Zfp62	-1.373442497	0.41673799	0.00098178	0.00293009
AABR07049574.1	1.267404968	0.38490002	0.00099189	0.00295802
Icam4	-3.845869085	1.16829607	0.00099527	0.00296693
Cilp2	1.852328996	0.56276869	0.0009967	0.00297064
AABR07015674.1	5.108562714	1.55231399	0.00099855	0.0029756
Ccdc71l	2.492876335	0.757642	0.00100077	0.00298164
Tmed8	1.625289723	0.49402251	0.00100219	0.0029853
Stox2	1.175671406	0.35767097	0.00101254	0.00301381
Prkdc	-1.132616064	0.34464987	0.0010152	0.00302115
Ezr	1.222731863	0.37213985	0.00101737	0.00302646
AABR07054264.1	-3.08402699	0.93881031	0.00101969	0.00303277
Adrb1	1.888631397	0.57494902	0.0010203	0.00303402
Mepce	3.232247365	0.98430912	0.00102428	0.00304525
Mro	-1.112654922	0.3388683	0.00102547	0.00304823
Gdf10	1.781437389	0.54302098	0.00103585	0.00307672
Msrb3	-1.162796485	0.35504279	0.00105629	0.00313266

LOC102549115	7.038985205	2.14995601	0.00106032	0.00314267
Rrm2	2.856810143	0.87367522	0.00107594	0.0031867
Gc	-1.083594516	0.33144652	0.00107818	0.00319211
Rn50_5_0815.3	-2.675714626	0.81848067	0.00107881	0.00319337
Zfp51	-1.739090396	0.5321296	0.00108245	0.00320232
C8a	-1.124009934	0.3440688	0.00108764	0.00321583
Dqx1	-1.040329135	0.31854317	0.00109118	0.00322447
H2afj	-1.016868232	0.31140904	0.00109318	0.00322893
Prf1	-1.136957783	0.34830857	0.00109764	0.00324047
Vash2	4.23644965	1.29789717	0.00109817	0.00324053
Hs3st1	1.385260387	0.42439796	0.00109828	0.00324053
Slc4a1	1.663613305	0.50982457	0.00110197	0.00324957
Ppp1r3g	2.668697946	0.81799649	0.00110442	0.00325617
AABR07013802.1	-1.03822162	0.31828638	0.00110664	0.00326211
Rcor1	1.203229561	0.36929955	0.00112145	0.00330389
Ccdc8	2.045402223	0.62783369	0.00112251	0.00330638
Aifm3	-2.213466729	0.67946731	0.00112339	0.00330835
Ifih1	-1.031522168	0.31670886	0.00112595	0.00331463
Dbn1	1.215928528	0.37361632	0.00113598	0.00334038
LOC100361009	3.368684299	1.03529837	0.00113861	0.00334746
Rgn	-1.435466498	0.44121145	0.00114006	0.00335111
Eaf1	1.020606709	0.3137721	0.00114314	0.00335952
Ubxn11	1.886555326	0.58012607	0.00114606	0.00336678
Adamtsl2	1.299951582	0.39980328	0.00114807	0.00337146
Gstp1	1.063988644	0.32734334	0.00115253	0.00338329
Ampd3	1.381773804	0.42561654	0.00116824	0.00342618
AABR07033887.1	1.462619695	0.45058613	0.00117023	0.00343137
Pla2g16	-1.261007252	0.38848637	0.00117059	0.00343179
Shisa4	2.542071374	0.78326646	0.00117255	0.00343558
Klhdc8a	-1.106274362	0.34088439	0.00117324	0.00343696
Rn50_X_0729.6	1.991265263	0.613743	0.00117673	0.00344654
Pibf1	-1.309527351	0.40397342	0.00118853	0.00347784
Tdrp	1.202067726	0.37087544	0.00119043	0.00348273
Zfp78	-1.992240949	0.61470058	0.00119114	0.00348414
AABR07064257.1	-1.673977646	0.51651621	0.00119153	0.00348463
Sult1a1	-1.357826718	0.41898453	0.00119213	0.00348574
Fam109a	1.080788329	0.33357267	0.00119514	0.00349387
Fa2h	4.935749329	1.5235837	0.00119712	0.00349901
Socs3	1.576788613	0.48705158	0.00120617	0.00352349
Gimap8	-1.479516767	0.45713911	0.00121018	0.00353388
Lpar5	1.914672154	0.59174014	0.0012136	0.0035432
Zfp612	-1.50385047	0.46485726	0.00121609	0.00354979
Igsf10	1.208064678	0.37352169	0.0012196	0.00355871
Pcsk5	1.081988536	0.33455644	0.00122027	0.00356001
Nr4a3	2.307419905	0.71368519	0.00122452	0.00357173
Ppm1n	2.496375543	0.77234746	0.00122844	0.0035825
Disp2	2.439853115	0.75494191	0.00122995	0.00358622
Nek11	-1.011165197	0.31297905	0.00123455	0.00359895

LOC102549542	-1.269673791	0.39328425	0.0012449	0.00362575
AABR07050848.1	6.019278449	1.86471898	0.00124667	0.00363022
Pde5a	1.706823491	0.52896879	0.00125227	0.00364515
AABR07007000.1	1.071150019	0.33207062	0.00125678	0.00365693
Synpo2	1.450085556	0.44956593	0.00125742	0.00365811
Ankrd23	-3.80267673	1.17934375	0.00126237	0.00367112
Fign	1.10796884	0.34369643	0.00126553	0.00367894
Cd33	1.274046057	0.39524426	0.00126661	0.00368139
Ppic	1.431033225	0.44401033	0.00126868	0.00368671
Mt1	2.370696673	0.73570586	0.00127147	0.00369345
Tgfbr3l	-3.2490669	1.00847222	0.00127401	0.00370013
Zfp189	-1.300033011	0.40374928	0.00128235	0.00372366
Acad10	-1.212580425	0.37667829	0.00128575	0.00373286
Wfdc21	1.197377185	0.37201764	0.00128817	0.00373847
Rnf122	1.337484839	0.41585494	0.00129887	0.00376743
Slc5a11	4.628684538	1.43952978	0.00130256	0.00377744
Rrm1	-1.057775057	0.32919436	0.00131254	0.00380389
Hilpda	1.295573754	0.40320407	0.00131267	0.00380389
Dpyd	-1.191716603	0.37092702	0.00131445	0.00380694
Olfml2a	1.481679189	0.46143627	0.00132267	0.00382931
Fez1	-2.243267592	0.69891846	0.00132907	0.00384686
LOC102556092	1.010008776	0.315	0.00134418	0.00388653
Plcb4	-1.237905669	0.38638803	0.00135632	0.00391728
Slc35e2b	1.043751344	0.32611736	0.00137171	0.00395512
LOC100359539	2.861117856	0.89409691	0.00137423	0.00396167
Serpind1	-1.104703915	0.34531699	0.00137857	0.00397221
Erbin	-1.015674865	0.31748938	0.00137866	0.00397221
Pir	-1.210590868	0.37844808	0.00137987	0.00397423
AC119015.1	-1.039410742	0.32493243	0.00137976	0.00397423
Ephb2	1.520323403	0.47579195	0.0013966	0.0040187
AABR07045454.1	4.006762114	1.25557252	0.00141691	0.00407265
LOC100911215	1.383295595	0.43356094	0.00142005	0.00408015
Rtn4ip1	-1.192478099	0.37385059	0.00142412	0.00409033
Cmtm4	1.133724376	0.35580397	0.00144068	0.0041341
Brdt	-1.753076137	0.55021637	0.00144176	0.00413643
Nab2	1.447995176	0.45470767	0.00145028	0.00415704
MGC105649	1.462840385	0.45961164	0.00145871	0.0041789
Sprtn	1.005418944	0.3159065	0.00145935	0.00417997
LOC299277	4.819160746	1.51441888	0.00146169	0.00418588
Pik3r1	-1.049773563	0.32990694	0.00146247	0.00418736
Sspo	-2.710333154	0.85237876	0.00147413	0.00421764
Tnfaip3	1.01360525	0.31885951	0.00147863	0.0042274
Gsg2	1.294833787	0.40742288	0.0014824	0.0042374
Rgcc	2.729927295	0.8592164	0.0014869	0.00424714
Frk	-1.127208615	0.3550222	0.00149817	0.00427779
Jakmip1	-4.095120208	1.29017558	0.00150312	0.00429114
Kel	2.488352473	0.78466875	0.00151803	0.00433052
Rbl2	-1.001615988	0.31589289	0.00152048	0.00433672

Orc4	-1.174094644	0.37048206	0.00152912	0.00435975
Ppidl1	-1.753306193	0.55345636	0.00153533	0.00437358
Stra6	3.673203906	1.16001072	0.00154272	0.00439369
Plp1	-1.567988037	0.4954097	0.00155065	0.00441227
Ccbe1	1.785000953	0.56396833	0.00155044	0.00441227
RGD1311946	1.080626643	0.34147175	0.00155288	0.0044178
Acsm3	-2.269173898	0.71766811	0.00156759	0.00445639
Cdc42ep5	1.32806066	0.4201129	0.00157121	0.00446504
Rnase2	5.76691716	1.82660224	0.00159301	0.00452371
Zkscan4	-1.470784339	0.46591631	0.00159535	0.0045295
Rn60_1_0253.2	4.432580907	1.40425104	0.00159651	0.00453197
Zmat1	-1.703540456	0.54009587	0.00160969	0.00456275
LOC103693189	2.828622566	0.89744508	0.00162233	0.00459523
Kat2b	-1.012735632	0.32135418	0.00162455	0.00460068
Amdhd1	-1.293288437	0.41039469	0.0016253	0.00460195
Nptxr	1.687121274	0.53569887	0.00163615	0.00463039
Plpp4	2.154258311	0.68402843	0.00163623	0.00463039
Actg1	1.09375174	0.34728341	0.00163578	0.00463039
Alpk3	3.319607588	1.05410859	0.00163713	0.0046321
Prkar1b	3.905979902	1.24043214	0.00163894	0.00463637
Penk	3.077550469	0.97760804	0.00164368	0.00464726
Htra3	1.821529146	0.57869368	0.00164585	0.00465168
Ranbp2	-1.040932276	0.33078086	0.00165015	0.00466215
Adamts15	1.600468735	0.50873746	0.00165542	0.00467533
Calr3	-1.088111402	0.34608464	0.0016662	0.00470239
Ttc24	-2.809069707	0.89366196	0.0016704	0.00471216
Zfp275	1.013876124	0.32259568	0.001673	0.00471816
Adgrg2	4.856206018	1.54520222	0.00167361	0.00471901
LOC100910418	6.075960617	1.93336275	0.00167403	0.00471934
Fabp2	-2.292145239	0.73027752	0.00169681	0.0047775
Pold1	1.327693478	0.42341659	0.00171464	0.0048217
Crip1	1.081857093	0.34501722	0.00171467	0.0048217
Mcph1	1.002416624	0.3199158	0.00172808	0.00485589
Pcm1	-1.140379536	0.36405891	0.00173381	0.00487025
Cep76	1.025509995	0.32759645	0.00174565	0.00489907
Mutyh	-1.017729097	0.32521983	0.00175189	0.00491483
Lig4	-1.118954219	0.35773935	0.00176091	0.00493658
Hist1h2bo	1.878005951	0.6004582	0.00176227	0.00493949
AABR07013111.1	1.605591431	0.51339965	0.00176377	0.00494192
Zfp385a	1.096570758	0.35063551	0.00176371	0.00494192
Reg3b	5.127053481	1.6396802	0.00176683	0.0049496
Col8a2	1.482554837	0.47426675	0.00177205	0.00496245
Tnfrsf25	-2.718253542	0.86965176	0.00177394	0.00496685
Nlrp12	-1.49019162	0.47679349	0.00177537	0.00496994
Kazald1	1.52525928	0.48808095	0.00177797	0.00497455
Ptprcap	1.024082581	0.32769964	0.00177766	0.00497455
Ccdc66	-1.484950963	0.47536332	0.00178518	0.00499023
AABR07059198.1	-1.646505801	0.5272971	0.00179298	0.00501115

RGD1565767	4.670294782	1.49653395	0.00180397	0.00503823
Asf1b	2.611496687	0.83683533	0.00180433	0.00503834
Fam179a	-2.87180538	0.92033835	0.00180618	0.0050426
Jun	1.414575879	0.45356814	0.00181606	0.00506746
Sorcs2	1.202099441	0.38553573	0.00182084	0.00507899
Nabl	5.219229533	1.67402987	0.00182229	0.00508211
Zfp12	-1.499656187	0.48145775	0.00184055	0.00513027
Cacna1b	4.912953277	1.57838324	0.00185416	0.00516638
LOC288978	-1.480877699	0.47597869	0.00186312	0.00518669
Phf11b	-1.074642308	0.34541859	0.00186373	0.00518745
Syt15	-4.338198143	1.39478026	0.00186891	0.00520097
LOC500877	1.319188517	0.42435447	0.00187916	0.00522574
Nxpe2	1.616411132	0.52007898	0.00188351	0.00523691
Steap1	2.141594303	0.68976791	0.00190405	0.00529024
Dhrs9	1.936914829	0.62394285	0.0019072	0.00529806
Grk3	1.291996526	0.41623813	0.00190934	0.00530303
Doc2g	-3.194093504	1.02923774	0.00191338	0.00531236
Ston2	1.023594215	0.33040382	0.00194825	0.00540533
Pnpla3	-2.086117539	0.67362817	0.00195597	0.00542383
Sema5a	1.300960897	0.42011338	0.00195694	0.00542462
Faah	2.296545504	0.74164663	0.00195787	0.00542622
Tmem158	2.882905713	0.93127872	0.00196387	0.00544188
Khk	-1.12270241	0.36272746	0.00196701	0.00544962
Prodh1	-1.6359058	0.52855812	0.0019679	0.00545013
Rai2	1.160359985	0.37490623	0.00196768	0.00545013
Cxcl12	-1.264525065	0.40870388	0.00197485	0.00546744
Plcd4	4.717199521	1.52510385	0.00198121	0.00548309
Prdm1	1.209738876	0.39124114	0.00198776	0.00549733
Ncr1	-2.534981397	0.82052928	0.0020053	0.00554335
Adap2	-1.260521203	0.40801219	0.00200547	0.00554335
Gcdh	-1.141751716	0.36965439	0.00201034	0.00555483
Krt10	-1.72230992	0.55812607	0.00202951	0.00560084
Rab7b	1.968565336	0.63851626	0.00204904	0.00565073
Zc2hc1a	1.341360037	0.43541646	0.00206558	0.00569333
Mex3b	1.1000361	0.35735269	0.0020819	0.00573223
Unc5d	-1.559522496	0.50684854	0.00209165	0.00575805
Cryab	2.62378704	0.85304552	0.00209947	0.00577754
Lgsn	-2.720222959	0.88461253	0.00210471	0.00579093
Plk1	2.870770214	0.93467666	0.00213054	0.00585786
Padi2	1.94316949	0.6341386	0.00218205	0.00598346
LOC103691699	-1.811964002	0.59143326	0.0021863	0.00599108
AABR07069282.1	2.293262439	0.74877773	0.00219369	0.00601025
Nr2f1	1.00181153	0.32717962	0.00219891	0.00602352
Oxld1	-1.009610696	0.3298544	0.00220764	0.00604422
Cct6b	-2.851351964	0.93170666	0.00221076	0.00605064
Gstm6l	-2.206911075	0.72181701	0.00223237	0.00610551
Odf2l	-1.410221703	0.46126125	0.00223328	0.00610692
Zfp458	-1.918376234	0.62755377	0.0022363	0.00611196

Tmtc1	1.299463336	0.42513076	0.00223848	0.00611683
AABR07045405.1	1.379651256	0.45181348	0.00226124	0.00617145
Lox	-1.476876978	0.48412724	0.00228387	0.00622994
Ryr2	-3.2131248	1.05433002	0.00230714	0.00629011
lyd	-1.248907106	0.41002376	0.00231955	0.00632063
Trim46	2.45245208	0.80530683	0.00232399	0.0063294
Stmn4	5.14308788	1.68961972	0.00233508	0.00635626
Mef2b	2.601819425	0.85516805	0.00234649	0.00638508
Nemf	-1.285529084	0.42261459	0.00235131	0.00639709
Tmem171	2.208590061	0.72627846	0.00235818	0.00641467
Wt1	2.367256427	0.77883894	0.00236996	0.00644194
AABR07011951.1	-2.506453146	0.82476976	0.00237386	0.00644943
Hjulp	3.226917242	1.06211963	0.00238007	0.00646276
Knop1	-1.011209904	0.33283314	0.00238005	0.00646276
Rn60_2_0036.1	3.096447956	1.01932113	0.00238348	0.00646991
Pnpla8	-1.068038298	0.35168001	0.00238977	0.0064836
Pcf11	-1.018783368	0.33582634	0.00241605	0.00655149
Nqo1	1.305493975	0.43056546	0.00242903	0.00658552
Mylk3	-2.481459193	0.81866427	0.00243659	0.00660487
Cpg1	-1.51732875	0.50062495	0.00243851	0.00660893
Parm1	1.76726407	0.58334102	0.00244914	0.00663427
Bhlhe40	1.014286116	0.33508948	0.00247066	0.00668793
Klf1	2.533990213	0.8371737	0.00247125	0.00668836
Ptpru	1.106512916	0.36577265	0.00248519	0.00672142
Ak9	-3.698618747	1.22262464	0.00248513	0.00672142
LOC103694872	-4.732623054	1.56554662	0.00250295	0.00676592
Ift88	-1.200572628	0.39717885	0.00250489	0.00676986
MGC105567	-1.707509239	0.56489476	0.00250528	0.00676986
Dcaf17	1.01844874	0.33696311	0.00250751	0.00677471
Gcgr	-1.028498799	0.34049677	0.00252288	0.00681153
Serpinc1	1.073744497	0.35549287	0.00252409	0.00681343
Slc16a4	-1.388519461	0.45972538	0.00252505	0.00681382
Sdr42e1	-1.117708819	0.37017619	0.00253279	0.00683233
Igsf6	-1.386183406	0.45953364	0.00255711	0.00689437
Dusp26	-3.489954976	1.15702654	0.00255868	0.00689623
Wnt9b	1.311020409	0.43502049	0.00258085	0.00694994
Phlda1	1.759165823	0.58410114	0.00259748	0.00698989
Snai1	1.185322665	0.39364421	0.00260258	0.00700121
AC107446.2	2.949025583	0.97936677	0.00260256	0.00700121
Acox2	-1.420788572	0.47204359	0.00261362	0.00702847
LOC100909657	-1.276071943	0.423991	0.00261534	0.00703188
Trps1	1.71255332	0.56985014	0.00265346	0.00712207
Wtip	1.279011418	0.42567085	0.00265847	0.00713429
Alpk2	-1.708191656	0.56904557	0.00268341	0.00719875
Ppial4d	-1.254939604	0.41818108	0.00269141	0.00721647
LOC688754	-2.586620631	0.8619646	0.00269233	0.00721771
Gbp3	-3.185415526	1.06202617	0.00270533	0.00724883
Icos	1.299398057	0.43332065	0.00271135	0.00726369

Aim2	-3.581275603	1.19447468	0.00271578	0.00727306
Dok5	4.325913653	1.44312487	0.00272113	0.00728488
AABR07025787.1	3.654738187	1.21921621	0.00272103	0.00728488
AC098750.1	5.800889021	1.93557956	0.00272671	0.0072973
Zfp866	-1.836138694	0.61273581	0.00272987	0.00730311
Nrxn1	-2.474071172	0.82578873	0.00273538	0.00731492
AABR07051708.1	3.146425838	1.0502157	0.00273564	0.00731492
AABR07013566.1	-2.143512556	0.71548858	0.00273661	0.00731626
Ttr	-1.136578857	0.3795117	0.00274584	0.00733716
Ttc25	-1.130578393	0.37752398	0.00274697	0.00733893
Palm2	1.186315778	0.39618016	0.00274999	0.00734447
Pou3f1	1.847026079	0.61687417	0.00275193	0.00734712
Rn50_10_0892.1	-2.178893446	0.7278958	0.00275875	0.00736323
AABR07029467.2	-3.503480384	1.17074323	0.00276678	0.00738173
Cacna2d4	-1.279193409	0.42752504	0.00277075	0.00739103
Sost	1.39707886	0.4670594	0.00277862	0.00740951
Rcor2	5.722212276	1.91365243	0.00278791	0.00743299
Dbil5	-2.219684725	0.74247091	0.00279351	0.00744664
Col6a6	1.077684931	0.36049262	0.00279454	0.00744812
Srms	1.445594375	0.48407366	0.00282366	0.007518
Opn3	1.681558759	0.56310973	0.00282467	0.00751942
RGD1304622	2.75490472	0.92261163	0.00282666	0.00752344
Zfp709	-1.131667798	0.37908117	0.00283308	0.00753923
Slc25a22	-1.416625574	0.47456695	0.00283494	0.00754288
AABR07001807.1	-4.847778327	1.62489861	0.00285033	0.00757866
2812a1a2	-4.313251307	1.44611689	0.00285771	0.00759567
Tnn	3.319609844	1.11392657	0.00288157	0.00765126
Clic2	-1.264177995	0.42426303	0.00288528	0.0076598
Mmp10	4.999920568	1.67823126	0.00288927	0.00766852
Mt1m	5.402406968	1.81366569	0.00289453	0.00767782
Cx3cl1	1.5678996	0.52669119	0.00291192	0.00772002
Nefm	3.944523787	1.32570387	0.00292589	0.00775573
C2cd4c	1.816216097	0.61058346	0.00293411	0.00777354
Enpp7	-5.731646713	1.92945518	0.00297215	0.00786363
Tnfaip8l3	1.018009507	0.34272552	0.00297475	0.00786918
Plxnb1	1.035379988	0.34876751	0.0029908	0.00790403
Abca8a	-1.19990365	0.40506029	0.00305366	0.00804919
Trbc2	1.193182958	0.40320624	0.00308402	0.00811959
Gli2	2.090099516	0.7063284	0.00308535	0.00812172
LOC259245	-2.570170349	0.86910296	0.00310378	0.00816473
Krt4	1.74312737	0.58964652	0.00311431	0.00818688
Cchcr1	-1.204473094	0.40744752	0.00311513	0.00818766
AC132740.1	-1.458321214	0.49337259	0.00311838	0.00819482
Sell	1.44001401	0.4872235	0.00312111	0.00819649
Cxcl10	1.408907818	0.47667776	0.00311979	0.00819649
Nsun6	-1.133005951	0.38373648	0.00315148	0.00826786
RGD1565131	4.02250376	1.36280579	0.00316097	0.00828858
Asb1	1.079008934	0.36580707	0.00318117	0.00833732

Faap24	-1.003016966	0.34009216	0.00318546	0.00834715
LOC103691005	-1.904176807	0.64594281	0.00319937	0.00838221
Cyfp2	1.537937935	0.52185253	0.00320797	0.00840189
Aste1	-1.087488897	0.36905974	0.00321239	0.00840924
Afm	-1.199542811	0.40720881	0.00322154	0.00843034
Tmem200b	1.447671093	0.49190309	0.00325048	0.0085018
Rab15	3.232699569	1.09849583	0.00325214	0.00850473
Slc4a7	1.139575195	0.38731694	0.00325859	0.00851871
LOC103690163	-1.466516599	0.49859138	0.00326817	0.00853947
Ptpv	2.073364682	0.70497494	0.00327105	0.00854411
Mug2	-1.402682069	0.47713022	0.00328392	0.00857387
Gadd45g	-2.339866176	0.79622601	0.00329596	0.00860054
Slc25a48	-1.563359366	0.53244271	0.00332258	0.00866564
Aldh6a1	-1.180597899	0.4021757	0.00332981	0.00868304
Prc1	2.343789614	0.79862825	0.00333796	0.00870283
Scube1	4.236995812	1.44385922	0.00334092	0.00870911
Ift80	-1.092054079	0.3721614	0.00334241	0.00871151
Slfn13	-1.136854095	0.38776266	0.00336971	0.00877586
Efcab2	-2.656878251	0.9062888	0.00337218	0.00878031
Kbtbd3	-1.114203223	0.3800951	0.0033746	0.00878512
Ell3	-2.912385222	0.9938897	0.00338646	0.00880863
Tdo2	-1.211996609	0.41362382	0.00338754	0.00880999
AABR07024742.1	3.190266482	1.08887076	0.00339087	0.00881717
Slco4a1	1.982489749	0.67666296	0.00339176	0.00881801
Rhpn1	1.468635489	0.50166824	0.00341695	0.0088758
Nox4	-2.505077865	0.85571663	0.00341741	0.0088758
Racgap1	2.127095496	0.72688277	0.00342992	0.00890236
Tgfb2	1.595089464	0.54510449	0.00343121	0.00890421
LOC365238	-1.387046415	0.47411204	0.00343829	0.00891963
LOC103690020	1.725332432	0.59035614	0.00347202	0.00900263
Cys1	1.37585951	0.47080727	0.00347411	0.00900654
Scn4b	4.364210123	1.49373845	0.00348161	0.00902448
Tnfrsf14	-1.733919145	0.59363324	0.00349067	0.00904648
Plagl1	3.271272641	1.12015683	0.00349616	0.00905918
Hk2	1.127936059	0.38635205	0.00350648	0.00908441
Dnase2b	1.868314655	0.63997566	0.00350759	0.00908578
Ttc14	-1.109014049	0.38019389	0.0035345	0.00914636
Itga8	1.58681391	0.54401471	0.00353576	0.0091481
Cebpe	1.6341072	0.56040414	0.00354614	0.0091719
Runx2	1.610734526	0.55277933	0.00356963	0.00923113
Hist2h3c2	3.408488671	1.17077154	0.00359907	0.00930417
Nudt12	-1.077882308	0.37041179	0.00361479	0.00934325
Kctd15	1.295423913	0.4454576	0.00363662	0.00939655
Ptgs2	2.848405981	0.97955253	0.00363906	0.00939975
Cpne4	-2.820382242	0.96990689	0.00363877	0.00939975
Ttc39a	2.112825704	0.7268203	0.00364979	0.00941965
Cdc20	1.891589538	0.65134066	0.00368254	0.00949789
Ddah2	1.11371761	0.38358767	0.00369107	0.00951829

RGD1564865	-1.877326319	0.64672473	0.00369818	0.00953347
Dr1	1.263672241	0.43535883	0.0037008	0.00953865
Cyp4f18	2.088149011	0.7195215	0.00370628	0.0095512
Mdk	-1.440106252	0.49641265	0.00371942	0.0095819
Plekhb1	-1.443821154	0.4979292	0.00373578	0.00962085
Rab37	3.326479768	1.14723687	0.00373689	0.00962213
Zfp704	1.216101735	0.4195272	0.00374661	0.00964556
Tuft1	-1.401012782	0.48351403	0.00376073	0.00967711
Erich5	2.075701193	0.71657913	0.00377133	0.00970117
Fam174b	-1.148753585	0.39674079	0.00378583	0.00973366
S1pr5	1.568010831	0.54170861	0.00379684	0.00976035
Cntf	-1.418567709	0.49043987	0.00382263	0.00982015
Ttc21a	-1.574970153	0.54459914	0.00382822	0.00982803
Pcp4l1	-3.484318884	1.20552442	0.00384883	0.00987931
Nr1i3	-2.659206532	0.92027951	0.00385776	0.00990062
Ogn	-2.238664596	0.77480833	0.00386083	0.00990686
Kifc1	2.079475334	0.72018979	0.00388441	0.0099608
Ctla4	3.253715914	1.12701381	0.00388905	0.00996776
Mycn	4.020618359	1.39327564	0.00390506	0.01000551
Rn50_5_0814.20	-2.15225521	0.74587491	0.00390737	0.01000814
Rfx2	2.398053241	0.83185179	0.00394171	0.01008615
Cdkn3	2.14390947	0.74443102	0.00397763	0.0101697
Kif14	4.486371018	1.55810118	0.00398453	0.010184
Ank2	2.499136013	0.86801925	0.0039878	0.01018901
Catsperg	-1.071478412	0.37215097	0.00398749	0.01018901
Zfp40	-2.046659219	0.71104791	0.00399736	0.01021175
Frem1	1.50754855	0.52383458	0.0040032	0.01021997
C1s	-1.040703206	0.3616984	0.00401135	0.01023742
Kcnj11	-2.503652119	0.87017073	0.00401226	0.01023806
Psrc1	4.37541074	1.52093605	0.00401745	0.01024628
Klf7	1.228192222	0.42695503	0.00401945	0.01024969
AC131360.1	2.450480581	0.85194528	0.00402322	0.01025762
Eva1c	1.26918137	0.4416198	0.00405408	0.01032954
Zfp772	-1.348879236	0.46944432	0.0040614	0.01034651
Slc47a1	4.493113883	1.56381532	0.0040637	0.01035067
P3h4	1.471655704	0.51221554	0.00406442	0.01035082
Nek2	3.371124865	1.17392287	0.00408303	0.0103914
Ddit3	1.242525088	0.43282579	0.00409528	0.01041747
Rn50_5_0814.8	-3.091047728	1.07785158	0.00413355	0.01050462
Amacr	-1.175919907	0.41010254	0.00413885	0.0105163
Ulk4	3.069416327	1.07125931	0.00416692	0.01058069
Tlcd2	-1.485047035	0.51844526	0.00417768	0.01060631
Pcdh20	3.804186854	1.32859755	0.0041924	0.01063846
LOC100909688	-1.820994254	0.63630108	0.00421185	0.01067911
Spata6	1.016347878	0.35525758	0.00422472	0.01070653
Ager	-2.94641901	1.03125744	0.00427514	0.01081493
Ankrd42	-1.138155525	0.39856588	0.00429519	0.01086214
Dok4	1.001174946	0.35064722	0.0043007	0.01087254

AABR07014550.1	-1.941177154	0.6802125	0.00432024	0.01092015
AABR07038021.1	-1.961732063	0.68747001	0.00432333	0.0109262
LOC100362987	7.172848063	2.51440982	0.004335	0.01094858
Asic5	-4.330774694	1.51859172	0.00434675	0.0109747
Cyp3a23/3a1	-1.393802581	0.4891905	0.0043829	0.01105462
Matn4	2.889033877	1.01422148	0.00439226	0.01107165
Prss39	-3.675884438	1.29068609	0.00439938	0.01108601
Calml3	3.786607471	1.32976798	0.00440544	0.01109948
Rtnn	2.572845201	0.90439511	0.00444359	0.01119018
Gsta2	-1.837090688	0.64596369	0.00445576	0.01121537
Lama3	-1.076354462	0.37889425	0.00450036	0.01132033
LOC102552659	5.65742153	1.99281701	0.00452684	0.01137958
AABR07049353.1	6.082565689	2.14360146	0.00454619	0.01142085
Gadd45b	1.161110244	0.40923151	0.00454976	0.01142614
Slamf6	1.549773916	0.54632983	0.00455824	0.01144373
Bhmt2	-1.096927096	0.38678861	0.00456844	0.0114675
Ttc30b	-1.096594224	0.38682795	0.00458491	0.01150141
AABR07054362.1	1.109106905	0.39135167	0.00459633	0.01152636
Clspn	2.679050602	0.94684188	0.00466267	0.01167017
LOC102551340	-1.2884527	0.45592939	0.00471345	0.01178967
AABR07021804.1	-3.530939517	1.24956241	0.00471714	0.01179513
Il15	-1.450925684	0.51361976	0.0047295	0.01182034
Tceal9	1.263855324	0.44785003	0.00477177	0.01191259
Sla	1.110440431	0.39366012	0.00479026	0.011953
Zfc3h1	-1.048616215	0.37193962	0.00481258	0.01200484
Atp10a	1.564253521	0.55492988	0.00481989	0.01202116
Nrcam	-1.937120936	0.68736176	0.00482942	0.01204106
Me3	-1.465033227	0.52006307	0.004847	0.01208104
Bmp4	-2.214145036	0.78614985	0.00485589	0.01209932
Pcdhga2	2.617922006	0.93017962	0.00488644	0.01217154
Car12	-3.800435437	1.35044085	0.0048896	0.01217638
M6pr	2.669432592	0.9485596	0.00488994	0.01217638
Fam217a	-3.075229499	1.09291975	0.00489636	0.01219041
Prrg4	1.276141651	0.45359169	0.00490184	0.01220209
Zfp112	-1.36222138	0.4842313	0.00490568	0.01220777
Plekhn1	-2.385986809	0.84844072	0.00492036	0.01223842
Gabbr2	1.80905543	0.64350066	0.0049346	0.01226082
Bok	1.017931636	0.36209162	0.00493488	0.01226082
Cyp1b1	2.606044093	0.92695872	0.00493277	0.01226082
Hoxb5	1.109823537	0.39510952	0.00497109	0.01233702
Rn50_14_0447.1	-3.324294692	1.18375604	0.004981	0.01235767
Plxdc2	1.046732883	0.37284242	0.00499369	0.01238127
Tpm2	-1.534833081	0.54684431	0.00500504	0.01240347
Col11a2	-2.237058481	0.79756161	0.00503365	0.01246844
LOC688286	-1.186274017	0.42375008	0.00511872	0.01266205
Hes6	-1.557060808	0.55624743	0.00512257	0.01266853
Ntf4	2.1389894	0.76419116	0.00512573	0.01267435
Gfpt2	1.310535732	0.46834145	0.00513806	0.01270079

AABR07002870.1	-1.153513322	0.41256314	0.00517445	0.01278061
Creb3l4	-3.997314296	1.42979802	0.00517843	0.01278638
LOC100909840	1.700129835	0.60829941	0.00519174	0.01281721
Serpina4	-1.288392833	0.46133065	0.0052258	0.01288937
Spata1	-2.112128762	0.75671932	0.00525186	0.0129499
Mtmt1	1.109443133	0.39790229	0.00529969	0.013063
Ston1	1.338668527	0.48024213	0.00531186	0.01308887
Fam126b	-1.043436343	0.37447785	0.00533009	0.01312755
Hmgn3	-1.122513216	0.40342581	0.00539497	0.01326846
Mab21l3	-1.055089844	0.37929581	0.00540738	0.01329478
Fam210b	-1.09137832	0.39242366	0.00541713	0.01331664
Pik3c2a	-1.030597017	0.37078743	0.00544457	0.01337776
Dpf3	-1.026700362	0.36940239	0.0054467	0.01337877
Gnrh1	-3.437382951	1.23696476	0.00545458	0.0133918
AC111632.2	-1.924847812	0.69264504	0.00545296	0.0133918
Ccl12	2.426865357	0.87354835	0.00546661	0.01341922
AABR07033851.1	2.274481137	0.81911254	0.00549032	0.01347318
Card9	-1.233009304	0.4441917	0.00550577	0.01350896
Cyp3a85-ps	-1.98324328	0.71453441	0.00551043	0.01351614
Car1	-2.508730354	0.90413438	0.00552473	0.01354267
Kbtbd6	1.144083658	0.41251459	0.00554674	0.01359449
Igip	-2.320195314	0.83749931	0.00559901	0.01371612
Slco1b2	-1.438310572	0.51964554	0.00564242	0.01380726
LOC100912485	-1.043136643	0.37698914	0.00565712	0.01383671
Grtp1	-1.052716384	0.3805706	0.0056722	0.01386923
Celsr1	1.576445657	0.57003314	0.00568298	0.01388905
Slc23a1	-1.0456406	0.37808742	0.00568172	0.01388905
Lcor	1.065018577	0.38520102	0.0056951	0.01391212
LOC367746	-3.126513139	1.13250041	0.00576746	0.01407344
Hnf4g	-1.094040186	0.39646215	0.00578886	0.01412123
Ly6g6f	2.321264859	0.84132851	0.00579702	0.01413671
Csrp3	4.835773613	1.75365274	0.00582375	0.01419744
Rbm12b	-2.230809854	0.80954927	0.00585811	0.0142745
S100a6	1.595116149	0.57932643	0.00589802	0.014365
Prss35	3.659046507	1.32901621	0.0059016	0.01437147
Ndnf	2.135015703	0.77563969	0.00591264	0.01439612
Traf3ip3	-1.551657899	0.56373597	0.00591503	0.01439967
Aqp7	2.688456782	0.97894196	0.00602738	0.01464343
Galnt6	1.242649364	0.45266793	0.006048	0.01468665
RGD1566138	-3.670521579	1.33779111	0.00607477	0.01474476
Sox11	5.726099657	2.08712689	0.00607821	0.01475081
Rarres2	-1.03327558	0.37665149	0.00608214	0.01475345
AC108588.1	-1.966084622	0.71666424	0.00608097	0.01475345
A2ml1	-1.909518961	0.69629708	0.00609937	0.01478833
Zfp70911	-2.158487999	0.78722852	0.00610882	0.01480434
Tgfb3	1.035343531	0.37782879	0.00613934	0.01487366
Ptgr1	-1.041267682	0.38038027	0.00619197	0.01498717
LOC501038	-1.342236268	0.49035028	0.00619456	0.01499113

Sgo1	1.197191809	0.43737451	0.00619602	0.01499232
AABR07009572.1	4.81367416	1.75928313	0.00621614	0.01503635
Acot6	4.309382693	1.57547955	0.00623266	0.01506695
Tma16	-1.165626277	0.42623293	0.0062434	0.01508822
Gfra1	-1.25173622	0.45787087	0.00626044	0.01512705
Cxcl2	4.128184785	1.51158807	0.00631377	0.01524821
Col6a5	1.994210548	0.73056262	0.00633936	0.0153035
Ahnak	1.038229633	0.38062243	0.00637746	0.0153869
RGD1562690	-1.161513577	0.42598284	0.00639775	0.0154277
Apoc1	-1.166697586	0.42791014	0.00640097	0.01543308
Plk4	2.73940799	1.0058598	0.00646042	0.01556196
RGD1562161	-1.507470469	0.55367968	0.00647626	0.01559288
Ppp1r3b	-1.366246874	0.50215447	0.006513	0.01567245
Lrrc52	3.529728694	1.29786571	0.00653528	0.01571799
Ak7	-1.422417828	0.52303574	0.00653723	0.01572025
AABR07035561.2	3.460191186	1.2723794	0.00653876	0.0157215
Eps8	1.052286841	0.38715085	0.00656723	0.01578263
Akr1c1	-2.252872724	0.82915956	0.00658655	0.01582419
Srcin1	-1.235624628	0.45487532	0.00659956	0.01585298
Mkrr2os	-2.577805725	0.94903381	0.00660276	0.01585678
LOC103689949	1.724115117	0.6351404	0.00663675	0.01592514
Stil	2.015051523	0.74261682	0.00665872	0.015968
Plekhg1	1.16490601	0.42943074	0.00667425	0.01600033
Arsi	2.775412148	1.02404325	0.00672327	0.0161104
Bcl7a	1.090570078	0.40243823	0.00673021	0.01612455
RGD1561520	3.963735856	1.46291464	0.00673891	0.0161429
Ubald1	1.574652556	0.58155034	0.00677552	0.01622063
Stk39	1.618536515	0.5983072	0.00682647	0.01631751
Pla2g4c	-3.117151922	1.15442442	0.00693023	0.01655537
Scara5	1.71454848	0.63510807	0.00694194	0.01657317
Krt80	3.085628521	1.14314852	0.00694987	0.01658703
Arc	1.743535936	0.6460887	0.00696315	0.01661617
Tigit	3.921465389	1.45488391	0.00703083	0.01676227
Glyat	-1.250196303	0.46390838	0.00704054	0.01678027
Tpd52l1	-1.58910646	0.59004917	0.00707748	0.01685543
Bst1	1.266497347	0.47029159	0.00708113	0.01686154
Gpr18	1.993742984	0.74049085	0.00709268	0.01688645
Zfp296	2.283589464	0.84831477	0.00710435	0.01691165
Ebna1bp2	-2.867874945	1.06588178	0.0071321	0.01696474
Cenpa	1.398676838	0.51995386	0.00714516	0.01699322
Gas6	1.086531686	0.40410309	0.00717204	0.01704933
Slc45a3	-1.091495406	0.40603202	0.00718383	0.01707475
Ptbp2	-1.151058195	0.42827678	0.00719567	0.01709768
Hhat	1.274919632	0.47440142	0.00720046	0.01710565
Lrrc4b	1.516987515	0.56449681	0.00720264	0.01710641
Ccdc62	-1.357931245	0.50561488	0.00723775	0.01718454
Smpd13b	1.559134068	0.58054656	0.00723929	0.01718559
Ticrr	2.788384144	1.03881608	0.00727049	0.0172465

LOC108348215	-2.316348541	0.86301633	0.00727439	0.01725313
AABR07051532.1	2.974767616	1.10872904	0.00729556	0.01729808
LOC100912228	1.227698384	0.45761565	0.00730052	0.01730721
Eif5b	-1.244725886	0.46398523	0.00730339	0.01731137
Nrarp	1.05248393	0.39247145	0.00732529	0.01735799
AABR07068285.2	2.411658002	0.89978234	0.00735632	0.01742887
Nrep	-1.24927819	0.46614045	0.00736119	0.0174351
F2rl2	2.196268133	0.81986042	0.00738795	0.01748785
RGD1562963	-1.576822559	0.58896467	0.00742229	0.01754779
Cyp4f37	6.065134168	2.2656367	0.00742822	0.01755915
Mfge8	1.321074815	0.49364656	0.00744721	0.01759505
Ccdc14	-1.022241122	0.38218788	0.00747943	0.01765875
Cmc1	-1.051523639	0.39341853	0.00752242	0.01775486
Tshz3	1.215110474	0.45477374	0.00754229	0.01779607
Arnt2	2.299845244	0.86119577	0.00757326	0.01786134
Lamb3	-1.187477888	0.44467411	0.00757507	0.0178629
Gnat1	1.277019691	0.47830423	0.00758761	0.01788705
Upb1	-1.145894917	0.4292296	0.00759292	0.01789416
Dpt	-1.24370767	0.46599841	0.00760979	0.0179312
RGD1309362	-2.566025211	0.96180845	0.00763231	0.01798154
RGD1305928	-3.83030038	1.43698081	0.00768695	0.01809931
Wnt7b	2.538343138	0.95238497	0.00769313	0.01810566
Nemp1	1.209682881	0.45454263	0.00778352	0.01830455
AABR07051626.2	1.672113423	0.6284582	0.00779877	0.01833765
AABR07027752.2	2.083861911	0.78337588	0.00781164	0.01836513
Sall1	1.002043596	0.37685411	0.00783801	0.01842156
Boc	1.398014776	0.5258725	0.0078497	0.01844348
Gdf1	1.436053938	0.54027709	0.0078607	0.01846085
LOC100361547	1.519103691	0.5715328	0.00786183	0.01846085
Chst9	-1.58995259	0.59821601	0.00786471	0.01846481
Zfp35	-1.084162473	0.4081081	0.00789431	0.01852593
Tppp	-1.290388322	0.48604917	0.00793434	0.01860584
AABR07048397.1	-2.123483349	0.8002223	0.00796342	0.01866561
AABR07061134.1	2.511448048	0.94722943	0.00801679	0.0187794
Fasn	1.222461118	0.46128347	0.00804608	0.01884235
LOC103690319	-3.854058114	1.45442432	0.0080519	0.01885315
Cdkn2b	1.236316358	0.46665319	0.00806525	0.01887873
Rp1	-2.842528509	1.07363071	0.0081069	0.01897051
Ly6h	2.81812581	1.06485405	0.00813319	0.01902345
NEWGENE_2319083	-1.594428164	0.60251222	0.00813776	0.01903128
Pde8b	-1.717270656	0.64905386	0.00814965	0.01905623
AC120727.1	-2.483836113	0.93940324	0.00819188	0.0191406
AABR07057495.1	1.264995091	0.47844306	0.00819369	0.01914196
Mtmr7	-2.014912163	0.76219304	0.00820363	0.01916232
Cfhr1	-1.134965981	0.42947871	0.00822577	0.01920539
RT1-S2	1.562561333	0.59148464	0.00824761	0.01925349
AABR07065815.2	-3.504568019	1.32788636	0.00831	0.01937881
Dpysl5	1.349335182	0.51134789	0.00832047	0.0194003

Frm4a	1.079178224	0.409043	0.00833228	0.01942494
Slc25a21	-1.140673788	0.43248297	0.00835196	0.01946792
Efna2	2.123425022	0.8051438	0.0083563	0.0194751
RGD1309139	-1.41948759	0.53838268	0.00837471	0.01951217
Hexim2	-1.01301982	0.38476626	0.00846795	0.01971084
AABR07062799.2	1.447996036	0.55003633	0.00847475	0.01972165
Cabp2	-1.212028819	0.46044123	0.00848039	0.01973182
Klri1	-2.210255795	0.83974184	0.00848674	0.01974071
AABR07041586.1	-2.148835137	0.81655006	0.00849832	0.01976174
Hsd17b6	-1.091022644	0.41459438	0.00849983	0.01976229
Clec1a	-1.395231522	0.53038495	0.00852339	0.01981115
Hist2h4a	3.172102371	1.20601001	0.00853232	0.01982896
Ano2	3.3262675	1.26487258	0.00854539	0.01985636
Kcnj5	-1.92084517	0.73054343	0.00855514	0.01987277
Plekhs1	-1.427826665	0.54329681	0.00858687	0.0199349
AABR07046778.1	-3.107966665	1.18311489	0.00861576	0.019999
AABR07001926.3	-2.642112954	1.00606539	0.00863481	0.02003127
Miox	1.204855721	0.45904806	0.00867296	0.02010779
Cd52	2.042681644	0.77829009	0.00867569	0.02011031
Atp8a1	1.887023823	0.71899245	0.00867663	0.02011031
Nol4l	1.542640364	0.58821071	0.00872621	0.02021019
Adgrl3	1.033569458	0.39430137	0.00876034	0.02028019
Rn60_1_0855.4	-4.003933586	1.52850988	0.00880584	0.02037341
Tex13b	-4.850974265	1.85308967	0.00885048	0.0204706
Ildr2	1.087961605	0.41578863	0.00888047	0.02052167
Spred3	-1.750387301	0.66901799	0.00888746	0.02053478
Slc7a6	1.253827037	0.47942785	0.00891603	0.02059164
Smarca1	-1.64382402	0.62915008	0.00898119	0.02073596
Cxcl6	-3.305582495	1.26534167	0.00899082	0.02075204
Ybx2	2.495169209	0.95510924	0.00898975	0.02075204
Crb2	3.914146874	1.49867062	0.00900812	0.02077965
Ncs1	1.783044623	0.68299876	0.00903804	0.02083942
Pnoc	1.529029663	0.58617109	0.00909389	0.02095579
Car6	-1.340722715	0.51425255	0.0091305	0.02103391
Fst	2.475999324	0.95009452	0.00915915	0.02108745
Mcm2dc2	-1.385588046	0.53169865	0.00916158	0.02108992
Snca	2.534149396	0.97254358	0.00916888	0.02110048
Apoa2	-1.371242994	0.52642974	0.00919285	0.02114627
Igfbp2	1.723225578	0.66170711	0.00920858	0.02117307
Pkp1	3.475146104	1.33459139	0.00921689	0.02118906
Znf354b	-1.786796189	0.68630812	0.009228	0.02120207
Tagap	1.26068371	0.48480495	0.00931169	0.02137543
Cyp2r1	-1.035531445	0.39826785	0.00931999	0.02139133
RGD1561145	-1.628325546	0.62645664	0.00934242	0.02143965
Grin2c	2.793775519	1.07571839	0.00940076	0.02154814
Bhmt	-1.790662675	0.68998649	0.0094532	0.02166196
Pdlim3	1.539079718	0.5936759	0.00952929	0.02182063
Haus4	1.097861578	0.42348387	0.00952945	0.02182063

Pcdhgb7	1.359712696	0.52461548	0.00954677	0.02185708
Trpc6	-4.164494208	1.60730766	0.00957044	0.02190483
Angpt2	-1.839936382	0.71025524	0.00958287	0.02192361
Aspn	4.533077063	1.75009777	0.00959244	0.02193905
Hamp	-1.045623113	0.40368447	0.00959205	0.02193905
Ggt7	1.362238368	0.52626865	0.00963992	0.02203471
Fbxo32	1.116014453	0.43120912	0.00965056	0.02205579
Slc1a6	2.286272472	0.88356349	0.00966587	0.02207782
Adora2b	-1.836481551	0.70984906	0.00967752	0.02210119
S1pr4	1.184859536	0.45811688	0.00969929	0.02214201
RGD1560289	-3.222476816	1.24631524	0.00972087	0.02218393
Cer1	-3.828632372	1.48118647	0.00974237	0.02222974
Far1	1.50355278	0.58188526	0.00976806	0.0222851
Mcm3	1.580572898	0.61184587	0.00978641	0.02231715
Ms4a6e	-7.163996714	2.77318818	0.00978582	0.02231715
RGD1566325	-1.134530976	0.43977559	0.00988589	0.02252092
Gtse1	1.487398274	0.57721924	0.00997098	0.02269483
AC098750.3	-1.901847789	0.73811307	0.00997673	0.02270129
Nmt2	1.178913775	0.4577619	0.01001282	0.02277674
LOC680200	-1.05126124	0.40832276	0.01003607	0.02282298
Syt2	-2.372971098	0.9221495	0.01007327	0.02289905
AABR07053500.1	1.303512124	0.50655645	0.01007394	0.02289905
Cav1	1.022357612	0.39733229	0.01008053	0.02291071
LOC499136	-1.316452178	0.51210636	0.01015044	0.02305277
Mki67	2.207609819	0.85876828	0.0101502	0.02305277
Rn60_20_0054.3	-1.781403137	0.69302245	0.01015565	0.02306124
Agbl1	-3.394426365	1.32190123	0.01023354	0.02321592
Klhl23	1.017923159	0.39648756	0.01024785	0.02323707
Fzd3	1.179315764	0.45935194	0.010248	0.02323707
Pappa2	3.72052362	1.44998061	0.01029047	0.02332997
LOC100360143	-2.038631271	0.79515941	0.01035326	0.02346548
LOC108348055	-1.922565242	0.74996451	0.01036103	0.02347967
Cyp27b1	3.538986667	1.38055426	0.01036366	0.02348221
Fbxo10	1.4111110599	0.55067087	0.01039126	0.02352453
Efhc1	-1.357155797	0.52961716	0.01039149	0.02352453
AABR07028795.1	1.753447448	0.68427887	0.01039291	0.02352453
Abl2	1.219928251	0.47621071	0.01041491	0.02356748
Tubb2b	1.090174477	0.42609146	0.0105111	0.02376788
Pacsin1	1.677596567	0.65578352	0.01052289	0.02378762
Krt76	-2.848848651	1.11371417	0.01052848	0.02379337
Gck	-1.926351753	0.75306713	0.01052737	0.02379337
Pdzd3	-3.073038252	1.20170015	0.01055058	0.02383983
AC094246.1	3.55804123	1.39161581	0.01056491	0.02385843
Rn50_X_0631.1	2.652556862	1.03746439	0.01056493	0.02385843
Enox1	-1.963752026	0.76833215	0.01059247	0.02390328
Cacnb2	-1.697544223	0.66460202	0.01064239	0.02400203
Gins3	-1.42433203	0.55767648	0.01064788	0.02401093
AC096601.1	1.077173647	0.4217837	0.01065382	0.02401735

Slc16a9	1.704806289	0.66759309	0.0106597	0.0240202
Mipol1	-1.32126619	0.51781612	0.01072256	0.02413739
Ret	1.785742626	0.70006513	0.01074687	0.02418163
LOC103690035	6.826787823	2.67684593	0.01076271	0.02421376
AABR07009834.1	1.834657356	0.71943831	0.01076844	0.02422316
Bche	-1.290467247	0.50677503	0.0108831	0.02444224
Hrc	-1.493485525	0.58672798	0.01091376	0.02449345
Rn50_X_0604.1	3.518035088	1.38213874	0.01091664	0.02449637
AABR07059925.1	1.607114372	0.63180115	0.01096844	0.02459842
Hist2h3c2	2.751153973	1.0816777	0.01097751	0.02460815
Ust5r	-1.242083914	0.48858799	0.011016	0.02468732
Zfp39	-1.741412245	0.68559876	0.01108564	0.02483267
Klkb1	-1.118275162	0.44058863	0.01114437	0.02493912
Tnfrsf18	1.626222212	0.64070388	0.01114304	0.02493912
Lmo3	-1.444803676	0.56941847	0.0111701	0.02499309
Slc2a13	1.334446536	0.52607302	0.01119289	0.02503329
Twist2	1.569997781	0.61931857	0.01124343	0.02512167
AABR07027088.1	1.292765151	0.5099719	0.01124559	0.0251223
Cbs	-1.033932365	0.40800069	0.01127225	0.02517825
Prss56	4.011650976	1.58364021	0.01130318	0.02523648
Lrrc75a	1.212162377	0.47854985	0.01130939	0.02524673
AABR07045047.1	-1.883393519	0.74381556	0.01133912	0.02530582
Zscan30	-1.436744528	0.56777195	0.01139015	0.02540515
Myom1	-1.336848499	0.528474	0.01141799	0.02546361
Mnda	-1.015663393	0.40151988	0.01142099	0.02546665
Igh-6	-1.916192929	0.75793649	0.01146585	0.02555571
LOC103690006	-1.149714164	0.45495786	0.01150158	0.02563168
Bbof1	-1.624366378	0.64284602	0.01150953	0.02564185
Zfp192	-1.33237578	0.52729434	0.01151018	0.02564185
LOC654482	1.898369699	0.75154523	0.01153841	0.02569537
RT1-DMa	-3.982353342	1.57714077	0.01156831	0.02575089
AABR07041604.1	3.49129	1.38275137	0.01157357	0.02575893
Fam102b	1.561226035	0.61835871	0.01157674	0.02576229
Taf1d	-1.294105545	0.51279131	0.01161437	0.02584234
Igf2bp3	-1.014454734	0.40206982	0.01163316	0.02587319
Bcl11b	1.894194198	0.750821	0.01164145	0.0258841
Sstr3	-1.759413109	0.6975407	0.01165873	0.02591513
Col15a1	2.657547148	1.05365234	0.01166154	0.02591769
Stk10	1.063171476	0.42156753	0.01167069	0.02592691
Art2b	-2.775865278	1.10066475	0.01166931	0.02592691
Znf750	-1.208939399	0.47946567	0.01168787	0.02595768
Lrrc73	2.5342892	1.00536427	0.01170993	0.02600296
Skida1	-1.257950378	0.49913247	0.01172637	0.02603574
Abca9	-1.158690292	0.4601516	0.01180025	0.02618859
Clec5a	2.627532795	1.04377337	0.01182446	0.02623483
Prim1	-1.052305264	0.41816019	0.01185228	0.0262928
Clybl	-1.185467831	0.4715153	0.01193142	0.02645707
F2rl3	1.790600421	0.71235119	0.01194895	0.02648463

Rasl11a	-1.049623231	0.41769184	0.01197389	0.02653613
Wnt2	1.16678865	0.46436241	0.0119822	0.02655076
Htr7	1.737507804	0.69191065	0.01203305	0.02664827
LOC100910833	5.246761085	2.09002905	0.01206023	0.02670467
Hist1h2ah	4.174014838	1.66303379	0.01207723	0.02673471
Hist1h2ah	4.174014838	1.66303379	0.01207723	0.02673471
Bhlhb9	-1.116815365	0.44585523	0.01224918	0.02709224
Zfp951	-3.284625064	1.31232116	0.0123176	0.02723196
Lilrb4	1.433331659	0.5726987	0.01232265	0.02723926
Lpl	1.441489274	0.57602489	0.01233275	0.02725385
Zfp367	1.367927727	0.54678353	0.01235735	0.02729659
Gprc5d	2.53197629	1.01235334	0.01238153	0.02734226
Fhdc1	1.677360327	0.6707303	0.01239142	0.02736021
Top2a	2.278329497	0.91126417	0.01241283	0.02739971
Mip	-1.368658218	0.54752322	0.01242893	0.02743136
Gata1	3.744177378	1.49789123	0.01243223	0.02743475
Aass	-1.078942587	0.43183803	0.0124724	0.02750897
Exo1	2.62116145	1.04910488	0.01247292	0.02750897
Akap17b	-1.114845116	0.44674357	0.01257825	0.02771772
Acot2	1.153752312	0.46235362	0.0125819	0.02772183
Mcpt1l4	-3.276736943	1.31319877	0.01258744	0.02772929
Ppp4r4	-1.426526486	0.57177405	0.0125988	0.02774338
Clec2d	-1.144253752	0.45865441	0.0126026	0.02774782
Rpp25	1.091679268	0.43775206	0.0126373	0.02782028
Ammecr1	1.207393466	0.48422026	0.01264978	0.02784381
Grap2	2.137104777	0.85722145	0.01266473	0.02786886
Dnah1	-1.196181271	0.47993117	0.01268824	0.02791311
Slc24a3	2.251232746	0.90324018	0.01268843	0.02791311
Eif5a2	-2.613296542	1.04863176	0.01269898	0.02792844
Gjb3	4.441186247	1.78286576	0.01273705	0.02799239
Fam81a	-2.69553804	1.08248092	0.01276898	0.02805464
Uchl1	3.090227816	1.2422635	0.01286161	0.02823029
Foxp2	-3.789591124	1.52435353	0.01291765	0.02834529
Tacr1	2.475984337	0.99674464	0.01298899	0.02846976
Prdm5	-2.684080004	1.08054641	0.01299149	0.02847121
Pcp4	-4.186641001	1.68583917	0.01301288	0.02851007
Bag5l1	-1.719823257	0.69255374	0.0130169	0.02851389
Pax8	1.325264776	0.53401096	0.01307506	0.02861969
Hcar2	1.818230432	0.73273575	0.01308574	0.02862943
Hmcn1	1.47276618	0.593509	0.0130847	0.02862943
Neu2	1.171083759	0.47198083	0.01309371	0.02863584
Slc5a9	2.687934619	1.08512765	0.01324668	0.02894087
Ppef2	3.705085635	1.49647193	0.01329081	0.02902506
AABR07021930.1	-1.652365694	0.66740041	0.01329292	0.02902562
AABR07061825.1	-1.031598538	0.41680276	0.01332257	0.0290822
AABR07065673.1	-4.088858402	1.65268674	0.01335845	0.02915643
Upk1b	3.195505247	1.29200749	0.01338766	0.02920791
Ace2	-2.321872213	0.93924362	0.01343347	0.02929554

Erc2	1.674181309	0.67743389	0.01346012	0.02934543
Peg12	1.058446335	0.42862516	0.01353404	0.02949008
XAF1	-1.005700666	0.40729872	0.01354168	0.02950259
Apon	-1.27660594	0.51726025	0.01358647	0.02958777
Pcdh17	1.882454184	0.76310105	0.01363083	0.02967606
Fgl1	-1.180164165	0.47882499	0.01371246	0.02984128
LOC103694864	1.259344207	0.51107988	0.01373636	0.02988075
Stambpl1	-1.094658664	0.4442686	0.01374127	0.02988725
Nfe2	-1.061152391	0.43089351	0.01379033	0.02997723
Dzf17	-1.173414868	0.47652264	0.013799	0.02999189
Uroc1	-1.113792101	0.45266836	0.01387422	0.03012594
Ikzf3	1.621019823	0.65939048	0.01395728	0.03029784
AC126897.1	3.167024415	1.28857214	0.01397995	0.0303386
LOC103690120	1.055803147	0.42997697	0.01406936	0.03050287
AC109837.1	-4.792961057	1.95264195	0.01410402	0.03055339
S100b	-3.749706352	1.52768025	0.01410768	0.03055617
Notum	-1.163564392	0.47406665	0.01411073	0.03055854
Cpxm1	1.010238192	0.41187941	0.01417679	0.03069306
Tex15	4.009134127	1.63473338	0.01418793	0.03071229
AABR07043347.1	-3.106073062	1.26707085	0.01423093	0.03078888
Il27ra	-2.273738178	0.92790594	0.01426987	0.03085168
Havcr1	-2.308274357	0.9420458	0.01427459	0.0308576
Ccl1	-3.524203779	1.43917343	0.01433452	0.03097426
Gpc6	1.802252421	0.73615775	0.01435768	0.0310157
Fam109b	1.311670132	0.53597494	0.01439469	0.03108271
Lmln	-1.758007778	0.71841377	0.01440234	0.03109061
Spata24	-1.001498212	0.40970492	0.01450781	0.03130093
Foxm1	1.155180177	0.47319164	0.01463643	0.03151729
Mup4	-6.570335997	2.69194852	0.01465736	0.03155801
Slc10a2	-1.596483236	0.65434196	0.01469417	0.03162851
Rn60_12_0107.2	-1.716752568	0.70374838	0.01471001	0.03165386
Poli	-1.170334969	0.47977926	0.01471495	0.03166011
Gdf6	2.900260928	1.18998091	0.01480013	0.0318258
Msln	2.441759989	1.00233874	0.01484811	0.03192016
Ncapg	2.260547697	0.92832378	0.01488827	0.03198001
LOC100909836	2.194382099	0.90142095	0.0149182	0.03203103
Stmn3	-2.242022175	0.92215692	0.01504556	0.03226002
Tigd3	3.064612491	1.26046848	0.01504358	0.03226002
Unc5cl	1.029999924	0.42366801	0.01505104	0.03226732
Srgap3	1.8825553	0.77446525	0.01506632	0.0322912
LOC56764	2.120540051	0.87290742	0.01512868	0.032407
Gimap1	-1.378952639	0.56791854	0.01517892	0.03251016
Rn50_17_0410.2	-3.215925008	1.32494167	0.01521502	0.03257852
Abcc8	-1.326277044	0.54685649	0.01529682	0.03272666
Pou2f2	1.180417997	0.48709012	0.01537566	0.03287275
Ucma	-1.336953018	0.55171046	0.01538075	0.03287913
Tiam1	1.443919481	0.59652029	0.01549617	0.03308912
Rn50_11_0375.8	1.20835938	0.49922402	0.01550023	0.03308912

LOC108348145	-1.044011155	0.43132029	0.01549914	0.03308912
Zfp791	-1.020629878	0.42203699	0.01559141	0.03327007
AABR07027854.1	-1.746298735	0.72220186	0.01560521	0.0332904
Cd24	-1.126028009	0.46605943	0.01568943	0.03344716
Ptprd	-1.060729506	0.43958144	0.01581989	0.03370222
AABR07060886.1	2.184253826	0.90520494	0.01582209	0.03370229
Slc6a1	-2.229539296	0.92411832	0.01583865	0.03372834
Inmt	-3.707472281	1.53722908	0.01587446	0.03379997
LOC100911403	-4.849926182	2.01101162	0.015879	0.0338004
Robo2	1.120139683	0.46463138	0.01591698	0.03387197
Lmtk3	2.854805238	1.18488041	0.01598046	0.03399778
Rn50_5_0814.17	-3.471787546	1.44178402	0.01604105	0.03411735
Ly75	1.609571585	0.66878897	0.01609757	0.03422355
B3gntl1	-1.352386124	0.5623598	0.01617949	0.03438823
AC126530.2	-1.204924415	0.50128066	0.01623043	0.03447777
Aqp5	1.119554035	0.46585572	0.01625138	0.03450815
Bbip1	-1.002649618	0.41734127	0.0162848	0.03457439
AABR07065815.1	4.237174408	1.76655117	0.0164598	0.03492213
Mtx3	1.106909842	0.46155885	0.01647592	0.03495158
Ovol3	-4.328953102	1.80513485	0.01647889	0.03495311
Tmod1	1.518638223	0.63364691	0.01654512	0.03507927
Dmbt1	1.37177047	0.57260291	0.01658979	0.0351644
LOC100360573	2.192036121	0.91555688	0.01665618	0.0352811
Sh2d1b	1.409937338	0.58889157	0.01665565	0.0352811
Pigb	1.016163616	0.42460164	0.01670139	0.03537205
Lrrc4	2.355590165	0.98454258	0.01673069	0.03541967
Trpv1	-1.270162107	0.5316785	0.01689584	0.03574015
RGD1308117	-1.712255681	0.71697231	0.01693226	0.03580744
Lrrn4	2.748341856	1.15086376	0.01693717	0.03581297
Cradd	-1.037473379	0.43463957	0.01698769	0.03589543
RGD1563323	-1.820426662	0.76270881	0.01699614	0.03590841
Tmsbl1	3.11638701	1.30593733	0.01701784	0.03593963
Mterf2	-1.100903254	0.46167114	0.01709747	0.03607356
Gprasp2	-1.017813582	0.42688191	0.01711175	0.03609879
Ca5a	-1.044037972	0.43806258	0.01715784	0.03618622
Ly6c	1.985611209	0.83312985	0.01715749	0.03618622
Ly6c	1.985611209	0.83312985	0.01715749	0.03618622
Mecom	-1.226793542	0.51477278	0.01716404	0.03619439
Speg	-1.3392608	0.56211407	0.01719354	0.03624678
AABR07065827.1	2.355068484	0.98885768	0.01723737	0.03631952
LOC103691744	-2.99625691	1.26043506	0.01744648	0.03672533
Myh7b	-1.133229864	0.47689585	0.017489	0.0368049
Rbm12	7.383789783	3.10822624	0.01752216	0.03685476
Steap2	1.461211397	0.61546929	0.01758979	0.03698202
Rn50_12_0305.1	3.587784525	1.51126799	0.01759547	0.03698397
Coq8a	-1.031289583	0.43449372	0.01761834	0.03702704
Matk	1.139453336	0.48026602	0.01766595	0.03711209
AABR07051947.1	-2.36737234	0.99785348	0.01766984	0.03711525

Ccdc158	-1.831787008	0.77263858	0.01774867	0.03726073
Pde6c	-2.431595016	1.02675066	0.01787279	0.03748088
Ccdc15	1.767683209	0.74664898	0.01790926	0.03755229
LOC100912565	-2.218773811	0.93751889	0.01795017	0.03760264
Auts2	1.462691668	0.61840601	0.01801736	0.0377231
Ccdc65	-2.34486769	0.99263839	0.01816401	0.03799438
Cfap45	-2.016736582	0.85395765	0.01819453	0.0380531
Pnck	-2.155459232	0.91369058	0.01832084	0.03829157
Hs3st3a1	2.696126713	1.1439398	0.01842929	0.03848536

Appendix 5.C

RNA sequencing comparison between FOF1F2 and FOF1

Gene	log2FoldChange	lfcSE	p-value	p-adjust
AABR07067267.1	9.120001856	0.49881884	1.13E-74	1.79E-70
AABR07004894.1	7.424193417	0.44313569	5.31E-63	4.23E-59
Cirbp	-3.552158108	0.2342458	6.10E-52	2.48E-48
AABR07073181.1	4.660352676	0.30735102	6.22E-52	2.48E-48
Spag7	-3.105277378	0.20792199	1.96E-50	6.23E-47
Bcas2	-1.765815223	0.12060145	1.52E-48	4.04E-45
RGD1559972	3.373579496	0.23481817	8.36E-47	1.90E-43
Rbm8a	-1.557831038	0.10863326	1.23E-46	2.44E-43
Naca	-2.124559084	0.15169811	1.45E-44	2.57E-41
Phgdh	6.724755771	0.48222949	3.37E-44	5.37E-41
Sarnp	-3.210008161	0.23268055	2.70E-43	3.91E-40
LOC688815	4.158802199	0.30164615	3.05E-43	4.05E-40
Snrnp70	-2.145647971	0.1567603	1.21E-42	1.48E-39
Psma4	-1.583527046	0.11625279	2.99E-42	3.06E-39
Ssr1	2.268796942	0.16651679	2.84E-42	3.06E-39
Pin4	-2.498017237	0.18341629	3.07E-42	3.06E-39
Rn60_1_1138.1	4.086754204	0.30856614	4.87E-40	4.56E-37
Ensa	-1.23275816	0.09357334	1.23E-39	1.09E-36
Creb3l2	2.234714347	0.17047396	2.93E-39	2.46E-36
Sdhaf2	-2.028832843	0.15504287	3.98E-39	3.17E-36
Sec31a	1.827914822	0.13990723	5.21E-39	3.95E-36
RGD1304884	2.297348921	0.17658669	1.08E-38	7.80E-36
Pop4	-1.920419677	0.14772874	1.23E-38	8.52E-36
RGD1565641	-3.221792121	0.24958949	4.04E-38	2.68E-35
Eny2	-1.506279571	0.1169773	6.09E-38	3.88E-35
Cox7b	-3.348492672	0.26067438	9.12E-38	5.59E-35
Cmip	2.145511983	0.16805127	2.51E-37	1.48E-34
Mrps9	-1.668182079	0.1309721	3.69E-37	2.10E-34
LOC103689975	2.299405992	0.18085088	4.92E-37	2.70E-34
Derl3	5.900210829	0.46875855	2.49E-36	1.32E-33
Dchs1	2.55639755	0.20445602	7.15E-36	3.68E-33
LOC103690018	6.512383387	0.52227706	1.10E-35	5.47E-33
Polr2k	-2.956614934	0.23923528	4.38E-35	2.11E-32
Cwc15	-1.665835335	0.13618187	2.09E-34	9.78E-32
Dnajc8	-1.185506049	0.09723912	3.44E-34	1.57E-31
Ssbp1	-2.391024401	0.19659167	4.93E-34	2.18E-31
Fam193b	-3.428807659	0.28274104	7.60E-34	3.27E-31
Ube2k	-1.574838359	0.13011185	1.01E-33	4.23E-31
Nsfl1c	-1.27425152	0.10536679	1.14E-33	4.67E-31
Nol7	-1.810764619	0.15091238	3.61E-33	1.41E-30
Rab9a	-2.402324081	0.2002246	3.63E-33	1.41E-30
Rreb1	1.83655864	0.15429083	1.14E-32	4.32E-30
Cnbp	-1.539340687	0.12972918	1.78E-32	6.59E-30

Prpf31	-1.565690718	0.1319692	1.82E-32	6.59E-30
Prpf3	-2.177052142	0.18359296	1.96E-32	6.92E-30
Ddost	1.775424549	0.14983371	2.17E-32	7.52E-30
Lcn2	6.290309654	0.53183067	2.81E-32	9.52E-30
Nmnat1	-2.258055593	0.19206765	6.53E-32	2.17E-29
Dnajc7	-2.596745564	0.22129049	8.48E-32	2.76E-29
Fbxw8	1.879934116	0.16118299	1.96E-31	6.22E-29
Laptm4a	1.135829675	0.09739492	1.99E-31	6.22E-29
Wee1	4.029002931	0.34625394	2.70E-31	8.29E-29
Zcchc17	-1.688675673	0.14572555	4.74E-31	1.40E-28
RGD1311745	-2.41612522	0.20913413	7.13E-31	2.03E-28
Cnksr3	1.683525355	0.14572229	7.13E-31	2.03E-28
Zmat2	-1.694950604	0.14688877	8.39E-31	2.35E-28
Pigo	1.91591923	0.16606179	8.55E-31	2.35E-28
Phf13	1.510568563	0.13129326	1.24E-30	3.35E-28
Slc40a1	11.92573668	1.03795002	1.49E-30	3.95E-28
LOC100363502	-1.675890464	0.14609883	1.85E-30	4.82E-28
Hdac1	-1.505359916	0.13167626	2.88E-30	7.38E-28
Bccip	-2.367374308	0.20709555	2.92E-30	7.38E-28
Dnajc1	-1.521317509	0.13378118	5.79E-30	1.44E-27
Slc7a1	6.601625881	0.58059503	5.87E-30	1.44E-27
Ckap4	4.671109891	0.41095038	6.13E-30	1.48E-27
Prkrip1	-1.866673896	0.16440321	7.06E-30	1.68E-27
Bid	-1.833365371	0.16159022	7.78E-30	1.82E-27
Trim30c	-3.546272666	0.31474213	1.90E-29	4.40E-27
Klf11	2.213831237	0.19667871	2.16E-29	4.92E-27
Ablim3	2.611575851	0.23270645	3.16E-29	7.09E-27
Gna11	1.822197382	0.16267907	4.02E-29	8.90E-27
Spsb1	3.509914625	0.31358687	4.42E-29	9.65E-27
Rere	1.289434222	0.11531245	4.99E-29	1.07E-26
Rpl21	-2.977302304	0.26637486	5.28E-29	1.12E-26
Tmem104	2.015195679	0.1810427	8.86E-29	1.86E-26
Eif2s2	-1.839651353	0.16545232	1.01E-28	2.10E-26
Ptdss1	1.370484722	0.12329507	1.05E-28	2.15E-26
Heg1	1.898933452	0.17100595	1.19E-28	2.38E-26
Lbp	3.656559777	0.32928656	1.19E-28	2.38E-26
AABR07044273.1	11.46968434	1.03387668	1.34E-28	2.64E-26
Kdelr1	1.588612815	0.14335718	1.54E-28	3.00E-26
Csde1	-2.491919871	0.22497572	1.63E-28	3.14E-26
Slc15a4	1.776838444	0.16060074	1.88E-28	3.57E-26
Ercc3	-1.52137436	0.13778802	2.41E-28	4.52E-26
LOC100912042	-1.518819636	0.13757693	2.46E-28	4.55E-26
Chtf8	1.23116221	0.11154101	2.51E-28	4.60E-26
Ift20	-2.976374329	0.27001667	2.96E-28	5.30E-26
Arglu1	-1.515591721	0.13748769	2.94E-28	5.30E-26
Nudc	-1.742018429	0.15844787	4.07E-28	7.21E-26
Denr	-2.273853339	0.20708012	4.74E-28	8.30E-26
Fbxl18	2.120871209	0.19440942	1.04E-27	1.80E-25

Zfp874b	-2.870849706	0.26367192	1.32E-27	2.25E-25
Slc6a9	2.840729147	0.26145194	1.69E-27	2.86E-25
Clec2g	-2.779754401	0.2562628	2.05E-27	3.45E-25
Soga1	4.406140846	0.40648171	2.23E-27	3.70E-25
LOC100911672	11.71079838	1.08066577	2.31E-27	3.79E-25
Rn60_4_0065.1	11.80476072	1.09018034	2.53E-27	4.11E-25
Tead1	3.078027101	0.28428379	2.56E-27	4.11E-25
Tbc1d13	1.505766767	0.13915112	2.74E-27	4.36E-25
Ddx23	-1.569705641	0.14546049	3.78E-27	5.97E-25
Cfap36	-2.69572904	0.24992733	4.01E-27	6.26E-25
Akap8l	-2.963111193	0.27515138	4.82E-27	7.45E-25
Polr3c	-1.623178404	0.15073699	4.86E-27	7.45E-25
Eif2s3y	-2.405493335	0.22373715	5.84E-27	8.86E-25
Selenon	2.563021464	0.23858772	6.43E-27	9.67E-25
Sec61-ps	9.205474538	0.85839352	7.85E-27	1.17E-24
Reln	2.604312746	0.24304123	8.61E-27	1.27E-24
Ube2h	1.22899897	0.11473249	8.95E-27	1.31E-24
Adipoq	-3.962304035	0.36997333	9.17E-27	1.32E-24
Gripap1	-1.75011227	0.16341338	9.16E-27	1.32E-24
Rbm5	-1.988791679	0.18574888	9.45E-27	1.34E-24
lqsec1	1.867003357	0.17446881	1.01E-26	1.42E-24
Lmf2	1.629059417	0.15255827	1.29E-26	1.80E-24
Zscan21	-2.493616256	0.23363429	1.36E-26	1.88E-24
Nostrin	-3.523820696	0.33025209	1.40E-26	1.93E-24
Atg3	-1.442249835	0.13524696	1.50E-26	2.05E-24
LOC100910575	11.16159115	1.04700373	1.56E-26	2.10E-24
Rnaseh1	-2.45136231	0.23000609	1.60E-26	2.15E-24
Chchd3	-1.573808235	0.14776307	1.73E-26	2.29E-24
R3hcc1	-1.59943104	0.15067036	2.53E-26	3.32E-24
Zcchc9	-2.460532562	0.23179911	2.54E-26	3.32E-24
Cfdp1	-1.993981769	0.1878882	2.60E-26	3.37E-24
Pabpn1	-1.447924427	0.13645198	2.64E-26	3.40E-24
Tex9	-3.884812603	0.36647079	2.96E-26	3.77E-24
RGD1310127	1.737257108	0.16410515	3.45E-26	4.36E-24
Col4a2	3.208922372	0.30342986	3.87E-26	4.82E-24
Mterf4	-2.431788144	0.22993937	3.86E-26	4.82E-24
RGD1561149	2.698589519	0.2553584	4.20E-26	5.19E-24
Aph1a	1.663521998	0.15756956	4.70E-26	5.76E-24
Tmem64	2.150855584	0.20416244	5.96E-26	7.25E-24
Map3k7	11.00619493	1.0467925	7.43E-26	8.97E-24
Ndufa5	-1.966516396	0.18711401	7.79E-26	9.34E-24
Trappc9	1.547675812	0.14728715	7.95E-26	9.45E-24
Rps27a	-2.535463958	0.24131996	8.05E-26	9.50E-24
Rpl5	-2.35439735	0.22410743	8.13E-26	9.53E-24
Zfhx3	2.198326837	0.20933065	8.48E-26	9.80E-24
Psma2	-1.276406823	0.12153913	8.45E-26	9.80E-24
Nup88	-1.179236887	0.11234045	8.92E-26	1.02E-23
Ccdc94	-2.674606606	0.25485561	9.15E-26	1.04E-23

Pfkfb3	4.173505426	0.39831128	1.09E-25	1.23E-23
Slc9a8	1.752979636	0.16743265	1.19E-25	1.33E-23
Rpap3	-3.097433257	0.29666495	1.61E-25	1.80E-23
Slc7a5	4.012854434	0.38535525	2.15E-25	2.38E-23
Syf2	-1.377057867	0.13230748	2.28E-25	2.50E-23
AABR07017110.1	7.837742517	0.75479184	2.93E-25	3.20E-23
Etf1	-1.188389568	0.11461713	3.45E-25	3.74E-23
Ccdc12	-1.504688605	0.14529634	3.93E-25	4.23E-23
Hexdc	-2.543969473	0.24607789	4.74E-25	5.07E-23
Psmc6	-2.330354129	0.22543552	4.79E-25	5.09E-23
Tnfrsf21	4.197857416	0.40621993	4.95E-25	5.22E-23
Sucla2	-2.496271489	0.24158113	4.99E-25	5.24E-23
Bhlha15	3.494875015	0.33828379	5.09E-25	5.30E-23
Hid1	4.163315183	0.40321598	5.42E-25	5.60E-23
Itpkb	2.380941135	0.2310136	6.59E-25	6.77E-23
Col3a1	2.910684896	0.28317308	8.78E-25	8.97E-23
Ttc1	-1.402055328	0.13657745	1.01E-24	1.02E-22
Zfp958	-3.801510792	0.37086325	1.18E-24	1.19E-22
Dpagt1	1.902178354	0.185765	1.32E-24	1.32E-22
Gpatch11	-2.045041886	0.19981015	1.38E-24	1.38E-22
Pcsk6	1.436250559	0.14038187	1.44E-24	1.43E-22
Acin1	-1.370912402	0.13406616	1.52E-24	1.50E-22
Alox15	4.866156912	0.47616346	1.62E-24	1.59E-22
Klf13	3.26224644	0.31988607	2.02E-24	1.96E-22
Snrnp35	-1.723011636	0.16914696	2.28E-24	2.19E-22
Commd8	-1.718930589	0.16873823	2.27E-24	2.19E-22
Rpl21	-1.808277426	0.17754742	2.32E-24	2.20E-22
Ythdc1	-1.88326886	0.18490635	2.31E-24	2.20E-22
Rab11fip5	2.651385227	0.26140011	3.56E-24	3.36E-22
Stx4	-1.544305625	0.15227677	3.62E-24	3.39E-22
Immt	-2.035694473	0.20079715	3.74E-24	3.49E-22
Tomm5	-1.731232905	0.17090244	4.07E-24	3.77E-22
Smarce1	-1.889362675	0.18653784	4.13E-24	3.80E-22
N6amt1	-2.508347032	0.24785683	4.50E-24	4.12E-22
Txndc17	-2.12067107	0.20985856	5.24E-24	4.77E-22
Rtn3	1.32660459	0.13135179	5.55E-24	5.02E-22
Leo1	-2.383534922	0.23632884	6.39E-24	5.75E-22
Lym2	-2.00079998	0.19880284	7.95E-24	7.12E-22
Klhl21	2.387898103	0.23774907	9.79E-24	8.71E-22
Gtf3c6	-2.267514907	0.22610961	1.14E-23	1.01E-21
Mnt	2.613887796	0.26131958	1.48E-23	1.31E-21
Pcdh10	10.66397611	1.06686229	1.59E-23	1.39E-21
Wiz	1.396789491	0.13981041	1.68E-23	1.46E-21
Timm44	-2.426350666	0.2429818	1.76E-23	1.52E-21
Gsr	1.139142868	0.11416279	1.90E-23	1.63E-21
Pnrc2	-2.317459994	0.23263302	2.24E-23	1.92E-21
Fam136a	-1.3563852	0.13620125	2.31E-23	1.96E-21
AC128212.1	4.963882936	0.4984593	2.32E-23	1.96E-21

Tec	-2.439285837	0.2450434	2.41E-23	2.03E-21
Ints5	1.650538397	0.16589752	2.54E-23	2.13E-21
Cnot10	-1.642295284	0.16514578	2.66E-23	2.22E-21
Nfic	2.006165934	0.20181592	2.77E-23	2.30E-21
Fbxo18	-1.243112003	0.12505931	2.78E-23	2.30E-21
Ctnna3	-3.968306199	0.39990909	3.31E-23	2.72E-21
Alg11	-1.579417784	0.15930744	3.61E-23	2.95E-21
Clptm1l	1.560095046	0.15755229	4.08E-23	3.30E-21
Anks3	-2.973518341	0.3007424	4.73E-23	3.80E-21
Cops5	-1.063751498	0.10767382	5.11E-23	4.10E-21
Pdap1	-1.26123671	0.12771185	5.31E-23	4.23E-21
Gkap1	-2.130937875	0.2159147	5.65E-23	4.48E-21
Psmc1	-1.239958018	0.12580762	6.46E-23	5.09E-21
Nipa13	2.220742318	0.22532715	6.48E-23	5.09E-21
Ccdc59	-3.051346555	0.30978379	6.86E-23	5.36E-21
Elf4	3.467630757	0.35246773	7.71E-23	5.99E-21
Rhbdf2	3.030530312	0.30834144	8.49E-23	6.57E-21
Tmem186	-1.774028066	0.18075598	9.75E-23	7.51E-21
Ndufaf2	-3.260856722	0.33233616	1.00E-22	7.66E-21
Tmcc2	4.657476107	0.47606879	1.33E-22	1.01E-20
Ip6k1	1.774525284	0.18147306	1.39E-22	1.06E-20
Mesdc1	2.06506867	0.21134896	1.50E-22	1.13E-20
Impdh1	3.933988408	0.40306388	1.67E-22	1.25E-20
Rsrc2	-2.819815866	0.28909541	1.77E-22	1.33E-20
Leng8	-1.256082487	0.12880143	1.81E-22	1.35E-20
Herpud1	2.064718384	0.21173567	1.82E-22	1.35E-20
Mgll	1.921524759	0.19710868	1.87E-22	1.38E-20
Nomo1	1.540914569	0.15822765	2.06E-22	1.52E-20
Exoc1	-1.835400033	0.18847848	2.08E-22	1.52E-20
Wasf2	3.048999346	0.31314595	2.10E-22	1.53E-20
Ybx3	2.776629949	0.28543468	2.30E-22	1.66E-20
AABR07013776.1	4.265342424	0.43894803	2.55E-22	1.84E-20
Adgra2	2.653305013	0.27384087	3.35E-22	2.40E-20
Mrps18c	-1.769698796	0.18271218	3.47E-22	2.48E-20
Rps24	-2.225384256	0.2299071	3.69E-22	2.62E-20
Cbfa2t3	3.023554134	0.31239114	3.71E-22	2.63E-20
H3f3c	-1.662709354	0.17195666	4.07E-22	2.87E-20
H3f3c	-1.662709354	0.17195666	4.07E-22	2.87E-20
Snrpb2	-1.876892501	0.1941389	4.13E-22	2.90E-20
Trappc13	-1.126368949	0.11664443	4.62E-22	3.23E-20
Tra2b	-1.782483187	0.18478058	5.09E-22	3.54E-20
Tm9sf2	1.573035597	0.1631711	5.40E-22	3.74E-20
Ppil2	-1.708215158	0.17734058	5.84E-22	4.02E-20
Elavl1	-1.546704723	0.16065699	6.13E-22	4.19E-20
Dag1	1.50327027	0.15614489	6.13E-22	4.19E-20
Pcca	-2.185281526	0.22700556	6.18E-22	4.21E-20
Sbds	-2.415112325	0.25114874	6.83E-22	4.63E-20
Plod3	1.515242516	0.15759684	6.93E-22	4.68E-20

Ctnnbl1	-1.730394649	0.18005197	7.22E-22	4.83E-20
Uimc1	-1.582192069	0.164627	7.20E-22	4.83E-20
Atp6v1e1	-1.333084783	0.13890868	8.24E-22	5.50E-20
AABR07065406.1	-2.514786704	0.26234891	9.19E-22	6.10E-20
Idh3B	-1.496857493	0.15620508	9.46E-22	6.25E-20
Twf1	-1.355551846	0.14148726	9.64E-22	6.34E-20
Mrpl13	-1.373162771	0.14365399	1.19E-21	7.81E-20
LOC100364509	-2.546596165	0.26651508	1.23E-21	8.06E-20
Tars	-1.425974437	0.1492684	1.26E-21	8.19E-20
Cep63	-2.149344569	0.22507362	1.30E-21	8.44E-20
Thumpd1	-2.192432612	0.22974242	1.39E-21	8.95E-20
Usp36	1.677465089	0.17581028	1.41E-21	9.06E-20
Ddx1	-1.626000424	0.17052375	1.49E-21	9.56E-20
Sun2	1.919544875	0.20136173	1.53E-21	9.76E-20
Slc25a37	2.132301095	0.22406754	1.79E-21	1.13E-19
Cd300e	-4.112666082	0.4321632	1.79E-21	1.13E-19
Vps53	-1.785746756	0.18773186	1.87E-21	1.18E-19
Exosc10	-1.302582823	0.13697067	1.91E-21	1.20E-19
Pml	2.187868601	0.23021006	2.02E-21	1.26E-19
Cox7c	-1.722163082	0.18129602	2.12E-21	1.32E-19
Atg13	1.622377668	0.17123281	2.68E-21	1.66E-19
Mrpl46	-1.879428488	0.19840827	2.73E-21	1.69E-19
Bms1	-2.058516329	0.21737981	2.81E-21	1.73E-19
Snx1	-1.066031799	0.11260219	2.87E-21	1.76E-19
Plrg1	-1.744004318	0.18423557	2.90E-21	1.77E-19
Sec16a	1.245781892	0.1316423	2.98E-21	1.81E-19
Atg16l1	-1.446237953	0.15302395	3.35E-21	2.03E-19
Mtif3	-1.906437888	0.20180074	3.48E-21	2.10E-19
Rasd1	-4.802852619	0.50880125	3.74E-21	2.25E-19
Fkbp15	-1.042998899	0.11068414	4.38E-21	2.62E-19
Nsmce2	-2.142933558	0.22742988	4.41E-21	2.63E-19
Slc35e1	2.429555971	0.2579884	4.63E-21	2.75E-19
Gda	2.45603248	0.2608734	4.75E-21	2.81E-19
B4galt1	2.310589479	0.24550101	4.88E-21	2.88E-19
RGD1309808	-3.269782884	0.3475484	5.05E-21	2.97E-19
Serbp1	-1.478458501	0.15716909	5.11E-21	3.00E-19
Dnaja3	-1.289436247	0.13720657	5.57E-21	3.25E-19
Tmem164	2.124836446	0.22627033	5.96E-21	3.47E-19
N4bp2l2	-2.036091621	0.21720805	6.99E-21	4.05E-19
Sf3a3	-2.270825496	0.24250679	7.68E-21	4.43E-19
Lgals5	3.965990407	0.42394391	8.36E-21	4.81E-19
Gpaa1	1.677949562	0.17941562	8.58E-21	4.92E-19
Prelp	1.787565491	0.19133935	9.42E-21	5.38E-19
Ddb1	1.322791808	0.14162692	9.64E-21	5.48E-19
Jtb	-1.337893331	0.14334424	1.02E-20	5.81E-19
Mrps7	-1.483480618	0.15895252	1.03E-20	5.82E-19
Bcr	2.062552219	0.22115147	1.10E-20	6.17E-19
Coq3	-1.340236609	0.1437098	1.10E-20	6.17E-19

Parp16	1.518361636	0.16291461	1.16E-20	6.51E-19
AABR07001435.1	-2.539817396	0.27279795	1.28E-20	7.11E-19
Desi1	1.779194816	0.19126163	1.37E-20	7.58E-19
Ormdl3	1.631208688	0.17535521	1.37E-20	7.58E-19
Zfand3	1.184687294	0.1273918	1.41E-20	7.75E-19
Sub1	-1.545912404	0.16633989	1.49E-20	8.16E-19
Leng1	-2.6085233	0.28072606	1.51E-20	8.26E-19
Mafk	2.326045285	0.25054226	1.63E-20	8.84E-19
Ndufa1	-2.529169259	0.27241244	1.63E-20	8.84E-19
Arhgef17	1.970836187	0.21231136	1.65E-20	8.92E-19
Pcdhgc3	2.021516482	0.21828363	2.03E-20	1.09E-18
Tbca	-1.414973355	0.15280112	2.04E-20	1.09E-18
Gfm1	-1.711564031	0.18496567	2.17E-20	1.16E-18
Mrpl42	-1.882314567	0.20345391	2.21E-20	1.18E-18
Gemin6	-1.819177239	0.19667308	2.25E-20	1.20E-18
Crcp	-2.575533705	0.27848848	2.28E-20	1.21E-18
Ube4b	1.202825223	0.13011992	2.38E-20	1.25E-18
Apool	-2.933046818	0.31761782	2.59E-20	1.36E-18
Mrpl16	-1.453762169	0.15745555	2.64E-20	1.38E-18
Psm4	-1.535861928	0.16637297	2.67E-20	1.39E-18
Hmg1l1	-1.17986019	0.12792548	2.89E-20	1.50E-18
Cops9	-1.645789935	0.17850502	2.98E-20	1.54E-18
Alas2	4.056208137	0.43998632	3.00E-20	1.55E-18
Sec24d	1.915268014	0.20787648	3.16E-20	1.63E-18
Cir1	-2.314706173	0.25128922	3.22E-20	1.66E-18
A2m	8.15484772	0.88580222	3.38E-20	1.73E-18
Wdfy3	2.120825964	0.23048392	3.53E-20	1.80E-18
Tmsb4x	-2.070904748	0.2250705	3.54E-20	1.80E-18
Zfp692	-3.204383393	0.34844753	3.71E-20	1.88E-18
Lime1	-2.858465508	0.31112581	4.02E-20	2.03E-18
Lrrc45	-1.91525533	0.20850001	4.08E-20	2.06E-18
Soat1	3.519797962	0.38327416	4.17E-20	2.10E-18
Ndufs5	-1.930943702	0.21056641	4.72E-20	2.36E-18
MGC95210	-2.338601687	0.25505546	4.77E-20	2.38E-18
Sdc3	1.713052971	0.18710792	5.41E-20	2.69E-18
Slc38a7	1.5119693	0.16514334	5.41E-20	2.69E-18
Med6	-1.3444513	0.14697223	5.82E-20	2.88E-18
Gpalpp1	-1.710431935	0.18707448	6.07E-20	3.00E-18
Mapre2	2.783769489	0.30451242	6.15E-20	3.02E-18
Prpf38b	-1.7085858	0.18691812	6.20E-20	3.04E-18
Chkb	-1.669067157	0.18269631	6.50E-20	3.17E-18
Aifm1	-1.855094389	0.20334595	7.32E-20	3.57E-18
Myo1c	2.879799547	0.31572962	7.44E-20	3.61E-18
Bbs4	-3.048403687	0.3342208	7.45E-20	3.61E-18
Rida	-3.371774187	0.36968979	7.47E-20	3.61E-18
Clptm1	1.53647733	0.1685223	7.70E-20	3.71E-18
Atf3	6.196150339	0.67976974	7.86E-20	3.77E-18
Polr2b	-1.809457495	0.19855903	8.02E-20	3.84E-18

Srsf11	-1.643513904	0.18037596	8.12E-20	3.87E-18
Vat1	1.980240174	0.21736415	8.22E-20	3.91E-18
Synpo	2.733171509	0.30026332	8.82E-20	4.18E-18
Parvb	2.488798172	0.27350248	9.06E-20	4.28E-18
Nav1	2.716804101	0.29915896	1.07E-19	5.05E-18
Ssb	-2.005257049	0.2208895	1.10E-19	5.19E-18
Scfd1	-1.799876676	0.19828493	1.11E-19	5.22E-18
Cd86	-2.196736124	0.24206966	1.14E-19	5.32E-18
Myadm	2.565903374	0.28276589	1.14E-19	5.33E-18
Mterf1	-2.424819886	0.2674751	1.24E-19	5.75E-18
Mrpl18	-1.515211658	0.16714912	1.25E-19	5.75E-18
Cspp1	-2.36169959	0.26052546	1.24E-19	5.75E-18
NEWGENE_1308612	-1.683059813	0.18586909	1.36E-19	6.28E-18
Prrc2b	1.969071859	0.21754393	1.41E-19	6.48E-18
Adm2	6.146151782	0.67930832	1.46E-19	6.69E-18
Snw1	-1.983707855	0.21971359	1.74E-19	7.94E-18
Commd1	-1.423604818	0.15774525	1.80E-19	8.20E-18
Wfs1	1.624307142	0.18011477	1.91E-19	8.66E-18
Zfp277	-1.898869786	0.21056048	1.91E-19	8.66E-18
Irgq	2.000115934	0.22184673	1.96E-19	8.83E-18
LOC100909712	-2.677050609	0.29701979	2.00E-19	9.00E-18
Stn1	-1.823140456	0.2022753	2.00E-19	9.00E-18
Fam32a	-1.297412893	0.14396108	2.02E-19	9.04E-18
Ap2a1	1.540757517	0.17096971	2.03E-19	9.04E-18
RGD735029	-1.753068908	0.19468407	2.16E-19	9.60E-18
Rufy3	-1.648030725	0.18316243	2.31E-19	1.02E-17
LOC102557117	-2.719133324	0.30222607	2.32E-19	1.02E-17
Dnajb11	1.776804722	0.19750682	2.34E-19	1.03E-17
Kcng4	-3.224473862	0.35866641	2.47E-19	1.08E-17
Pspc1	-2.50570467	0.27876324	2.50E-19	1.10E-17
Snpc5	-2.480606159	0.27609252	2.59E-19	1.13E-17
Pnlsr	-3.7217858	0.41441169	2.69E-19	1.17E-17
Usp20	2.467577372	0.27476865	2.69E-19	1.17E-17
Apbb3	-1.82153946	0.20290387	2.77E-19	1.20E-17
Tmem5	-1.214354068	0.13527997	2.79E-19	1.21E-17
Tgfbr2	1.477101086	0.16459368	2.85E-19	1.23E-17
Tmem248	1.919289873	0.21396343	2.96E-19	1.27E-17
Rpn1	1.261592483	0.14071849	3.09E-19	1.32E-17
Hspb8	2.339732714	0.26103953	3.16E-19	1.35E-17
Spop	-1.566540779	0.17501348	3.52E-19	1.50E-17
Tm9sf1	1.214103269	0.13566745	3.58E-19	1.52E-17
Rgp1	1.796920998	0.20089913	3.74E-19	1.58E-17
Cog4	-2.445892132	0.27348448	3.77E-19	1.59E-17
Aif1	-1.889258354	0.21130302	3.86E-19	1.63E-17
Wdr55	-1.670161358	0.18682464	3.90E-19	1.64E-17
Zfp68	-3.100950195	0.34739304	4.40E-19	1.85E-17
Mkks	-1.20651815	0.13517698	4.44E-19	1.86E-17
Mef2d	1.621401285	0.18167452	4.47E-19	1.86E-17

Gmcl1	-1.330100046	0.1492034	4.89E-19	2.04E-17
Vps45	-1.980149208	0.2221835	5.00E-19	2.07E-17
LOC103694910	9.421712737	1.05716989	5.00E-19	2.07E-17
Zfp386	-4.235422992	0.47557144	5.29E-19	2.18E-17
Mex3d	2.982336969	0.33510407	5.60E-19	2.30E-17
Zbtb42	1.532137734	0.17231697	6.03E-19	2.48E-17
Cdadc1	-2.080161848	0.23401791	6.17E-19	2.53E-17
Pyroxd1	-2.697978887	0.30371895	6.50E-19	2.66E-17
Eif4ebp2	1.871810047	0.21081885	6.76E-19	2.76E-17
Exosc7	-1.350247055	0.1520871	6.80E-19	2.76E-17
Wdr83	-1.950791789	0.22001617	7.54E-19	3.06E-17
Rars2	-1.942997495	0.21914458	7.56E-19	3.06E-17
Syvn1	1.451035051	0.16366527	7.59E-19	3.06E-17
Hm13	1.725099845	0.19472045	8.05E-19	3.24E-17
Ddx39b	-1.591296036	0.1799687	9.40E-19	3.73E-17
Cops2	-2.196528609	0.24842465	9.42E-19	3.73E-17
Nfatc2	2.585516242	0.29239971	9.37E-19	3.73E-17
Dnaaf5	1.893900942	0.21419175	9.40E-19	3.73E-17
Impad1	10.00227903	1.13119971	9.39E-19	3.73E-17
Ern1	1.688449248	0.19101365	9.62E-19	3.80E-17
Ero1b	2.31941652	0.2624186	9.69E-19	3.82E-17
LOC100362980	-1.571850754	0.17784931	9.74E-19	3.83E-17
RGD1311899	-1.886085041	0.21343668	9.85E-19	3.87E-17
Asns	3.99308856	0.45225089	1.05E-18	4.12E-17
Rcc2	1.869409822	0.21197181	1.15E-18	4.50E-17
Rpl4	-1.573709126	0.17845754	1.16E-18	4.52E-17
Mrps31	-1.836141734	0.20824495	1.17E-18	4.56E-17
Med4	-2.347971059	0.26636624	1.20E-18	4.65E-17
Cln8	1.964083063	0.22284976	1.21E-18	4.69E-17
Gsk3b	1.277986854	0.14510186	1.28E-18	4.94E-17
Rps6	-2.011505163	0.22844346	1.31E-18	5.02E-17
RGD1309730	-2.07473909	0.23567487	1.33E-18	5.10E-17
Eapp	-1.33440468	0.1515978	1.34E-18	5.14E-17
Naa35	-1.32906214	0.15110732	1.42E-18	5.44E-17
Ldah	-1.296285783	0.14738732	1.43E-18	5.44E-17
Irf3	-1.802145745	0.2049054	1.43E-18	5.44E-17
Fam110a	3.094945078	0.35214785	1.51E-18	5.74E-17
Tp53inp1	2.787226378	0.31762502	1.71E-18	6.46E-17
Phax	-1.388188295	0.15822519	1.73E-18	6.54E-17
Nxf1	-1.270238759	0.14480207	1.75E-18	6.60E-17
Rmnd1	-2.56059372	0.29219067	1.89E-18	7.12E-17
Wars2	-1.786719824	0.20398098	1.97E-18	7.37E-17
Tpmt	-1.946791044	0.22247378	2.12E-18	7.93E-17
Chmp3	-1.261743662	0.1442349	2.17E-18	8.12E-17
Golga5	-1.911528634	0.21867258	2.30E-18	8.56E-17
Srsf5	-1.568733704	0.17946827	2.31E-18	8.58E-17
Gas2l1	1.860035834	0.21286092	2.37E-18	8.77E-17
Snrpd2l	6.337361096	0.72546615	2.42E-18	8.96E-17

Grb10	2.946378158	0.3374867	2.54E-18	9.36E-17
Cdc25b	4.508669094	0.51645319	2.55E-18	9.37E-17
Igfbp1	-1.961120703	0.22482264	2.71E-18	9.95E-17
Tubb6	4.543231633	0.5211173	2.83E-18	1.03E-16
Rab7a	-1.183002543	0.13570981	2.85E-18	1.04E-16
Gtf2f1	-1.949215461	0.22372717	2.97E-18	1.08E-16
Rmdn2	-2.139142613	0.24565927	3.10E-18	1.13E-16
Fam220a	1.657935514	0.19040324	3.11E-18	1.13E-16
Hba-a2	3.532842884	0.40581612	3.16E-18	1.14E-16
Hipk2	2.573724503	0.2957491	3.25E-18	1.17E-16
Pfdn5	-1.416799561	0.16284822	3.32E-18	1.20E-16
Palmd	-2.239809017	0.25764496	3.52E-18	1.27E-16
Tep1	1.715759269	0.1974197	3.60E-18	1.29E-16
Mthfd1l	4.397236101	0.5064914	3.90E-18	1.40E-16
Clk1	-2.451638165	0.28262082	4.15E-18	1.48E-16
Ube3b	1.451811793	0.16758609	4.59E-18	1.63E-16
Pfdn1	-1.80421211	0.20835971	4.75E-18	1.69E-16
Klhdc10	1.315406233	0.15208933	5.20E-18	1.84E-16
Gmpr2	-1.584266466	0.18317754	5.20E-18	1.84E-16
Ncdn	2.211788489	0.25598215	5.60E-18	1.97E-16
Cad	1.963371481	0.22726217	5.66E-18	1.99E-16
Toe1	-1.919568605	0.22221896	5.71E-18	2.00E-16
Sh3bp4	1.810880585	0.20967679	5.79E-18	2.03E-16
Sgms2	2.423284848	0.28094522	6.38E-18	2.23E-16
Dusp8	4.079868773	0.47306047	6.44E-18	2.25E-16
Ube2o	2.077861945	0.24099969	6.59E-18	2.29E-16
Plod1	1.285587087	0.14923364	7.02E-18	2.44E-16
Lap3	-1.764920938	0.20500348	7.36E-18	2.55E-16
Zfp94	-2.379249841	0.27645792	7.55E-18	2.61E-16
Zfp94	-2.379249841	0.27645792	7.55E-18	2.61E-16
Metap1d	-1.942473635	0.22596682	8.23E-18	2.84E-16
Slc4a2	1.254114015	0.14594834	8.48E-18	2.92E-16
Vamp1	-3.35766828	0.39090645	8.74E-18	3.00E-16
Prrc1	1.266068613	0.14741406	8.81E-18	3.02E-16
Pycr1	3.642819163	0.42415591	8.82E-18	3.02E-16
RGD1597339	-1.51182768	0.17606583	8.95E-18	3.05E-16
Spata2	1.620408765	0.18876178	9.13E-18	3.11E-16
Zfp717	-2.725362292	0.31751498	9.21E-18	3.12E-16
Sh3pxd2a	1.953691733	0.22760641	9.19E-18	3.12E-16
Mkl1	1.581726734	0.18430588	9.32E-18	3.15E-16
AABR07073038.1	1.774918322	0.2068645	9.48E-18	3.20E-16
Usmg5	-1.900109891	0.22145903	9.49E-18	3.20E-16
Abcc4	2.289661094	0.26706367	1.00E-17	3.38E-16
Dtnbp1	-1.712339973	0.19994865	1.09E-17	3.66E-16
Rbm39	-3.011089575	0.35169083	1.11E-17	3.72E-16
Ncbp2	-1.43960736	0.16824839	1.16E-17	3.89E-16
Dis3l	-1.385881023	0.16201218	1.19E-17	3.96E-16
Coa7	-1.569837868	0.18354437	1.20E-17	3.99E-16

Prss53	-3.809307267	0.44542991	1.21E-17	4.02E-16
Srsf2	-1.291167759	0.15102625	1.24E-17	4.10E-16
Akt2	1.25156067	0.14641006	1.25E-17	4.13E-16
AABR07000398.1	3.548730085	0.41573877	1.39E-17	4.59E-16
Arfp2	-2.308907641	0.27059816	1.43E-17	4.71E-16
Ccdc91	-1.022888048	0.12002227	1.56E-17	5.13E-16
Opa1	-1.814929071	0.21300008	1.58E-17	5.20E-16
RGD1562218	-1.234657492	0.14491956	1.60E-17	5.24E-16
Tnks	2.270499239	0.26653729	1.62E-17	5.28E-16
Cldn2	-1.96465235	0.2308136	1.71E-17	5.58E-16
Psma5	-1.0465242	0.122986	1.75E-17	5.69E-16
Dld	-2.076019783	0.24423058	1.89E-17	6.14E-16
Htatsf1	-2.125924505	0.25026961	1.99E-17	6.44E-16
Casp3	-2.023943815	0.23842678	2.09E-17	6.75E-16
RGD1564698	-6.030058496	0.71068323	2.16E-17	6.97E-16
Zfp703	2.422525415	0.28575592	2.30E-17	7.40E-16
Pinx1	-2.005999565	0.23676295	2.40E-17	7.71E-16
Tmem131	1.286787484	0.15198451	2.53E-17	8.10E-16
Foxo3	1.983913341	0.23433056	2.53E-17	8.10E-16
Fam160a2	1.659816712	0.19606262	2.55E-17	8.13E-16
Rps25	-1.857918494	0.21950924	2.58E-17	8.24E-16
Anks1a	1.137199409	0.13446303	2.74E-17	8.70E-16
Gnai1	2.894880391	0.34275396	3.02E-17	9.57E-16
Ubqln2	1.265996172	0.14991134	3.04E-17	9.63E-16
Zfp110	-2.199345862	0.26069013	3.27E-17	1.03E-15
Dpcd	-1.887974142	0.22379005	3.27E-17	1.03E-15
Cox6c	-1.897651873	0.22496259	3.30E-17	1.04E-15
Anks4b	-3.309723198	0.39262775	3.47E-17	1.09E-15
Klf16	2.013332836	0.23887575	3.51E-17	1.10E-15
Sco1	-1.391384436	0.16519533	3.68E-17	1.15E-15
Cd59	-2.453161686	0.29136178	3.78E-17	1.18E-15
Axl	1.682890952	0.19992328	3.84E-17	1.20E-15
Nsrp1	-2.510653951	0.29833019	3.91E-17	1.21E-15
Trib3	4.038441948	0.48018363	4.09E-17	1.27E-15
Chpf	3.552638117	0.42259972	4.22E-17	1.30E-15
Tmem245	2.203060926	0.26206315	4.22E-17	1.30E-15
Itga9	2.310754631	0.27493041	4.28E-17	1.32E-15
Mmp19	1.451237694	0.17270203	4.35E-17	1.34E-15
Fkbp3	-2.23339492	0.2658299	4.40E-17	1.35E-15
Hnrnpa1	-2.148630732	0.25585706	4.55E-17	1.39E-15
Dnajc19	-1.960313751	0.23348646	4.63E-17	1.41E-15
Glod4	-1.579189988	0.18825813	4.93E-17	1.50E-15
Metap2	-1.648667063	0.19656544	4.97E-17	1.51E-15
Prr12	1.226438979	0.14629611	5.15E-17	1.56E-15
Rhbdd2	2.373686369	0.28331516	5.37E-17	1.63E-15
Tatdn1	-2.164031694	0.25835773	5.47E-17	1.65E-15
Xrcc5	-1.474154452	0.17618945	5.92E-17	1.79E-15
Mettl6	-1.923541573	0.22998686	6.08E-17	1.83E-15

Slc11a2	1.273183792	0.15225328	6.15E-17	1.85E-15
Fiz1	1.260685554	0.15085316	6.43E-17	1.93E-15
Narf	-1.615545925	0.19331235	6.42E-17	1.93E-15
Sult1c2a	-3.505375335	0.4195738	6.56E-17	1.96E-15
Sidt2	1.197172439	0.14338718	6.87E-17	2.05E-15
Hyou1	1.886743943	0.22605258	7.03E-17	2.09E-15
Pold3	-1.412183365	0.16920261	7.05E-17	2.10E-15
RGD1561277	-3.411407778	0.4088967	7.25E-17	2.15E-15
Serpinh1	2.547675765	0.30538766	7.28E-17	2.16E-15
Pnn	-3.002146737	0.35988475	7.31E-17	2.16E-15
Sdccag3	-1.182203611	0.14178193	7.54E-17	2.23E-15
Extl3	1.85153396	0.22222138	7.95E-17	2.34E-15
Slc3a2	2.34808451	0.28181449	7.95E-17	2.34E-15
Sfswap	-1.182359445	0.14198973	8.29E-17	2.43E-15
Slc38a2	1.364693734	0.1639214	8.41E-17	2.46E-15
Eif4g1	1.906404731	0.22900763	8.46E-17	2.47E-15
Smarcal1	-1.448432082	0.17399485	8.46E-17	2.47E-15
Cul1	-1.847054355	0.22192248	8.58E-17	2.50E-15
Spire2	4.644197523	0.55802321	8.61E-17	2.50E-15
Ptbp1	2.096403928	0.25198255	8.82E-17	2.56E-15
Ube2v2	-2.253919911	0.27118718	9.47E-17	2.74E-15
Tgfbr3	1.681334587	0.20229233	9.46E-17	2.74E-15
B2m	-1.670026798	0.20093788	9.48E-17	2.74E-15
Timm8b	-1.41617852	0.17040777	9.53E-17	2.75E-15
Plxnd1	1.580716519	0.19022198	9.58E-17	2.76E-15
Rpl36a1	-1.651516379	0.19876871	9.67E-17	2.78E-15
Mfap1a	-1.666798354	0.2006193	9.71E-17	2.78E-15
Zfp69	-3.274968593	0.39433855	9.98E-17	2.86E-15
Dcaf7	1.505033593	0.18126844	1.02E-16	2.90E-15
Ngrn	-1.359379993	0.16373174	1.02E-16	2.91E-15
Zbtb8os	-1.324130941	0.15954697	1.05E-16	2.98E-15
Eif3el1	-1.513873176	0.18243851	1.06E-16	3.01E-15
Tnpo3	-1.17028748	0.14110205	1.10E-16	3.11E-15
Higd2a11	8.130960584	0.98049774	1.11E-16	3.13E-15
Capza2	-1.681336685	0.2029776	1.20E-16	3.38E-15
Cutc	-1.411631337	0.17053469	1.26E-16	3.54E-15
Pdcd5	-1.641261973	0.19829365	1.26E-16	3.56E-15
Grn	1.648285265	0.19931685	1.34E-16	3.77E-15
Nudt2	-1.643458527	0.19874002	1.35E-16	3.78E-15
Thoc5	-1.341618625	0.16227295	1.37E-16	3.83E-15
C1qbp	1.529130829	0.18498423	1.38E-16	3.86E-15
Ing2	-1.430453048	0.1730872	1.40E-16	3.92E-15
Lrrc58	2.821109851	0.34146278	1.43E-16	4.00E-15
Gbas	-1.743735447	0.21115008	1.48E-16	4.11E-15
Cep95	-2.789999564	0.33790155	1.50E-16	4.15E-15
AABR07007905.2	-3.20822736	0.38860951	1.51E-16	4.19E-15
Birc2	-1.944603185	0.23557023	1.52E-16	4.21E-15
Mrps26	-1.510846503	0.18303045	1.52E-16	4.21E-15

Mnat1	-1.723846212	0.20896867	1.59E-16	4.39E-15
Mrps33	-1.737847117	0.2107263	1.63E-16	4.47E-15
Slc45a4	1.43011981	0.17346334	1.66E-16	4.55E-15
Lpp	2.690454306	0.3267895	1.83E-16	5.00E-15
Ppp2r3c	-1.811411247	0.22002587	1.83E-16	5.00E-15
Timm9	-1.849210982	0.22473059	1.89E-16	5.17E-15
RGD1359158	-2.330493553	0.28333787	1.95E-16	5.31E-15
Tbl2	1.240468913	0.15082617	1.96E-16	5.33E-15
Prdm9	-3.84745165	0.46803012	2.03E-16	5.50E-15
Ipo4	1.970860041	0.23980021	2.06E-16	5.56E-15
Dap3	-1.055438877	0.12841334	2.05E-16	5.56E-15
Aknad1	-3.256557311	0.39623824	2.06E-16	5.56E-15
Cnm2	1.449889645	0.17645866	2.09E-16	5.64E-15
Luc7l3	-3.253201738	0.39609225	2.15E-16	5.79E-15
Ccdc71	1.172494621	0.14281126	2.21E-16	5.94E-15
Loxl2	2.773429296	0.3378925	2.25E-16	6.03E-15
Sec24b	1.481118285	0.1804757	2.27E-16	6.09E-15
Tgfb1	2.259353692	0.27532863	2.29E-16	6.11E-15
Uhmk1	1.941991997	0.23669624	2.31E-16	6.18E-15
Prmt9	-1.49283436	0.18202516	2.38E-16	6.34E-15
Tdp2	-2.010037845	0.24529599	2.52E-16	6.70E-15
Ttyh3	1.495910847	0.18256468	2.53E-16	6.72E-15
Tns1	1.920103233	0.23444312	2.61E-16	6.92E-15
Fam149b1	-1.463647371	0.17873882	2.64E-16	6.99E-15
Mrpl41	-1.244453877	0.15201468	2.69E-16	7.11E-15
Alg3	1.4411374	0.17614635	2.80E-16	7.40E-15
Ctdsp2	2.225829041	0.27206807	2.81E-16	7.40E-15
Adsl	-1.525081687	0.18646367	2.86E-16	7.53E-15
Dmap1	-1.723002227	0.21076549	2.96E-16	7.77E-15
Igf2r	1.534972283	0.18777427	2.97E-16	7.78E-15
Anapc4	-1.87427911	0.22936005	3.04E-16	7.95E-15
Ddx41	-1.292327293	0.15817417	3.08E-16	8.04E-15
Cox16	-1.577060314	0.19310987	3.17E-16	8.27E-15
Calm3	-1.012534048	0.12400743	3.21E-16	8.36E-15
Ndufs4	-1.467420529	0.17981129	3.33E-16	8.64E-15
Gpkow	-1.528396559	0.1875504	3.66E-16	9.50E-15
Arhgap18	-2.301932619	0.28264024	3.81E-16	9.86E-15
Thoc7	-1.588486245	0.1951139	3.91E-16	1.01E-14
LOC100359687	-1.699145577	0.20874643	3.96E-16	1.02E-14
Zdhhc8	1.801155376	0.22128813	3.97E-16	1.02E-14
Nrxn2	1.542339599	0.18956393	4.08E-16	1.05E-14
Rnf8	-1.761491625	0.21651613	4.10E-16	1.05E-14
Det1	1.320885279	0.16239584	4.16E-16	1.07E-14
Tymp	-3.35042711	0.41192886	4.17E-16	1.07E-14
LOC680875	-3.238418032	0.39828097	4.26E-16	1.09E-14
Unc5b	3.458486214	0.42549737	4.36E-16	1.11E-14
Il15ra	-2.900344928	0.35690747	4.43E-16	1.13E-14
Hba-a2	3.475990022	0.42779187	4.46E-16	1.13E-14

Serp1	1.235070253	0.15213533	4.73E-16	1.20E-14
Taf8	-1.209244016	0.14896093	4.74E-16	1.20E-14
Acat1	-2.252623607	0.27751883	4.78E-16	1.21E-14
Dek	-2.276214121	0.28046972	4.83E-16	1.22E-14
Lrpap1	-1.822447705	0.22458935	4.87E-16	1.23E-14
Degs1	1.518686179	0.18717051	4.90E-16	1.23E-14
Zscan12	-2.802360263	0.34544725	4.97E-16	1.25E-14
Rwdd2b	-1.535048983	0.18924278	5.00E-16	1.25E-14
Fbxo42	1.046843369	0.12909686	5.10E-16	1.28E-14
Sap25	-4.286854891	0.52870574	5.14E-16	1.29E-14
Cpeb2	2.66232735	0.32856378	5.37E-16	1.34E-14
Zdhhc18	2.129812836	0.262962	5.53E-16	1.38E-14
Uprt	3.396690788	0.41955849	5.69E-16	1.42E-14
Taok2	-1.045745301	0.12932381	6.15E-16	1.53E-14
LOC108348098	-1.485605566	0.18376176	6.25E-16	1.55E-14
Zrsr2	-1.804165828	0.22333662	6.57E-16	1.63E-14
Ggnbp2	-2.273759406	0.28154559	6.69E-16	1.66E-14
Ndufa6	-1.786179383	0.22117955	6.71E-16	1.66E-14
Tbce	-1.973432434	0.24436967	6.71E-16	1.66E-14
Il5ra	7.904883121	0.97909224	6.82E-16	1.68E-14
Psmc6	-1.169768857	0.14488436	6.81E-16	1.68E-14
Anxa7	3.268052192	0.40492007	6.98E-16	1.71E-14
Ankrd49	-1.80527533	0.22369707	7.02E-16	1.72E-14
Bloc1s1	-2.816252213	0.34899214	7.05E-16	1.73E-14
Ptpn1	1.559721836	0.19334083	7.19E-16	1.76E-14
Slc30a7	1.481091564	0.18360726	7.23E-16	1.76E-14
Chchd1	-1.697187518	0.21043354	7.31E-16	1.78E-14
Rangap1	1.822565831	0.22600481	7.37E-16	1.79E-14
Arhgap23	2.319039032	0.28772078	7.63E-16	1.85E-14
Nol9	2.365585754	0.29355593	7.73E-16	1.87E-14
Nfkb2	2.469054863	0.30648955	7.89E-16	1.91E-14
Zfp426	-3.343360958	0.4150716	7.95E-16	1.92E-14
Rnf186	3.498896017	0.43450654	8.11E-16	1.96E-14
Gatb	-1.800327095	0.22358985	8.15E-16	1.96E-14
Pom121	1.734569162	0.21556206	8.50E-16	2.05E-14
Brcc3	-2.152349485	0.2676159	8.79E-16	2.11E-14
Ints10	-1.598370794	0.1987597	8.86E-16	2.13E-14
LOC108348144	-1.671716205	0.2079567	9.07E-16	2.17E-14
Ggcx	1.427396214	0.17763336	9.31E-16	2.23E-14
Vhl	1.602827997	0.19954261	9.55E-16	2.28E-14
Por	2.583611089	0.32167943	9.62E-16	2.29E-14
Rpl26	-1.754199386	0.21866243	1.04E-15	2.47E-14
Tstd3	-2.439770036	0.30412492	1.04E-15	2.47E-14
Srp72	-1.556559442	0.19406835	1.05E-15	2.49E-14
Rrp15	-1.470693039	0.18339769	1.06E-15	2.52E-14
LOC100911305	1.963780171	0.24498717	1.09E-15	2.59E-14
Uqcc1	-1.155456879	0.14416602	1.10E-15	2.60E-14
Fhl3	2.521307406	0.31491393	1.18E-15	2.79E-14

Cluap1	-1.761373217	0.22006787	1.21E-15	2.84E-14
Tfe3	1.469240811	0.18376197	1.29E-15	3.03E-14
LOC103693430	-1.398289238	0.17488854	1.29E-15	3.03E-14
Maff	4.77549824	0.59730596	1.30E-15	3.03E-14
Svep1	3.705119436	0.46355147	1.32E-15	3.08E-14
Mrpl54	-1.762021104	0.22050865	1.34E-15	3.13E-14
Taf7	-1.858155573	0.23274178	1.42E-15	3.31E-14
Pms2	-1.753602107	0.21976398	1.47E-15	3.42E-14
Rps3a	-1.970142877	0.24689581	1.47E-15	3.42E-14
Reep5	1.962514916	0.24601395	1.50E-15	3.48E-14
Hibch	-2.054090207	0.25764319	1.55E-15	3.60E-14
Mtif2	-3.113032418	0.39048355	1.56E-15	3.61E-14
Scmh1	1.857757578	0.23315191	1.61E-15	3.73E-14
Fam129a	4.144632776	0.52049193	1.68E-15	3.88E-14
Col4a1	2.708769663	0.34036307	1.74E-15	4.02E-14
Syap1	-1.723651623	0.21660156	1.75E-15	4.04E-14
Nfe2l2	-2.013973439	0.25317055	1.79E-15	4.12E-14
Nploc4	1.576630794	0.19825707	1.83E-15	4.20E-14
Polr2a	1.184409081	0.14895926	1.85E-15	4.23E-14
Emc2	-2.22831547	0.28027316	1.86E-15	4.25E-14
Zcchc7	-2.846409907	0.35805938	1.87E-15	4.28E-14
Dnajc17	-2.592616234	0.32620726	1.90E-15	4.34E-14
Tanc2	1.994674458	0.25100269	1.91E-15	4.36E-14
LOC103690343	-3.706166719	0.46643949	1.93E-15	4.40E-14
Brd9	-2.126736098	0.26767772	1.94E-15	4.41E-14
Taf11	-1.221468483	0.15374511	1.95E-15	4.42E-14
Hnrnph1	-2.270463067	0.28581166	1.96E-15	4.44E-14
Ccdc25	-1.915382888	0.24115114	1.98E-15	4.48E-14
Eloc	-1.442430514	0.1816323	2.00E-15	4.52E-14
Dact2	3.427724323	0.43181501	2.06E-15	4.64E-14
Exo5	-2.062248787	0.26023477	2.29E-15	5.16E-14
Ptcd3	-2.517966955	0.31829029	2.56E-15	5.74E-14
LOC108348151	2.325495513	0.29395489	2.55E-15	5.74E-14
NEWGENE_621351	3.943708533	0.4988044	2.65E-15	5.94E-14
Stab1	1.840149496	0.2327425	2.65E-15	5.94E-14
Ttf1	-2.194387116	0.277552	2.65E-15	5.94E-14
Sugt1	-1.355976256	0.17151816	2.66E-15	5.95E-14
Gpat3	5.918078122	0.74886904	2.73E-15	6.09E-14
Basp1	3.541321759	0.44817142	2.75E-15	6.13E-14
Ankmy2	-1.804119902	0.22835195	2.78E-15	6.18E-14
Lonrf1	2.233787046	0.28277182	2.80E-15	6.22E-14
Dcst1	-2.762768684	0.34993468	2.90E-15	6.44E-14
Pabpc4	1.73233779	0.21944774	2.92E-15	6.48E-14
Cdc5l	-1.886976499	0.23907742	2.96E-15	6.54E-14
Tomm7	-1.461264677	0.18521539	3.03E-15	6.70E-14
NEWGENE_1586233	-2.009745955	0.25475016	3.04E-15	6.72E-14
Pld3	1.506734935	0.19112125	3.18E-15	7.01E-14
Ergic2	-1.293567202	0.1642143	3.35E-15	7.36E-14

Col5a1	2.659990681	0.33771315	3.37E-15	7.40E-14
Clcn7	1.669096568	0.21193241	3.39E-15	7.44E-14
Vti1b	-1.310666648	0.16652025	3.52E-15	7.72E-14
Nbn	-2.462598211	0.31297938	3.60E-15	7.87E-14
Xrcc6	-1.56896319	0.19960408	3.83E-15	8.37E-14
RGD1311345	-1.568696722	0.19962838	3.90E-15	8.51E-14
Zcchc8	-1.724561957	0.21951545	3.96E-15	8.63E-14
Lifr	2.105401277	0.26807073	4.03E-15	8.78E-14
Upf3a	-1.228417664	0.15646237	4.12E-15	8.96E-14
Rabep1	-2.233730288	0.28453508	4.15E-15	9.00E-14
Zfp319	1.441856572	0.18369606	4.19E-15	9.08E-14
Ptpn23	2.090750341	0.26663999	4.47E-15	9.67E-14
Hddc2	-2.697933062	0.34420734	4.57E-15	9.89E-14
Dynll1	2.260678869	0.28847036	4.62E-15	9.98E-14
Ttpal	1.624292242	0.20733416	4.72E-15	1.02E-13
Snx2	-1.900289421	0.2428821	5.12E-15	1.10E-13
Ppp1r9b	1.42981506	0.18274633	5.12E-15	1.10E-13
Nsa2	-1.378252601	0.17617996	5.16E-15	1.11E-13
Slc35a2	1.445515339	0.18486395	5.31E-15	1.14E-13
Uqcrc2	-1.430347529	0.18299677	5.44E-15	1.17E-13
Slc35d1	1.519989739	0.1945016	5.51E-15	1.18E-13
Plekhm2	1.895872816	0.24268881	5.63E-15	1.20E-13
Rbm6	-1.911225779	0.24467457	5.66E-15	1.21E-13
RGD1305713	-1.357990485	0.17384811	5.66E-15	1.21E-13
AABR07013065.1	-3.928555591	0.50305025	5.74E-15	1.22E-13
Tap1	1.930658521	0.24729374	5.85E-15	1.24E-13
Mrpl33	-2.186375222	0.28007554	5.89E-15	1.25E-13
St3gal2	1.995871017	0.2556822	5.90E-15	1.25E-13
Ilf2	-1.25099783	0.16030073	5.99E-15	1.27E-13
Bud31	-1.294023125	0.16588388	6.15E-15	1.30E-13
Clec4f	-2.388274379	0.30615229	6.14E-15	1.30E-13
Adam23	2.097577109	0.26893125	6.21E-15	1.31E-13
Itpripl2	2.960513836	0.37959647	6.23E-15	1.31E-13
Atg2a	1.24437036	0.15959253	6.33E-15	1.33E-13
Ttll12	1.600686556	0.20531022	6.37E-15	1.34E-13
Tbc1d20	1.281208777	0.16439184	6.51E-15	1.37E-13
AABR07004112.1	9.378633773	1.20343792	6.53E-15	1.37E-13
LOC100911337	-2.256063388	0.28951389	6.56E-15	1.37E-13
Golga1	-2.282379334	0.29310032	6.86E-15	1.43E-13
Crim1	2.043155726	0.26246718	7.00E-15	1.46E-13
Ctla2a	-2.263565754	0.2913355	7.87E-15	1.64E-13
Nfatc3	1.176079959	0.15141112	8.01E-15	1.66E-13
Vps41	-2.196383102	0.28279266	8.05E-15	1.67E-13
Fra10ac1	-2.062859593	0.26571894	8.27E-15	1.71E-13
Fnbp4	-2.633090897	0.33924193	8.38E-15	1.73E-13
LOC100909505	11.54958422	1.48829442	8.47E-15	1.75E-13
Fam65a	1.465105911	0.18902925	9.14E-15	1.89E-13
Ikzf1	2.571370725	0.33192758	9.43E-15	1.94E-13

Ofd1	-2.586393625	0.33396222	9.59E-15	1.97E-13
Eif2b4	-1.204347448	0.15551893	9.63E-15	1.98E-13
Gse1	1.889002155	0.24393144	9.63E-15	1.98E-13
Slirp	-1.674824278	0.21628636	9.67E-15	1.98E-13
Mpc2	-1.797391425	0.23218549	9.85E-15	2.02E-13
AABR07061902.1	1.615727059	0.20883483	1.02E-14	2.08E-13
Nt5dc3	2.595411294	0.33582283	1.09E-14	2.22E-13
Ano6	1.441451612	0.18655063	1.10E-14	2.25E-13
Dnaja1	-1.529894205	0.19809623	1.14E-14	2.32E-13
Fxr1	-1.838263479	0.23803978	1.14E-14	2.32E-13
Vwf	1.849321374	0.23950992	1.15E-14	2.34E-13
Dopey2	1.209921607	0.15679549	1.20E-14	2.43E-13
Fh	-1.960415856	0.25408942	1.21E-14	2.44E-13
Vasp	1.792370018	0.23231594	1.21E-14	2.45E-13
Snd1	1.17960912	0.15297062	1.24E-14	2.51E-13
Ptprb	1.939810858	0.2516709	1.28E-14	2.58E-13
Traf3ip2	-1.648509534	0.21399658	1.32E-14	2.67E-13
Stom	1.569821256	0.2038484	1.35E-14	2.72E-13
Frg1	-1.948322815	0.25309701	1.38E-14	2.78E-13
Pde3a	2.501476478	0.32496921	1.39E-14	2.78E-13
Slc39a11	1.371250713	0.17815033	1.39E-14	2.79E-13
Dus1l	-1.247314629	0.16211796	1.43E-14	2.86E-13
Atp5j	-1.454683036	0.18924702	1.51E-14	3.02E-13
Dip2b	1.786905058	0.23253685	1.54E-14	3.07E-13
Btn2a2	-1.913489908	0.24905967	1.56E-14	3.10E-13
RGD1311251	-2.619928011	0.34118101	1.60E-14	3.19E-13
Gimd1	-4.257110622	0.55462951	1.65E-14	3.27E-13
Rn50_X_0677.1	9.263966609	1.20693627	1.65E-14	3.27E-13
Amer1	2.368818619	0.30906182	1.79E-14	3.56E-13
Chst15	2.104808256	0.27477479	1.86E-14	3.68E-13
Synj2bp	-1.382519585	0.18050443	1.87E-14	3.70E-13
Gprc5a	6.750304284	0.88149596	1.89E-14	3.74E-13
Ube2j1	1.440505963	0.18817875	1.93E-14	3.82E-13
Isyna1	2.471090298	0.32297754	1.99E-14	3.93E-13
Ncoa3	1.567207501	0.20492016	2.04E-14	4.02E-13
Rbfox2	1.352766876	0.17692413	2.07E-14	4.07E-13
Srek1	-2.332271595	0.30502812	2.07E-14	4.07E-13
Mtrf1	-3.186178822	0.41696906	2.15E-14	4.22E-13
Gm5471	1.642258369	0.21495838	2.17E-14	4.26E-13
Eml4	-1.611807493	0.21097725	2.18E-14	4.26E-13
Snrpe	-1.152103822	0.15081891	2.19E-14	4.28E-13
Zfp105	-2.104792384	0.27579942	2.32E-14	4.53E-13
Fancg	2.185320175	0.28650554	2.39E-14	4.67E-13
Lrpprc	-1.694426902	0.22221182	2.44E-14	4.74E-13
Dctn5	-1.024182021	0.13433706	2.46E-14	4.78E-13
Shisa5	1.132277173	0.14860083	2.54E-14	4.94E-13
Cd47	1.090657298	0.14316524	2.57E-14	4.99E-13
Oit3	1.792801878	0.23546242	2.66E-14	5.14E-13

Tln1	1.461878416	0.1922178	2.84E-14	5.49E-13
Exosc8	-1.850669632	0.24335142	2.85E-14	5.50E-13
Anp32a	-1.523588704	0.20036967	2.87E-14	5.54E-13
Fgfr1op2	-1.350248236	0.17762493	2.92E-14	5.63E-13
Arf6	1.321521155	0.17387022	2.95E-14	5.66E-13
Rapgef1	2.134534194	0.28104851	3.08E-14	5.91E-13
Slc7a11	7.417302484	0.97762525	3.27E-14	6.27E-13
Tm9sf4	1.195712196	0.1576738	3.36E-14	6.44E-13
Serpine1	5.00730329	0.66046127	3.42E-14	6.53E-13
RGD1308706	-1.53771753	0.20287145	3.46E-14	6.61E-13
Chst14	2.328520724	0.30724898	3.49E-14	6.67E-13
Vegfa	-1.67170658	0.22059392	3.50E-14	6.68E-13
RGD1307100	-2.501045646	0.33022058	3.62E-14	6.90E-13
Fem1a	1.163681223	0.15367121	3.66E-14	6.96E-13
Luc7l2	-1.434455058	0.18947905	3.72E-14	7.06E-13
Orc2	-1.694391218	0.22393463	3.84E-14	7.28E-13
Ppp1r15a	3.310236057	0.43751315	3.85E-14	7.29E-13
Scamp2	1.049041256	0.13873872	3.99E-14	7.55E-13
Insr	1.367327323	0.1808445	4.01E-14	7.57E-13
Bcat1	7.946967502	1.05115707	4.02E-14	7.60E-13
Ercc5	-3.362008802	0.44498109	4.18E-14	7.87E-13
Tfb2m	-1.199743136	0.15889046	4.33E-14	8.15E-13
Cdk7	-1.551790984	0.20552231	4.34E-14	8.16E-13
Mmrn2	1.686753604	0.22344602	4.39E-14	8.25E-13
Gabpb1	-1.258243769	0.1667105	4.44E-14	8.33E-13
Ufl1	-2.035582184	0.26972417	4.46E-14	8.36E-13
Hba-a3	3.608680276	0.47819251	4.47E-14	8.37E-13
LOC103692171	1.400011098	0.18563406	4.64E-14	8.67E-13
Dmgdh	-2.296751853	0.30459694	4.69E-14	8.76E-13
Ddx50	-1.821439597	0.24177814	4.94E-14	9.22E-13
Blvra	-1.312850585	0.1742827	4.96E-14	9.25E-13
Iffo1	-1.560274552	0.2072236	5.10E-14	9.49E-13
Caskin2	1.242913342	0.16509893	5.14E-14	9.56E-13
LOC108348175	1.826281259	0.24269392	5.27E-14	9.78E-13
Gtpbp10	-2.19393567	0.29161697	5.34E-14	9.89E-13
Mtrr	-1.423959607	0.18928715	5.36E-14	9.93E-13
Abca3	1.460465036	0.19414889	5.38E-14	9.94E-13
Nol10	-1.708792029	0.22717677	5.40E-14	9.97E-13
Ddx10	-2.152046318	0.2861444	5.44E-14	1.00E-12
Nono	-1.126052889	0.14973638	5.47E-14	1.01E-12
Ddx28	-1.527267751	0.20308643	5.47E-14	1.01E-12
Syde1	3.087994576	0.41073787	5.56E-14	1.02E-12
Aloxe3	5.706901553	0.75927011	5.63E-14	1.03E-12
Lyc2	-4.147634279	0.551984	5.73E-14	1.05E-12
Fam53b	1.383078515	0.18414541	5.88E-14	1.08E-12
Cln6	1.465502346	0.19514274	5.92E-14	1.08E-12
Naxd	-1.420467887	0.18915542	5.93E-14	1.08E-12
Unc119b	1.149480384	0.15306947	5.93E-14	1.08E-12

Cdyl	2.217831456	0.29546814	6.09E-14	1.11E-12
Sult1c2	-3.114367128	0.41494246	6.12E-14	1.11E-12
Trmt10b	-1.43312865	0.19110628	6.42E-14	1.17E-12
Itgal	1.925966085	0.25685865	6.47E-14	1.17E-12
Papss1	1.50501928	0.20077518	6.58E-14	1.19E-12
Itgav	2.467534961	0.32926327	6.68E-14	1.21E-12
Map4	1.086869631	0.14503224	6.68E-14	1.21E-12
Usp2	4.189040755	0.55903056	6.71E-14	1.21E-12
LOC103693780	1.260885225	0.16830394	6.80E-14	1.23E-12
Fam53c	1.741039613	0.23241884	6.84E-14	1.23E-12
Rfc1	-2.177503124	0.29075291	6.93E-14	1.25E-12
LOC103692719	2.402848509	0.32091099	7.02E-14	1.26E-12
Zfp710	1.83867009	0.24558963	7.06E-14	1.27E-12
Mad1l1	-1.354945403	0.18105052	7.22E-14	1.29E-12
Mrpl47	-1.305129591	0.17445051	7.35E-14	1.32E-12
Cwc27	-1.704405546	0.22790095	7.51E-14	1.34E-12
Sdr9c7	-2.406441808	0.32181917	7.57E-14	1.35E-12
Mansc1	2.252289599	0.30121886	7.59E-14	1.35E-12
Fam213a	-2.125140781	0.28422431	7.60E-14	1.36E-12
Rgmb	2.154752061	0.28820808	7.64E-14	1.36E-12
Rtel1	-1.242526741	0.16623443	7.75E-14	1.38E-12
Capn15	1.249950766	0.16724002	7.78E-14	1.38E-12
Rpl27a	-1.682393085	0.22513827	7.86E-14	1.39E-12
Mlh3	-2.064871566	0.2764106	8.00E-14	1.42E-12
Cpd	2.185211658	0.29254722	8.04E-14	1.42E-12
Ago2	2.376747505	0.31822448	8.09E-14	1.43E-12
Nob1	-1.582876199	0.21194123	8.11E-14	1.43E-12
Tmed2	1.075653885	0.14409488	8.34E-14	1.47E-12
Tubb5	2.582128087	0.34590373	8.34E-14	1.47E-12
Zfp330	-1.65815647	0.2222115	8.52E-14	1.50E-12
Dmwd	1.471023607	0.1971785	8.63E-14	1.52E-12
Paqr8	3.36442799	0.45100364	8.66E-14	1.52E-12
Sfr1	-2.109359586	0.28281301	8.75E-14	1.54E-12
Rpl35a	-1.786487631	0.23957466	8.86E-14	1.55E-12
Ccdc130	-1.709205048	0.2292404	8.92E-14	1.56E-12
AABR07006049.2	4.530287776	0.6076716	8.98E-14	1.57E-12
Ccdc90b	-1.766418246	0.23728072	9.74E-14	1.70E-12
Arhgap31	1.950320063	0.26204139	9.86E-14	1.72E-12
Sem1	-1.215748696	0.16335285	9.88E-14	1.72E-12
Cblb	1.430689028	0.19226119	9.96E-14	1.73E-12
Tmem185b	1.888224	0.25401024	1.06E-13	1.84E-12
Cep170b	1.664068184	0.22388519	1.06E-13	1.85E-12
Tm6sf2	1.534553177	0.2064649	1.07E-13	1.85E-12
Tax1bp1	-1.888413094	0.2544466	1.16E-13	2.00E-12
Itgb3	2.317533258	0.31229727	1.16E-13	2.01E-12
Ndufaf1	-1.61775654	0.21805627	1.18E-13	2.04E-12
Ndufb3	-1.757708732	0.23699007	1.20E-13	2.07E-12
Metap1	-1.133558964	0.15286545	1.21E-13	2.09E-12

Pnpt1	-1.801414556	0.24314391	1.27E-13	2.19E-12
Vps18	1.143785175	0.15446577	1.31E-13	2.26E-12
Tspan31	1.00629257	0.13589946	1.31E-13	2.26E-12
Lars2	-1.285377455	0.1736084	1.32E-13	2.27E-12
Lgals8	-1.532893146	0.20709821	1.34E-13	2.30E-12
Map3k6	3.902584302	0.52733079	1.36E-13	2.32E-12
Ankzf1	-1.17659539	0.15902411	1.37E-13	2.35E-12
Atf6	1.60918791	0.21763495	1.43E-13	2.43E-12
Mrpl40	-1.03105496	0.1394899	1.45E-13	2.47E-12
Zfp933	-3.359619792	0.45457461	1.46E-13	2.49E-12
Arf4	1.27913259	0.17309468	1.47E-13	2.50E-12
Elk4	1.151944967	0.15588792	1.47E-13	2.50E-12
Adamts2	2.6318212	0.35642491	1.54E-13	2.61E-12
Sf3b1	-1.754264348	0.23762388	1.55E-13	2.63E-12
mrpl9	-1.396119346	0.18915629	1.57E-13	2.66E-12
RGD1308147	-2.227038807	0.30190692	1.62E-13	2.74E-12
Zfp687	1.058280028	0.14353454	1.67E-13	2.82E-12
Pxdn	2.526089138	0.34296777	1.77E-13	2.98E-12
RGD1562758	6.367146484	0.86449803	1.77E-13	2.98E-12
Sel1l	1.163922422	0.15805182	1.78E-13	3.00E-12
Csnk1d	1.112967057	0.15116187	1.80E-13	3.03E-12
Mkln1	-1.649265195	0.22405694	1.83E-13	3.07E-12
Ccar1	-1.921041436	0.26102688	1.85E-13	3.09E-12
Ppp1r18	1.496015893	0.20329359	1.85E-13	3.11E-12
Rnf6	-1.783023912	0.24234488	1.88E-13	3.14E-12
Grina	1.355730437	0.18426941	1.88E-13	3.14E-12
Fabp1	-2.704421437	0.36767745	1.90E-13	3.18E-12
Ppp1r13l	2.81135682	0.38246185	1.97E-13	3.29E-12
Mphosph6	-2.090994565	0.28449107	1.98E-13	3.30E-12
Phf14	-1.581724958	0.21525545	2.01E-13	3.35E-12
Pear1	1.523032741	0.20731288	2.03E-13	3.38E-12
Parp9	-1.842680734	0.25083895	2.04E-13	3.39E-12
Bag6	1.164168044	0.1585247	2.08E-13	3.44E-12
Chmp2b	-1.320808658	0.17993264	2.13E-13	3.52E-12
LOC100912604	1.963502218	0.26762218	2.19E-13	3.62E-12
Tmed10	1.017039585	0.13864533	2.21E-13	3.65E-12
Cacul1	1.368990732	0.18667627	2.24E-13	3.70E-12
Hnrnpm	-1.02007481	0.13919959	2.33E-13	3.85E-12
Rpl22	-1.366086097	0.1865052	2.40E-13	3.95E-12
Rpl22	-1.366086097	0.1865052	2.40E-13	3.95E-12
Sept09	1.279976182	0.17477471	2.41E-13	3.97E-12
Cxcl9	-2.396988528	0.32745035	2.48E-13	4.07E-12
Anapc13	-1.54973767	0.21171594	2.48E-13	4.08E-12
Tbc1d4	1.588205131	0.21700382	2.50E-13	4.11E-12
Mfhas1	2.541712418	0.34730709	2.51E-13	4.12E-12
Cwf19l2	-2.315566173	0.31653021	2.56E-13	4.20E-12
Rpl7	-1.083157785	0.14813621	2.63E-13	4.31E-12
Scarb2	1.705093309	0.23327814	2.69E-13	4.39E-12

Azgp1	-2.473463178	0.3384488	2.71E-13	4.42E-12
Zdhhc9	1.190462868	0.16294904	2.76E-13	4.50E-12
Pip4k2b	1.63823774	0.22428642	2.79E-13	4.54E-12
Tefm	-1.759358169	0.24091431	2.82E-13	4.59E-12
LOC688583	-1.596491233	0.21862065	2.82E-13	4.59E-12
Ndufa2	-2.130970974	0.29185069	2.84E-13	4.62E-12
Anxa5	2.592608208	0.35514735	2.88E-13	4.67E-12
Vegfb	1.51845681	0.20803387	2.90E-13	4.70E-12
Micall1	1.322939766	0.1813347	2.97E-13	4.82E-12
Stab2	1.660237522	0.22758478	2.99E-13	4.83E-12
Sh3d19	1.354574063	0.18573295	3.03E-13	4.89E-12
Ttc23	-2.139284753	0.2934086	3.07E-13	4.96E-12
Camk2n2	3.028944231	0.41549454	3.10E-13	5.00E-12
Mark4	1.177152879	0.16148046	3.11E-13	5.00E-12
Etfdh	-2.452335303	0.33654555	3.17E-13	5.11E-12
Elp3	-1.17496511	0.16132934	3.26E-13	5.25E-12
Pofut1	1.48589599	0.20407427	3.31E-13	5.32E-12
Stk35	1.574850228	0.21631985	3.33E-13	5.35E-12
Hmga1	3.568454092	0.49033325	3.40E-13	5.45E-12
Lin7a	-2.600101666	0.35769716	3.62E-13	5.80E-12
Fbxo46	1.03910855	0.14295831	3.63E-13	5.81E-12
Herc4	-1.730304005	0.238091	3.66E-13	5.86E-12
Rars	-1.400511334	0.19272021	3.67E-13	5.87E-12
Gle1	-1.760387649	0.24237281	3.78E-13	6.03E-12
Tceal8	-1.272410521	0.17525955	3.87E-13	6.16E-12
Yeats4	-1.180020313	0.16254482	3.88E-13	6.18E-12
Arl3	-1.341706817	0.18487219	3.94E-13	6.27E-12
Cep70	-3.851768458	0.53080213	3.97E-13	6.31E-12
Frmd6	2.350370624	0.32393265	3.99E-13	6.34E-12
Tmem41a	1.551138297	0.21383172	4.05E-13	6.41E-12
Dpysl2	2.056772577	0.28355545	4.06E-13	6.43E-12
Ficd	1.882326692	0.25958389	4.13E-13	6.52E-12
Dcbl2	3.646286238	0.50294806	4.17E-13	6.59E-12
Apip	-1.744011103	0.24061767	4.23E-13	6.67E-12
Spred2	1.846576819	0.25478302	4.24E-13	6.68E-12
Wipf2	1.976648583	0.27278121	4.28E-13	6.74E-12
Lyar	-1.926324285	0.26584747	4.29E-13	6.75E-12
Gucy1b2	-3.142416891	0.43376383	4.34E-13	6.82E-12
Uckl1	-1.146653768	0.15830286	4.38E-13	6.87E-12
Hcfc1	1.370800277	0.18925839	4.39E-13	6.88E-12
Irak3	2.606184251	0.35988592	4.43E-13	6.94E-12
Dsc2	1.361437126	0.18806671	4.52E-13	7.06E-12
Snrpd3	-1.065020649	0.14712338	4.52E-13	7.06E-12
Trpv2	2.847295137	0.39342036	4.58E-13	7.14E-12
Atp5f1	-1.152087236	0.15927259	4.71E-13	7.34E-12
Utp3	-2.048945084	0.28355183	4.97E-13	7.74E-12
Xpc	-2.068627717	0.28637136	5.06E-13	7.87E-12
RGD1306954	-1.328512512	0.18393482	5.10E-13	7.91E-12

Antxr1	2.451602894	0.33944141	5.11E-13	7.92E-12
Secisbp2	-1.681250924	0.23284707	5.18E-13	8.03E-12
Derl1	1.14550502	0.15866496	5.21E-13	8.07E-12
Mmp24	3.118270665	0.43220047	5.40E-13	8.34E-12
Fnip2	1.764763052	0.24488825	5.74E-13	8.87E-12
Spns2	1.595575752	0.22142398	5.76E-13	8.89E-12
Tle2	-1.783971364	0.24757385	5.77E-13	8.89E-12
Sc1t1	-2.582770797	0.35849183	5.82E-13	8.97E-12
Trim28	1.293337109	0.17952223	5.83E-13	8.97E-12
Mphosph8	-2.550325267	0.3547147	6.49E-13	9.94E-12
Zkscan3	-1.520239241	0.21156381	6.69E-13	1.02E-11
Etfa	-1.834896262	0.25544003	6.81E-13	1.04E-11
Prpf40b	-1.161715058	0.16172616	6.81E-13	1.04E-11
Ksr1	1.442204277	0.20083041	6.91E-13	1.05E-11
Rcan3	2.704409458	0.37661267	6.93E-13	1.06E-11
Ndfip2	1.119033595	0.15587153	7.01E-13	1.07E-11
Rab43	1.27666825	0.17785514	7.07E-13	1.08E-11
Ddx52	-2.148750925	0.29938862	7.12E-13	1.08E-11
LOC100911068	2.053321639	0.28620538	7.27E-13	1.10E-11
Krr1	-2.012287513	0.28053725	7.34E-13	1.11E-11
Prorsd1	-1.902359654	0.26525928	7.41E-13	1.12E-11
Snu13	1.748946647	0.24389267	7.45E-13	1.13E-11
Mkrn1	-1.32101047	0.18427594	7.57E-13	1.14E-11
Ehd2	2.075250139	0.28961348	7.75E-13	1.17E-11
Tti1	-1.33970024	0.1869796	7.78E-13	1.17E-11
LOC103692169	-1.065347689	0.1487472	7.94E-13	1.20E-11
Gpn3	-1.723478421	0.24068911	8.03E-13	1.21E-11
Nub1	-1.116317679	0.15592806	8.12E-13	1.22E-11
Fbxo21	1.345254132	0.18792132	8.15E-13	1.22E-11
Srfbp1	-1.746823117	0.24403877	8.19E-13	1.23E-11
Ctnnal1	-1.961089733	0.27399152	8.22E-13	1.23E-11
Tspan4	1.851486563	0.25867382	8.21E-13	1.23E-11
Hectd4	1.428203155	0.19956705	8.28E-13	1.24E-11
Cwc22	-2.339615974	0.32694829	8.31E-13	1.24E-11
Glmp	1.385691228	0.19364	8.31E-13	1.24E-11
Atmin	1.886642896	0.26376075	8.50E-13	1.27E-11
PVR	3.833932988	0.53609499	8.58E-13	1.28E-11
Zfp382	-3.470544154	0.48536008	8.65E-13	1.29E-11
Riok1	-1.977575595	0.27669851	8.87E-13	1.32E-11
Nelfcd	-1.107514885	0.15506384	9.18E-13	1.36E-11
Ubiad1	1.370245951	0.19192083	9.36E-13	1.39E-11
March06	2.148278877	0.30094498	9.44E-13	1.40E-11
Ddx5	-1.590315726	0.22278647	9.45E-13	1.40E-11
Rps21-ps1	-1.773713832	0.24847794	9.45E-13	1.40E-11
Cdr2	3.586215554	0.5025235	9.58E-13	1.42E-11
Igsf8	2.180724819	0.30572307	9.82E-13	1.45E-11
Calhm2	1.800980925	0.25254135	9.93E-13	1.47E-11
Idua	-1.51818539	0.21298521	1.02E-12	1.50E-11

Tmem184b	1.806460228	0.25353024	1.04E-12	1.53E-11
Uhrf1bp1	1.788646834	0.25111785	1.06E-12	1.56E-11
Cnm4	1.235637935	0.17350071	1.07E-12	1.57E-11
Zscan26	-2.394228086	0.33623001	1.07E-12	1.58E-11
Uqcrh	-1.474394817	0.20710367	1.09E-12	1.60E-11
Mthfr	1.955511438	0.2748905	1.13E-12	1.66E-11
Git2	-1.299734309	0.18272753	1.14E-12	1.66E-11
Sdcbp2	8.61531823	1.21129729	1.14E-12	1.67E-11
Sec14l1	1.762485878	0.24786291	1.15E-12	1.69E-11
RGD1307704	1.460205747	0.20540792	1.17E-12	1.71E-11
Cdk5rap1	-1.49003689	0.20968844	1.19E-12	1.74E-11
Terf1	-2.50252225	0.35219627	1.20E-12	1.75E-11
Ankrd52	1.495626975	0.21051391	1.21E-12	1.76E-11
Arhgap22	3.790760545	0.53360469	1.21E-12	1.76E-11
Ermard	-2.23154464	0.31413171	1.21E-12	1.76E-11
Uggt1	1.184144045	0.16670018	1.22E-12	1.77E-11
Adora2a	1.362573471	0.19184631	1.23E-12	1.78E-11
Akirin2	1.083308993	0.15259079	1.25E-12	1.81E-11
Grin2d	2.762629353	0.38927866	1.28E-12	1.85E-11
Tyw5	-2.091573962	0.29474314	1.28E-12	1.85E-11
Tmem229b	1.831441374	0.25808264	1.28E-12	1.85E-11
Rest	1.966847107	0.27733481	1.32E-12	1.91E-11
Ccz1b	-1.060954635	0.14963105	1.34E-12	1.93E-11
Dnajc2	-2.097441496	0.29585436	1.35E-12	1.94E-11
Slc25a24	3.625594229	0.51152909	1.36E-12	1.96E-11
Ss18	-1.445819844	0.20401064	1.37E-12	1.97E-11
Dock4	1.661637686	0.23451418	1.39E-12	1.99E-11
Wdr60	-1.407094449	0.19860858	1.39E-12	2.00E-11
Tmem181	1.3254629	0.18712894	1.41E-12	2.02E-11
RGD621098	1.159745249	0.1637886	1.43E-12	2.05E-11
Actr1a	1.081742339	0.15283902	1.47E-12	2.10E-11
Emc1	1.117881959	0.15799186	1.49E-12	2.13E-11
Xpr1	1.691098944	0.23915178	1.54E-12	2.19E-11
Matr3	-2.170772789	0.30701998	1.54E-12	2.20E-11
Vash1	2.188507694	0.30957827	1.56E-12	2.22E-11
NEWGENE_621351	-24.58123429	3.4799198	1.62E-12	2.31E-11
Prune	1.291696684	0.18289211	1.63E-12	2.33E-11
Tmem70	-1.614810482	0.22865912	1.64E-12	2.33E-11
Atp5e	-2.216744616	0.31392571	1.65E-12	2.34E-11
Gpmb	3.266068748	0.46273022	1.69E-12	2.39E-11
Ssr2	1.707647938	0.24198224	1.70E-12	2.41E-11
Slc35e3	1.422011365	0.20151686	1.71E-12	2.42E-11
Ccdc58	-1.157018775	0.16397308	1.71E-12	2.42E-11
Hars2	-1.337706691	0.18962889	1.73E-12	2.45E-11
Pf4	2.69500296	0.38214691	1.76E-12	2.49E-11
Qsox2	1.853017186	0.26279004	1.77E-12	2.50E-11
Upf2	-2.337949531	0.33169068	1.81E-12	2.55E-11
Rpl31	-1.683395269	0.23887334	1.83E-12	2.57E-11

C9	-2.312525479	0.32814815	1.83E-12	2.57E-11
Sdf2l1	1.81448896	0.25766106	1.89E-12	2.66E-11
Cdc42se1	1.513544748	0.21515115	2.00E-12	2.80E-11
Fndc3b	2.219913522	0.31560383	2.01E-12	2.82E-11
Rmi1	-1.852324121	0.26336576	2.02E-12	2.83E-11
Samd1	1.75453357	0.24950387	2.03E-12	2.85E-11
Cul3	-1.487197716	0.21152031	2.05E-12	2.87E-11
Dirc2	1.134612423	0.16137715	2.05E-12	2.87E-11
C1d	-1.19585292	0.17013404	2.08E-12	2.91E-11
Stxbp3	-1.673546741	0.23815587	2.11E-12	2.94E-11
Usp22	1.51788075	0.21614614	2.18E-12	3.04E-11
Ahsa2	-1.603991049	0.2284098	2.18E-12	3.04E-11
Slu7	-1.754276718	0.24985365	2.20E-12	3.06E-11
Lats2	1.558958165	0.22204916	2.21E-12	3.07E-11
Zfp18	-1.313897151	0.18721152	2.25E-12	3.12E-11
Rbm34	-1.541329843	0.21977271	2.33E-12	3.23E-11
Tmed3	2.347724371	0.334893	2.38E-12	3.29E-11
Dusp12	-2.240769788	0.31971502	2.41E-12	3.33E-11
Nxn	1.312199938	0.187301	2.46E-12	3.39E-11
Ywhaq	1.033384961	0.14756661	2.51E-12	3.46E-11
Tpbp	1.50871778	0.21552299	2.55E-12	3.52E-11
Ehbp1	-1.561874269	0.22315111	2.57E-12	3.55E-11
Tmem258b	1.642916021	0.23481143	2.62E-12	3.60E-11
Plec	1.29778846	0.18570069	2.78E-12	3.82E-11
Swt1	-2.426105834	0.34720459	2.80E-12	3.84E-11
Tmem201	1.404776622	0.20110021	2.84E-12	3.89E-11
Map3k9	1.256161665	0.17988169	2.88E-12	3.95E-11
Lrrc8a	1.384818768	0.19831388	2.89E-12	3.96E-11
Ldlrad1	-4.457150036	0.63863281	2.97E-12	4.06E-11
Amotl1	2.169283704	0.31084906	2.98E-12	4.07E-11
Lgals3	3.099180459	0.44416493	3.00E-12	4.10E-11
LOC499770	-1.791866646	0.2568518	3.03E-12	4.14E-11
Dusp7	1.319551044	0.18916456	3.04E-12	4.15E-11
Dnajc24	-2.203410948	0.31602555	3.12E-12	4.25E-11
Ints13	-1.540203374	0.22098048	3.17E-12	4.31E-11
LOC102554034	8.328455962	1.19604544	3.32E-12	4.51E-11
Nup214	2.171006887	0.31180937	3.34E-12	4.53E-11
Slc2a2	1.591255056	0.22873188	3.48E-12	4.72E-11
Snrnp48	-2.27101669	0.32658947	3.56E-12	4.82E-11
Rab6a	1.460512745	0.21004029	3.56E-12	4.82E-11
Usp47	-1.449855427	0.20853277	3.58E-12	4.85E-11
Tmem107	3.813733415	0.54891071	3.71E-12	5.01E-11
Mapk1ip1	-1.59494426	0.22964339	3.78E-12	5.10E-11
Prkx	1.569774919	0.22609321	3.84E-12	5.17E-11
Nek6	-1.534377445	0.22102261	3.86E-12	5.20E-11
Fn1	1.631601937	0.23507797	3.90E-12	5.25E-11
Tbrg1	1.545284509	0.22270249	3.95E-12	5.32E-11
LOC100158225	-2.646363108	0.38144999	3.99E-12	5.36E-11

Eva1a	-1.628898136	0.23481543	4.01E-12	5.38E-11
Trim30c	-2.287214579	0.32973826	4.02E-12	5.39E-11
Sqstm1	1.68779659	0.2434932	4.16E-12	5.58E-11
Sept11	1.85072577	0.26718743	4.31E-12	5.77E-11
Enc1	2.546240311	0.36765506	4.34E-12	5.81E-11
Aatf	-1.123682468	0.1623066	4.42E-12	5.90E-11
Tmem115	1.174061508	0.16958974	4.42E-12	5.91E-11
Desi2	1.310170414	0.18926773	4.44E-12	5.93E-11
Hypk	-1.36222064	0.19694232	4.62E-12	6.15E-11
Med8	-1.361137064	0.19678407	4.62E-12	6.15E-11
Lrrc32	1.376005186	0.19908737	4.79E-12	6.38E-11
Dhrs4	-1.432857598	0.20739655	4.89E-12	6.49E-11
Cyp2a1	-2.382001635	0.34477552	4.89E-12	6.49E-11
Kdm2b	1.129990593	0.16355763	4.89E-12	6.49E-11
Parp2	-1.03478543	0.14983796	4.98E-12	6.60E-11
Ftsj1	-1.01906756	0.14760422	5.05E-12	6.69E-11
Thoc1	-2.014542525	0.2918412	5.10E-12	6.74E-11
Cyp1a1	7.58160786	1.09864742	5.17E-12	6.82E-11
Ccdc17	-1.618799667	0.2346247	5.22E-12	6.88E-11
Ndrp1	3.594535393	0.52101459	5.23E-12	6.89E-11
RGD1305350	1.002761522	0.14534804	5.24E-12	6.89E-11
Btg3	3.278938371	0.47536354	5.28E-12	6.95E-11
Gnl2	-1.739214432	0.25214839	5.29E-12	6.95E-11
Emilin2	2.88817432	0.41882056	5.35E-12	7.03E-11
Gpatch1	-1.750455153	0.25385625	5.37E-12	7.05E-11
Lancl1	1.537123835	0.22297544	5.44E-12	7.13E-11
Ids	2.217021909	0.3217198	5.53E-12	7.25E-11
Nol6	1.3551186	0.19664907	5.54E-12	7.25E-11
Lpcat3	1.032533278	0.14985352	5.57E-12	7.28E-11
Yod1	2.180800365	0.31654914	5.61E-12	7.33E-11
Abcg1	1.796719682	0.26084109	5.65E-12	7.37E-11
Larp7	-1.872436017	0.27182998	5.65E-12	7.37E-11
Gpd1l	1.445690389	0.20994527	5.74E-12	7.48E-11
Gab2	2.865671888	0.41616673	5.74E-12	7.48E-11
Edem1	1.674882943	0.24330342	5.82E-12	7.58E-11
Slc39a9	1.067798904	0.15515211	5.89E-12	7.66E-11
Fkbp11	1.4075264	0.20451697	5.89E-12	7.66E-11
Fkbp11	1.4075264	0.20451697	5.89E-12	7.66E-11
LOC103694857	2.754962004	0.40037029	5.94E-12	7.72E-11
Smdt1	-1.401209	0.20364054	5.95E-12	7.72E-11
Csnk2a2	1.109802149	0.1613077	5.98E-12	7.76E-11
Ubap2	2.021656124	0.29390829	6.05E-12	7.83E-11
Npc1l1	8.084813216	1.17547336	6.07E-12	7.86E-11
Pmp22	3.415112928	0.49657787	6.10E-12	7.89E-11
Stk25	-1.003972473	0.14600057	6.13E-12	7.93E-11
Gnl3	-1.649984903	0.23997612	6.17E-12	7.97E-11
Zfp157	-2.740651979	0.39863486	6.19E-12	7.99E-11
Bcor1	1.374409743	0.19997053	6.28E-12	8.10E-11

Stim1	1.091167442	0.15878724	6.34E-12	8.16E-11
Hsc70-ps2	2.760776991	0.40176739	6.35E-12	8.17E-11
Atp13a1	1.073749912	0.15629259	6.41E-12	8.25E-11
Pan2	-1.254708182	0.18265379	6.45E-12	8.29E-11
Nynrin	2.170124395	0.31594659	6.48E-12	8.32E-11
Igfbp1	3.370767738	0.49081762	6.53E-12	8.37E-11
Eprs	-1.558373213	0.22696409	6.60E-12	8.45E-11
Gsta5	-2.996066085	0.43653638	6.73E-12	8.61E-11
Rpl32	-2.020283252	0.29446163	6.84E-12	8.75E-11
Zfp407	-1.794490592	0.2616749	7.00E-12	8.94E-11
Tab1	-1.205297694	0.17576788	7.02E-12	8.96E-11
Mettl3	-1.322629488	0.19290519	7.06E-12	9.01E-11
LOC103694855	2.792856388	0.40747481	7.18E-12	9.14E-11
Cdk11b	-1.106604858	0.16153035	7.35E-12	9.35E-11
Mphosph10	-2.52764692	0.36905377	7.44E-12	9.46E-11
Hnrnpr	-1.705522983	0.24904012	7.47E-12	9.49E-11
Cyp2e1	-1.989037111	0.29049521	7.54E-12	9.57E-11
Cd44	5.339629612	0.78021846	7.71E-12	9.77E-11
Ucp2	1.613976409	0.23583384	7.72E-12	9.77E-11
Cryz1	-2.171546872	0.31730819	7.72E-12	9.77E-11
Rpf2	-1.444662078	0.21113541	7.79E-12	9.85E-11
Ptk7	2.98634291	0.43650251	7.84E-12	9.90E-11
LOC108348298	-1.504724814	0.21994129	7.84E-12	9.90E-11
Trap1	-1.515225702	0.22165024	8.14E-12	1.03E-10
Dhfr	-1.834335743	0.26834914	8.16E-12	1.03E-10
Dnajc21	-1.827215196	0.26745944	8.39E-12	1.05E-10
Rps8	-1.313999494	0.19233647	8.39E-12	1.05E-10
Gtf2h1	-1.6120396	0.23604499	8.53E-12	1.07E-10
Arhgap27	1.814492883	0.26576463	8.64E-12	1.08E-10
Trmu	-1.90929367	0.27965982	8.66E-12	1.09E-10
Cyp3a9	-2.180397108	0.31943839	8.75E-12	1.10E-10
Gnai2	1.219965544	0.17882579	8.97E-12	1.12E-10
Cd276	2.440651777	0.3577557	8.97E-12	1.12E-10
Zfp830	-2.027284871	0.29744632	9.38E-12	1.17E-10
Tlk1	-1.929334679	0.28308442	9.40E-12	1.17E-10
Tlk1	-1.929334679	0.28308442	9.40E-12	1.17E-10
Cyb561	1.582480061	0.2322455	9.50E-12	1.19E-10
Rn60_X_0641.1	1.209235554	0.17759309	9.83E-12	1.22E-10
AABR07021823.1	-1.370995674	0.20135408	9.84E-12	1.22E-10
Zbtb7a	1.382371194	0.20303353	9.86E-12	1.23E-10
Dnajc16	1.199943867	0.17626095	9.91E-12	1.23E-10
Smox	2.715444469	0.39887196	9.91E-12	1.23E-10
AABR07024908.1	-1.031132016	0.15148901	9.99E-12	1.24E-10
Rpap2	-1.796270417	0.26392943	1.00E-11	1.25E-10
Acad9	-1.610847354	0.23670003	1.01E-11	1.25E-10
Prpf38a	-1.454828704	0.21385967	1.03E-11	1.27E-10
Adcy3	1.928065402	0.28343862	1.03E-11	1.27E-10
Syng2	1.287123431	0.1892859	1.05E-11	1.29E-10

Add1	1.109663933	0.16321781	1.06E-11	1.30E-10
LOC100365062	-1.499086559	0.22051489	1.06E-11	1.31E-10
Csmd1	2.733416258	0.40210011	1.06E-11	1.31E-10
Mocs3	1.147168531	0.16875908	1.06E-11	1.31E-10
Abcf2	-1.112545079	0.16375507	1.09E-11	1.34E-10
Ski	1.62018443	0.23853265	1.10E-11	1.36E-10
LOC100912538	-1.685773584	0.24820219	1.11E-11	1.36E-10
Hsp90aa1	7.815540576	1.15073502	1.11E-11	1.36E-10
A3galt2	3.365016213	0.49552102	1.11E-11	1.37E-10
Srp19	-1.281438625	0.18893804	1.18E-11	1.45E-10
Insig2	-2.522481058	0.37194277	1.19E-11	1.45E-10
Vma21	1.799669551	0.26538605	1.19E-11	1.46E-10
Acadl	-1.626188903	0.23997902	1.23E-11	1.51E-10
Psmd7	-1.033069122	0.15246581	1.24E-11	1.51E-10
Ttc28	1.847675811	0.27276115	1.25E-11	1.53E-10
Mmp3	5.745335755	0.84821588	1.26E-11	1.53E-10
Wasf1	1.204193528	0.17785383	1.28E-11	1.56E-10
Nkain1	5.516971708	0.81540214	1.32E-11	1.61E-10
Mettl14	-1.493779263	0.22079456	1.33E-11	1.62E-10
Saraf	1.316625522	0.19461694	1.33E-11	1.62E-10
Rexo4	-1.090615349	0.16123804	1.34E-11	1.63E-10
Nif3l1	-1.470968993	0.21748058	1.35E-11	1.63E-10
Lias	-1.713636556	0.25337527	1.35E-11	1.64E-10
Sdhd	-1.309371628	0.19362561	1.36E-11	1.65E-10
Ctns	1.464240996	0.21660824	1.38E-11	1.67E-10
AABR07058464.1	-2.270110039	0.33586444	1.39E-11	1.68E-10
Rpap1	1.12535005	0.16656773	1.42E-11	1.71E-10
Hbb	2.806761045	0.41574178	1.47E-11	1.77E-10
Ntn1	1.963678212	0.29087468	1.47E-11	1.77E-10
Rn50_2_1408.1	-1.692461812	0.25075316	1.48E-11	1.79E-10
Irf2bpl	1.122622634	0.16633291	1.49E-11	1.79E-10
Mfsd9	1.031466304	0.15294174	1.54E-11	1.85E-10
Akr7a3	2.796112399	0.41461373	1.54E-11	1.86E-10
Dsg2	1.432240995	0.21238681	1.55E-11	1.86E-10
RGD1564614	-2.638349378	0.39124425	1.55E-11	1.86E-10
Zfp652	1.058246996	0.15694718	1.55E-11	1.87E-10
Zbtb48	-1.77725858	0.26363298	1.57E-11	1.88E-10
Znhit6	-1.066895291	0.1582671	1.57E-11	1.89E-10
Srd5a3	1.947059176	0.28884246	1.57E-11	1.89E-10
Cenpj	-2.73033535	0.40509517	1.58E-11	1.90E-10
Casz1	3.687429115	0.54742938	1.63E-11	1.95E-10
Ufsp2	-1.355282061	0.20122917	1.64E-11	1.96E-10
Fam83h	1.28862213	0.19136268	1.65E-11	1.97E-10
Zmat3	2.378024721	0.35316708	1.66E-11	1.98E-10
Slc35b1	1.486652806	0.22081979	1.67E-11	1.99E-10
Trim35	2.389915796	0.35500084	1.67E-11	1.99E-10
Becn1	-1.067797941	0.15862215	1.68E-11	2.00E-10
Copb2	-1.310800791	0.19476483	1.69E-11	2.02E-10

Lmtk2	1.074617819	0.15968689	1.70E-11	2.03E-10
Gapdh	1.53854716	0.22870423	1.73E-11	2.06E-10
Tes	3.413842897	0.50750435	1.74E-11	2.06E-10
Abcg3l1	-2.02697562	0.30136426	1.74E-11	2.07E-10
Dnrtip2	-2.334386538	0.34716626	1.77E-11	2.10E-10
Prmt3	1.531410405	0.22779661	1.78E-11	2.11E-10
Kdelr3	2.307156439	0.34320392	1.79E-11	2.12E-10
Sdccag8	-2.417266651	0.35961841	1.80E-11	2.13E-10
Limk1	1.619143222	0.24090304	1.80E-11	2.13E-10
Pygb	1.959681696	0.2916082	1.81E-11	2.14E-10
Usp10	1.186728323	0.17661774	1.83E-11	2.16E-10
Bmp6	1.95457873	0.29094211	1.84E-11	2.17E-10
Ncbp3	-1.236978914	0.1841348	1.85E-11	2.18E-10
Myc	3.073868014	0.4576201	1.85E-11	2.18E-10
Hif1an	1.346181716	0.2004351	1.86E-11	2.19E-10
Ccdc92	3.621464556	0.53928187	1.88E-11	2.21E-10
Nkiras2	1.219164333	0.18156618	1.88E-11	2.21E-10
Cnpy4	-1.809087158	0.26948768	1.91E-11	2.24E-10
Ptgfrn	1.354176669	0.20173889	1.91E-11	2.24E-10
Hipk3	1.494460566	0.22269105	1.93E-11	2.27E-10
Rtn4	1.809347302	0.26961711	1.94E-11	2.27E-10
Per1	3.048153061	0.45435817	1.96E-11	2.30E-10
Mob3a	1.650420359	0.24604924	1.98E-11	2.31E-10
RGD1310951	1.188099323	0.17713934	1.98E-11	2.32E-10
Clpx	-2.55708037	0.38130906	2.00E-11	2.34E-10
LOC501110	-2.665495585	0.3975402	2.01E-11	2.35E-10
Hvcn1	2.897277933	0.43214967	2.02E-11	2.36E-10
Ptar1	1.792242892	0.26737113	2.04E-11	2.38E-10
Paics	-1.28500704	0.19177816	2.08E-11	2.42E-10
Hao2	-3.125112554	0.46658426	2.12E-11	2.46E-10
Foxo1	1.992508686	0.2975186	2.13E-11	2.47E-10
Egr3	5.415131982	0.80856941	2.12E-11	2.47E-10
Tbc1d2b	1.0857937	0.16228176	2.22E-11	2.58E-10
Mitd1	-2.340719695	0.34984909	2.22E-11	2.58E-10
Elovl1	1.205229664	0.18022616	2.27E-11	2.63E-10
Cul2	-1.584947319	0.23710697	2.32E-11	2.68E-10
Frmd4b	-1.641763276	0.24566485	2.34E-11	2.71E-10
Ndst1	1.909750082	0.28580281	2.36E-11	2.72E-10
Gdf2	-1.230518256	0.18419369	2.38E-11	2.75E-10
Map3k11	1.106782278	0.16570446	2.40E-11	2.77E-10
Zswim4	2.428435137	0.36358781	2.40E-11	2.77E-10
Ifrd2	1.567498523	0.23473304	2.43E-11	2.80E-10
Fbxo9	-1.784711224	0.26726607	2.43E-11	2.80E-10
Carm1	1.010472974	0.15136662	2.46E-11	2.83E-10
Kif26b	2.178708463	0.32647757	2.50E-11	2.88E-10
Uqcc3	-1.31681326	0.19732986	2.50E-11	2.88E-10
Rpl26-ps2	-1.561623652	0.23411805	2.55E-11	2.93E-10
Washc3	-1.455557993	0.21847185	2.69E-11	3.09E-10

Sec61a2	1.382493423	0.20753427	2.71E-11	3.11E-10
Cxcl16	1.860028945	0.27930334	2.75E-11	3.15E-10
Otud3	1.604289628	0.24091336	2.75E-11	3.15E-10
Hk1	1.88317889	0.28279337	2.75E-11	3.15E-10
Pdcl3	-1.487540803	0.22345524	2.79E-11	3.19E-10
Slc25a22	-3.204435204	0.4814007	2.80E-11	3.20E-10
Ccdc124	-1.499365157	0.22526143	2.81E-11	3.21E-10
Cpeb3	1.784467974	0.26847834	3.00E-11	3.42E-10
Ccdc181	-2.839329397	0.42720426	3.01E-11	3.42E-10
RGD1562699	-3.010190709	0.45300988	3.03E-11	3.45E-10
Atp2a3	1.281959316	0.19299044	3.08E-11	3.50E-10
Usp31	2.756374701	0.41498655	3.09E-11	3.51E-10
Asb16	-3.569832721	0.53753382	3.11E-11	3.53E-10
Rela	1.179674995	0.17770772	3.17E-11	3.60E-10
Zmiz2	11.40039224	1.71735117	3.17E-11	3.60E-10
Ripk1	-1.021925072	0.15404875	3.27E-11	3.71E-10
Rxra	1.87599094	0.28282116	3.29E-11	3.72E-10
Atp2a2	1.217434809	0.18364052	3.37E-11	3.81E-10
Mlxip	2.0663492	0.31172013	3.38E-11	3.82E-10
Ift57	-1.02704699	0.15493498	3.38E-11	3.82E-10
Ppwd1	-2.25415383	0.34010079	3.40E-11	3.84E-10
Vsig10l	1.743155138	0.26318371	3.51E-11	3.96E-10
Ptgr2	-1.154088239	0.17425948	3.52E-11	3.97E-10
Plpp5	1.194678029	0.18044658	3.58E-11	4.03E-10
Tgs1	-1.847701895	0.27922948	3.66E-11	4.12E-10
Sdpr	-1.647212604	0.24893911	3.67E-11	4.12E-10
Slc25a46	-1.369976368	0.2070655	3.69E-11	4.14E-10
Atxn7l3	1.596407194	0.24130054	3.69E-11	4.15E-10
Elovl7	6.969087496	1.05406784	3.80E-11	4.26E-10
Timm21	-1.926566341	0.29149001	3.86E-11	4.32E-10
Ubqln4	1.043001729	0.15781576	3.87E-11	4.33E-10
Dbi	-2.001245641	0.30287645	3.91E-11	4.37E-10
LOC100911545	31.39938624	4.75227359	3.92E-11	4.38E-10
Atp1a3	6.055264825	0.91647536	3.92E-11	4.38E-10
Esf1	-2.24144421	0.33940172	4.00E-11	4.46E-10
Pik3c3	-2.147271556	0.32517448	4.02E-11	4.48E-10
Clasrp	-1.355962961	0.2054069	4.07E-11	4.54E-10
Hhip	2.380926232	0.36090397	4.19E-11	4.67E-10
Fosl1	9.601625019	1.45543065	4.19E-11	4.67E-10
Mkl	-2.074298523	0.31445012	4.21E-11	4.68E-10
Astn2	2.260802219	0.34276445	4.23E-11	4.70E-10
Slc25a39	1.225667972	0.18587967	4.28E-11	4.75E-10
Snapc4	-1.483088324	0.22492648	4.29E-11	4.76E-10
Ints4	-1.096200881	0.16632147	4.37E-11	4.85E-10
Etv5	1.617961919	0.24560672	4.47E-11	4.95E-10
Guf1	-1.439737302	0.21857106	4.49E-11	4.96E-10
Npas2	-2.618603377	0.39758877	4.51E-11	4.99E-10
Rasl11b	4.789095035	0.72716699	4.52E-11	4.99E-10

Akr1cl	-1.719750221	0.26112254	4.52E-11	4.99E-10
Stk3	-1.696829185	0.25775913	4.61E-11	5.09E-10
RGD1564865	-4.301723466	0.6535399	4.64E-11	5.11E-10
Txndc5	2.206505864	0.33524746	4.65E-11	5.12E-10
Rpp14	-1.128848402	0.1715262	4.67E-11	5.14E-10
Gas2	-1.641260001	0.24939145	4.67E-11	5.14E-10
Nacc1	1.224844798	0.18613535	4.69E-11	5.16E-10
Pacs1	1.614818989	0.2454201	4.71E-11	5.18E-10
Gmfg	-1.490369947	0.22654433	4.75E-11	5.21E-10
Rnf10	1.146785457	0.17435203	4.79E-11	5.25E-10
Rnf19a	-1.542786991	0.2345908	4.82E-11	5.28E-10
Ranbp17	-2.160954639	0.32860605	4.83E-11	5.29E-10
Kif21b	2.290044103	0.34839264	4.93E-11	5.39E-10
Ice2	-1.946207359	0.29610247	4.94E-11	5.41E-10
Zcchc14	1.540379328	0.23439728	4.98E-11	5.44E-10
AABR07000902.1	-6.847089199	1.04197429	4.99E-11	5.45E-10
Gpc1	4.818797294	0.73351665	5.05E-11	5.52E-10
Anks6	3.623216724	0.55156747	5.07E-11	5.53E-10
Bloc1s5	-1.869742406	0.28467633	5.10E-11	5.56E-10
LOC100910771	-4.144301563	0.63109004	5.14E-11	5.60E-10
Cdk4	1.012081933	0.15416774	5.21E-11	5.67E-10
LOC100910143	-31.05001764	4.73036073	5.24E-11	5.70E-10
AABR07030494.1	7.183409868	1.09439805	5.25E-11	5.70E-10
Ddx18	-1.243109419	0.18941206	5.27E-11	5.73E-10
Fam57a	3.52674638	0.53739965	5.29E-11	5.74E-10
Pla2g4b	-2.252216836	0.34329362	5.36E-11	5.81E-10
Rin1	4.766666282	0.72682287	5.45E-11	5.90E-10
Tmem120a	1.911782415	0.29155391	5.48E-11	5.94E-10
Brix1	-1.728417132	0.26365954	5.55E-11	6.00E-10
Aimp1	-1.15328104	0.17594563	5.57E-11	6.03E-10
Klf5	6.455421331	0.98488631	5.58E-11	6.04E-10
Prex1	1.852307926	0.28260748	5.59E-11	6.04E-10
Dhx36	-2.014745724	0.30749615	5.67E-11	6.12E-10
Fan1	-1.460334455	0.223035	5.85E-11	6.31E-10
LOC100125368	-2.353357879	0.35956765	5.95E-11	6.42E-10
Arrb1	2.179880509	0.33307259	5.96E-11	6.42E-10
Utp15	1.453641538	0.22212953	5.98E-11	6.44E-10
LOC689757	-3.388050626	0.51785166	6.05E-11	6.51E-10
Agpat1	1.287675319	0.1968699	6.12E-11	6.58E-10
Optn	-1.570920416	0.24017906	6.13E-11	6.58E-10
Ccdc107	-1.657336581	0.25349957	6.24E-11	6.70E-10
Tctn1	1.341948882	0.2053583	6.37E-11	6.84E-10
Grpel1	-1.269706426	0.19433566	6.42E-11	6.88E-10
Gsap	-1.573060423	0.24078886	6.45E-11	6.91E-10
Mapk8ip3	-1.566090248	0.23976524	6.50E-11	6.96E-10
C3ar1	2.111388447	0.32325707	6.51E-11	6.96E-10
Ppig	-1.950416565	0.29867615	6.57E-11	7.02E-10
Ndufa10	-1.598529256	0.2448412	6.63E-11	7.08E-10

Tcp11l1	2.29295889	0.35122688	6.65E-11	7.09E-10
Usp16	-1.635328549	0.25050593	6.66E-11	7.10E-10
Wdr77	1.438165415	0.22032969	6.70E-11	7.14E-10
Gcn1l1	1.06906238	0.16379647	6.72E-11	7.16E-10
Tmbim4	1.048126899	0.16061021	6.76E-11	7.19E-10
Utp14a	-1.729116652	0.26507385	6.88E-11	7.32E-10
Sec63	-1.205017419	0.18481129	7.02E-11	7.46E-10
Scd2	1.849657174	0.28367789	7.02E-11	7.46E-10
Tesk1	1.068045332	0.16383699	7.08E-11	7.52E-10
Kdm5c	1.068414837	0.16390061	7.09E-11	7.52E-10
Acadvl	-1.293433262	0.19847353	7.18E-11	7.61E-10
LOC100909474	7.62346209	1.1698166	7.18E-11	7.61E-10
Tspan5	2.696093971	0.41388671	7.31E-11	7.74E-10
Decr1	-1.469593666	0.22574364	7.51E-11	7.95E-10
Tsc22d4	1.772146838	0.27236224	7.69E-11	8.12E-10
Tbk1	-1.711375387	0.26306032	7.74E-11	8.17E-10
Golph3	1.182021848	0.18175099	7.85E-11	8.27E-10
Mfsd5	1.226301532	0.18861092	7.94E-11	8.37E-10
Nadsyn1	-1.194505916	0.18384642	8.18E-11	8.61E-10
Ambra1	1.045091172	0.16086604	8.21E-11	8.64E-10
Strn	1.615428933	0.24876378	8.37E-11	8.80E-10
Ppp4r3b	-2.060675492	0.31745542	8.51E-11	8.94E-10
Slc37a2	2.445628911	0.37684221	8.60E-11	9.02E-10
Ccdc125	-1.926554598	0.29708114	8.88E-11	9.31E-10
Slc44a2	1.218046661	0.18792214	9.07E-11	9.50E-10
RGD1305455	1.466107886	0.22620192	9.09E-11	9.51E-10
Arfgef3	3.407888412	0.52599332	9.24E-11	9.66E-10
Pitpnm2	1.113617281	0.17188841	9.25E-11	9.67E-10
Chac1	2.965001993	0.4576609	9.26E-11	9.67E-10
Phf2	1.341819541	0.20714849	9.32E-11	9.73E-10
Trmt10c	-1.242017536	0.1917805	9.40E-11	9.81E-10
Angptl3	-3.12951963	0.48335565	9.51E-11	9.91E-10
Hmox2	-1.360560037	0.21018	9.59E-11	9.99E-10
Spn	1.046228683	0.16162751	9.60E-11	9.99E-10
Kiz	-2.479571951	0.383182	9.74E-11	1.01E-09
Mfsd12	2.254428755	0.34850289	9.87E-11	1.03E-09
Parg	-1.528000212	0.23626413	9.97E-11	1.04E-09
Elmsan1	1.332598085	0.20606628	1.00E-10	1.04E-09
Meox2	-3.736325888	0.57786432	1.01E-10	1.04E-09
LOC100363268	-1.720921759	0.26616129	1.01E-10	1.04E-09
LOC102550396	-3.086925542	0.47742679	1.01E-10	1.04E-09
LOC683674	1.173513166	0.18153523	1.02E-10	1.05E-09
Crem	-1.32129032	0.20450754	1.04E-10	1.08E-09
Zmynd10	-4.327182954	0.66987437	1.05E-10	1.08E-09
Cbl	2.354430979	0.36451699	1.05E-10	1.09E-09
Cic	1.051375843	0.16277354	1.05E-10	1.09E-09
Pccb	-1.566834817	0.242593	1.06E-10	1.09E-09
RGD1562378	-2.03586061	0.31525892	1.06E-10	1.10E-09

Kdelc2	-1.389000239	0.21512683	1.07E-10	1.10E-09
Lonp2	-1.674589859	0.25945127	1.09E-10	1.12E-09
Plscr3	1.14692927	0.17783546	1.12E-10	1.16E-09
Pdcd4	-1.591181727	0.24673336	1.13E-10	1.16E-09
Smad4	1.26372959	0.19609112	1.16E-10	1.19E-09
Tram2	2.086123298	0.32378247	1.17E-10	1.20E-09
Cdc26	-1.042879781	0.16187253	1.17E-10	1.20E-09
Mau2	-1.099955889	0.17077099	1.19E-10	1.22E-09
Snx24	-1.071313676	0.16639695	1.21E-10	1.24E-09
Zfp133	-1.928909849	0.29960418	1.21E-10	1.24E-09
Vkorc1l1	4.211235167	0.65430653	1.23E-10	1.25E-09
Col1a1	4.530094736	0.70389247	1.23E-10	1.26E-09
Arfgap3	1.326565929	0.20627531	1.27E-10	1.29E-09
Hadha	-1.174103142	0.18257459	1.27E-10	1.30E-09
Thumpd2	-1.396805961	0.21735146	1.31E-10	1.33E-09
Fam13b	-1.540855937	0.23979364	1.31E-10	1.34E-09
Tom1l2	1.553532102	0.2417789	1.32E-10	1.34E-09
Olr36	-4.887155104	0.76064332	1.32E-10	1.34E-09
Coro2b	2.497326028	0.38907848	1.38E-10	1.40E-09
Gpr153	2.803205475	0.4369011	1.40E-10	1.42E-09
Ints3	1.174208104	0.18301514	1.40E-10	1.42E-09
Hamp	-2.590274499	0.40374697	1.40E-10	1.42E-09
Opa3	1.002977555	0.15637358	1.42E-10	1.44E-09
Ercc6	-1.634723028	0.25486576	1.42E-10	1.44E-09
Abcc1	2.495670382	0.38917269	1.43E-10	1.45E-09
Anxa2	3.480642403	0.54286781	1.44E-10	1.46E-09
Pym1	-1.431160154	0.22323241	1.44E-10	1.46E-09
Enoph1	1.155762574	0.18035554	1.47E-10	1.49E-09
Arhgap33	-1.713284954	0.26735779	1.47E-10	1.49E-09
Arg1	-2.193921137	0.34238509	1.48E-10	1.49E-09
Lman1	1.582871559	0.24706504	1.49E-10	1.50E-09
Trnt1	-1.741318734	0.27221276	1.59E-10	1.59E-09
Nf1x	1.92794764	0.30140058	1.59E-10	1.60E-09
Glmn	-2.416693597	0.37783917	1.59E-10	1.60E-09
Rnf146	-1.426089814	0.22297209	1.60E-10	1.60E-09
Fam127b	1.001381826	0.15656767	1.60E-10	1.60E-09
Slc35f6	1.758806686	0.27503983	1.61E-10	1.61E-09
Tyw3	-1.911353211	0.29894136	1.62E-10	1.62E-09
Chsy1	1.894128929	0.29625966	1.62E-10	1.62E-09
Sdk2	2.094044279	0.32780198	1.68E-10	1.68E-09
Mest	2.713879476	0.42486482	1.68E-10	1.68E-09
Trem2	4.456531451	0.69803219	1.72E-10	1.72E-09
Tigd5	1.749294502	0.27403914	1.73E-10	1.73E-09
Tmem42	-1.294590919	0.20284938	1.75E-10	1.74E-09
AABR07043748.1	-1.889117979	0.29611561	1.77E-10	1.77E-09
Lbh	2.470042698	0.38721091	1.78E-10	1.77E-09
Ipo13	1.129423819	0.17709041	1.80E-10	1.79E-09
Cerk	1.17845225	0.18486337	1.83E-10	1.82E-09

RGD1306063	-1.534015669	0.24064506	1.83E-10	1.82E-09
AABR07007730.1	22.59155217	3.54594901	1.88E-10	1.86E-09
Fabp7	-3.831885099	0.60182256	1.93E-10	1.91E-09
Zfp260	-1.733015086	0.27219695	1.93E-10	1.91E-09
C1galt1c1	-1.439586713	0.22631272	2.00E-10	1.98E-09
LOC500956	-1.272210589	0.20004839	2.02E-10	2.00E-09
Hnrnpa2b1	-1.161081475	0.18260764	2.04E-10	2.01E-09
Qrich1	-1.059982531	0.16671884	2.05E-10	2.02E-09
Relb	2.563265233	0.40320617	2.05E-10	2.03E-09
Cd38	1.516768811	0.23860194	2.06E-10	2.03E-09
Wdr45	-1.086909596	0.17098058	2.06E-10	2.03E-09
RGD1566085	1.848390339	0.29078403	2.06E-10	2.03E-09
Rmdn3	-1.03889778	0.16349173	2.09E-10	2.06E-09
Nek3	-1.80673008	0.2844232	2.12E-10	2.09E-09
Fam120a	1.485847372	0.23390968	2.12E-10	2.09E-09
LOC100911564	-30.06096635	4.73278324	2.13E-10	2.09E-09
Nol3	2.903724982	0.45734595	2.17E-10	2.13E-09
Rsad2	3.734049359	0.58814749	2.17E-10	2.13E-09
Stk11ip	1.171626108	0.18454941	2.17E-10	2.13E-09
Crnkl1	-1.730574124	0.27268285	2.20E-10	2.16E-09
Il6st	1.57090632	0.24752729	2.20E-10	2.16E-09
Pias3	1.078316212	0.16993496	2.22E-10	2.17E-09
Atp5j2	-1.596051185	0.25162869	2.26E-10	2.21E-09
Wdpcp	-2.682905269	0.42331264	2.33E-10	2.28E-09
Fgd5	1.245226711	0.19650943	2.35E-10	2.29E-09
Las1l	-1.615884382	0.25501192	2.35E-10	2.29E-09
Dnase2	-1.322203664	0.20881423	2.42E-10	2.36E-09
Cox7a2	-1.418662465	0.22406502	2.43E-10	2.37E-09
Ccnd2	1.79313417	0.28329332	2.46E-10	2.40E-09
Zbtb4	1.322175867	0.20894079	2.48E-10	2.42E-09
Chrne	-2.966467904	0.46900228	2.53E-10	2.46E-09
Smim15	-1.382847006	0.21865629	2.54E-10	2.47E-09
Spink1l	-1.996488072	0.31570027	2.55E-10	2.48E-09
Sh3tc1	1.259525228	0.19916993	2.55E-10	2.48E-09
Plekhm3	1.598580655	0.25300584	2.64E-10	2.56E-09
Sipa1l1	-1.241468589	0.19650359	2.65E-10	2.57E-09
Wdr92	-1.285981363	0.2035526	2.66E-10	2.57E-09
Enox2	-1.846143631	0.29244121	2.74E-10	2.65E-09
ldh3g	-1.180407336	0.18700457	2.75E-10	2.66E-09
RGD1307315	2.110910186	0.33443073	2.76E-10	2.66E-09
Ndufa4	-1.606798273	0.25464342	2.79E-10	2.70E-09
Zcchc4	-1.325823639	0.21015565	2.81E-10	2.72E-09
AABR07042859.1	-3.503335472	0.55535099	2.82E-10	2.72E-09
Sh3pxd2b	3.727431472	0.5911168	2.87E-10	2.76E-09
Dffb	-1.377962882	0.21852373	2.87E-10	2.76E-09
Smc1a	-1.619587155	0.25691839	2.90E-10	2.80E-09
LOC100361907	-2.551972261	0.40485619	2.91E-10	2.80E-09
Tma7	-1.238844705	0.19653999	2.91E-10	2.80E-09

B3galnt1	3.731184464	0.59196559	2.92E-10	2.81E-09
Myh11	-3.474180569	0.55157051	3.00E-10	2.88E-09
Slco3a1	2.702856987	0.42919893	3.03E-10	2.90E-09
LOC100174910	-1.547426514	0.24578239	3.06E-10	2.93E-09
Ptafr	1.474565498	0.23421755	3.06E-10	2.93E-09
Wdr48	-1.033739008	0.16431832	3.15E-10	3.02E-09
Ilkap	-1.078384772	0.17145326	3.18E-10	3.04E-09
Dot1l	2.783935122	0.44271063	3.21E-10	3.06E-09
Rbm15b	1.653571651	0.26305626	3.26E-10	3.11E-09
Csk	1.042384064	0.16597592	3.38E-10	3.22E-09
Tpcn2	-1.266648268	0.20168803	3.38E-10	3.22E-09
AABR07058091.2	-3.8415923	0.61172814	3.39E-10	3.23E-09
Myl6	-1.098291622	0.17491682	3.41E-10	3.25E-09
Nln	-1.117600784	0.17809064	3.49E-10	3.32E-09
LOC689065	-5.102669179	0.81312483	3.49E-10	3.32E-09
Pdp2	-1.567600516	0.2498852	3.54E-10	3.36E-09
RGD1564074	-1.831815586	0.29200718	3.54E-10	3.36E-09
Angptl8	-2.211160006	0.35252455	3.56E-10	3.38E-09
Acadm	-2.25960653	0.36032451	3.59E-10	3.40E-09
Otud4	1.746628492	0.27855241	3.60E-10	3.42E-09
Rbbp9	-2.048320915	0.32688096	3.70E-10	3.50E-09
Mccc1	-2.232621984	0.35658214	3.82E-10	3.61E-09
LOC102555183	-1.801608674	0.28794997	3.93E-10	3.72E-09
Ndufb7	-1.462191105	0.2337079	3.94E-10	3.72E-09
Tlk2	-1.155348057	0.1846821	3.95E-10	3.73E-09
Net1	-1.491673169	0.23844501	3.95E-10	3.73E-09
Ehd3	1.526999566	0.24416019	4.00E-10	3.77E-09
Atad1	-1.042151647	0.16668919	4.05E-10	3.82E-09
Paf1	-1.32308281	0.2116656	4.08E-10	3.85E-09
Mmp13	7.259968379	1.16165833	4.11E-10	3.87E-09
Pcgf5	1.431267093	0.2290137	4.11E-10	3.87E-09
Thumpd3	-1.580941183	0.25306659	4.18E-10	3.93E-09
Casp6	-1.779598495	0.28494127	4.22E-10	3.97E-09
Casp6	-1.779598495	0.28494127	4.22E-10	3.97E-09
Mrpl45	-1.177270724	0.18851105	4.24E-10	3.97E-09
Zfp57	2.08929713	0.33455274	4.24E-10	3.97E-09
Copg2	-1.270812248	0.20357431	4.31E-10	4.03E-09
Rad52	-2.135198657	0.34207771	4.32E-10	4.05E-09
Tnip2	-1.633669985	0.26177084	4.35E-10	4.07E-09
Sltm	-1.897880586	0.30416198	4.38E-10	4.10E-09
Chmp2a	-1.00498017	0.16108944	4.41E-10	4.12E-09
Adamts10	-1.253946932	0.20106364	4.47E-10	4.18E-09
Sort1	1.23903907	0.19877251	4.56E-10	4.26E-09
H2afv	-1.456948506	0.23376261	4.59E-10	4.28E-09
Zfp451	-1.370843922	0.22000571	4.64E-10	4.32E-09
St7l	-1.316296709	0.21146033	4.82E-10	4.48E-09
Stk40	1.500309344	0.24102134	4.82E-10	4.48E-09
Dennd5a	1.448812933	0.23280801	4.87E-10	4.52E-09

Zfp3	-2.058282312	0.33084298	4.93E-10	4.57E-09
C8b	-2.061924885	0.33146953	4.95E-10	4.59E-09
Pacs2	1.049593976	0.16873531	4.96E-10	4.60E-09
Ltbp3	1.931787799	0.31062163	5.00E-10	4.63E-09
Sfi1	-1.56775712	0.25210726	5.02E-10	4.64E-09
Ppt2	1.029247326	0.16554239	5.05E-10	4.68E-09
Ddx46	-1.216505207	0.19567251	5.07E-10	4.68E-09
Dnajc9	-1.716927506	0.27618604	5.08E-10	4.70E-09
Uchl5	-1.193521984	0.19211859	5.22E-10	4.82E-09
Slc35a1	-1.038087321	0.16720253	5.35E-10	4.93E-09
Lactb	-1.014893477	0.16351057	5.40E-10	4.98E-09
Clk4	-2.41827056	0.38972516	5.47E-10	5.04E-09
Eno1	1.666439968	0.26864446	5.53E-10	5.10E-09
Tfpi	-1.193659973	0.1924737	5.59E-10	5.14E-09
Rpp40	-1.133220237	0.18282119	5.70E-10	5.24E-09
Cdc23	-1.296375871	0.20914044	5.70E-10	5.24E-09
Hbegf	3.042422638	0.49089413	5.73E-10	5.26E-09
Triap1	-1.550016011	0.25010634	5.74E-10	5.27E-09
Fam53a	1.170017576	0.18881232	5.77E-10	5.29E-09
Gtpbp2	1.668089913	0.26919436	5.77E-10	5.29E-09
Mgrn1	1.100234375	0.17757054	5.79E-10	5.30E-09
L2hgdh	-1.584201846	0.25567826	5.79E-10	5.30E-09
Dcun1d3	1.599314396	0.2581706	5.84E-10	5.34E-09
Lmna	1.646772585	0.26593687	5.93E-10	5.42E-09
Tmco6	1.022496119	0.16514878	5.96E-10	5.45E-09
Rin3	1.156685107	0.18683494	5.98E-10	5.46E-09
Hsd11b1	-2.217728523	0.35824828	6.00E-10	5.48E-09
Ptprg	1.240021365	0.20032089	6.01E-10	5.48E-09
Ptbp3	2.113265432	0.34145395	6.05E-10	5.52E-09
Klf4	3.645194261	0.589007	6.07E-10	5.53E-09
Tmem109	1.012253009	0.16375025	6.34E-10	5.77E-09
Fam92a	-1.767550976	0.2860196	6.42E-10	5.84E-09
Bmp2	1.699315648	0.27500605	6.44E-10	5.86E-09
Polr1b	1.026325869	0.16614894	6.53E-10	5.93E-09
Hist1h2bcl1	-1.030006649	0.16676519	6.56E-10	5.95E-09
Srpra	1.017034159	0.16466995	6.57E-10	5.96E-09
Cetn2	-1.788469854	0.28957628	6.57E-10	5.96E-09
Tmem43	1.402713569	0.22717515	6.63E-10	6.01E-09
Clcn5	2.507355987	0.40621858	6.72E-10	6.09E-09
Galt	-1.590548216	0.25775561	6.80E-10	6.15E-09
Mia2	-1.493377699	0.2420725	6.87E-10	6.21E-09
Nudt6	-1.29011999	0.20913923	6.88E-10	6.22E-09
Slc39a7	1.241847193	0.20133381	6.91E-10	6.24E-09
Mss51	-4.443714751	0.72090174	7.09E-10	6.40E-09
Cd28	4.571336754	0.74172325	7.13E-10	6.43E-09
Agap1	1.363892297	0.22129886	7.13E-10	6.43E-09
Ptk2	-1.003422175	0.16293613	7.35E-10	6.62E-09
Hmgb2l1	-3.064342593	0.49763532	7.38E-10	6.63E-09

Mrps22	-1.344426622	0.2183257	7.37E-10	6.63E-09
Piezo1	2.114933325	0.34344667	7.37E-10	6.63E-09
Klf6	2.424239832	0.39386469	7.51E-10	6.74E-09
Pck2	2.052480072	0.33351425	7.55E-10	6.77E-09
Cfb	-4.457585152	0.7244133	7.59E-10	6.80E-09
Cebpz	-1.96445858	0.3192542	7.59E-10	6.80E-09
Fosl2	2.786722031	0.45292907	7.62E-10	6.82E-09
Sox18	1.595734482	0.25938055	7.65E-10	6.84E-09
Dars2	-1.151632272	0.1872177	7.69E-10	6.87E-09
Sat2	-1.683114769	0.27367638	7.75E-10	6.92E-09
Gaa	1.047090167	0.1702645	7.76E-10	6.93E-09
Tmem242	-1.110634895	0.18060334	7.77E-10	6.93E-09
LOC100911248	1.092987098	0.17775961	7.81E-10	6.97E-09
Odf3b	-3.713154829	0.6038945	7.81E-10	6.97E-09
Gramd4	-1.066374743	0.17346775	7.88E-10	7.02E-09
Ddx55	-1.763495273	0.28706388	8.09E-10	7.19E-09
Irf2bp1	1.259838953	0.20512009	8.15E-10	7.24E-09
Cmtr2	1.662707557	0.27072166	8.16E-10	7.25E-09
Bloc1s2	-1.515229829	0.24672415	8.18E-10	7.26E-09
C4b	1.832742363	0.29848839	8.25E-10	7.32E-09
RGD1565775	-1.20237553	0.19584641	8.28E-10	7.35E-09
Fam19a4	7.188605385	1.17118434	8.36E-10	7.41E-09
Dolpp1	1.007114122	0.16409957	8.40E-10	7.44E-09
Mapre2	1.47117876	0.23992374	8.69E-10	7.68E-09
Ptges3l1	1.438833697	0.23483209	8.95E-10	7.91E-09
Rn60_4_1636.2	1.92337196	0.31397951	9.02E-10	7.97E-09
Prkaca	-1.119211508	0.18270986	9.03E-10	7.97E-09
Fam35a	-1.768394838	0.28873291	9.09E-10	8.01E-09
Rmdn1	-2.008739284	0.3280385	9.15E-10	8.07E-09
Sp2	1.381728003	0.2256632	9.18E-10	8.09E-09
Frzb	2.478591613	0.40496583	9.33E-10	8.21E-09
Sytl2	-2.995660296	0.48944287	9.33E-10	8.21E-09
Peli2	1.290902182	0.21094557	9.38E-10	8.25E-09
LOC102555672	-3.19202328	0.52163175	9.40E-10	8.26E-09
Sufu	1.63540616	0.26730731	9.47E-10	8.32E-09
AABR07005549.1	2.650221311	0.43326459	9.54E-10	8.37E-09
Gsta4	-1.771632355	0.28966686	9.59E-10	8.41E-09
Nid2	1.68629996	0.2757461	9.63E-10	8.44E-09
Sp140	-1.741618662	0.28482094	9.67E-10	8.46E-09
Cdc40	-1.088575261	0.17808277	9.79E-10	8.56E-09
N4bp1	1.603089113	0.2622528	9.79E-10	8.56E-09
Dync1i2	-1.165818507	0.1907369	9.83E-10	8.59E-09
RGD1306746	-1.193536448	0.19531757	9.92E-10	8.66E-09
Rnf26	1.019585187	0.16687934	9.98E-10	8.71E-09
Prag1	2.29765989	0.37608033	9.99E-10	8.72E-09
Trim27	1.487836323	0.24361634	1.01E-09	8.84E-09
Rwdd3	-3.085320666	0.50534003	1.03E-09	8.93E-09
Rhog	1.27504146	0.20886301	1.03E-09	8.97E-09

LOC303448	-2.800301324	0.45875759	1.03E-09	9.00E-09
Manba	1.742787076	0.28569194	1.06E-09	9.20E-09
Zfp498	1.378830182	0.22614715	1.08E-09	9.38E-09
Cyrr1	-2.593753779	0.42543047	1.08E-09	9.39E-09
Pcbp2	1.31717924	0.21614176	1.10E-09	9.55E-09
Scyl3	-1.603442289	0.2631387	1.10E-09	9.57E-09
Zfp28	-1.7169682	0.28178494	1.11E-09	9.59E-09
Egfl8	-4.317365283	0.70864835	1.11E-09	9.63E-09
Hsd3b5	-2.55113334	0.41875778	1.11E-09	9.64E-09
Polr2e	-1.57554282	0.25866427	1.12E-09	9.70E-09
Dbt	-1.531606683	0.25149962	1.13E-09	9.76E-09
Rabl2a	-1.178312802	0.19353924	1.14E-09	9.86E-09
Tnrc18	1.263561962	0.20754223	1.14E-09	9.86E-09
R3hcc1l	-2.55152624	0.41937795	1.17E-09	1.01E-08
Runx1	3.352992997	0.55112791	1.17E-09	1.01E-08
Lect2	-1.330255664	0.21871324	1.19E-09	1.02E-08
Flnc	4.907028446	0.80689403	1.19E-09	1.03E-08
Nde1	-1.470999854	0.24189503	1.19E-09	1.03E-08
Hspa1a	7.402829764	1.21737311	1.19E-09	1.03E-08
Aurkc	-3.952822242	0.65038396	1.22E-09	1.05E-08
Itpkc	2.109254561	0.34717791	1.24E-09	1.06E-08
Foxp3	4.513984381	0.74303628	1.24E-09	1.06E-08
Surf4	1.04466442	0.17196747	1.24E-09	1.06E-08
Hivep3	2.432330784	0.40048239	1.25E-09	1.07E-08
Aggf1	-1.399516781	0.23044773	1.26E-09	1.08E-08
Rpl31l4	-1.327023804	0.21856879	1.27E-09	1.09E-08
Rhob	1.464704594	0.24133034	1.28E-09	1.10E-08
Tmem56	1.241561469	0.2045907	1.29E-09	1.10E-08
Tef	1.720579569	0.28357478	1.30E-09	1.11E-08
Clec16a	1.234850955	0.20352652	1.30E-09	1.11E-08
AABR07064257.1	-3.155975152	0.52022457	1.31E-09	1.12E-08
Bace2	1.375395885	0.22674015	1.31E-09	1.12E-08
Piga	2.032011543	0.33501972	1.32E-09	1.12E-08
Acadsb	-2.733600558	0.45075217	1.32E-09	1.13E-08
Hnrnph3	-1.201201735	0.19809759	1.33E-09	1.13E-08
Chrd	-1.373512466	0.22656803	1.34E-09	1.14E-08
Qpctl	1.086702796	0.17925503	1.34E-09	1.14E-08
Nphp1	-1.518026742	0.2504407	1.35E-09	1.15E-08
Rnf25	-1.088679862	0.17962444	1.35E-09	1.15E-08
Akip1	-1.350787552	0.22287476	1.35E-09	1.15E-08
Rnmt	-1.719752324	0.28382132	1.37E-09	1.16E-08
Uaca	-1.319502438	0.21780018	1.38E-09	1.17E-08
Mettl25	-1.169460911	0.19309348	1.39E-09	1.18E-08
RGD1305733	-4.596995972	0.75994727	1.46E-09	1.23E-08
Trim47	1.947865412	0.32214967	1.48E-09	1.25E-08
Mccc2	-2.284792204	0.37788734	1.48E-09	1.25E-08
Aldh8a1	-1.968526398	0.32562254	1.49E-09	1.26E-08
Svip	-1.515991493	0.25078354	1.49E-09	1.26E-08

Rgl3	-1.221906443	0.20217257	1.50E-09	1.27E-08
Cdc42ep1	1.321681505	0.21884205	1.55E-09	1.30E-08
Kmt5c	-1.10955804	0.18376044	1.56E-09	1.31E-08
Hmgcl	-1.294766795	0.21445056	1.56E-09	1.32E-08
Eml5	-2.764956533	0.45815874	1.59E-09	1.34E-08
Cbap	2.848571926	0.47202687	1.59E-09	1.34E-08
Fbn1	2.219353513	0.367841	1.60E-09	1.35E-08
Nrip2	3.994930599	0.66231605	1.62E-09	1.36E-08
Colec11	-1.122238934	0.18610604	1.64E-09	1.37E-08
LOC102555377	-3.268108398	0.54201444	1.64E-09	1.38E-08
Nrg1	2.314988943	0.38402661	1.66E-09	1.39E-08
Rbbp8	-1.843640784	0.30586962	1.66E-09	1.39E-08
Exosc9	-1.412197229	0.23435901	1.68E-09	1.41E-08
Dus2	-1.021688944	0.16955681	1.68E-09	1.41E-08
Rab11fip1	1.378214774	0.22878538	1.70E-09	1.42E-08
Pum3	-1.312070765	0.21784078	1.71E-09	1.43E-08
AABR07026997.1	5.004426102	0.83134587	1.75E-09	1.46E-08
Gzma	-3.327904976	0.55292691	1.76E-09	1.47E-08
Zfp316	1.280188028	0.21271255	1.76E-09	1.47E-08
Mrps35	-1.202065756	0.19978179	1.78E-09	1.48E-08
Doc2a	6.929217318	1.15176419	1.79E-09	1.49E-08
Zfp472	-2.620228527	0.43563388	1.80E-09	1.50E-08
Topors	-1.648034214	0.27414742	1.84E-09	1.53E-08
Fam78a	1.538558521	0.25599098	1.85E-09	1.54E-08
Rbks	-1.346229269	0.2240142	1.86E-09	1.54E-08
Plxna1	1.594332855	0.2653237	1.87E-09	1.55E-08
Gm29106	-3.377200354	0.56216023	1.88E-09	1.56E-08
Fcf1	-1.027344836	0.17102779	1.89E-09	1.57E-08
Ltn1	-1.380308504	0.22982674	1.90E-09	1.58E-08
Rnh1	1.191270302	0.19837826	1.91E-09	1.58E-08
Ndufs1	-1.386581884	0.23091076	1.92E-09	1.58E-08
Pet100	-1.422707296	0.23693946	1.92E-09	1.59E-08
Fam84b	1.920019191	0.31977184	1.92E-09	1.59E-08
Spns1	1.223845974	0.2038585	1.93E-09	1.60E-08
Peak1	1.456730781	0.24279689	1.98E-09	1.63E-08
Prg4	1.64734091	0.27462313	1.99E-09	1.64E-08
RGD1560687	3.138007808	0.52337903	2.03E-09	1.67E-08
Il36b	-3.059802995	0.51036684	2.03E-09	1.67E-08
Tnn	6.350491482	1.05940958	2.04E-09	1.68E-08
Sypl1	1.454711697	0.24270723	2.05E-09	1.69E-08
AABR07041586.1	-7.246445505	1.21019217	2.13E-09	1.75E-08
Scamp4	1.404881376	0.23465962	2.14E-09	1.76E-08
Fam207a	-1.437857909	0.24031804	2.19E-09	1.80E-08
Itfg2	-1.218072332	0.20359901	2.19E-09	1.80E-08
Ado	1.206184644	0.20165026	2.21E-09	1.81E-08
Pdlim5	1.466651601	0.24520368	2.21E-09	1.81E-08
Fem1b	1.088223587	0.18195293	2.22E-09	1.82E-08
Spice1	-2.301694622	0.38491155	2.23E-09	1.83E-08

Per2	1.886409872	0.31548845	2.24E-09	1.83E-08
Ednrb	2.132021927	0.35658386	2.24E-09	1.84E-08
Ndufaf5	-1.227898407	0.20540162	2.26E-09	1.85E-08
Pdzd2	2.119566543	0.35460417	2.27E-09	1.85E-08
Tsc22d2	1.93561178	0.32385206	2.28E-09	1.86E-08
Slc35a4	1.091728326	0.18266719	2.28E-09	1.86E-08
Ctdspl	1.258663633	0.21060298	2.28E-09	1.86E-08
Timd2	-1.576277173	0.26377633	2.29E-09	1.87E-08
Pigr	-1.988114839	0.3327144	2.29E-09	1.87E-08
Pqlc3	2.636668541	0.44132955	2.31E-09	1.88E-08
NEWGENE_1308196	-1.206671008	0.20203668	2.34E-09	1.90E-08
Msh3	-1.635095249	0.27387075	2.37E-09	1.92E-08
Ccdc174	-1.565058716	0.26215379	2.37E-09	1.93E-08
Rngtt	-1.525011438	0.25547045	2.38E-09	1.93E-08
Mut	-2.338622071	0.39186051	2.40E-09	1.95E-08
Afap1	1.995579722	0.33444979	2.42E-09	1.96E-08
AABR07054262.1	6.635322825	1.11209984	2.42E-09	1.96E-08
Zbtb20	1.898889991	0.31827629	2.43E-09	1.97E-08
Ltbp2	2.777859981	0.46597962	2.50E-09	2.03E-08
Psen1	1.142614049	0.19168278	2.51E-09	2.03E-08
Ugcg	2.095030962	0.35148889	2.52E-09	2.03E-08
Qsox1	1.416756543	0.23778347	2.55E-09	2.06E-08
Trip4	-1.305249107	0.21917617	2.60E-09	2.10E-08
Hdac4	1.441595259	0.24213065	2.62E-09	2.11E-08
RGD1359508	-2.483282885	0.4173258	2.67E-09	2.16E-08
Rbm28	-1.410635332	0.23708555	2.68E-09	2.16E-08
Alb	-2.243769135	0.37712668	2.69E-09	2.16E-08
Cib2	-4.491206075	0.75486198	2.69E-09	2.16E-08
Aco1	1.022285475	0.17184697	2.70E-09	2.17E-08
Fzr1	1.283622201	0.21579525	2.71E-09	2.18E-08
Slc4a7	2.21734992	0.37282892	2.72E-09	2.19E-08
Sipa1l3	1.527124659	0.25677331	2.72E-09	2.19E-08
Lfng	1.799040164	0.30252656	2.74E-09	2.20E-08
Znrd1as1	-2.103497322	0.35375138	2.74E-09	2.20E-08
Cd1d1	-1.902181894	0.31989944	2.74E-09	2.20E-08
Kirrel	1.899441743	0.31945033	2.75E-09	2.20E-08
Pomt1	1.051235257	0.17680557	2.75E-09	2.21E-08
Mcph1	1.786105764	0.30048833	2.78E-09	2.23E-08
Rpl38	-1.393835038	0.23453074	2.80E-09	2.24E-08
Emp2	2.322411863	0.390817	2.81E-09	2.25E-08
Smad5	1.046583914	0.17613527	2.82E-09	2.25E-08
Vps50	-1.790978239	0.30149454	2.84E-09	2.27E-08
Osmr	2.860125172	0.48147376	2.84E-09	2.27E-08
Ccdc28b	-1.700263176	0.28624365	2.85E-09	2.28E-08
Tsen15	-1.173349642	0.19767401	2.92E-09	2.33E-08
Gpr182	1.220952668	0.20586896	3.02E-09	2.40E-08
LOC500584	-2.511564976	0.42384031	3.11E-09	2.47E-08
Zfp516	2.248725422	0.37959426	3.14E-09	2.50E-08

Nop9	1.118363892	0.18879054	3.15E-09	2.50E-08
Paox	1.25793736	0.21236769	3.15E-09	2.51E-08
Pbdc1	-1.316710466	0.22232555	3.17E-09	2.52E-08
Spa17	-2.122458406	0.35852983	3.22E-09	2.56E-08
Trmt2a	-1.014150326	0.17134619	3.24E-09	2.57E-08
Runx3	3.172546244	0.53613413	3.27E-09	2.59E-08
Arl5b	2.302827271	0.38920443	3.28E-09	2.60E-08
Mettl21b	3.402724996	0.57523107	3.31E-09	2.62E-08
Kcnab2	2.102743865	0.3555727	3.35E-09	2.65E-08
Hscb	-1.145898635	0.19389188	3.42E-09	2.70E-08
Tusc3	2.054714117	0.34771776	3.44E-09	2.72E-08
Angel1	1.009971577	0.17094785	3.46E-09	2.73E-08
Sec62	-1.475997303	0.24988872	3.49E-09	2.75E-08
Slc36a1	1.11501318	0.18882241	3.52E-09	2.78E-08
Pex10	-1.348725596	0.22842215	3.54E-09	2.79E-08
Rilp	-2.254636003	0.3819651	3.58E-09	2.81E-08
Slc33a1	1.058427919	0.17931295	3.58E-09	2.81E-08
Casp1	-1.851210063	0.31363761	3.58E-09	2.82E-08
Hlf	1.62669072	0.2756371	3.60E-09	2.83E-08
LOC100363537	6.617431115	1.12196343	3.68E-09	2.89E-08
Akna	2.031846428	0.34453708	3.69E-09	2.90E-08
Igsf23	6.81477471	1.15616122	3.76E-09	2.95E-08
Cpeb1	6.684210075	1.13413002	3.78E-09	2.96E-08
Crlf2	1.625404905	0.27586627	3.82E-09	2.99E-08
Tubb3	5.115956462	0.86860234	3.86E-09	3.03E-08
LOC100909715	3.528840009	0.59946458	3.94E-09	3.08E-08
Galnt10	1.10849261	0.18834719	3.97E-09	3.11E-08
Plcx2	2.272723484	0.38619407	3.98E-09	3.11E-08
Adam28	-1.911520898	0.3249273	4.03E-09	3.15E-08
Tc2n	-2.541427727	0.43201899	4.04E-09	3.15E-08
Pcbd2	-1.352714184	0.23016017	4.17E-09	3.25E-08
LOC100365839	-1.091214317	0.18569748	4.20E-09	3.27E-08
Zfp638	-2.048179932	0.34858065	4.21E-09	3.28E-08
Txn14b	-1.321015041	0.22482479	4.21E-09	3.28E-08
Mdp1	-1.709187016	0.2909058	4.22E-09	3.28E-08
RGD1306148	-1.175042007	0.19998833	4.21E-09	3.28E-08
Cpeb4	1.465012544	0.24933681	4.21E-09	3.28E-08
Gm17067	-2.554466388	0.43497748	4.29E-09	3.33E-08
Acer2	1.487142238	0.25327273	4.31E-09	3.35E-08
Antxr2	1.420780485	0.24197753	4.32E-09	3.35E-08
AABR07010705.1	1.242069906	0.21160942	4.37E-09	3.39E-08
Krtcap2	1.32673233	0.22603847	4.37E-09	3.39E-08
Pard3b	1.645711196	0.28038697	4.37E-09	3.39E-08
Pcmdt1	-1.642240513	0.27991848	4.44E-09	3.44E-08
Zfp1	-1.993141323	0.33978902	4.47E-09	3.46E-08
Fbxw11	1.003560533	0.17111638	4.50E-09	3.48E-08
Uspl1	-1.50540861	0.25670978	4.51E-09	3.49E-08
Notch3	1.954978768	0.33355445	4.60E-09	3.55E-08

Dll4	1.383041795	0.23598277	4.61E-09	3.56E-08
Lmbrd2	1.744720687	0.29770693	4.61E-09	3.56E-08
Zfp513	-1.014500084	0.17315602	4.66E-09	3.60E-08
Sgsh	1.463068662	0.24973856	4.67E-09	3.60E-08
Rpain	-1.448586452	0.24731528	4.71E-09	3.63E-08
Neurl1b	3.443603566	0.58803322	4.74E-09	3.65E-08
Ciart	3.671808397	0.62736513	4.84E-09	3.72E-08
lqcg	-2.051333953	0.35058597	4.88E-09	3.76E-08
Meiob	-3.855351544	0.65901039	4.91E-09	3.78E-08
Cfi	-2.07396757	0.35469758	5.00E-09	3.84E-08
Chst1	3.116032769	0.53303505	5.04E-09	3.87E-08
LOC103693608	2.275377989	0.38928099	5.06E-09	3.89E-08
Podn	-1.925243341	0.32954922	5.16E-09	3.96E-08
Cald1	-1.341214177	0.22968394	5.24E-09	4.02E-08
Klra2	-2.348979239	0.40231445	5.26E-09	4.03E-08
March03	1.159965643	0.19890147	5.48E-09	4.19E-08
Pqbp1	-1.041973426	0.17869298	5.51E-09	4.21E-08
Asxl1	1.056843954	0.18124724	5.51E-09	4.21E-08
Col5a2	2.337443504	0.40091332	5.53E-09	4.23E-08
Tspan12	-1.376735877	0.23618515	5.57E-09	4.26E-08
Nasp	-1.524259139	0.26166425	5.70E-09	4.35E-08
Nsmaf	-1.112151242	0.19092782	5.71E-09	4.36E-08
Mfn1	-1.146179012	0.19686872	5.81E-09	4.43E-08
Noct	3.047052587	0.52337755	5.82E-09	4.43E-08
Tanc1	1.34809269	0.23161099	5.87E-09	4.47E-08
E4f1	-1.124058536	0.1932051	5.96E-09	4.53E-08
Atf7	1.605127303	0.27600617	6.04E-09	4.60E-08
Acsl3	-1.574785688	0.27082572	6.07E-09	4.61E-08
Usp40	-1.192865779	0.20514303	6.07E-09	4.61E-08
Mios	-1.620944273	0.27880648	6.10E-09	4.64E-08
Rnf19b	1.294165786	0.22265624	6.16E-09	4.68E-08
Tipin1	-1.7446361	0.30027578	6.24E-09	4.74E-08
LOC108348287	-1.430620786	0.24629387	6.30E-09	4.78E-08
Fam171a2	1.603130612	0.27600278	6.31E-09	4.78E-08
Myh9l1	1.654863046	0.28499456	6.37E-09	4.83E-08
Timp1	2.989259894	0.51482974	6.39E-09	4.84E-08
Sdha	-1.477694055	0.25451198	6.40E-09	4.84E-08
Mum1	-1.197451838	0.20625583	6.41E-09	4.85E-08
Smc3	-1.929578829	0.33238417	6.43E-09	4.86E-08
Rnf44	1.428193321	0.2461061	6.51E-09	4.92E-08
Nup210	1.252215026	0.21598709	6.73E-09	5.08E-08
Fbxl7	1.475753744	0.25460218	6.78E-09	5.11E-08
Klf2	1.574750044	0.27171988	6.81E-09	5.13E-08
Zmiz1	1.100096403	0.18984844	6.85E-09	5.16E-08
Slc12a4	1.075880184	0.18569131	6.88E-09	5.18E-08
Rnf4	1.212055085	0.20921429	6.90E-09	5.19E-08
Clasp1	1.065387974	0.18392153	6.93E-09	5.21E-08
Fam133b	-2.138040636	0.36918686	6.99E-09	5.25E-08

Sap30bp	-1.012238146	0.17480386	7.01E-09	5.27E-08
Zfp11	-2.118507183	0.36592302	7.06E-09	5.30E-08
Marcks11	1.353292988	0.23377651	7.09E-09	5.32E-08
Recql	-1.074266802	0.18559164	7.11E-09	5.33E-08
Rpf1	-1.344113744	0.2322314	7.13E-09	5.34E-08
Igdcc4	3.480463681	0.60140871	7.16E-09	5.36E-08
LOC100360781	-2.804009807	0.48453278	7.16E-09	5.36E-08
Flnb	1.110064139	0.19188666	7.25E-09	5.43E-08
Dip2a	1.371682413	0.23713348	7.28E-09	5.44E-08
Dvl3	1.164489084	0.2013541	7.33E-09	5.47E-08
Pgrmc1	-1.251271163	0.21643442	7.41E-09	5.54E-08
Pfdn4	-1.403047899	0.24275394	7.48E-09	5.59E-08
Tmem65	1.878594342	0.3250451	7.49E-09	5.59E-08
Rcc1l	-1.078174382	0.18661613	7.58E-09	5.66E-08
Uqcrq	-1.625318086	0.28137751	7.64E-09	5.69E-08
Tp53	1.370550556	0.23733838	7.71E-09	5.75E-08
Hspb1	5.45398581	0.94505623	7.88E-09	5.87E-08
Ift74	-2.725084296	0.47225788	7.91E-09	5.89E-08
Clip2	1.855988522	0.32165902	7.92E-09	5.90E-08
Zc3h7a	-1.705627822	0.29565495	7.98E-09	5.93E-08
LOC108348078	-1.842806769	0.3197472	8.25E-09	6.13E-08
Grhl1	3.582252375	0.62217691	8.53E-09	6.33E-08
Adam1a	-3.421411954	0.5943378	8.58E-09	6.36E-08
Rassf6	-1.204365814	0.20926404	8.65E-09	6.41E-08
Tmod3	-1.249467528	0.2171449	8.71E-09	6.45E-08
Dnhd1	-2.045117105	0.35551355	8.79E-09	6.51E-08
H2afj	-1.803152282	0.31349047	8.83E-09	6.53E-08
Hip1	1.191903154	0.2072489	8.87E-09	6.56E-08
Rrp12	1.523835269	0.26503976	8.95E-09	6.62E-08
Ankrd27	-1.172093604	0.20388084	8.98E-09	6.63E-08
Prpf39	-2.629929664	0.45788178	9.26E-09	6.83E-08
Fmnl3	1.630773211	0.28429149	9.68E-09	7.14E-08
Mrps28	-1.156351712	0.2016157	9.73E-09	7.17E-08
Suclg2	-1.467417054	0.25586866	9.75E-09	7.18E-08
Ddx20	-1.462962166	0.25515063	9.83E-09	7.23E-08
Ptk2b	1.487730882	0.25971407	1.01E-08	7.46E-08
Sertad2	1.647864332	0.28767561	1.01E-08	7.46E-08
Wdfy1	1.224842042	0.21389782	1.03E-08	7.54E-08
Atp6v0c	1.209171326	0.21122547	1.04E-08	7.61E-08
RGD1565685	-1.093634701	0.19107032	1.04E-08	7.65E-08
Usp13	4.370603087	0.7636626	1.05E-08	7.66E-08
Zfp182	-3.48399739	0.60882531	1.05E-08	7.69E-08
Zfand2a	3.220787813	0.56287132	1.05E-08	7.71E-08
Slain2	1.075587271	0.18801947	1.06E-08	7.77E-08
Lrrc59	1.331768186	0.23284003	1.07E-08	7.81E-08
Sphk1	3.66088781	0.64032751	1.08E-08	7.92E-08
Lrg1	1.608916134	0.28147672	1.09E-08	7.97E-08
Pkmyt1	2.774841712	0.48583301	1.12E-08	8.18E-08

Rn50_5_0814.15	-4.396745462	0.77015693	1.14E-08	8.30E-08
Atp5i	-1.456958957	0.25528211	1.15E-08	8.38E-08
Cers5	1.230825308	0.21567194	1.15E-08	8.39E-08
Klhl42	1.507612121	0.26418358	1.15E-08	8.40E-08
Cisd1	-1.044866839	0.18311984	1.16E-08	8.43E-08
Acs15	-1.538443184	0.2697744	1.18E-08	8.58E-08
Pla2g16	-2.225544824	0.39027157	1.18E-08	8.59E-08
Tnfaip8l2	-1.435089847	0.25178221	1.20E-08	8.72E-08
Usp54	-1.320887475	0.23178667	1.21E-08	8.77E-08
Wdr59	-1.166811054	0.20484774	1.23E-08	8.91E-08
Hirip3	-1.432422621	0.25148953	1.23E-08	8.91E-08
LOC103690013	1.608590567	0.28241583	1.23E-08	8.91E-08
Sifn13	-2.282414395	0.40075344	1.23E-08	8.93E-08
LOC100912405	-2.933583166	0.51512217	1.23E-08	8.94E-08
Pyurf	-1.028122688	0.18053722	1.24E-08	8.95E-08
Lrrc8c	1.255468672	0.22050917	1.24E-08	9.00E-08
Smc6	-2.133573813	0.37473128	1.24E-08	9.00E-08
Msantd4	-1.461726331	0.25673558	1.24E-08	9.00E-08
AC130162.1	-2.961647836	0.52086172	1.30E-08	9.39E-08
AC114460.1	1.319968565	0.23217222	1.31E-08	9.42E-08
Mapk7	1.303445146	0.22929112	1.31E-08	9.45E-08
Aak1	1.453395487	0.2558223	1.34E-08	9.64E-08
Dhx58	-1.339677004	0.23583182	1.34E-08	9.67E-08
Brd4	1.118969602	0.19700662	1.35E-08	9.71E-08
Pdpk1	1.189361797	0.2094215	1.35E-08	9.74E-08
Snapiin	-1.056108224	0.18602813	1.37E-08	9.85E-08
Setdb2	-1.779297841	0.31342409	1.37E-08	9.85E-08
Ifrd1	2.244886799	0.39549979	1.38E-08	9.90E-08
Fabp5	1.997111255	0.35192904	1.39E-08	9.97E-08
Svbp	-1.781964168	0.31402457	1.39E-08	9.98E-08
LOC288913	-1.213220246	0.21399267	1.43E-08	1.03E-07
Rnf217	1.441128725	0.25428852	1.45E-08	1.04E-07
Ccdc6	1.556479697	0.27464755	1.45E-08	1.04E-07
Hpd	-1.293637692	0.22837948	1.48E-08	1.06E-07
Cybrd1	1.290966826	0.22798951	1.49E-08	1.07E-07
Glb1l2	2.649838494	0.46824952	1.52E-08	1.09E-07
Zfp322a	-1.941060293	0.34299972	1.52E-08	1.09E-07
Zfp347	-3.036744583	0.53674219	1.53E-08	1.09E-07
Ago1	1.411248071	0.24945251	1.54E-08	1.10E-07
Gfod1	2.209862251	0.39123513	1.62E-08	1.15E-07
Larp4b	1.630494302	0.28868915	1.62E-08	1.16E-07
Ccnd3	1.075032447	0.1903723	1.63E-08	1.16E-07
Dtx2	1.489274484	0.26373668	1.63E-08	1.16E-07
Zfp617	-2.539221253	0.44993726	1.67E-08	1.18E-07
Setd2	-1.493154348	0.26463023	1.68E-08	1.19E-07
LOC500124	-1.642791078	0.29123602	1.69E-08	1.20E-07
Hmbox1	1.369277571	0.24275836	1.70E-08	1.20E-07
Myo7a	1.408927966	0.24989182	1.72E-08	1.22E-07

Nubpl	-1.292382536	0.22925995	1.73E-08	1.22E-07
Aamdc	-2.159068791	0.38300963	1.73E-08	1.22E-07
Gin1	-1.738969131	0.3085023	1.73E-08	1.23E-07
Cables2	1.183688305	0.21001572	1.74E-08	1.23E-07
Grk6	1.264674736	0.22449807	1.77E-08	1.25E-07
Csf1r	1.257388829	0.22320721	1.77E-08	1.25E-07
Esam	1.203272008	0.21361647	1.77E-08	1.25E-07
Pprc1	1.770521898	0.31432562	1.77E-08	1.25E-07
Zfp791	-2.450064287	0.43502953	1.78E-08	1.26E-07
AABR07002768.1	-2.227065922	0.39546627	1.79E-08	1.26E-07
Pde10a	5.513216781	0.97925546	1.80E-08	1.27E-07
Trit1	-1.051542516	0.18678927	1.81E-08	1.27E-07
Rsrp1	-1.143768047	0.20320675	1.82E-08	1.28E-07
Prkch	1.430145174	0.2541095	1.82E-08	1.28E-07
E2f3	1.192947	0.2119765	1.83E-08	1.29E-07
Cela1	-3.773437244	0.67116529	1.89E-08	1.33E-07
Robo1	1.579562934	0.28096724	1.89E-08	1.33E-07
Slc30a1	1.033132151	0.1838106	1.90E-08	1.34E-07
Olr1	4.28433029	0.76233477	1.91E-08	1.34E-07
Idi1	-2.458594937	0.43753484	1.92E-08	1.35E-07
Naglu	1.063007026	0.18923385	1.94E-08	1.36E-07
Chi3l1	3.038557359	0.54092937	1.94E-08	1.36E-07
Pxdc1	1.352416856	0.24077411	1.94E-08	1.36E-07
AABR07028027.1	1.169792363	0.20828213	1.95E-08	1.37E-07
Wdfy4	1.028371169	0.18316503	1.97E-08	1.38E-07
Dynlt3	-1.691626457	0.30139244	1.99E-08	1.39E-07
Supt16h	-1.531911525	0.27293484	1.99E-08	1.39E-07
Gzf1	-1.250489184	0.22280574	1.99E-08	1.39E-07
Wdsub1	-1.722712962	0.30700161	2.01E-08	1.40E-07
Lrp10	1.220015744	0.21774062	2.11E-08	1.47E-07
AC117869.1	4.451172445	0.7948558	2.14E-08	1.49E-07
Brox	-1.020174446	0.18218767	2.15E-08	1.50E-07
Lactb2	-1.186356522	0.2118819	2.15E-08	1.50E-07
Wipf1	1.353910679	0.24181338	2.16E-08	1.50E-07
Lipc	-1.902145416	0.3397587	2.16E-08	1.50E-07
Gan	1.722212513	0.30774619	2.19E-08	1.52E-07
Rnf38	1.682882439	0.30074932	2.20E-08	1.53E-07
AABR07070599.1	5.072756843	0.90659055	2.20E-08	1.53E-07
Gucy2c	5.149478019	0.92062245	2.23E-08	1.55E-07
Uck2	1.927859642	0.34467214	2.23E-08	1.55E-07
Cep83	-2.055062774	0.36744397	2.23E-08	1.55E-07
Tspyl2	-1.280019169	0.22886802	2.23E-08	1.55E-07
Mllt3	-1.710355004	0.30587219	2.25E-08	1.56E-07
Snx4	-1.042239049	0.18648086	2.28E-08	1.58E-07
RGD1306474	-3.408689573	0.61000915	2.30E-08	1.59E-07
Zfp868	-1.802663381	0.32274894	2.33E-08	1.61E-07
Setd1b	1.761394019	0.31539698	2.34E-08	1.62E-07
Zbtb39	1.027568361	0.18404614	2.36E-08	1.63E-07

LOC100362149	-1.359776421	0.24354491	2.36E-08	1.63E-07
Pddc1	-1.318330613	0.23611907	2.36E-08	1.63E-07
Serinc2	3.431649255	0.61466674	2.36E-08	1.63E-07
Rnpc3	-1.854582969	0.33224513	2.38E-08	1.64E-07
Exosc3	-1.345713317	0.24115792	2.40E-08	1.65E-07
Zfp821	-1.81425947	0.32517122	2.41E-08	1.66E-07
Psmc3	1.028059652	0.18426803	2.42E-08	1.66E-07
Zdhhc5	1.002688179	0.17972484	2.42E-08	1.66E-07
F9	-2.250409501	0.40343123	2.43E-08	1.67E-07
Ajuba	1.336605437	0.23967074	2.45E-08	1.68E-07
Mpc1	-1.729161007	0.310134	2.47E-08	1.69E-07
Fer1l5	-1.96632841	0.3526854	2.47E-08	1.69E-07
Cmya5	-2.306403438	0.41385809	2.50E-08	1.72E-07
Uba3	-1.314152435	0.23587145	2.53E-08	1.73E-07
C1qtnf1	1.324529472	0.23781104	2.55E-08	1.75E-07
Alg10	1.558816893	0.27990224	2.56E-08	1.75E-07
Fam162a	-1.241097671	0.22289196	2.57E-08	1.76E-07
Vps51	1.049262886	0.18844805	2.58E-08	1.76E-07
Dad1	1.355456935	0.24357534	2.62E-08	1.79E-07
Pygl	-1.882512155	0.33833152	2.64E-08	1.80E-07
Zdhhc21	2.0898255	0.37565685	2.65E-08	1.81E-07
Ftl1l1	1.967308551	0.35370252	2.67E-08	1.82E-07
Zfp653	-1.176716638	0.21158646	2.68E-08	1.82E-07
Asb7	1.13346021	0.20386568	2.70E-08	1.84E-07
Irf5	1.408127184	0.25339244	2.74E-08	1.87E-07
Akr1b10	3.767224788	0.67819281	2.78E-08	1.89E-07
Odc1	1.299853337	0.23404857	2.80E-08	1.90E-07
Tbcel	1.481137112	0.26680453	2.83E-08	1.92E-07
Irs2	1.868995827	0.33671671	2.85E-08	1.93E-07
Supt20h	-1.440985911	0.2596499	2.86E-08	1.94E-07
Atp1b1	1.431755137	0.25806579	2.89E-08	1.96E-07
Sh2d4a	-1.184332991	0.21354971	2.92E-08	1.98E-07
Psmg1	-1.101469468	0.19867297	2.95E-08	2.00E-07
LOC100361492	3.709633405	0.66918169	2.96E-08	2.00E-07
RGD1305178	-1.516131408	0.273494	2.96E-08	2.00E-07
Ckap5	-1.435709228	0.25899602	2.97E-08	2.01E-07
Prickle4	-2.291503648	0.41358149	3.01E-08	2.04E-07
Ccdc43	-1.36955875	0.24718897	3.02E-08	2.04E-07
Ahnak2	4.871397872	0.87947054	3.04E-08	2.05E-07
LOC103689949	3.378489036	0.610193	3.08E-08	2.08E-07
Skiv2l2	-1.328590394	0.23999456	3.10E-08	2.09E-07
Myl12a	1.466555637	0.26497615	3.12E-08	2.10E-07
Cpt1b	-2.198535865	0.39724704	3.12E-08	2.10E-07
Slc25a12	-1.188503857	0.21475215	3.12E-08	2.10E-07
Mcu	1.11262621	0.20107787	3.14E-08	2.11E-07
Gne	-1.50201619	0.27155539	3.18E-08	2.14E-07
Ttc27	-1.216099379	0.21986385	3.18E-08	2.14E-07
Plaur	3.651972485	0.66047253	3.21E-08	2.16E-07

Smarca5	-1.395976023	0.25267736	3.30E-08	2.22E-07
Dtymk	-1.286993887	0.23302883	3.33E-08	2.24E-07
Sec61a1	1.074161735	0.19458552	3.39E-08	2.27E-07
Cmtm4	1.907616156	0.34557949	3.39E-08	2.27E-07
Yap1	1.234593696	0.22391446	3.51E-08	2.36E-07
Hspa9	-1.108774741	0.20110833	3.52E-08	2.36E-07
Cds1	1.205264369	0.21866959	3.55E-08	2.38E-07
Bmp8a	8.430469184	1.53056525	3.63E-08	2.43E-07
Aldoa	1.713527329	0.31122885	3.68E-08	2.46E-07
Arid1a	1.156043659	0.21000594	3.70E-08	2.47E-07
LOC688906	-1.198849061	0.21780562	3.71E-08	2.48E-07
Dock11	-1.774904091	0.3225959	3.76E-08	2.51E-07
Prkacb	1.577596023	0.28686768	3.81E-08	2.54E-07
Capza1	-1.178922425	0.21439358	3.82E-08	2.55E-07
Zfp879	-2.47222196	0.44967446	3.85E-08	2.56E-07
Dars	-1.055205042	0.19194192	3.85E-08	2.57E-07
Stt3a	1.273293198	0.23162475	3.86E-08	2.57E-07
Phyh	-1.76024222	0.32038727	3.93E-08	2.61E-07
E2f1	3.280557513	0.59715518	3.94E-08	2.62E-07
Tgfb1i1	1.965428004	0.35778227	3.94E-08	2.62E-07
C6	-2.248207016	0.40928815	3.95E-08	2.63E-07
LOC691170	-2.627301857	0.47875457	4.07E-08	2.70E-07
Hsd17b4	-1.366712192	0.24907517	4.08E-08	2.71E-07
Esco1	-2.004694905	0.36556329	4.16E-08	2.76E-07
Bnip1	-1.03564576	0.18886139	4.17E-08	2.76E-07
Rbm41	-2.103464364	0.38363455	4.18E-08	2.77E-07
Gatad2b	1.117248757	0.20381287	4.21E-08	2.78E-07
Rn50_X_0752.1	7.58426397	1.38412954	4.27E-08	2.82E-07
Ydjc	3.235511287	0.5906136	4.30E-08	2.84E-07
Slc7a2	1.932553255	0.3527746	4.30E-08	2.84E-07
Tmem120b	1.61958782	0.29568261	4.31E-08	2.85E-07
Creb3l1	1.742492339	0.31817435	4.34E-08	2.86E-07
Col6a1	1.893961041	0.3458511	4.34E-08	2.86E-07
Pdxk	1.294133135	0.23645731	4.42E-08	2.91E-07
Srf	1.064960735	0.19464168	4.47E-08	2.94E-07
Pex13	-1.097795512	0.20068201	4.49E-08	2.95E-07
Crot	-2.282393548	0.41727162	4.51E-08	2.96E-07
Sdc1	1.033602445	0.18897636	4.51E-08	2.97E-07
Srms	2.637641772	0.48229884	4.53E-08	2.97E-07
Nlgn2	1.351561295	0.24713489	4.53E-08	2.97E-07
Prkar2a	1.559319155	0.28514119	4.54E-08	2.98E-07
Sema6a	1.707740485	0.3124241	4.60E-08	3.02E-07
Atp6v1c1	-1.083454135	0.19822394	4.61E-08	3.02E-07
Zfc3h1	-2.041283666	0.37349538	4.62E-08	3.03E-07
AABR07026893.1	-1.643019804	0.30065964	4.64E-08	3.04E-07
Fads3	2.10936949	0.3861437	4.69E-08	3.07E-07
AABR07010878.1	-3.446498056	0.63123564	4.76E-08	3.11E-07
Rtf1	-1.025829809	0.1879457	4.81E-08	3.14E-07

Myo1e	1.136185597	0.20820871	4.84E-08	3.16E-07
AC135696.1	-1.066266528	0.1954248	4.87E-08	3.18E-07
AC107531.3	-3.690612553	0.67675082	4.94E-08	3.22E-07
Ankrd39	-1.298652761	0.23821429	4.99E-08	3.25E-07
Ncam1	3.85144433	0.70648362	4.99E-08	3.25E-07
Haus7	-1.225676904	0.22487319	5.02E-08	3.27E-07
Trmt12	-1.207620966	0.22161746	5.06E-08	3.29E-07
Tspan9	1.002458501	0.18407688	5.16E-08	3.35E-07
Rubcn	1.218762674	0.2237995	5.16E-08	3.35E-07
LOC103690067	-1.608254694	0.29533731	5.17E-08	3.36E-07
Map2k1	1.28148271	0.23538251	5.20E-08	3.38E-07
Rbak	-1.688638302	0.31023445	5.24E-08	3.40E-07
Gpbp1	-1.498847424	0.27556758	5.35E-08	3.47E-07
LOC100359583	-1.076149984	0.19797823	5.46E-08	3.54E-07
Echdc1	-2.169788418	0.39928025	5.50E-08	3.56E-07
RGD1559600	-2.536313673	0.4667744	5.52E-08	3.57E-07
Atrnl1	1.707931431	0.31441522	5.57E-08	3.60E-07
Slc48a1	1.008348002	0.18563434	5.58E-08	3.60E-07
Sh3bgrl2	1.72040474	0.31685427	5.65E-08	3.65E-07
Bfar	-1.012226323	0.18643267	5.65E-08	3.65E-07
Amfr	1.062057494	0.19563018	5.67E-08	3.66E-07
Col12a1	2.587248434	0.47682661	5.76E-08	3.72E-07
Edf1	-1.141099072	0.21033472	5.79E-08	3.73E-07
Strbp	-1.365772886	0.2517848	5.82E-08	3.74E-07
LOC102550729	-2.628305117	0.48464498	5.86E-08	3.77E-07
Fam160b1	1.643647788	0.30315376	5.90E-08	3.79E-07
Rap2a	1.194698008	0.22037808	5.92E-08	3.81E-07
RGD1564171	-2.778467529	0.51254481	5.93E-08	3.81E-07
Ankrd44	2.035370958	0.37550494	5.95E-08	3.82E-07
Zfp394	-1.107036698	0.20427662	5.98E-08	3.84E-07
Arid5a	2.146990904	0.39621904	6.00E-08	3.85E-07
Bclaf1	-1.923923447	0.35506225	6.01E-08	3.85E-07
Pde2a	1.081916478	0.19970408	6.04E-08	3.87E-07
Trem1	3.065296681	0.5659063	6.07E-08	3.89E-07
Mthfd2	2.904438045	0.53634871	6.12E-08	3.92E-07
Xpa	-2.381066184	0.43972378	6.13E-08	3.93E-07
Bmp8b	8.044254917	1.48560273	6.14E-08	3.93E-07
Magee1	1.49671123	0.27645613	6.17E-08	3.95E-07
Mia3	-1.121298512	0.20718902	6.23E-08	3.99E-07
Elk1	1.032122813	0.1907229	6.25E-08	3.99E-07
Rbm48	-1.563568617	0.28895624	6.26E-08	4.00E-07
Zfyve27	1.628972295	0.30108851	6.29E-08	4.02E-07
Vldlr	2.792865653	0.51634396	6.34E-08	4.05E-07
AABR07027902.1	-3.942192536	0.72884751	6.34E-08	4.05E-07
Rhbdd3	1.028438614	0.19017135	6.37E-08	4.07E-07
Npc1	1.027725203	0.19015512	6.49E-08	4.13E-07
Pcdhgb8	3.105559883	0.57458633	6.49E-08	4.13E-07
Ccdc66	-2.710230079	0.50145942	6.49E-08	4.13E-07

Amy1a	-2.443632209	0.45212911	6.49E-08	4.13E-07
AABR07034393.1	-2.977182477	0.55096988	6.53E-08	4.16E-07
Znf48	1.128113147	0.20894543	6.70E-08	4.25E-07
AABR07063893.1	-3.416659325	0.63315848	6.81E-08	4.32E-07
Sdhaf3	-1.390751669	0.25785173	6.91E-08	4.38E-07
LOC100360117	1.663893451	0.30851376	6.92E-08	4.38E-07
Usp46	-1.089866149	0.2021146	6.96E-08	4.40E-07
Ampd3	2.208804089	0.4096549	6.97E-08	4.41E-07
AABR07003537.1	6.21576971	1.15295725	7.00E-08	4.43E-07
Rgs19	1.308485419	0.24272248	7.01E-08	4.44E-07
Cat	-2.160973754	0.40090846	7.04E-08	4.45E-07
Mfap2	2.78720115	0.51713569	7.06E-08	4.46E-07
Faim	-1.654659845	0.30701406	7.06E-08	4.46E-07
Faim	-1.654659845	0.30701406	7.06E-08	4.46E-07
Pja1	-1.395442054	0.25892937	7.07E-08	4.47E-07
RGD1559786	-1.002148656	0.18596096	7.08E-08	4.47E-07
Rpl36a	-1.661417403	0.30837236	7.14E-08	4.50E-07
Gon7	-1.236623407	0.22970721	7.31E-08	4.60E-07
Map6	2.890960706	0.53701903	7.31E-08	4.60E-07
Hdac7	1.327877832	0.24671312	7.36E-08	4.63E-07
Acyp1	-1.602191126	0.29771917	7.38E-08	4.64E-07
Kank1	-1.410233286	0.26224876	7.55E-08	4.74E-07
Kctd18	-1.116246342	0.20774039	7.73E-08	4.85E-07
Limk2	1.227567165	0.22850988	7.78E-08	4.88E-07
Nat9	-1.00264739	0.18675689	7.93E-08	4.97E-07
NEWGENE_1582994	-1.240067882	0.23099399	7.94E-08	4.97E-07
Sdcbp	1.498078334	0.2790674	7.95E-08	4.98E-07
Csf2rb	1.814246965	0.33806872	8.03E-08	5.02E-07
LOC108348080	-1.35602043	0.25270084	8.05E-08	5.03E-07
Flrt2	3.296354699	0.61489831	8.28E-08	5.18E-07
Frs3	-1.588108397	0.29632567	8.35E-08	5.22E-07
LOC100911575	1.195385808	0.22306424	8.37E-08	5.23E-07
Rasip1	1.147896612	0.21421194	8.38E-08	5.23E-07
Bcl2l1	1.172993195	0.21893148	8.42E-08	5.25E-07
RGD1566320	-1.191885492	0.22248716	8.46E-08	5.27E-07
Immp1l	-1.286750024	0.24027814	8.54E-08	5.32E-07
Zswim3	-1.171670405	0.21894362	8.72E-08	5.42E-07
Mrc2	2.216825406	0.41436847	8.80E-08	5.47E-07
AABR07019083.1	2.703020576	0.505397	8.88E-08	5.52E-07
Bean1	3.311299306	0.61923427	8.92E-08	5.54E-07
Rasal2	1.640948958	0.30696017	9.00E-08	5.59E-07
AABR07040855.1	-1.4584454	0.27283462	9.02E-08	5.59E-07
Washc2c	-1.137568321	0.21294861	9.19E-08	5.70E-07
Ii23a	4.28449587	0.80239264	9.31E-08	5.77E-07
Hsd12	-1.689587799	0.3164925	9.37E-08	5.81E-07
Chrna7	5.89262429	1.10397303	9.42E-08	5.83E-07
Sympk	1.161244959	0.21758423	9.45E-08	5.85E-07
Zkscan5	-1.572498438	0.29472758	9.53E-08	5.90E-07

Slc1a5	2.62735841	0.49246669	9.55E-08	5.91E-07
Dlat	1.039897853	0.19494841	9.60E-08	5.93E-07
Peo1	-1.030665149	0.19324812	9.64E-08	5.95E-07
Ep300	1.634682552	0.30653132	9.67E-08	5.97E-07
Nfib	1.417057475	0.26576968	9.72E-08	6.00E-07
Tbc1d22b	1.322781176	0.24817443	9.82E-08	6.06E-07
Glrx3	-1.079744343	0.2026074	9.86E-08	6.08E-07
Itgb1bp2	-2.402531803	0.45083062	9.87E-08	6.08E-07
Rpl17	-1.213137451	0.22765992	9.89E-08	6.09E-07
Nhsl1	1.081009836	0.20290177	9.94E-08	6.12E-07
Slc27a4	1.798131522	0.33755883	9.99E-08	6.15E-07
U2surp	-1.537269127	0.28879792	1.02E-07	6.28E-07
Wdr54	2.466148952	0.46339064	1.03E-07	6.31E-07
Cmb1	-1.572962432	0.29567522	1.04E-07	6.38E-07
Apbb1ip	1.447735035	0.27216908	1.04E-07	6.40E-07
Grpel2	-1.125769791	0.2116672	1.05E-07	6.42E-07
Cables1	1.55753805	0.29292156	1.05E-07	6.46E-07
Cyb561a3	1.326343544	0.2496424	1.08E-07	6.61E-07
Adam17	-1.253869298	0.23610098	1.09E-07	6.69E-07
AABR07034657.1	1.601504063	0.30157917	1.09E-07	6.70E-07
Ddx3	-2.05981895	0.38790051	1.10E-07	6.70E-07
Git1	1.089275195	0.20513914	1.10E-07	6.71E-07
Pls3	-1.272364832	0.23970562	1.11E-07	6.78E-07
Ddr1	2.393660999	0.45111774	1.12E-07	6.84E-07
Zdhhc2	1.460325534	0.27529539	1.13E-07	6.90E-07
Rgs16	4.325781142	0.81568204	1.14E-07	6.94E-07
Cx3cr1	2.84525092	0.5365353	1.14E-07	6.95E-07
Slc38a5	6.604343842	1.24560356	1.14E-07	6.98E-07
She	1.759077022	0.33185496	1.15E-07	7.03E-07
Ggt5	2.12479009	0.40095352	1.16E-07	7.08E-07
Gtpbp1	1.08678163	0.20511838	1.17E-07	7.12E-07
Hdac2	-1.176266088	0.22201521	1.17E-07	7.12E-07
Ppfibp2	-1.731085276	0.32676348	1.17E-07	7.13E-07
LOC100911295	1.408157755	0.26580863	1.17E-07	7.13E-07
Med13l	1.203958721	0.22726851	1.17E-07	7.14E-07
Plekhb2	1.245319935	0.23509308	1.18E-07	7.15E-07
B3gnt7	2.013923377	0.38037573	1.19E-07	7.25E-07
Oas3	2.763500847	0.52203658	1.20E-07	7.28E-07
Selenoi	1.258671402	0.23777134	1.20E-07	7.28E-07
Ap5z1	1.288461661	0.24340718	1.20E-07	7.28E-07
Aaas	1.04590474	0.19758373	1.20E-07	7.28E-07
Lag3	-2.083381723	0.39363055	1.21E-07	7.30E-07
Fahd1	-1.626370127	0.30730662	1.21E-07	7.32E-07
Mcoln2	3.194219967	0.60378233	1.22E-07	7.39E-07
Abr	1.894142527	0.35803592	1.22E-07	7.39E-07
Bcap29	-1.355328656	0.25619239	1.22E-07	7.39E-07
Dusp16	1.296980314	0.24519616	1.23E-07	7.41E-07
Chd2	-1.385096544	0.26185545	1.23E-07	7.41E-07

Slc4a1ap	-1.522373537	0.28800101	1.25E-07	7.55E-07
Bcor	1.335095466	0.25257164	1.25E-07	7.55E-07
Rps7	-1.101871122	0.20846919	1.25E-07	7.57E-07
Tet3	1.805269922	0.34163363	1.26E-07	7.62E-07
Gnaq	1.261485813	0.23876266	1.27E-07	7.64E-07
Sh3bgrl3	1.35654523	0.25693416	1.29E-07	7.79E-07
Ppil4	-1.600386935	0.30317601	1.30E-07	7.83E-07
Smyd4	-1.881864479	0.35650277	1.30E-07	7.83E-07
Snx12	1.679904566	0.31830077	1.31E-07	7.87E-07
Fscn1	2.53877556	0.48105338	1.31E-07	7.88E-07
Reg3b	8.425527195	1.59689132	1.32E-07	7.93E-07
Bri3bp	1.871561949	0.3547309	1.32E-07	7.93E-07
Ppp1r21	-1.163493635	0.22052268	1.32E-07	7.93E-07
Clec4a1	1.133151593	0.21478642	1.32E-07	7.94E-07
Zfp143	-1.357575027	0.25734407	1.33E-07	7.96E-07
Faap20	1.612329349	0.30564733	1.33E-07	7.96E-07
Plekhh1	1.720931848	0.32624853	1.33E-07	7.97E-07
Mapk8ip1	1.069401211	0.20278348	1.34E-07	8.02E-07
Bhlhe41	4.535353638	0.86009999	1.34E-07	8.04E-07
Msantd3	3.538173341	0.67118194	1.35E-07	8.11E-07
Mob4	-1.025400114	0.19458613	1.37E-07	8.18E-07
Limd1	1.133117375	0.21508341	1.38E-07	8.24E-07
Itga3	1.515363245	0.28804259	1.43E-07	8.56E-07
B4galt3	1.020031934	0.193899	1.44E-07	8.57E-07
Ston2	1.69146303	0.32171506	1.46E-07	8.71E-07
Crtc3	1.13741698	0.21637864	1.47E-07	8.75E-07
Ctdsp1	1.065077368	0.20263207	1.47E-07	8.77E-07
Chrnbl	1.765862749	0.33612018	1.49E-07	8.89E-07
Ppfia1	1.488743617	0.2834326	1.50E-07	8.94E-07
Acbd5	-1.946467203	0.37067564	1.51E-07	9.00E-07
Psat1	2.305517461	0.43922647	1.53E-07	9.10E-07
Ktn1	-1.661977918	0.31663307	1.53E-07	9.10E-07
Ttc5	-1.404599793	0.2677806	1.56E-07	9.27E-07
Gcfc2	-1.473562218	0.28093504	1.56E-07	9.27E-07
Apoh	-1.746944685	0.33321012	1.58E-07	9.39E-07
Sv2a	1.471006536	0.28057981	1.58E-07	9.39E-07
Msrbl2	-1.166895369	0.22258925	1.59E-07	9.41E-07
Gosr1	1.17756042	0.22462746	1.59E-07	9.41E-07
Hddc3	-1.123611107	0.21454158	1.63E-07	9.66E-07
Fcna	-1.597444091	0.30504853	1.63E-07	9.69E-07
Map3k2	1.747431246	0.33381908	1.65E-07	9.78E-07
Igsf6	-2.522790096	0.48196715	1.66E-07	9.80E-07
Gpc4	1.00403311	0.19185792	1.67E-07	9.85E-07
Cep57	-1.683870826	0.32180662	1.67E-07	9.88E-07
Mboat7l1	1.0561113	0.20183601	1.67E-07	9.88E-07
Tmem132e	1.402290503	0.26815995	1.70E-07	1.01E-06
Wipi1	1.116694346	0.21364504	1.72E-07	1.02E-06
Ppp2cb	1.113961054	0.21325477	1.75E-07	1.03E-06

Hnrnpa3	-1.514144502	0.28997728	1.77E-07	1.05E-06
Scnm1	-1.016961893	0.19477069	1.78E-07	1.05E-06
Epb41	1.358462129	0.26022483	1.79E-07	1.05E-06
Pkd1l2	1.697985059	0.3253381	1.80E-07	1.06E-06
Rab29	-1.164561945	0.22327714	1.83E-07	1.08E-06
Amz1	1.964205061	0.37674015	1.85E-07	1.09E-06
Kbtbd4	-1.086625904	0.20843283	1.85E-07	1.09E-06
Rusc2	1.722019945	0.33040418	1.87E-07	1.10E-06
Wls	1.498018052	0.28763484	1.91E-07	1.12E-06
LOC108351584	-1.976031083	0.37956016	1.93E-07	1.13E-06
Dmxl2	-1.885896685	0.36246017	1.96E-07	1.15E-06
Stk24	1.254790596	0.2412009	1.97E-07	1.15E-06
Gckr	-2.223984359	0.42754409	1.97E-07	1.16E-06
Susd6	1.313029843	0.25242556	1.98E-07	1.16E-06
Otulin	-1.020058757	0.19610936	1.98E-07	1.16E-06
Fam98c	-1.15688354	0.22244873	1.99E-07	1.16E-06
Zufsp	-1.333840451	0.25657509	2.01E-07	1.17E-06
Pianp	1.000727645	0.19251767	2.01E-07	1.18E-06
LOC257650	-2.681840756	0.51593778	2.01E-07	1.18E-06
Ngdn	-1.18621665	0.22826458	2.03E-07	1.18E-06
Mettl18	-1.228407478	0.23640264	2.03E-07	1.19E-06
Sh2b2	2.013761171	0.38781593	2.07E-07	1.21E-06
Tie1	1.031585995	0.19867233	2.08E-07	1.21E-06
Gem	3.684446051	0.70982145	2.10E-07	1.22E-06
Tacr1	4.899378789	0.94398069	2.10E-07	1.22E-06
AC118165.1	-1.847497068	0.35612494	2.13E-07	1.24E-06
Fancl	-1.404211051	0.27074542	2.14E-07	1.25E-06
Tmem168	1.423948156	0.27458078	2.15E-07	1.25E-06
Fkrp	1.170007788	0.22565826	2.16E-07	1.26E-06
LOC108348250	1.103583052	0.2128634	2.17E-07	1.26E-06
Adcy9	1.24958796	0.24108853	2.18E-07	1.27E-06
Tulp4	1.44075545	0.27830706	2.26E-07	1.31E-06
Rnf157	1.498271314	0.28946262	2.27E-07	1.31E-06
Timmdc1	-1.082162034	0.20907912	2.27E-07	1.31E-06
Cmtm7	1.490192726	0.287993	2.29E-07	1.32E-06
Smlr1	-1.520091421	0.29382077	2.30E-07	1.33E-06
Osgepl1	-1.64169047	0.31734797	2.30E-07	1.33E-06
Tsku	2.208733284	0.42703305	2.31E-07	1.34E-06
Nckap5l	1.268841488	0.24541642	2.34E-07	1.35E-06
Mbp	1.427448984	0.27610393	2.34E-07	1.35E-06
AABR07042821.1	-1.422494631	0.27517768	2.35E-07	1.36E-06
Spag1	-2.357531615	0.45610741	2.36E-07	1.36E-06
Nae1	-1.443807432	0.27932796	2.36E-07	1.36E-06
Rpl11	-1.107458231	0.21428172	2.36E-07	1.36E-06
Itgad	2.303870229	0.44584571	2.37E-07	1.37E-06
Ube2g2	1.009494427	0.19536284	2.38E-07	1.37E-06
Morc3	-1.542195718	0.29846584	2.38E-07	1.37E-06
Stk16	-1.261448339	0.24417932	2.39E-07	1.38E-06

Abhd11	-1.223913361	0.23700802	2.42E-07	1.39E-06
Baz2b	-1.595019531	0.30892113	2.43E-07	1.40E-06
Kin	-1.417527751	0.27459888	2.44E-07	1.40E-06
Baz2a	1.217454013	0.23589534	2.46E-07	1.41E-06
Bak1	1.443867096	0.27979555	2.46E-07	1.41E-06
Tdrkh	-2.229688941	0.43220988	2.49E-07	1.43E-06
Eif2ak2	-1.727857224	0.33495494	2.49E-07	1.43E-06
LOC103689996	4.111580645	0.79708962	2.49E-07	1.43E-06
LOC100910577	-2.488207898	0.48245032	2.50E-07	1.44E-06
Rasgrp3	-1.705779806	0.33089484	2.54E-07	1.45E-06
Rad50	-1.573285424	0.30519751	2.54E-07	1.45E-06
Zfp869	-1.557250569	0.30215923	2.55E-07	1.46E-06
Eno3	-1.655089019	0.32125619	2.58E-07	1.48E-06
Gtf2i	1.111869926	0.21584008	2.59E-07	1.48E-06
Fkbp10	2.85152339	0.55366458	2.60E-07	1.49E-06
Cdh1	1.202479981	0.23349502	2.61E-07	1.49E-06
lws1	-1.120538171	0.2176022	2.61E-07	1.49E-06
RGD1303003	-1.400008493	0.27192147	2.62E-07	1.50E-06
LOC681367	-1.455207976	0.28265789	2.63E-07	1.50E-06
Sdr42e1	-1.907050226	0.37062302	2.67E-07	1.52E-06
Nptxr	2.69797984	0.52434338	2.67E-07	1.52E-06
Tenm4	5.412701133	1.05243532	2.70E-07	1.54E-06
Taf4	1.198411923	0.23305795	2.72E-07	1.55E-06
Tmbim1	2.538916387	0.4938113	2.73E-07	1.55E-06
Uqcrb	-1.086099213	0.21125258	2.73E-07	1.55E-06
Pik3ca	-1.13880515	0.22159789	2.76E-07	1.57E-06
Helz2	1.40637646	0.2736825	2.77E-07	1.57E-06
lpcef1	6.338157924	1.23340665	2.77E-07	1.57E-06
Casp2	1.264438796	0.24608247	2.77E-07	1.58E-06
Tnfrsf14	-3.516472759	0.68453067	2.79E-07	1.59E-06
Sh2d3c	1.114104695	0.21687334	2.79E-07	1.59E-06
Arsb	1.101935611	0.21453457	2.80E-07	1.59E-06
Yipf1	-1.020119415	0.19865743	2.82E-07	1.60E-06
Prpf40a	-1.691920938	0.32965715	2.86E-07	1.62E-06
NEWGENE_1309258	1.284634732	0.25031062	2.86E-07	1.62E-06
Cyp3a18	-2.211548174	0.43099075	2.88E-07	1.63E-06
Nbr1	-1.213789467	0.23655637	2.88E-07	1.63E-06
AABR07053741.1	-1.421438284	0.27713572	2.91E-07	1.65E-06
Kdm4c	-1.134683328	0.22123919	2.92E-07	1.65E-06
Pcdh18	1.335353198	0.26040694	2.93E-07	1.66E-06
Stag1	-1.26727547	0.24713646	2.93E-07	1.66E-06
Lbr	1.469457828	0.28661701	2.95E-07	1.66E-06
Abcg3l3	-1.571435781	0.30651782	2.95E-07	1.67E-06
LOC100910046	-1.57210566	0.30670871	2.96E-07	1.67E-06
Spin1	1.019120537	0.1988412	2.97E-07	1.68E-06
Slit3	2.61905378	0.51119184	3.00E-07	1.69E-06
Vps36	-1.188963171	0.2321075	3.02E-07	1.70E-06
Stag2	-1.476773875	0.2883106	3.02E-07	1.70E-06

Spag8	-3.831305836	0.74802603	3.02E-07	1.70E-06
LOC100911766	1.591476777	0.31076466	3.04E-07	1.71E-06
Tmem119	2.180853022	0.42618005	3.10E-07	1.75E-06
Klhl20	-1.460780481	0.28561549	3.15E-07	1.77E-06
Nos1	1.949486666	0.38119143	3.15E-07	1.77E-06
Epas1	1.111346226	0.21739461	3.19E-07	1.79E-06
Map1b	2.222374163	0.43483277	3.21E-07	1.80E-06
Ccdc77	-3.023185717	0.5918822	3.26E-07	1.83E-06
sept07	-1.269678829	0.24859716	3.27E-07	1.83E-06
Prdm15	-1.153596972	0.22594328	3.30E-07	1.85E-06
Mtcl1	3.501172537	0.6857317	3.29E-07	1.85E-06
Bag3	2.062546036	0.40408206	3.32E-07	1.86E-06
Crtapl1	1.081085218	0.21188864	3.36E-07	1.88E-06
Inhbb	4.814969585	0.94378893	3.37E-07	1.88E-06
Ncoa4	-1.139702113	0.22340969	3.37E-07	1.89E-06
Rn50_5_0814.30	-4.882934531	0.95719628	3.37E-07	1.89E-06
Eif3j	-1.007834482	0.19757661	3.38E-07	1.89E-06
Akr1e2	-1.401457846	0.27474818	3.38E-07	1.89E-06
Panx1	1.410256971	0.27649813	3.39E-07	1.89E-06
NEWGENE_1310139	1.812883655	0.35547368	3.40E-07	1.90E-06
Ndufb9	-1.059279807	0.20776254	3.42E-07	1.91E-06
Lars	-1.298323021	0.25479821	3.48E-07	1.94E-06
Clcn6	1.08611853	0.21322005	3.51E-07	1.95E-06
Rpl35	-1.248572816	0.24512136	3.51E-07	1.96E-06
Etnppl	-2.725739349	0.53513078	3.51E-07	1.96E-06
Yipf2	1.047226186	0.20562422	3.53E-07	1.96E-06
Zfp180	-1.082215613	0.21253409	3.54E-07	1.97E-06
Tank	-1.195020585	0.23472081	3.56E-07	1.98E-06
Mtrf1l	-1.362527449	0.26769581	3.58E-07	1.99E-06
Dock7	-1.288660258	0.2532108	3.59E-07	2.00E-06
Chst2	2.050897944	0.40299172	3.60E-07	2.00E-06
Chac2	-1.786431038	0.35110588	3.62E-07	2.01E-06
Acot13	-1.447423564	0.28476818	3.72E-07	2.06E-06
Zfp955a	-2.999549295	0.59021301	3.73E-07	2.07E-06
Adgrv1	-2.1675229	0.42650645	3.73E-07	2.07E-06
Tox2	2.560208972	0.50379633	3.74E-07	2.07E-06
St14	1.26924511	0.24978439	3.75E-07	2.07E-06
Acrbp	-3.681332597	0.72467882	3.78E-07	2.09E-06
Naa15	-1.370658452	0.26982137	3.78E-07	2.09E-06
Gnpda1	1.598181521	0.31467418	3.80E-07	2.10E-06
Adck1	1.061802232	0.20906873	3.80E-07	2.10E-06
Fam83a	5.849218079	1.15221791	3.84E-07	2.12E-06
Slc35e4	2.563790681	0.50506681	3.85E-07	2.13E-06
Taf13	-1.272585271	0.25069733	3.85E-07	2.13E-06
Pmvk	-1.299921046	0.25609055	3.85E-07	2.13E-06
Lamtor4	-1.011412476	0.19927087	3.86E-07	2.13E-06
AABR07003049.1	1.959981934	0.38615712	3.86E-07	2.13E-06
Flt1	1.22650257	0.24169053	3.88E-07	2.14E-06

Calml4	-2.48534547	0.48982641	3.90E-07	2.15E-06
LOC100910979	-2.518458268	0.49641197	3.91E-07	2.15E-06
Lig4	-1.853914891	0.3655057	3.93E-07	2.16E-06
Rpl9	-1.582535882	0.31201916	3.94E-07	2.17E-06
Zxdc	1.040680602	0.20519124	3.94E-07	2.17E-06
Il34	1.250527154	0.24657728	3.95E-07	2.17E-06
Pelp1	1.075881973	0.21217362	3.96E-07	2.18E-06
LOC100910130	-2.500792219	0.49319348	3.97E-07	2.18E-06
Hbq1b	5.94737203	1.17332625	4.00E-07	2.20E-06
Ddx27	-1.090496419	0.21514217	4.00E-07	2.20E-06
Rbp1	-1.848646033	0.36476378	4.02E-07	2.20E-06
AABR07010609.1	-2.791341901	0.55087685	4.04E-07	2.21E-06
Mob3b	1.084926571	0.21413183	4.05E-07	2.22E-06
Saa4	-1.89048248	0.3732873	4.10E-07	2.24E-06
Clcn3	1.24365944	0.24558879	4.11E-07	2.25E-06
Abca9	-2.351404318	0.46452742	4.15E-07	2.27E-06
AABR07000261.1	-5.611468795	1.10917486	4.21E-07	2.30E-06
Acad11	-1.482183789	0.29306198	4.25E-07	2.32E-06
Nrp1	1.265068696	0.25020837	4.28E-07	2.33E-06
Cep131	-1.026614188	0.20305903	4.29E-07	2.34E-06
Loxl4	-1.627424392	0.32205309	4.34E-07	2.36E-06
Zbtb10	1.935829043	0.38320986	4.38E-07	2.38E-06
Rpgr	-1.742875052	0.34503646	4.39E-07	2.39E-06
Fgfr1op	-1.056589072	0.20917372	4.39E-07	2.39E-06
AC106663.1	6.413712469	1.26984876	4.40E-07	2.39E-06
Mtfp1	-1.26263074	0.25006099	4.43E-07	2.41E-06
Rb1	1.25324443	0.24822868	4.45E-07	2.41E-06
Ano2	6.144889451	1.21740734	4.48E-07	2.43E-06
Tmem25	-1.588845972	0.31484448	4.50E-07	2.44E-06
Tsen2	-1.293490176	0.25641754	4.55E-07	2.46E-06
Dennd2a	1.250086475	0.24782363	4.55E-07	2.46E-06
Fut4	1.52652861	0.30266889	4.57E-07	2.47E-06
Otud1	2.267794611	0.44964246	4.57E-07	2.47E-06
Mtf2	-1.728988217	0.34287837	4.59E-07	2.48E-06
Akr1c19	-2.823470656	0.56014534	4.64E-07	2.51E-06
Lox	-2.448777056	0.48582358	4.64E-07	2.51E-06
Dcaf17	1.65660866	0.32879275	4.69E-07	2.54E-06
Stac2	5.489610253	1.08974252	4.72E-07	2.55E-06
Dgkh	3.95125742	0.78449337	4.74E-07	2.56E-06
Gigyf2	-1.098545214	0.21811494	4.74E-07	2.56E-06
Gab1	1.605221191	0.31879239	4.77E-07	2.57E-06
Ppara	2.058840392	0.40888069	4.77E-07	2.57E-06
Elk3	1.040144901	0.20658447	4.78E-07	2.58E-06
Tarbp1	1.47895142	0.29376595	4.79E-07	2.58E-06
Arrdc2	-2.290732139	0.45541852	4.91E-07	2.64E-06
Exoc8	1.476812904	0.29360347	4.91E-07	2.64E-06
Plekha3	1.136491124	0.22604003	4.96E-07	2.67E-06
Fv1	1.273638783	0.25333277	4.97E-07	2.67E-06

Epcam	-1.602996475	0.31886154	4.98E-07	2.68E-06
Chchd2	1.842979935	0.36667567	5.00E-07	2.69E-06
Farp1	1.059956033	0.21096073	5.05E-07	2.71E-06
Crbn	-1.300635727	0.25891585	5.08E-07	2.72E-06
Tm4sf19	3.564693492	0.70973249	5.10E-07	2.73E-06
LOC100910057	-3.359779463	0.6692889	5.17E-07	2.77E-06
Slc12a9	1.138402498	0.22687096	5.23E-07	2.80E-06
Zfp35	-2.117053885	0.42204242	5.27E-07	2.82E-06
Cfh	-1.780492412	0.35503249	5.30E-07	2.84E-06
Ttc37	-1.320839495	0.2634205	5.33E-07	2.85E-06
Pcdh1	1.161090285	0.23157163	5.33E-07	2.85E-06
Adamts1	3.953278887	0.78855306	5.35E-07	2.86E-06
Creld2	1.16201045	0.23181702	5.37E-07	2.87E-06
Pibf1	-2.08727112	0.41650381	5.40E-07	2.89E-06
Wdr3	-1.146237937	0.22881498	5.46E-07	2.91E-06
LOC680039	-1.078262807	0.21526636	5.47E-07	2.92E-06
Cd300lb	3.267979026	0.65247605	5.48E-07	2.93E-06
Pabpc1	1.021029671	0.20396182	5.56E-07	2.96E-06
Kel	3.814672982	0.76211227	5.57E-07	2.97E-06
Pipox	-1.977950133	0.39526669	5.61E-07	2.99E-06
Tbccd1	-1.216163685	0.2430653	5.63E-07	3.00E-06
Mical2	1.016527946	0.20323565	5.68E-07	3.03E-06
Nvl	-1.454036871	0.29071252	5.68E-07	3.03E-06
Praf2	1.632459966	0.32650697	5.74E-07	3.05E-06
Flvcr2	1.653954396	0.33093185	5.80E-07	3.08E-06
Nat1	-1.279635263	0.25616689	5.87E-07	3.12E-06
Med31	-1.088498289	0.21791897	5.88E-07	3.12E-06
Zrsr1	-1.544052113	0.30918066	5.91E-07	3.14E-06
Gramd1c	-1.814897677	0.3634385	5.92E-07	3.14E-06
AABR07009715.1	1.695144957	0.3395095	5.95E-07	3.15E-06
RGD1566386	-2.437015631	0.48817727	5.97E-07	3.17E-06
Rarg	1.228151587	0.2461495	6.06E-07	3.21E-06
Pdxdc1	-1.025674672	0.20557268	6.06E-07	3.21E-06
Dnajc15	-1.060783435	0.21265455	6.09E-07	3.22E-06
Fam118b	-1.128356025	0.22631629	6.17E-07	3.26E-06
Nfkbiz	-1.383354816	0.2774793	6.18E-07	3.27E-06
LOC100361457	3.696819061	0.74207678	6.30E-07	3.33E-06
Mapkapk2	1.074971342	0.21579342	6.31E-07	3.33E-06
Rev1	-1.369826078	0.27515203	6.41E-07	3.39E-06
Zfp358	1.270281641	0.25526298	6.48E-07	3.42E-06
Prkdc	-1.725281854	0.34682086	6.54E-07	3.45E-06
LOC103690166	-2.276261917	0.45785369	6.64E-07	3.50E-06
Rpp21	-1.405400928	0.28283937	6.73E-07	3.55E-06
RGD1359290	2.193653329	0.44156835	6.77E-07	3.57E-06
Arhgap39	1.152613392	0.23203684	6.79E-07	3.58E-06
Rnf20	-1.105259531	0.22251744	6.80E-07	3.58E-06
Kidins220	-1.061562859	0.21375743	6.83E-07	3.60E-06
Tmem189	1.036739175	0.20879936	6.86E-07	3.61E-06

Tln2	1.322905859	0.26643944	6.87E-07	3.61E-06
Nova2	2.289615932	0.46129946	6.93E-07	3.64E-06
Coq10b	1.104439352	0.22258759	6.98E-07	3.67E-06
Mvb12b	1.264044379	0.25476987	6.99E-07	3.68E-06
Cdc42ep2	1.268785034	0.2558103	7.05E-07	3.70E-06
Mbip	-1.694854609	0.3418025	7.10E-07	3.73E-06
Ndc1	1.260720399	0.254281	7.12E-07	3.74E-06
Mrnip	-2.181414067	0.44003705	7.15E-07	3.75E-06
Iqgap1	1.549211445	0.31262153	7.21E-07	3.78E-06
Rpl41	-1.127483203	0.22754139	7.23E-07	3.79E-06
Actn1	1.713482564	0.34591732	7.29E-07	3.82E-06
Rn50_10_0705.2	-1.477541694	0.29830408	7.30E-07	3.82E-06
P3h1	1.033957641	0.20875043	7.30E-07	3.82E-06
Col6a2	1.750230862	0.35344118	7.35E-07	3.85E-06
Esyt2	1.105616259	0.22331291	7.38E-07	3.86E-06
Speg	-2.752816046	0.55626488	7.47E-07	3.91E-06
Plat	2.674627073	0.54052202	7.49E-07	3.92E-06
Trerf1	1.475897225	0.298322	7.52E-07	3.93E-06
Dusp9	7.007556787	1.41689211	7.59E-07	3.96E-06
Tnc	4.635750675	0.9374369	7.61E-07	3.97E-06
Ehd4	1.667389023	0.33720771	7.63E-07	3.98E-06
Apoc2	-2.130519578	0.43088545	7.63E-07	3.98E-06
Sepsecs	-1.346450898	0.27235777	7.67E-07	4.00E-06
Daam1	-1.096339849	0.22195279	7.83E-07	4.08E-06
Per3	2.643097982	0.53540544	7.95E-07	4.14E-06
Gsdma	-2.471569288	0.50081004	8.01E-07	4.17E-06
Gstm6	-2.78395449	0.56429406	8.08E-07	4.20E-06
Kyat3	-1.870225059	0.37925166	8.17E-07	4.25E-06
Pop1	-1.287764002	0.26122208	8.23E-07	4.28E-06
Dbr1	-1.046247046	0.21236385	8.36E-07	4.35E-06
AABR07015674.1	7.442459687	1.51081223	8.39E-07	4.36E-06
Pitrm1	-1.058183228	0.21486204	8.44E-07	4.38E-06
Fras1	3.565363029	0.72405963	8.47E-07	4.40E-06
Rps12	-1.212861135	0.2463103	8.47E-07	4.40E-06
Zfp524	1.128851895	0.22938742	8.60E-07	4.45E-06
Fkbp2	-1.008413216	0.20498514	8.68E-07	4.49E-06
Map1a	2.840872028	0.57786756	8.83E-07	4.56E-06
LOC688655	5.020875422	1.02133095	8.83E-07	4.56E-06
Brwd1	-1.404491958	0.28572525	8.85E-07	4.57E-06
Kmt2a	1.497932592	0.30475924	8.87E-07	4.58E-06
Abcb11	-1.732047464	0.35238629	8.87E-07	4.58E-06
LOC100363112	-7.124422248	1.44959889	8.89E-07	4.59E-06
Il1rl1	6.009555867	1.22289168	8.91E-07	4.60E-06
Psmb9	-1.135508034	0.23112446	8.97E-07	4.63E-06
Olr59	-2.524293689	0.5138283	8.98E-07	4.63E-06
Commd4	-1.158514346	0.23582241	8.99E-07	4.63E-06
Jmy	1.184039637	0.24107871	9.04E-07	4.66E-06
Arl16	-1.237866727	0.25206071	9.06E-07	4.67E-06

Nrp2	1.194305639	0.24321703	9.09E-07	4.68E-06
LOC100912218	1.566244317	0.31918443	9.25E-07	4.76E-06
Sp6	4.369767683	0.89094116	9.36E-07	4.81E-06
Mfsd11	1.196285901	0.24396213	9.41E-07	4.84E-06
Egr2	3.343209269	0.68183698	9.43E-07	4.84E-06
C1qtnf6	1.855311481	0.37871002	9.63E-07	4.94E-06
Larp1	1.151938734	0.23525426	9.75E-07	5.00E-06
Prnp	2.594435099	0.5298918	9.77E-07	5.01E-06
Vmac	1.336380371	0.27294246	9.77E-07	5.01E-06
Nr3c1	-1.345365341	0.27487342	9.86E-07	5.05E-06
Tbxas1	1.471009259	0.30067083	9.96E-07	5.10E-06
Ivd	-1.905130661	0.38941153	9.96E-07	5.10E-06
Mfsd14a	2.134485404	0.43629903	9.97E-07	5.10E-06
Hpf1	-1.022688806	0.20919307	1.01E-06	5.19E-06
Tmx1	1.185329584	0.24246562	1.02E-06	5.19E-06
Sntb2	2.124387772	0.4345696	1.02E-06	5.19E-06
Golgb1	-1.375797304	0.28145083	1.02E-06	5.20E-06
Mfap3	1.262949785	0.25842398	1.02E-06	5.23E-06
Rbmx2	-2.001881352	0.40972919	1.03E-06	5.26E-06
Ggps1	-1.168974437	0.23928619	1.03E-06	5.27E-06
Dysf	1.080703176	0.22123076	1.03E-06	5.28E-06
Mcee	-1.526591247	0.3125303	1.04E-06	5.29E-06
AABR07055280.1	4.934946877	1.01036197	1.04E-06	5.29E-06
Zyx	1.672164177	0.34237374	1.04E-06	5.30E-06
Cadps2	-1.058176415	0.21668071	1.04E-06	5.31E-06
Sebox	-3.90021102	0.79877611	1.05E-06	5.33E-06
Pigb	2.009611409	0.41192197	1.07E-06	5.44E-06
Fmnl1	1.395811912	0.28611933	1.07E-06	5.44E-06
Arhgap4	-1.135651855	0.23288603	1.08E-06	5.49E-06
Vsir	1.070866223	0.21966667	1.09E-06	5.53E-06
Reck	1.207117572	0.24771306	1.10E-06	5.58E-06
Fjx1	4.156206649	0.85299889	1.10E-06	5.60E-06
Zfp667	-2.800190945	0.57475787	1.11E-06	5.61E-06
Pcyox1	1.159639981	0.23809302	1.11E-06	5.65E-06
Rbm38	1.234907505	0.25360523	1.12E-06	5.68E-06
Mpdz	-1.414079564	0.29045594	1.12E-06	5.70E-06
Tstd1	-3.085506235	0.63381677	1.13E-06	5.70E-06
Thsd7a	2.160179832	0.44375969	1.13E-06	5.71E-06
Papln	1.336523803	0.27456498	1.13E-06	5.71E-06
Pot1b	-2.274574036	0.46738369	1.14E-06	5.74E-06
Emilin1	1.065253123	0.21891007	1.14E-06	5.75E-06
Gcnt2	1.670778867	0.34350784	1.15E-06	5.81E-06
Ncl	-1.469105746	0.30206031	1.15E-06	5.82E-06
Eps8	1.845069773	0.37941503	1.16E-06	5.84E-06
Lipo1	-2.328068395	0.47896876	1.17E-06	5.91E-06
Zdhhc14	1.050736608	0.21618686	1.17E-06	5.91E-06
Ace	2.2337278	0.45960544	1.17E-06	5.92E-06
Tada2a	-1.158955108	0.238511	1.18E-06	5.94E-06

Cdc25a	1.202376341	0.24746398	1.18E-06	5.95E-06
Gadd45g	-3.876038695	0.7979049	1.19E-06	5.98E-06
Cdr2l	1.099915904	0.22653222	1.20E-06	6.05E-06
Creg1	-1.58037995	0.3255193	1.20E-06	6.06E-06
Cxcl11	-1.008393461	0.20771832	1.21E-06	6.07E-06
S100a11	2.544933619	0.52429869	1.21E-06	6.08E-06
Acsm1	-1.598341268	0.32928073	1.21E-06	6.08E-06
Cmc1	-1.917859722	0.39516939	1.21E-06	6.10E-06
Ngly1	-1.215527188	0.25050946	1.22E-06	6.13E-06
Rslcan18	-2.11593426	0.43608367	1.22E-06	6.14E-06
Rbm25	-1.505547724	0.31034206	1.23E-06	6.16E-06
Cxcr4	1.43817249	0.29656485	1.24E-06	6.21E-06
Unc5a	-2.236198375	0.46129115	1.25E-06	6.27E-06
LOC100910526	-4.497460492	0.92852147	1.27E-06	6.39E-06
App	1.40584217	0.29055597	1.31E-06	6.55E-06
Stard8	1.156009971	0.23905313	1.33E-06	6.64E-06
Fam222a	2.039473711	0.42183231	1.33E-06	6.67E-06
Fer	-1.477028534	0.30557155	1.34E-06	6.70E-06
Epg5	1.162992032	0.24068508	1.35E-06	6.75E-06
Phlda1	2.80852748	0.58146619	1.36E-06	6.81E-06
LOC103694210	-2.704489784	0.5599724	1.37E-06	6.83E-06
Gstk1	-1.415407642	0.29323902	1.39E-06	6.92E-06
Adamts1	1.49861174	0.31056347	1.40E-06	6.97E-06
Nipsnap1	-1.385924578	0.28723848	1.40E-06	6.98E-06
Prickle3	-1.246514458	0.25838279	1.41E-06	7.00E-06
LOC680406	-2.201883234	0.45654047	1.41E-06	7.05E-06
Nid1	1.373480266	0.28482628	1.42E-06	7.07E-06
G0s2	-1.279994299	0.26551046	1.43E-06	7.12E-06
AC132740.1	-2.413479409	0.50082089	1.44E-06	7.18E-06
Pus3	-1.320249853	0.2739977	1.45E-06	7.19E-06
Fam83g	4.365535594	0.90621059	1.45E-06	7.23E-06
AABR07001923.1	-3.059324851	0.63536982	1.47E-06	7.31E-06
Tbx10	-5.536784054	1.14992185	1.47E-06	7.32E-06
Inpp5d	1.115405742	0.23166979	1.47E-06	7.32E-06
Veph1	-1.649985128	0.34273715	1.48E-06	7.34E-06
Atp5l	-1.099712813	0.22849385	1.49E-06	7.38E-06
Eif4a2	-1.080982759	0.22464966	1.50E-06	7.42E-06
Mllt1	1.011892853	0.21030579	1.50E-06	7.43E-06
RGD1310587	-1.410028088	0.29305917	1.50E-06	7.43E-06
Tmem151a	2.38457817	0.49576261	1.51E-06	7.48E-06
Atxn1	1.660746178	0.34535092	1.52E-06	7.51E-06
Zhx1	-1.498761958	0.31168107	1.52E-06	7.52E-06
NEWGENE_1306714	2.444608421	0.50842495	1.52E-06	7.53E-06
Dnajc5	1.027304259	0.21369016	1.53E-06	7.56E-06
Nr1i2	-1.340782534	0.27891517	1.53E-06	7.57E-06
Pdzd4	-3.764272817	0.78327098	1.54E-06	7.61E-06
AABR07040412.1	1.370365358	0.28522911	1.55E-06	7.66E-06
Nop14	-1.01005122	0.21024928	1.55E-06	7.67E-06

Rlbp1	5.715614383	1.1897327	1.55E-06	7.67E-06
Apof	-2.825135368	0.58846831	1.58E-06	7.79E-06
LOC108348302	-2.554278123	0.53227364	1.60E-06	7.86E-06
Traf3	1.003717582	0.2092293	1.61E-06	7.92E-06
Dopey1	-1.292021488	0.26937017	1.61E-06	7.94E-06
Ssh2	1.307785959	0.27266533	1.62E-06	7.95E-06
Socs7	1.004259392	0.20938612	1.62E-06	7.95E-06
Tgm1	2.173808461	0.45332287	1.62E-06	7.98E-06
Plp2	1.636108986	0.34138475	1.65E-06	8.09E-06
Tctn3	1.035321229	0.2160297	1.65E-06	8.09E-06
Zfp418	-1.436234559	0.29970187	1.65E-06	8.09E-06
Rpp38	1.301454011	0.27158209	1.65E-06	8.10E-06
Gdpd5	1.646483503	0.34370133	1.66E-06	8.16E-06
Mcm6	2.944486398	0.61474452	1.67E-06	8.19E-06
AABR07007997.1	-2.283739689	0.4768322	1.67E-06	8.20E-06
Plekhb1	-2.386590879	0.4985103	1.69E-06	8.27E-06
Cgnl1	-1.019986412	0.21307045	1.69E-06	8.29E-06
Ptprh	-3.189037291	0.66632414	1.70E-06	8.33E-06
Pzp	-1.541578283	0.32215901	1.71E-06	8.36E-06
Phldb1	1.653322859	0.34552887	1.71E-06	8.37E-06
Rlf	-1.167429483	0.24402367	1.72E-06	8.40E-06
Sesn3	1.289361899	0.26967635	1.74E-06	8.52E-06
Pag1	1.760989696	0.36860074	1.77E-06	8.67E-06
Fam3c	1.281430946	0.26827343	1.78E-06	8.70E-06
Fam126a	1.822929793	0.38165959	1.79E-06	8.71E-06
Dph5	-1.440379717	0.30177553	1.81E-06	8.84E-06
Herc1	-1.367811513	0.28662423	1.82E-06	8.88E-06
Ccdc120	1.179950088	0.24728911	1.83E-06	8.90E-06
Cltb	1.044706702	0.2189699	1.83E-06	8.92E-06
Arhgap12	-1.610279433	0.33757797	1.84E-06	8.96E-06
Cyp2c13	-2.130648612	0.44674864	1.85E-06	9.00E-06
Cox6a2	5.45528809	1.14409181	1.86E-06	9.04E-06
Hspa1b	4.874628543	1.02268768	1.87E-06	9.11E-06
Tgds	-1.002677332	0.21050879	1.91E-06	9.26E-06
Cep89	-1.057218418	0.2219722	1.91E-06	9.27E-06
Map4k2	1.006177833	0.21131883	1.92E-06	9.33E-06
Fyn	1.398076032	0.2938463	1.96E-06	9.49E-06
Swsap1	1.624114852	0.34135088	1.96E-06	9.49E-06
Oard1	-1.36156221	0.28624207	1.97E-06	9.54E-06
Ghdc	1.362420791	0.28645382	1.97E-06	9.56E-06
Sesn2	1.036753569	0.21801653	1.98E-06	9.59E-06
Syngap1	1.762220745	0.37062014	1.99E-06	9.62E-06
AABR07021096.1	-1.894749741	0.39850722	1.99E-06	9.62E-06
Apoa5	-1.460987713	0.3072878	1.99E-06	9.63E-06
Tdrd15	-2.129959492	0.44804861	2.00E-06	9.65E-06
Zfp263	-1.65340167	0.34781977	2.00E-06	9.66E-06
Dusp5	1.66093057	0.34960016	2.02E-06	9.78E-06
Tonsl	2.702381752	0.56941728	2.08E-06	1.00E-05

LOC502176	-6.573785174	1.38573331	2.10E-06	1.01E-05
Rpl13a	-1.123553478	0.23692062	2.11E-06	1.02E-05
Srcin1	-2.48173667	0.52379864	2.16E-06	1.04E-05
Acss3	-1.626385505	0.34328447	2.16E-06	1.04E-05
Cpz	1.689917199	0.35672554	2.17E-06	1.04E-05
Plcg2	1.574642721	0.33240081	2.17E-06	1.04E-05
Prkcdbp	1.609506845	0.33981578	2.18E-06	1.04E-05
Arhgdia	1.045290489	0.22069339	2.18E-06	1.04E-05
Malt1	-1.426826749	0.30136169	2.19E-06	1.05E-05
Fchsd2	1.004675553	0.21223642	2.20E-06	1.06E-05
Alms1	-1.424670508	0.30103245	2.22E-06	1.06E-05
Nsmf	-1.34548544	0.28431237	2.22E-06	1.06E-05
Zfp964	-1.994446262	0.42171903	2.25E-06	1.08E-05
Dedd2	1.371185647	0.2899605	2.26E-06	1.08E-05
Pon3	-1.587127691	0.33570251	2.27E-06	1.09E-05
Snx14	-1.488021539	0.31479832	2.28E-06	1.09E-05
Iqcb1	-1.597717844	0.33811246	2.30E-06	1.10E-05
Rps6kb1	-1.22438967	0.25917368	2.31E-06	1.10E-05
Hpse	1.272042195	0.26928683	2.32E-06	1.11E-05
Siglec1	1.680859312	0.35591464	2.33E-06	1.11E-05
Zfp202	-1.646670002	0.34867984	2.33E-06	1.11E-05
Rcn1	1.903046494	0.40306495	2.34E-06	1.12E-05
Ftsj3	-1.241796325	0.26303818	2.35E-06	1.12E-05
Set	2.949817068	0.62495909	2.36E-06	1.12E-05
Zfp870	-2.10745657	0.44658859	2.37E-06	1.13E-05
Zfp111	-1.695064242	0.35934313	2.39E-06	1.14E-05
Scarf2	1.493999379	0.31674577	2.40E-06	1.14E-05
LOC684270	-1.490826093	0.31610848	2.40E-06	1.14E-05
Scaper	-1.42444444	0.30205125	2.41E-06	1.14E-05
RGD1561333	2.109940837	0.44744126	2.41E-06	1.15E-05
Snupn	-1.143222595	0.24259912	2.45E-06	1.16E-05
Loxl1	2.241962074	0.47613363	2.49E-06	1.18E-05
Apaf1	1.42065487	0.30175837	2.50E-06	1.19E-05
Slc35e2b	1.531015039	0.3252887	2.52E-06	1.19E-05
Omd	-2.753482618	0.58505935	2.52E-06	1.20E-05
Alas1	1.334543034	0.28356251	2.52E-06	1.20E-05
LOC100365363	-2.430011773	0.51632089	2.52E-06	1.20E-05
AC080157.1	-2.914632981	0.61942099	2.53E-06	1.20E-05
Slc52a2	1.028854201	0.21872448	2.55E-06	1.21E-05
Slc16a3	3.486943135	0.74148581	2.57E-06	1.22E-05
Ccbe1	2.548089925	0.54195076	2.58E-06	1.22E-05
Kif5a	-3.216477206	0.68417566	2.59E-06	1.22E-05
Msr1	-1.240079792	0.26383269	2.60E-06	1.23E-05
Rn50_6_0926.2	2.856659177	0.60797993	2.62E-06	1.24E-05
Reps2	1.878063858	0.39985479	2.64E-06	1.25E-05
Atp5s	-1.182160659	0.25174885	2.66E-06	1.25E-05
MGC116121	-1.125602281	0.23996142	2.72E-06	1.29E-05
Slc38a1	2.941193819	0.62710347	2.73E-06	1.29E-05

Hist1h2bk	2.936724561	0.62652068	2.77E-06	1.30E-05
Mast2	1.168223275	0.24938566	2.81E-06	1.32E-05
Cdv3	1.132219248	0.24178296	2.83E-06	1.33E-05
Ralgapa2	1.158267359	0.24736042	2.83E-06	1.33E-05
Tmem63a	1.086225015	0.23213919	2.88E-06	1.35E-05
Serpina5	-4.095520703	0.87541414	2.89E-06	1.36E-05
Tmed8	2.207042198	0.47201059	2.93E-06	1.38E-05
Prf1	-1.656487734	0.35436309	2.95E-06	1.38E-05
Gpr183	2.382651615	0.50989334	2.97E-06	1.40E-05
Rfesd	-1.375237606	0.29456343	3.03E-06	1.42E-05
MGC105567	-2.740446832	0.58713566	3.05E-06	1.43E-05
Max	1.019351701	0.21840585	3.05E-06	1.43E-05
Ift80	-1.778647855	0.38128282	3.09E-06	1.44E-05
Ino80d	1.629622279	0.34943936	3.11E-06	1.45E-05
Flvcr1	2.282667208	0.48957648	3.12E-06	1.46E-05
Prickle1	1.557635396	0.33408448	3.13E-06	1.46E-05
Pcm1	-1.70157047	0.36519636	3.17E-06	1.48E-05
Klhl12	-1.127294311	0.24195196	3.17E-06	1.48E-05
Rassf5	1.124356301	0.24136901	3.19E-06	1.49E-05
Ltbp1	1.289975238	0.27696409	3.20E-06	1.49E-05
Homez	-1.027353311	0.22062362	3.21E-06	1.50E-05
Dmtf1	-1.603949432	0.34449768	3.23E-06	1.50E-05
Rras2	1.020531989	0.21931632	3.27E-06	1.52E-05
Itgb3bp	-2.273743445	0.48879008	3.29E-06	1.53E-05
Ncoa2	1.511196422	0.32488962	3.30E-06	1.53E-05
Nat2	-1.939374248	0.41694305	3.30E-06	1.53E-05
Tmem26	2.458254169	0.52880935	3.34E-06	1.55E-05
Mocs2	-1.127887346	0.24273312	3.37E-06	1.57E-05
Plpp2	1.267765113	0.27288745	3.39E-06	1.57E-05
Arap1	-1.016849003	0.21892328	3.40E-06	1.58E-05
Nrm	2.207869607	0.47538661	3.41E-06	1.58E-05
LOC100911562	-1.810274156	0.38979106	3.41E-06	1.58E-05
Gstz1	-1.936115981	0.41725709	3.48E-06	1.61E-05
Ptk6	-2.401370044	0.51756661	3.49E-06	1.62E-05
Ogt	-1.245278361	0.26846689	3.51E-06	1.63E-05
Cfap126	-1.380462752	0.2976656	3.52E-06	1.63E-05
RGD1309139	-2.83636316	0.61169166	3.54E-06	1.64E-05
Tbx20	2.142892485	0.46218792	3.55E-06	1.64E-05
Cds2	1.007026175	0.21734859	3.60E-06	1.66E-05
Ankrd13b	1.679788676	0.362648	3.62E-06	1.67E-05
LOC301124	-1.108709933	0.23937462	3.63E-06	1.68E-05
Cmpk2	1.876033902	0.40508557	3.64E-06	1.68E-05
Shc4	3.70196093	0.79945742	3.65E-06	1.68E-05
Rbm14	1.031138988	0.22271918	3.66E-06	1.69E-05
Nck1	-1.039489842	0.22454969	3.67E-06	1.69E-05
Rcor1	1.683361818	0.3640074	3.75E-06	1.73E-05
Ccdc38	-3.008888623	0.65084427	3.78E-06	1.74E-05
Chd6	-1.234770478	0.26709387	3.78E-06	1.74E-05

Phtf1	-1.353555485	0.29302339	3.85E-06	1.77E-05
Poll	1.105426818	0.23937036	3.87E-06	1.78E-05
Cenpb	1.025572032	0.22209981	3.88E-06	1.78E-05
LOC102553760	-2.649572516	0.57383597	3.89E-06	1.78E-05
Lsm4	-1.259250078	0.27272553	3.89E-06	1.78E-05
Sult1c2	-9.375065565	2.03038425	3.89E-06	1.78E-05
LOC103690120	1.954519424	0.42334655	3.90E-06	1.79E-05
Paqr4	1.441269491	0.31225245	3.92E-06	1.80E-05
Pradc1	-1.182834646	0.25638496	3.96E-06	1.82E-05
Cd37	1.216948038	0.2637931	3.96E-06	1.82E-05
Sfxn3	1.205055206	0.26123991	3.97E-06	1.82E-05
Adamdec1	-3.574411954	0.77491982	3.98E-06	1.82E-05
Lyl1	1.395876116	0.30274902	4.01E-06	1.84E-05
Mrgprf	2.256937882	0.48967681	4.05E-06	1.85E-05
Ninl	-2.389424882	0.51848637	4.06E-06	1.86E-05
Dclre1c	-2.073724403	0.45022332	4.11E-06	1.88E-05
AC112624.1	-2.157136558	0.46859383	4.16E-06	1.90E-05
LOC100911730	1.714863157	0.3725543	4.16E-06	1.90E-05
Zscan2	-2.082115309	0.45246484	4.19E-06	1.91E-05
Trmt13	-2.298972517	0.49980369	4.23E-06	1.93E-05
Tcerg1	-1.057378222	0.22991192	4.24E-06	1.94E-05
Wsb1	-1.825804286	0.39704531	4.26E-06	1.94E-05
Gorab	-1.846936725	0.4016717	4.26E-06	1.94E-05
Slc35g1	1.298179468	0.28232703	4.26E-06	1.94E-05
Mier1	-1.114752995	0.24251248	4.29E-06	1.96E-05
Capn5	1.021028086	0.22223292	4.34E-06	1.98E-05
Thsd1	1.522641486	0.33160874	4.40E-06	2.00E-05
Nr5a2	-1.380940417	0.3007656	4.40E-06	2.00E-05
Cp	-1.732550526	0.37777314	4.51E-06	2.05E-05
Efna1	-1.116232061	0.24344872	4.54E-06	2.06E-05
LOC679823	1.051450984	0.22934679	4.55E-06	2.07E-05
Cenpc	-2.116542989	0.46176243	4.57E-06	2.08E-05
P2rx5	5.171656293	1.12842172	4.58E-06	2.08E-05
Fmr1	-1.375085929	0.30014531	4.62E-06	2.09E-05
Atp10a	2.479165532	0.54124989	4.64E-06	2.10E-05
Nup54	-1.234567613	0.26954782	4.65E-06	2.11E-05
Zcchc6	-1.38476469	0.30236005	4.65E-06	2.11E-05
Kdm3a	-1.216302141	0.26558087	4.65E-06	2.11E-05
Mcpt8	-2.418456654	0.52812924	4.67E-06	2.11E-05
Nat8f3	5.147383731	1.12422247	4.68E-06	2.12E-05
Pus10	-1.316055462	0.28743976	4.68E-06	2.12E-05
AC098008.2	-3.413104265	0.74586546	4.74E-06	2.14E-05
Apba2	-2.971808053	0.64952959	4.75E-06	2.15E-05
Micall2	1.606258029	0.35106576	4.75E-06	2.15E-05
Sh3d21	-2.862349834	0.6256072	4.76E-06	2.15E-05
Blzf1	-1.234342372	0.26982484	4.77E-06	2.16E-05
Zzef1	1.074321	0.23485371	4.78E-06	2.16E-05
Serpina7	-2.482579317	0.54285403	4.80E-06	2.17E-05

AC117058.1	-2.655379788	0.58069262	4.81E-06	2.17E-05
Dyrk3	5.399836321	1.18088151	4.81E-06	2.17E-05
Lztf1	-1.603749795	0.35080679	4.84E-06	2.18E-05
Stat3	1.014072056	0.22192106	4.89E-06	2.20E-05
Rhbdf1	1.071894391	0.23465244	4.92E-06	2.22E-05
LOC108348145	-2.041260556	0.44712962	4.99E-06	2.25E-05
Zfp292	-1.913320429	0.41915346	5.00E-06	2.25E-05
Lcn12	-1.726302526	0.37825343	5.02E-06	2.26E-05
Traf3ip1	-1.236111134	0.27085474	5.02E-06	2.26E-05
Nat6	-1.545906458	0.33887543	5.07E-06	2.28E-05
Ncr3	-2.107484898	0.46209718	5.10E-06	2.29E-05
Flna	1.67535441	0.36740414	5.12E-06	2.30E-05
Creb5	5.436193273	1.19228091	5.13E-06	2.30E-05
Tpr	-1.367920054	0.30002621	5.13E-06	2.30E-05
Man1a1	1.106207777	0.24273064	5.18E-06	2.32E-05
Pi16	2.202235982	0.48331053	5.20E-06	2.33E-05
Podxl	1.551100408	0.34046214	5.22E-06	2.34E-05
Palm2	1.786975277	0.39228087	5.23E-06	2.34E-05
Sirt3	-1.466883044	0.32203653	5.24E-06	2.35E-05
LOC360919	-1.951816714	0.42877626	5.31E-06	2.38E-05
Senp6	-1.177308769	0.25865504	5.32E-06	2.38E-05
Hpx	1.411056961	0.31002789	5.33E-06	2.39E-05
LOC685067	-2.385293649	0.52424771	5.37E-06	2.40E-05
Akr1c12	-2.028463273	0.44582092	5.37E-06	2.40E-05
Evi5	-1.418665172	0.31187647	5.40E-06	2.41E-05
Rn60_12_0107.3	-2.216530625	0.48733911	5.41E-06	2.42E-05
Srgap1	2.278331364	0.50098765	5.42E-06	2.42E-05
Hmox1	1.171869027	0.25774488	5.45E-06	2.44E-05
Gpsm2	-1.238322579	0.27241739	5.48E-06	2.45E-05
Gpat2	-2.32819514	0.5123122	5.51E-06	2.46E-05
Cacna2d4	-1.954246114	0.4302382	5.57E-06	2.48E-05
Tnnt1	-2.668328649	0.5874833	5.57E-06	2.48E-05
RGD1565622	-2.152694266	0.47406221	5.60E-06	2.49E-05
Ccdc18	-2.586383063	0.56965093	5.62E-06	2.50E-05
RGD1309621	-1.845266666	0.40643374	5.62E-06	2.50E-05
LOC100359574	1.081239001	0.23816989	5.63E-06	2.51E-05
F11	-1.784054743	0.39312549	5.68E-06	2.52E-05
Efemp2	1.649842094	0.36404828	5.84E-06	2.59E-05
Entpd7	1.452047067	0.32046832	5.87E-06	2.61E-05
Ngfr	2.185579739	0.48242233	5.89E-06	2.61E-05
LOC100909998	-2.161599288	0.47720179	5.91E-06	2.62E-05
Cotl1	1.733234578	0.38264513	5.91E-06	2.62E-05
Brpf3	1.396179772	0.30847458	6.01E-06	2.66E-05
Calr3	-1.612780944	0.35664766	6.12E-06	2.71E-05
Lsm11	1.41110541	0.31206852	6.13E-06	2.71E-05
Fam171a1	1.736533145	0.38421633	6.19E-06	2.74E-05
RGD1561161	1.241418153	0.27468438	6.20E-06	2.74E-05
LOC100909441	3.309746051	0.73243521	6.22E-06	2.75E-05

RGD1561796	-1.736909204	0.38448463	6.26E-06	2.76E-05
Tnk2	1.119095554	0.24776752	6.28E-06	2.77E-05
LOC299277	6.626030325	1.46730385	6.31E-06	2.78E-05
Zc3h11a	-1.257227194	0.27850803	6.36E-06	2.81E-05
Sfmbt2	1.729588126	0.38319663	6.37E-06	2.81E-05
Slc43a2	1.079808129	0.23934469	6.44E-06	2.84E-05
Naa16	-1.822132262	0.40408663	6.51E-06	2.87E-05
Gstt2	-1.235839583	0.27409143	6.52E-06	2.87E-05
Me1	1.078126873	0.23911902	6.52E-06	2.87E-05
Rn50_5_0814.28	-3.392851205	0.75250964	6.52E-06	2.87E-05
Rfc4	-1.510849059	0.33514396	6.54E-06	2.88E-05
Dapp1	-1.549747446	0.3438026	6.55E-06	2.88E-05
RT1-Da	1.1589074	0.25709569	6.55E-06	2.88E-05
Arid2	1.124675149	0.24956619	6.59E-06	2.90E-05
Lrrc24	2.449705712	0.54382101	6.65E-06	2.92E-05
Agpat4	1.248327557	0.27715784	6.67E-06	2.93E-05
Ccdc84	-1.111423516	0.24679593	6.69E-06	2.93E-05
Ckb	1.379611769	0.30642197	6.72E-06	2.95E-05
Hoga1	-1.426844055	0.31690892	6.72E-06	2.95E-05
Ly6g6c	6.35903997	1.41264715	6.75E-06	2.96E-05
Slc25a44	1.006565271	0.22368183	6.80E-06	2.98E-05
Ttr	-1.707544444	0.37951328	6.82E-06	2.99E-05
Akap9	-1.338725272	0.29753733	6.82E-06	2.99E-05
Slc39a8	-1.358466071	0.30194674	6.83E-06	2.99E-05
Emp3	1.768601644	0.39317827	6.85E-06	3.00E-05
LOC100912163	-2.391016885	0.53201437	6.98E-06	3.05E-05
Spatc1	2.867584241	0.63805003	6.98E-06	3.05E-05
Rspo3	-1.316879501	0.29304484	7.00E-06	3.06E-05
Eno2	2.528790802	0.56281768	7.02E-06	3.07E-05
LOC100362384	1.899298363	0.422869	7.07E-06	3.09E-05
Fblim1	2.085501015	0.46438878	7.09E-06	3.10E-05
Ccdc80	-1.165760219	0.25960622	7.11E-06	3.10E-05
Car1	-4.177596016	0.93035365	7.11E-06	3.10E-05
Paxbp1	-1.620175517	0.36086645	7.13E-06	3.11E-05
Arhgef2	1.173480398	0.26144016	7.17E-06	3.12E-05
Galm	-1.352851548	0.30144758	7.19E-06	3.13E-05
Cst6	3.137080424	0.69972689	7.35E-06	3.20E-05
Ier5	1.153800309	0.25743276	7.40E-06	3.22E-05
LOC100911660	-2.019971247	0.45073917	7.41E-06	3.22E-05
Comt	-1.009561941	0.22531849	7.44E-06	3.24E-05
Was	1.250415952	0.27929463	7.57E-06	3.29E-05
Msh6	-1.275022442	0.2848346	7.59E-06	3.30E-05
Crct1	8.929614102	1.99521488	7.62E-06	3.31E-05
S100a10	2.141541008	0.47860596	7.66E-06	3.32E-05
Tnik	2.990828314	0.66883902	7.76E-06	3.37E-05
Ercc6l2	-1.448139897	0.32393523	7.81E-06	3.38E-05
AABR07057196.1	-1.097923207	0.24561787	7.82E-06	3.39E-05
Bmp2k	1.20147368	0.26880519	7.83E-06	3.39E-05

Zfp39	-3.403497015	0.76177235	7.90E-06	3.42E-05
Zfp40	-4.232662242	0.94754329	7.93E-06	3.43E-05
Plk3	1.709520089	0.38285104	8.00E-06	3.46E-05
Taok3	1.22253842	0.27379842	8.00E-06	3.46E-05
AC126530.2	-2.252751665	0.50455718	8.01E-06	3.47E-05
LOC100362366	-1.355235049	0.30356685	8.03E-06	3.47E-05
Tmem167b	1.400570122	0.31378083	8.06E-06	3.48E-05
Tmem256	-1.330386817	0.29808887	8.08E-06	3.49E-05
Adap2	-1.834420158	0.41114076	8.13E-06	3.51E-05
Cthrc1	5.604742957	1.25629283	8.15E-06	3.52E-05
Jmjd6	-1.100796758	0.2467621	8.16E-06	3.52E-05
Slc20a2	1.099588235	0.24649026	8.16E-06	3.52E-05
Kmt5a	1.22209515	0.27408432	8.24E-06	3.55E-05
Aff1	1.336545094	0.29985501	8.30E-06	3.58E-05
Srxn1	1.918830123	0.43056497	8.33E-06	3.59E-05
Phc3	1.370305785	0.30760662	8.40E-06	3.61E-05
RGD1563482	-1.514541939	0.34001191	8.41E-06	3.62E-05
Ccl21	-2.252202419	0.50568291	8.44E-06	3.63E-05
Slc7a8	1.331554628	0.29909078	8.51E-06	3.66E-05
Ttc21b	-1.833153795	0.41186484	8.55E-06	3.67E-05
Pdik1l	-1.444820932	0.32476971	8.64E-06	3.71E-05
Metrn1	1.273056409	0.28617363	8.65E-06	3.71E-05
Sult1a1	-1.8636971	0.41901081	8.67E-06	3.72E-05
Megf9	1.060142311	0.23842302	8.73E-06	3.74E-05
Ddit3	1.921608303	0.43219479	8.74E-06	3.75E-05
AABR07039694.1	-2.196385508	0.4941044	8.78E-06	3.76E-05
Endov	-1.295224563	0.29138402	8.79E-06	3.76E-05
Rb1cc1	-1.579761651	0.35543767	8.81E-06	3.77E-05
Bmp10	1.768882003	0.39809037	8.85E-06	3.79E-05
Fopnl	-1.121118688	0.25233283	8.87E-06	3.79E-05
RGD1311756	-1.10839586	0.24952008	8.91E-06	3.81E-05
Papolg	-1.12976219	0.25436922	8.94E-06	3.82E-05
Acaa2	-1.21419271	0.27338896	8.94E-06	3.82E-05
C5ar1	1.533172481	0.34529989	8.99E-06	3.84E-05
Disp1	1.839826505	0.4143904	9.00E-06	3.84E-05
Cpq	-1.850226336	0.41692854	9.09E-06	3.88E-05
Mtus1	-1.184377256	0.26705827	9.21E-06	3.92E-05
Kynu	-2.125409186	0.47927212	9.22E-06	3.93E-05
RGD1562399	-1.835455554	0.41395399	9.25E-06	3.94E-05
Dok5	6.093390954	1.37441678	9.27E-06	3.95E-05
Apoe	-1.735865458	0.39160079	9.30E-06	3.96E-05
Klhdc8a	-1.519518298	0.34285386	9.34E-06	3.97E-05
Zc3h12c	1.666189881	0.37597981	9.35E-06	3.98E-05
Tor4a	1.104489391	0.24924087	9.36E-06	3.98E-05
Slc25a21	-2.003411485	0.45214617	9.38E-06	3.99E-05
Caprin2	-1.565318479	0.35337446	9.44E-06	4.01E-05
Eml1	1.29731943	0.29288068	9.44E-06	4.01E-05
Tnfrsf12a	2.073853865	0.46822488	9.46E-06	4.02E-05

Pir	-1.68603459	0.3807394	9.50E-06	4.03E-05
RGD1565059	-1.471493586	0.33238531	9.55E-06	4.05E-05
LOC100910235	-3.031832471	0.68502783	9.61E-06	4.07E-05
Hgf	-1.39370366	0.31494947	9.64E-06	4.09E-05
Als2cr12	-3.700685617	0.83633827	9.65E-06	4.09E-05
Snrk	1.177235371	0.26605875	9.66E-06	4.09E-05
Nos3	1.251240131	0.28284085	9.70E-06	4.11E-05
Atg4a	-1.305364433	0.29512693	9.73E-06	4.12E-05
Etfrf1	-1.412829686	0.31950086	9.78E-06	4.14E-05
Map2k7	1.124253536	0.25432777	9.85E-06	4.17E-05
Il1rn	1.376076801	0.3113092	9.86E-06	4.17E-05
Larp1b	-1.074593573	0.24317041	9.91E-06	4.19E-05
Lrif1	-1.695917115	0.38379431	9.92E-06	4.19E-05
Nr2c2	1.497084678	0.3388163	9.94E-06	4.20E-05
Irs3	-1.672203269	0.37853176	9.98E-06	4.21E-05
Armcx2	1.36035665	0.30808704	1.01E-05	4.25E-05
Gltscr1l	1.120792828	0.25386065	1.01E-05	4.26E-05
Fabp12	-2.790467931	0.63209689	1.01E-05	4.27E-05
Maml2	1.765846616	0.4000803	1.02E-05	4.29E-05
Add2	3.396481097	0.76968817	1.02E-05	4.30E-05
Mcm5	3.369094781	0.76360557	1.02E-05	4.31E-05
Pcf11	-1.487501923	0.33721431	1.03E-05	4.33E-05
Cln5	1.24424974	0.28219304	1.04E-05	4.37E-05
Mtss1l	1.016754888	0.23060286	1.04E-05	4.37E-05
Anp32a	-1.062664038	0.24112769	1.05E-05	4.40E-05
Pcdhgb6	1.841781629	0.41800403	1.05E-05	4.42E-05
Eaf1	1.38029211	0.31328672	1.05E-05	4.42E-05
Pcgf3	1.055748503	0.23979099	1.07E-05	4.48E-05
RGD1564053	-2.640993083	0.59985284	1.07E-05	4.48E-05
Tbkbp1	1.48945525	0.33863298	1.09E-05	4.56E-05
LOC100910196	2.648167316	0.60206368	1.09E-05	4.56E-05
Ryr2	-5.817209658	1.32334713	1.10E-05	4.62E-05
Wbp4	-1.557769475	0.35445013	1.11E-05	4.64E-05
Cyp3a85-ps	-3.141041062	0.71480277	1.11E-05	4.65E-05
Hpgds	-1.589571204	0.36195688	1.13E-05	4.70E-05
Arl13b	-1.499714658	0.34165731	1.14E-05	4.75E-05
AABR07034573.3	-3.437460319	0.78315078	1.14E-05	4.75E-05
Oat	-2.483466029	0.56584281	1.14E-05	4.76E-05
Kansl2	1.067335814	0.24332908	1.15E-05	4.81E-05
Tbc1d31	-1.342563077	0.30617779	1.16E-05	4.84E-05
Scn5a	2.248836246	0.51293797	1.16E-05	4.85E-05
Itga4	1.890037405	0.4313052	1.18E-05	4.90E-05
Egfl7	-1.003370663	0.2289791	1.18E-05	4.90E-05
Ppial4d	-1.834767476	0.41881351	1.18E-05	4.92E-05
Zfp397	-1.575303786	0.35973486	1.19E-05	4.96E-05
RT1-DOa	-2.550532918	0.58262671	1.20E-05	4.99E-05
Mdm1	-1.594776123	0.36442049	1.21E-05	5.02E-05
Igf1r	2.04410074	0.46709864	1.21E-05	5.02E-05

Smyd5	1.194294044	0.27300986	1.22E-05	5.05E-05
LOC499136	-2.252862632	0.51511193	1.22E-05	5.07E-05
Foxn3	1.100122283	0.25163581	1.23E-05	5.11E-05
Sprr1a	7.031128258	1.6089273	1.24E-05	5.15E-05
Cnn2	1.530077634	0.35012415	1.24E-05	5.15E-05
Cd52	3.276747161	0.75008321	1.25E-05	5.18E-05
Gfm2	-1.135212504	0.25999614	1.26E-05	5.23E-05
Aimp2	1.105096068	0.25316963	1.27E-05	5.26E-05
Cep76	1.407008468	0.32236086	1.27E-05	5.27E-05
Kctd15	1.908553007	0.43733269	1.28E-05	5.28E-05
Mro	-1.482049861	0.33962746	1.28E-05	5.29E-05
Rnd3	-1.124375633	0.25769045	1.28E-05	5.30E-05
Rps6ka2	1.327766475	0.30432835	1.28E-05	5.30E-05
Gpatch4	-1.293314276	0.29648106	1.29E-05	5.32E-05
Bend3	1.548413991	0.3550497	1.29E-05	5.35E-05
Bcam	1.204760349	0.27628763	1.30E-05	5.36E-05
Tlr6	1.070303039	0.2454578	1.30E-05	5.36E-05
Ripply1	-2.371380436	0.54394144	1.30E-05	5.38E-05
Cdt1	2.880237234	0.66068279	1.30E-05	5.38E-05
Spred1	1.327144998	0.30452022	1.31E-05	5.41E-05
Ramp2	1.26267126	0.28973576	1.31E-05	5.41E-05
Ggh	-1.099883731	0.25243725	1.32E-05	5.43E-05
Isoc1	1.116397396	0.25640847	1.34E-05	5.51E-05
Birc3	-1.120297745	0.25731092	1.34E-05	5.51E-05
Tshr	3.977604388	0.91363808	1.34E-05	5.51E-05
Nr1h4	-1.32749766	0.30497471	1.34E-05	5.53E-05
Med11	-1.232545248	0.28325703	1.35E-05	5.56E-05
Fmo6	4.315125346	0.99178077	1.36E-05	5.57E-05
Adrg1	1.074058336	0.24704463	1.38E-05	5.65E-05
Trib2	1.392001558	0.32019754	1.38E-05	5.66E-05
Sec31b	-2.429336182	0.55884857	1.38E-05	5.66E-05
Fcnb	2.776741714	0.63912627	1.40E-05	5.72E-05
Dclre1a	-1.029795825	0.2370627	1.40E-05	5.74E-05
Lif	3.102372927	0.71482611	1.42E-05	5.84E-05
Apc2	1.531756013	0.35295759	1.43E-05	5.84E-05
Pdzrn3	-1.52216184	0.35078856	1.43E-05	5.85E-05
LOC690142	-2.599351921	0.59907119	1.43E-05	5.86E-05
Usp15	-1.119326739	0.25801359	1.44E-05	5.88E-05
Slc13a4	-2.262275435	0.52160638	1.44E-05	5.91E-05
Sult1c3	-2.980506536	0.68722869	1.44E-05	5.91E-05
Apoa1	-1.291936176	0.2979206	1.45E-05	5.92E-05
Bicc1	1.728942008	0.39878163	1.45E-05	5.94E-05
Rab3d	1.588537311	0.36653535	1.46E-05	5.98E-05
Zfp563	-2.272306796	0.52440773	1.47E-05	6.00E-05
Ndufc1	-1.252887103	0.28921773	1.48E-05	6.03E-05
Coro6	-3.013132978	0.69565185	1.48E-05	6.05E-05
LOC691427	-1.186930485	0.27408901	1.49E-05	6.07E-05
Slc1a4	1.36764093	0.3159688	1.50E-05	6.13E-05

Acmsd	-2.51516937	0.58121444	1.51E-05	6.15E-05
Cystm1	1.357234168	0.31369449	1.51E-05	6.17E-05
Iqcc	-1.611484236	0.37284476	1.55E-05	6.29E-05
Golga4	-1.273854273	0.29487472	1.56E-05	6.35E-05
Acaca	1.217335086	0.28187322	1.57E-05	6.38E-05
Tmem171	3.101748179	0.71836794	1.58E-05	6.41E-05
LOC680227	-1.365334247	0.31627185	1.58E-05	6.43E-05
Lcor	1.63314609	0.37843739	1.59E-05	6.47E-05
Pgs1	1.147831561	0.26601493	1.60E-05	6.48E-05
Zdhhc7	1.021689737	0.23678178	1.60E-05	6.48E-05
Trpm4	1.836976855	0.42594418	1.61E-05	6.53E-05
LOC100361087	1.151666609	0.26704727	1.61E-05	6.54E-05
Agfg1	1.086566867	0.25196776	1.62E-05	6.54E-05
AABR07048397.1	-3.519288711	0.81638261	1.63E-05	6.58E-05
Ache	1.232735057	0.28605251	1.64E-05	6.62E-05
RGD1559960	-3.409670514	0.79131774	1.64E-05	6.64E-05
Ppp1r3c	-1.705132131	0.39589092	1.65E-05	6.68E-05
Vill	-1.329988862	0.30889262	1.66E-05	6.72E-05
Mmp15	1.131206139	0.26273785	1.67E-05	6.73E-05
Tigd2	-1.362855564	0.3166185	1.67E-05	6.76E-05
Exoc3l2	1.130304097	0.26265774	1.68E-05	6.79E-05
Lsm7	-1.105698424	0.25697809	1.69E-05	6.81E-05
Cfd	-1.41435214	0.32872112	1.69E-05	6.81E-05
Sult1b1	-1.121745701	0.26075051	1.69E-05	6.83E-05
AABR07056845.1	-3.505440006	0.81520603	1.71E-05	6.88E-05
Efcab7	-2.710902713	0.63072086	1.72E-05	6.94E-05
Ccdc3	2.917662719	0.67883793	1.72E-05	6.94E-05
Ccdc15	2.973282779	0.69180447	1.72E-05	6.94E-05
Tmem55a	1.661722937	0.38670359	1.73E-05	6.96E-05
Ctsh	-1.377476309	0.32091598	1.77E-05	7.11E-05
Jchain	1.866449114	0.43490806	1.77E-05	7.13E-05
Parvg	1.152229042	0.26848161	1.77E-05	7.13E-05
Zfp189	-1.738849827	0.40522162	1.78E-05	7.14E-05
Acsm3	-3.080853251	0.7181688	1.79E-05	7.18E-05
Upp1	1.575899638	0.36773123	1.82E-05	7.32E-05
Zmym6	-1.562012023	0.3645196	1.83E-05	7.33E-05
Prkd3	-1.427948273	0.33337208	1.84E-05	7.38E-05
Fbxl17	1.052136245	0.24564965	1.84E-05	7.39E-05
Cdca7	2.315941889	0.54089558	1.85E-05	7.43E-05
Ager	-5.367087878	1.25383832	1.86E-05	7.46E-05
LOC102546716	3.33426691	0.77923916	1.88E-05	7.51E-05
Odf2l	-2.006779139	0.46916737	1.89E-05	7.56E-05
Abcd4	-1.064598663	0.24893198	1.90E-05	7.58E-05
Mlh1	-1.533015898	0.35851161	1.90E-05	7.60E-05
Gcc2	-1.375913015	0.32191573	1.92E-05	7.66E-05
RGD1562420	3.036199719	0.71054417	1.93E-05	7.70E-05
Ch25h	3.484100215	0.81575318	1.95E-05	7.76E-05
Ttc8	-1.258499579	0.29467676	1.95E-05	7.77E-05

Cfl1	1.090502272	0.25539492	1.96E-05	7.80E-05
LOC501406	-2.723592058	0.63789262	1.96E-05	7.80E-05
Eif3a	-1.176175433	0.27554992	1.97E-05	7.84E-05
Mmd	2.48776503	0.582942	1.98E-05	7.87E-05
Dcaf4	-1.013534651	0.23758929	1.99E-05	7.93E-05
LOC100911956	-1.426883917	0.33459804	2.00E-05	7.97E-05
Plod2	2.31792334	0.54371877	2.02E-05	8.02E-05
Plk2	-1.079249938	0.25316647	2.02E-05	8.02E-05
Cmklr1	1.122873618	0.26342843	2.02E-05	8.04E-05
Prpf4b	-1.447937251	0.33970367	2.02E-05	8.04E-05
RGD1561849	-2.28986534	0.53722972	2.02E-05	8.04E-05
Neurl3	2.279481633	0.53491056	2.03E-05	8.07E-05
Adam11	-4.851689684	1.13874519	2.04E-05	8.10E-05
Ptpn14	2.45592759	0.57654021	2.05E-05	8.12E-05
Ptger2	2.250844685	0.5283905	2.05E-05	8.12E-05
Smoc1	1.109870256	0.2605567	2.05E-05	8.12E-05
Exoc6	-1.324026683	0.31088942	2.05E-05	8.15E-05
Ccdc138	-3.131744108	0.73569092	2.07E-05	8.21E-05
Znfx1	1.166405008	0.27402127	2.08E-05	8.22E-05
LOC102552527	-2.21373526	0.52006836	2.08E-05	8.22E-05
Adgb	-2.871076739	0.67495156	2.10E-05	8.32E-05
Wfdc3	-1.254499171	0.29508634	2.13E-05	8.40E-05
LOC103694863	1.845234309	0.43407408	2.13E-05	8.41E-05
Tnfsf18	5.555224393	1.30702718	2.14E-05	8.44E-05
Fzd5	1.364561121	0.32116842	2.15E-05	8.49E-05
Rpl39	-1.089272068	0.25638098	2.15E-05	8.49E-05
LOC679739	-1.057929604	0.24902568	2.15E-05	8.50E-05
Ptpn18	-1.704047409	0.40134558	2.18E-05	8.59E-05
Abca6	-1.725965704	0.40655822	2.18E-05	8.61E-05
Elmo1	1.439713106	0.33926619	2.20E-05	8.66E-05
Ebi3	1.809852919	0.42681861	2.23E-05	8.78E-05
Clic2	-1.805652809	0.42589387	2.24E-05	8.80E-05
Kctd19	4.680781461	1.10426606	2.25E-05	8.84E-05
Bmp7	1.290262148	0.3044401	2.25E-05	8.86E-05
Trmt6	-1.266752205	0.29897498	2.27E-05	8.90E-05
LOC685157	-5.613255259	1.32520357	2.28E-05	8.95E-05
Cdk5rap2	-1.298603641	0.3067214	2.30E-05	9.02E-05
Dusp4	2.828375807	0.66823314	2.31E-05	9.07E-05
Arhgap44	2.375214388	0.5613733	2.33E-05	9.12E-05
Itgae	-1.464607396	0.34621256	2.33E-05	9.15E-05
LOC317456	1.255054004	0.29672575	2.34E-05	9.17E-05
Nfatc2ip	1.186102007	0.28047022	2.35E-05	9.20E-05
Plekhs1	-2.479717702	0.58639752	2.35E-05	9.21E-05
Fktn	-1.363232673	0.32260472	2.38E-05	9.33E-05
Golm1	-1.560873249	0.36957018	2.41E-05	9.42E-05
AABR07005618.1	-1.511050485	0.3579442	2.43E-05	9.50E-05
Apoc1	-1.805519099	0.42791656	2.45E-05	9.59E-05
RGD1307235	-1.064425404	0.25231739	2.46E-05	9.61E-05

LOC103691699	-2.511495886	0.59539475	2.46E-05	9.63E-05
AABR07006258.2	1.438815378	0.34112953	2.47E-05	9.64E-05
Phactr4	1.187022319	0.2815178	2.48E-05	9.69E-05
Fcrl2	4.640117461	1.10062102	2.49E-05	9.71E-05
Rarres2	-1.587984586	0.37666471	2.49E-05	9.71E-05
Sbsn	-3.807572741	0.90329138	2.50E-05	9.73E-05
LOC100911166	7.773082779	1.84435506	2.50E-05	9.76E-05
Rock1	-1.292096762	0.3066185	2.51E-05	9.78E-05
Pgm2	-1.029931914	0.24445351	2.52E-05	9.81E-05
Ceacam9	2.717575393	0.64528834	2.54E-05	9.89E-05
Zfp52	-2.604780999	0.61857733	2.54E-05	9.91E-05
Afp	-1.504526295	0.35729897	2.54E-05	9.91E-05
AABR07025051.3	5.039491148	1.19684223	2.55E-05	9.92E-05
Tob2	1.165397976	0.27678222	2.55E-05	9.92E-05
Prkca	1.241934153	0.29500109	2.55E-05	9.94E-05
Etfb	-1.225541721	0.29112354	2.56E-05	9.95E-05
LOC100911225	-4.594600448	1.09142114	2.56E-05	9.95E-05
Arid3a	2.744313482	0.65195144	2.56E-05	9.96E-05
Tuba1a	1.413005394	0.33579425	2.58E-05	0.00010017
Eif2ak4	-1.117070433	0.2655952	2.60E-05	0.00010106
RGD1564664	1.698556903	0.4039509	2.61E-05	0.0001015
Gpr137b	1.377139246	0.32756667	2.62E-05	0.0001018
Smoc2	1.594113132	0.3794294	2.65E-05	0.00010302
AABR07066529.1	1.334820937	0.31773669	2.66E-05	0.00010312
Apol9a	-1.229216208	0.29263658	2.66E-05	0.00010333
Mmp23	1.80728741	0.43042183	2.68E-05	0.00010402
Arrdc4	1.792504374	0.42709418	2.71E-05	0.00010484
Oxld1	-1.393551027	0.33207982	2.71E-05	0.00010507
Has1	6.42456747	1.53124036	2.72E-05	0.0001054
Zfr	-1.171445601	0.27933417	2.74E-05	0.00010624
LOC100912068	2.07443198	0.49508382	2.79E-05	0.00010786
Snx29	1.129533113	0.26967591	2.81E-05	0.0001085
Prkar1b	5.060355233	1.20834074	2.82E-05	0.00010875
Cyr61	1.173659045	0.28029833	2.82E-05	0.00010905
Rnf145	1.244831438	0.29741507	2.85E-05	0.00010978
Mmab	-1.068660572	0.25540338	2.86E-05	0.00011038
Nipbl	-1.431182003	0.34219093	2.88E-05	0.00011123
LOC108348064	1.330921645	0.31824055	2.89E-05	0.00011134
Cep162	-1.879376908	0.4494945	2.90E-05	0.00011179
Rasgef1b	1.741665589	0.41673204	2.92E-05	0.0001126
Rbp7	-2.371955291	0.56754965	2.92E-05	0.0001126
Hmgcs1	-1.684151104	0.40300377	2.93E-05	0.00011272
Ppp2r1b	1.313522178	0.31447544	2.96E-05	0.0001137
Cd83	1.361497844	0.32596684	2.96E-05	0.0001137
Rps19bp1	-1.039265988	0.24898082	2.99E-05	0.00011501
Pold1	1.761418001	0.42198837	2.99E-05	0.00011501
Pik3cg	1.149228233	0.27536838	3.00E-05	0.00011532
Samd9l	-1.903707647	0.45616283	3.00E-05	0.00011535

Tiam1	2.399783389	0.5750556	3.00E-05	0.00011541
Aldob	-1.179163888	0.28261788	3.02E-05	0.00011575
Arsg	-1.290968892	0.30951364	3.03E-05	0.00011635
Ric3	-2.406398829	0.57701794	3.04E-05	0.0001166
Jaml	-1.451326173	0.34810165	3.06E-05	0.00011713
Atox1	-1.407039232	0.3376866	3.09E-05	0.00011829
Thop1	1.010027394	0.2424336	3.10E-05	0.00011852
Gtpbp4	-1.362908096	0.32715618	3.10E-05	0.0001186
Opn3	2.297918016	0.55162047	3.10E-05	0.00011866
Vav1	1.171997407	0.28142589	3.12E-05	0.00011929
Gins2	-1.608197583	0.38618753	3.12E-05	0.00011934
Rpl18a	1.119739568	0.26901804	3.15E-05	0.00012029
Etaa1	-1.706852853	0.41014985	3.16E-05	0.00012068
Bco1	-1.72318275	0.41413113	3.17E-05	0.00012092
Tmem108	2.045403604	0.49177501	3.19E-05	0.00012176
Stx11	2.16774266	0.52128613	3.20E-05	0.00012211
Fam129b	1.328831875	0.3195833	3.21E-05	0.00012229
Cpne7	-1.443978872	0.34733574	3.22E-05	0.00012264
Hrasls5	4.72273599	1.13658173	3.25E-05	0.00012368
Zfp192	-2.265876906	0.54549225	3.27E-05	0.0001244
Akr1c3	-1.675929319	0.40351746	3.28E-05	0.00012463
RGD1561465	6.506970417	1.56739144	3.30E-05	0.00012557
AABR07027753.2	3.364193933	0.81041216	3.31E-05	0.00012565
LOC102551340	-1.932510347	0.46569774	3.33E-05	0.00012645
Krt75	5.209835602	1.25566428	3.34E-05	0.00012677
Mgat5	1.38216095	0.33331459	3.37E-05	0.00012802
Hpcal1	1.027326417	0.24780051	3.39E-05	0.00012851
Prr22	-1.787429066	0.43124058	3.40E-05	0.000129
Rn50_17_0383.1	4.724761492	1.14034954	3.42E-05	0.00012984
Kcnn4	2.000720333	0.48294296	3.43E-05	0.00013006
Bbip1	-1.83897192	0.4441205	3.46E-05	0.0001312
Rad51d	-1.005613684	0.24288478	3.47E-05	0.00013141
Zmym5	-1.616783155	0.39050728	3.47E-05	0.00013142
LOC100910418	7.93310411	1.91763067	3.52E-05	0.00013325
Syn1	1.871047412	0.45245103	3.54E-05	0.0001341
Tcaf2	-1.469576482	0.35543789	3.56E-05	0.00013451
Ablim1	1.123369428	0.27180175	3.58E-05	0.00013536
Rrm1	-1.362014092	0.32960684	3.59E-05	0.00013577
Zfp458	-2.763988587	0.66915963	3.62E-05	0.00013675
Pdzd3	-5.568214579	1.34873828	3.65E-05	0.00013783
Arhgef37	-1.423619197	0.34500313	3.68E-05	0.00013901
AABR07058124.4	1.304116512	0.31607253	3.69E-05	0.00013921
AABR07053509.2	-3.316792503	0.80419535	3.72E-05	0.00014009
Morc4	-1.123501648	0.27240771	3.72E-05	0.00014009
Smc5	-1.224989966	0.29703039	3.72E-05	0.00014019
Cd63	1.166140676	0.28277028	3.72E-05	0.00014024
Caps2	-2.363411965	0.57314521	3.73E-05	0.00014045
Lama2	1.011062236	0.24526031	3.75E-05	0.00014114

Il18	-1.049190082	0.25459756	3.77E-05	0.00014195
Panx2	1.328214683	0.32233854	3.78E-05	0.00014216
Rnd1	1.807059062	0.43855052	3.78E-05	0.00014216
Sh3bgrl	-1.346197173	0.32672144	3.78E-05	0.00014224
Cbx1	-1.050900661	0.2550555	3.78E-05	0.00014224
Slc15a3	1.077007225	0.26148756	3.81E-05	0.00014311
Zfp949	-1.432929486	0.34797941	3.82E-05	0.00014361
Stk32c	-3.56137357	0.86506129	3.84E-05	0.00014417
Ankrd42	-1.666885072	0.40517056	3.89E-05	0.00014584
LOC498826	-5.117937672	1.24432561	3.91E-05	0.00014641
Slf1	-1.944738838	0.47307653	3.94E-05	0.0001477
Lrrc8e	1.903670981	0.46316207	3.95E-05	0.0001481
Actl7b	-5.159791572	1.25543444	3.96E-05	0.00014819
Nedd9	-1.242029553	0.30233215	3.99E-05	0.00014928
Zhx3	1.193514132	0.29053399	3.99E-05	0.00014935
Mapkapk3	1.128763804	0.27481448	4.00E-05	0.00014969
Ppp1r26	1.378244934	0.33578417	4.05E-05	0.00015148
Mab21l3	-1.557643178	0.37963868	4.08E-05	0.00015242
Zfhx2	1.201102984	0.29279541	4.09E-05	0.00015283
Upf3b	-2.053738828	0.50068547	4.10E-05	0.00015301
Nkd1	1.127811341	0.27496886	4.10E-05	0.00015315
Ccdc62	-2.155152718	0.52552955	4.12E-05	0.00015355
S100a13	-1.220534381	0.29768396	4.13E-05	0.00015396
Adhfe1	-1.854519944	0.45275932	4.20E-05	0.00015646
Zfp455	-2.090632783	0.51040912	4.20E-05	0.00015646
Col4a4	1.616268405	0.39463278	4.21E-05	0.00015665
Cpne2	1.251545926	0.30563855	4.22E-05	0.00015712
Gimap8	-1.916920028	0.46816469	4.23E-05	0.0001573
Erich1	-1.229044134	0.3003506	4.28E-05	0.0001589
AABR07024825.1	1.977956071	0.4834776	4.29E-05	0.0001595
Krit1	-1.074734063	0.26283695	4.33E-05	0.00016089
Nrxn3	3.647212265	0.89222886	4.36E-05	0.0001617
Ibtk	-1.028104249	0.25151236	4.36E-05	0.00016171
Arntl2	-1.89763719	0.46426253	4.36E-05	0.00016186
Nol4l	2.256979725	0.55219932	4.37E-05	0.00016194
Fabp4	2.645075309	0.64717525	4.37E-05	0.000162
Nup58	1.155963985	0.282869	4.38E-05	0.0001623
March09	1.311318204	0.32093408	4.39E-05	0.00016271
RGD1304624	1.351380009	0.33078296	4.40E-05	0.00016305
Jun	1.85144921	0.45342176	4.44E-05	0.00016443
Taf5	-1.0703253	0.2621735	4.46E-05	0.00016494
Chtf18	1.895174245	0.46429141	4.47E-05	0.00016536
Samd11	-1.230292235	0.30141833	4.47E-05	0.00016545
Rn60_12_0107.2	-2.873983481	0.70433893	4.50E-05	0.00016629
Alg2	1.015568705	0.2488984	4.50E-05	0.00016635
Tox3	2.12242894	0.52019261	4.50E-05	0.00016644
Hsd17b13	-1.223358619	0.2999456	4.53E-05	0.00016738
Zyg11b	1.072564876	0.26303015	4.55E-05	0.00016786

AtI3	1.003254867	0.24603309	4.55E-05	0.00016786
Dock3	1.217656158	0.29862128	4.55E-05	0.00016791
LOC102547287	-1.578392056	0.38709377	4.55E-05	0.00016791
Mup4	-3.765910507	0.92370953	4.56E-05	0.00016827
Pla2g4a	-1.239371004	0.30418942	4.61E-05	0.00017
Zscan29	-1.582845862	0.38849249	4.61E-05	0.00017
Aadac	-1.852273554	0.45462425	4.62E-05	0.00017
Vegfd	2.053396725	0.50407726	4.63E-05	0.00017045
Tbx15	5.286680347	1.29779521	4.63E-05	0.00017045
Tsc22d1	-1.268464982	0.31150778	4.66E-05	0.00017151
Car6	-2.121655556	0.52104561	4.66E-05	0.00017151
Uqcr10	-1.099734869	0.27007425	4.66E-05	0.00017151
Cyp26b1	2.054534766	0.50460822	4.67E-05	0.0001717
Abca5	1.344361054	0.33028859	4.70E-05	0.00017261
RGD1562339	2.522065489	0.61967453	4.70E-05	0.00017276
Phyhd1	-1.047622009	0.25742537	4.71E-05	0.00017296
AABR07045307.1	-2.6427056	0.64938846	4.71E-05	0.00017296
Uchl3	-1.63298038	0.40155057	4.77E-05	0.000175
Spock1	-2.2460942	0.5526473	4.82E-05	0.00017672
Rn50_20_0046.8	1.265853409	0.31164636	4.87E-05	0.00017835
RGD1310212	-1.388101028	0.34178135	4.88E-05	0.00017866
Synpo2	1.795942064	0.44228477	4.89E-05	0.00017917
Tmem173	1.491976135	0.36746904	4.90E-05	0.00017948
Selplg	1.127051219	0.27767405	4.93E-05	0.00018037
Npff	-6.018680221	1.48284243	4.93E-05	0.00018037
Chka	-1.361809332	0.33558049	4.95E-05	0.00018095
Snx13	-1.252031371	0.3085826	4.96E-05	0.00018146
Zfp62	-1.694681064	0.4177584	4.98E-05	0.00018201
Ttc24	-3.823107151	0.94245279	4.98E-05	0.00018201
Zfp612	-1.894833926	0.46723354	5.00E-05	0.00018284
Pkm	1.431859737	0.35310722	5.01E-05	0.00018311
Asap2	1.242037966	0.30630661	5.02E-05	0.00018318
Cd55	4.064893037	1.00269956	5.04E-05	0.00018388
Trim34	-1.327379427	0.32745001	5.04E-05	0.00018402
Dram1	1.150390146	0.28380334	5.05E-05	0.00018408
Mfge8	1.999480256	0.49354503	5.09E-05	0.0001857
Pdk3	1.547030216	0.38205633	5.14E-05	0.00018729
Ogfod1	1.096292338	0.27075949	5.14E-05	0.00018746
Gp1bb	2.3797265	0.58782362	5.16E-05	0.00018789
Ecd	-1.232474328	0.30451462	5.18E-05	0.00018867
Gmids	1.840887481	0.45490748	5.19E-05	0.00018912
Pstk	-1.521582533	0.37621375	5.24E-05	0.00019087
Gas8	-2.223423722	0.5498187	5.26E-05	0.00019124
Gls2	-1.525319001	0.37722359	5.26E-05	0.00019149
Mt-nd1	1.195474727	0.29567058	5.27E-05	0.00019167
Gc	-1.340094437	0.33144662	5.27E-05	0.00019171
Utp18	-1.031887068	0.25530863	5.31E-05	0.00019285
Myo1b	-1.252486063	0.31019433	5.40E-05	0.0001961

Dusp2	2.423795321	0.600362	5.41E-05	0.0001965
Traf3ip3	-2.464063941	0.61048018	5.43E-05	0.00019725
Dph7	-1.195565767	0.29624154	5.44E-05	0.00019753
Phlpp2	1.352991986	0.33533696	5.47E-05	0.00019833
Mmp12	3.543029301	0.87868064	5.53E-05	0.00020041
Trim7	2.746984778	0.68188605	5.61E-05	0.0002035
Zfp719	-2.150167038	0.53454603	5.76E-05	0.00020851
LOC100363452	-8.171239522	2.03219218	5.80E-05	0.00020972
Fgfr1	1.146105232	0.28504381	5.80E-05	0.00020975
Gnat2	-2.920473409	0.72634884	5.80E-05	0.00020975
Trim62	1.641291713	0.40823778	5.81E-05	0.00020999
Pigp	-1.055745154	0.26263267	5.82E-05	0.00021036
Csrnp1	1.310783004	0.32608811	5.83E-05	0.00021043
Fam204a	-1.320242103	0.32855314	5.86E-05	0.00021151
Gldc	-1.166878283	0.29049567	5.90E-05	0.00021277
Eif6	1.004518614	0.25007643	5.90E-05	0.00021277
Kdm1b	-1.039670236	0.25891788	5.93E-05	0.00021399
Inmt	-6.211323795	1.54724737	5.96E-05	0.00021476
LOC685431	5.531331911	1.3778781	5.96E-05	0.00021476
Stmn4	6.705487243	1.67034175	5.96E-05	0.00021476
Otc	-1.882916474	0.46907386	5.97E-05	0.00021496
Glis2	1.071389879	0.26693723	5.98E-05	0.00021535
Hck	1.183774144	0.29509731	6.03E-05	0.00021728
Fbxo32	1.718440834	0.42868435	6.11E-05	0.00021976
Zfp951	-5.67224746	1.41552867	6.15E-05	0.00022099
Zfp51	-2.154922088	0.53798947	6.19E-05	0.00022249
Cbx6	1.104823357	0.27584636	6.20E-05	0.00022272
Mug1	-2.033620685	0.50795877	6.24E-05	0.00022427
Zfp709l1	-3.408924762	0.85200737	6.31E-05	0.00022657
Uevld	-1.470093825	0.36745671	6.31E-05	0.00022683
Slc22a25	-2.434972379	0.60870457	6.33E-05	0.00022718
Alg6	1.117069918	0.2793041	6.35E-05	0.00022777
Bag4	1.295262643	0.32386931	6.35E-05	0.00022785
Ppp2r3a	-1.822701416	0.45607997	6.43E-05	0.00023039
Sox12	1.517297443	0.37976259	6.46E-05	0.00023138
Eef1a2	-2.581564857	0.6462329	6.48E-05	0.00023191
Oplah	1.162243583	0.29107191	6.52E-05	0.00023363
Ttc21a	-2.248857966	0.56326115	6.54E-05	0.00023399
Pnck	-4.697425495	1.17803953	6.68E-05	0.00023872
RT1-M2	-1.91399437	0.4801608	6.72E-05	0.00023997
Stx1b	-2.056466152	0.5159635	6.73E-05	0.00024039
LOC367975	-1.837767939	0.46118631	6.75E-05	0.00024111
Bmp5	-1.388101162	0.34841823	6.78E-05	0.00024187
LOC102547241	3.21610433	0.80727227	6.78E-05	0.00024192
Slc16a9	2.549075053	0.63995415	6.80E-05	0.00024247
Zbtb16	2.673223395	0.67150401	6.86E-05	0.00024463
Prkd1	2.299062976	0.57755298	6.87E-05	0.00024483
Krcc1	-1.092748341	0.27468863	6.95E-05	0.00024732

Slamf9	1.751989236	0.44058141	6.99E-05	0.00024887
Klc4	-1.137517612	0.28618463	7.04E-05	0.00025062
Gapdh-ps2	1.37574458	0.34612556	7.05E-05	0.00025064
Myh14	-1.570157129	0.39506832	7.06E-05	0.0002509
Obsl1	1.490406657	0.37557359	7.24E-05	0.00025683
Tcf15	4.230463676	1.06639483	7.28E-05	0.00025816
Stmn1	1.164986882	0.29366954	7.28E-05	0.00025818
Fam49a	-1.269989556	0.32018672	7.30E-05	0.00025877
Gnmt	-2.675918304	0.67478161	7.32E-05	0.00025957
LOC103694328	1.092365163	0.27556077	7.37E-05	0.0002611
Itpr3	2.127508068	0.53680995	7.39E-05	0.00026187
Celf2	1.08916779	0.27493034	7.44E-05	0.00026354
Plekhg1	1.667593228	0.42109675	7.49E-05	0.00026508
Mmp10	6.591161676	1.66516181	7.55E-05	0.0002669
Usp43	2.35596768	0.59527304	7.56E-05	0.00026733
Prss46	5.900490848	1.49085953	7.57E-05	0.00026733
Dagla	1.268231964	0.3205276	7.60E-05	0.00026842
Setd7	2.131638551	0.53876359	7.60E-05	0.00026855
Mia2	-1.185119232	0.29960002	7.63E-05	0.00026946
Phldb3	1.240238747	0.3135896	7.65E-05	0.00027019
Sbpl	-4.552177094	1.15130312	7.69E-05	0.00027125
Gcdh	-1.461207511	0.3696666	7.73E-05	0.00027251
Aqp11	1.00289197	0.25382561	7.78E-05	0.00027423
Krt14	7.74818648	1.96114851	7.79E-05	0.00027447
Klf7	1.624096816	0.41121007	7.83E-05	0.00027589
Sema3b	2.234844722	0.56613414	7.90E-05	0.00027798
Hilpda	1.571401585	0.39806089	7.89E-05	0.00027798
Ccdc191	-1.954440676	0.4953997	7.97E-05	0.00028048
Aste1	-1.484974844	0.37655381	8.03E-05	0.00028216
Tgfbr3l	-4.463791799	1.13193917	8.03E-05	0.00028222
Adamtsl3	1.124078868	0.28532482	8.16E-05	0.00028659
Nr4a1	1.784459489	0.45313344	8.21E-05	0.00028844
Kmt5b	-1.067321932	0.27110679	8.25E-05	0.00028975
Gabbr2	2.400506015	0.60980438	8.27E-05	0.00029015
Rsbn1l	-1.041240007	0.26452577	8.28E-05	0.00029035
Hagh	-1.131294398	0.28746479	8.31E-05	0.00029129
Irak1bp1	-1.479488684	0.37608861	8.36E-05	0.00029303
Tmem220	-1.184127538	0.30109195	8.40E-05	0.00029432
Pcsk5	1.311173111	0.33351979	8.45E-05	0.00029598
Mmd2	-4.154947529	1.05756535	8.54E-05	0.00029898
Rn50_5_0814.4	-3.397260688	0.86502447	8.59E-05	0.0003007
Fam134b	2.007461693	0.51118085	8.60E-05	0.00030095
Slc4a4	1.792766868	0.45652377	8.60E-05	0.00030102
Wdr5b	-1.344048499	0.34226964	8.61E-05	0.00030111
RGD1562652	-5.455225339	1.38943376	8.63E-05	0.00030179
Vash2	4.907218361	1.25000733	8.65E-05	0.00030231
Tex12	-1.845482055	0.47025154	8.69E-05	0.00030381
Ica1	1.558088461	0.39707124	8.71E-05	0.00030427

LOC100909857	-3.109529187	0.79245191	8.71E-05	0.00030427
Prr36	4.662626221	1.18834922	8.72E-05	0.00030454
Nemf	-1.665135094	0.42441872	8.73E-05	0.00030483
Cpxm1	1.577573876	0.40237675	8.83E-05	0.00030806
Pms1	-1.926492813	0.49144954	8.85E-05	0.00030864
Timp3	1.271436396	0.32463894	8.99E-05	0.00031296
Lsm2	1.199775241	0.30633938	8.98E-05	0.00031296
Mzt2b	-1.074358967	0.27464485	9.16E-05	0.0003187
Ccl2	2.733925428	0.69895107	9.17E-05	0.00031908
Phf11	-1.668843086	0.42670997	9.19E-05	0.00031963
Coro1a	1.382200111	0.35346467	9.21E-05	0.00032025
Rab31	1.281090997	0.32773421	9.27E-05	0.00032217
Rpl12	-5.429784158	1.38967074	9.34E-05	0.00032429
Aadat	-1.389371203	0.35574398	9.40E-05	0.00032637
Slc8a1	1.514273161	0.38779479	9.43E-05	0.00032719
AABR07014550.1	-2.664148623	0.68240266	9.46E-05	0.00032814
F13b	-1.575838177	0.40373366	9.49E-05	0.00032925
Galns	1.400323719	0.35876714	9.49E-05	0.00032925
Slc16a4	-1.794997395	0.45995444	9.52E-05	0.00032992
AABR07011700.1	-4.897142689	1.25518131	9.56E-05	0.00033109
LOC680200	-1.613834076	0.41368994	9.58E-05	0.00033159
LOC108348083	2.237517272	0.57403542	9.70E-05	0.00033578
Ankrd24	-1.091121462	0.27999346	9.74E-05	0.00033698
Plagl1	4.282186339	1.09908609	9.77E-05	0.00033805
Lacc1	1.558045037	0.40027084	9.92E-05	0.00034289
Amacr	-1.59624846	0.41012244	9.94E-05	0.00034331
Fam175a	-1.380241594	0.35471023	9.98E-05	0.00034443
Tmed5	1.166443763	0.29998826	0.00010095	0.00034832
Cd69	3.274099335	0.84209929	0.00010107	0.00034864
Rev3l	-1.240013483	0.31906807	0.00010176	0.00035096
LOC108348085	8.476413869	2.18213634	0.00010256	0.00035349
Actg1	1.348852074	0.34726732	0.00010267	0.0003538
Ska2	-1.141381364	0.29388975	0.00010288	0.00035428
Pbx3	1.08368761	0.27905392	0.00010299	0.00035452
LOC103694872	-6.078486456	1.56554662	0.00010332	0.00035557
Afmid	-1.472956581	0.37949897	0.00010389	0.00035746
Rmnd5a	1.094676366	0.28208531	0.00010417	0.00035836
Giot1	-2.026146283	0.52216151	0.00010433	0.0003588
Zmym2	-1.291428479	0.3328773	0.00010463	0.0003597
AABR07022022.1	4.65517956	1.20012851	0.00010493	0.00036064
AC111632.2	-2.704147916	0.69733575	0.00010539	0.00036216
Rpgrip1l	-1.357932033	0.35046908	0.00010679	0.0003669
Cplx2	1.286730542	0.33218685	0.00010728	0.00036847
Cpg1	-1.988116496	0.51342047	0.00010781	0.00037024
Serf1	-1.121552555	0.28970247	0.00010821	0.00037145
LOC103691005	-2.593549198	0.66996807	0.00010832	0.00037174
Eci2	-1.270738378	0.32841304	0.00010913	0.00037437
Eci2	-1.270738378	0.32841304	0.00010913	0.00037437

Zfp704	1.571269738	0.40609853	0.0001092	0.00037452
Lama4	1.085450356	0.28082241	0.00011097	0.00038043
Adap1	1.846058392	0.47766782	0.00011121	0.00038116
Emp1	2.517157216	0.65138525	0.0001114	0.00038174
Grk3	1.55114876	0.40147629	0.00011172	0.00038275
Asgr2	-1.182048253	0.30599206	0.000112	0.00038354
LOC108348072	1.314508357	0.34044338	0.00011285	0.00038619
Slco1a6	-1.947934207	0.50458597	0.00011317	0.00038723
Rhoj	1.05739134	0.27394133	0.00011342	0.000388
Map1s	1.559814122	0.40417774	0.00011375	0.00038902
Zfp53	-2.651735643	0.68713653	0.0001138	0.00038912
Rn60_14_0076.1	1.438611324	0.37283824	0.00011407	0.00038986
Ncoa7	1.307876436	0.33896364	0.00011411	0.00038991
Tnfaip3	1.218339487	0.31588644	0.00011484	0.00039225
Bdh1	-1.335718767	0.34654029	0.00011599	0.00039594
Katnal2	-2.502038445	0.64921702	0.00011624	0.00039668
Ptgis	2.1528611	0.55868201	0.00011646	0.00039735
Cdc25c	-1.193266488	0.30981586	0.00011738	0.00040041
Tax1bp3	1.334870018	0.34662855	0.00011763	0.0004011
Cep57l1	-1.212289931	0.31488349	0.00011814	0.00040273
Vwce	1.501539387	0.39023886	0.00011921	0.00040631
Fam169b	-2.160903051	0.56179767	0.00011986	0.00040827
Ifi47	1.536407994	0.39946401	0.00011998	0.00040857
Mgat3	2.482839096	0.64555263	0.00012003	0.00040866
Wnt5a	1.831644188	0.47642305	0.00012076	0.00041098
Pelo	1.048646255	0.27276513	0.0001208	0.00041101
Ddx3x	-1.000097317	0.26018129	0.00012112	0.00041194
Zfp82	-2.423853712	0.63057203	0.0001211	0.00041194
Bank1	-1.927197774	0.50165179	0.00012218	0.00041538
Zfp329	-2.179112039	0.56729941	0.00012243	0.00041605
Nudt16	-1.18921903	0.30977537	0.00012355	0.00041949
Ribc1	-1.130338023	0.29444923	0.00012363	0.00041966
Nfkbie	1.047518044	0.27298632	0.00012442	0.00042225
Cdyl2	2.168820113	0.56534327	0.00012491	0.00042364
Ccdc146	-2.305356964	0.60099051	0.00012509	0.00042417
Ly6g6f	3.129859344	0.81660431	0.00012671	0.00042929
Pde5a	1.998284735	0.52142189	0.00012691	0.00042989
Lrp1	1.002394108	0.26159679	0.00012719	0.00043057
LOC690035	-1.405141808	0.36678059	0.00012762	0.00043191
Mob1b	1.185501189	0.30948219	0.00012783	0.00043246
Ccnt2	-1.094709147	0.28579499	0.00012794	0.00043264
Sema7a	2.753637392	0.71898358	0.00012819	0.00043331
Cer1	-6.003180612	1.56757935	0.00012836	0.0004336
AABR07007121.1	-1.487670661	0.38851705	0.00012861	0.00043436
Plcx1	2.439182263	0.63702536	0.00012866	0.00043441
Prima1	1.566053764	0.40908526	0.00012909	0.0004357
Cd8b	2.166644593	0.56601916	0.00012926	0.00043618
Rfxank	-1.089427675	0.28469741	0.00012992	0.00043821

Tmc6	1.147749741	0.29996687	0.00013011	0.00043876
Haus1	6.733898228	1.76002374	0.00013023	0.00043907
Gpr4	1.396744525	0.3651056	0.00013046	0.00043976
Mnda	-1.553140525	0.4060037	0.00013054	0.00043994
Iqce	1.022126684	0.26728219	0.00013123	0.00044197
Palld	1.001284794	0.26189309	0.0001317	0.00044328
Atm	-1.281264674	0.33513069	0.00013174	0.00044333
LOC100912534	7.575966102	1.98205281	0.00013222	0.00044485
Pbx2	1.127369055	0.29498158	0.00013247	0.00044549
Acap2	1.246619378	0.3261944	0.00013253	0.00044561
AC113785.2	-4.995186791	1.30763644	0.00013345	0.00044859
Fhl2	1.493089073	0.39098732	0.00013412	0.00045067
Zfp54	-2.446770324	0.64073965	0.00013418	0.00045076
Gria3	-1.699854112	0.44520793	0.00013448	0.00045168
Smim22	-1.31062112	0.34331165	0.00013476	0.00045245
RGD1308750	-1.362053023	0.3568897	0.00013538	0.00045443
Cbwd1	-1.123498492	0.29458718	0.00013684	0.00045904
Hcn2	2.313729982	0.60675261	0.00013712	0.00045989
Dapk2	-1.136930844	0.29855626	0.00014004	0.00046928
Dusp18	1.134846662	0.29822155	0.00014159	0.00047435
Rsf1	-1.380513845	0.36287488	0.00014216	0.00047618
Zmat1	-2.06447364	0.54266841	0.00014221	0.00047623
Rn50_X_0744.1	1.110779664	0.29205994	0.0001428	0.00047804
Usp32	-1.062068077	0.27927938	0.00014302	0.00047865
Arid4a	-1.360561632	0.35793052	0.000144	0.00048185
Ackr4	-1.227328323	0.32298951	0.00014475	0.00048425
Gsg1	7.220109391	1.90050288	0.00014525	0.00048576
Asb2	-1.886526188	0.49658137	0.00014527	0.00048576
Cngb1	-3.571287397	0.94028714	0.00014582	0.00048711
Pfkfb2	1.122944982	0.2957317	0.00014635	0.00048879
Egf	-1.512832074	0.39842783	0.00014646	0.00048902
Prrg1	-1.707073196	0.44959369	0.0001465	0.00048908
Fry	1.560770788	0.4111152	0.00014679	0.00048995
Ifih1	-1.201299758	0.31651581	0.00014741	0.00049191
ldh1	-1.119041472	0.29511054	0.00014948	0.00049869
Myh7b	-1.85851965	0.49015339	0.00014961	0.00049894
AABR07054264.1	-4.131059171	1.09013234	0.00015095	0.00050287
AC120727.1	-4.171684143	1.10090602	0.00015106	0.00050303
Bcl2l11	1.386597242	0.36593852	0.00015116	0.00050318
Cyp2j4	-1.238134859	0.32675877	0.00015117	0.00050318
Zfp280d	-1.567821384	0.41401585	0.00015256	0.0005075
Dcst2	-1.66631984	0.4400376	0.00015262	0.00050759
Nlrp12	-1.80567396	0.47688289	0.00015284	0.00050821
Acot11	2.832095623	0.74818211	0.00015352	0.00051027
Espnl	4.802481523	1.26929169	0.00015458	0.00051336
LOC679894	-1.985579361	0.52481781	0.00015472	0.00051361
Layn	-1.98064099	0.52370839	0.0001556	0.00051621
Col16a1	1.475599522	0.39040637	0.00015705	0.0005209

AABR07028381.1	5.40670897	1.43224708	0.00016002	0.00053053
Tlr9	2.10710674	0.55826984	0.00016042	0.00053177
Akap17b	-1.718552837	0.45536384	0.00016064	0.00053236
Nefm	4.841056532	1.28406664	0.00016318	0.00054013
Ifi44l	-1.61523554	0.42852693	0.00016372	0.00054169
Serpind1	-1.300645057	0.34531414	0.00016551	0.00054716
Bach2	1.15688161	0.30726179	0.00016646	0.00055006
Oasl	1.887628738	0.5013517	0.0001665	0.00055006
Orm1	1.433788494	0.38105328	0.00016809	0.00055521
Mdh1b	-4.655422263	1.23730537	0.00016819	0.00055543
Parm1	2.175592589	0.57918441	0.00017244	0.00056864
Spsb4	2.167361156	0.57742556	0.00017439	0.00057483
Tpm2	-2.066985685	0.55080572	0.00017497	0.00057662
AABR07024498.1	1.640403721	0.43715155	0.00017509	0.0005769
Zscan30	-2.240455156	0.59724394	0.0001759	0.00057946
Mmp17	1.05062977	0.28016958	0.00017685	0.00058234
AABR07001048.1	-2.306518164	0.61576294	0.00017983	0.00059177
Ildr2	1.548928612	0.41360818	0.00018045	0.00059359
Slc20a1	1.293909677	0.34552774	0.00018058	0.00059381
Zbtb46	1.086606806	0.29027213	0.00018154	0.0005968
Crmp1	1.582278503	0.42307619	0.00018407	0.00060447
Pnlcd1	-2.689977888	0.71955123	0.00018519	0.00060803
Acads	-1.159463984	0.31024806	0.00018607	0.0006108
Rnf150	1.292142754	0.34577951	0.0001863	0.00061132
Reep1	1.32366636	0.35432671	0.00018718	0.00061393
Atp8b1	-1.121986396	0.3004685	0.00018837	0.00061759
Agtppb1	1.440057308	0.38582968	0.00018969	0.00062115
LOC100361636	-5.256200035	1.4082628	0.00018966	0.00062115
Btg2	1.3353964	0.35786853	0.00019032	0.00062284
Parp8	-1.835319689	0.49183697	0.0001903	0.00062284
Mras	1.187094614	0.31818946	0.00019089	0.00062443
Ranbp2	-1.233689726	0.3307524	0.00019152	0.00062624
Fbln5	1.254495602	0.33638342	0.00019197	0.00062744
Doc2g	-4.238463601	1.13660836	0.00019221	0.00062797
Slc4a1	1.899425876	0.50935916	0.0001922	0.00062797
Ly6h	3.818671616	1.02425322	0.00019281	0.00062983
Serpina3c	-1.589555435	0.4265979	0.00019445	0.00063478
Trpm7	-1.291649404	0.34676907	0.00019546	0.00063782
Tle3	1.03627184	0.27827102	0.00019612	0.0006397
AABR07013802.1	-1.184390441	0.31807448	0.00019638	0.00064043
LOC102546648	-1.643797544	0.44204703	0.00020033	0.00065276
Pcmdt2	-1.219897443	0.32811666	0.0002009	0.00065437
Olfml2a	1.705242422	0.45872201	0.0002013	0.00065554
Pid1	-1.165303431	0.31351714	0.0002017	0.00065658
Cacna2d2	1.106774561	0.29819945	0.00020601	0.00066926
LOC100359951	4.182241947	1.12680189	0.00020595	0.00066926
Hand2	1.097132743	0.2955993	0.00020599	0.00066926
RGD1307603	-1.875498132	0.5053764	0.00020637	0.00067025

Epsti1	-1.370117269	0.36927007	0.00020698	0.00067211
Lrrc57	-1.069708628	0.28840165	0.000208	0.00067529
LOC100360856	-1.473098352	0.39736653	0.0002096	0.00068034
Rgn	-1.635519939	0.4412079	0.0002098	0.00068085
Kbtbd6	1.496577535	0.40416274	0.00021314	0.00069085
RGD1561145	-2.472906336	0.66807039	0.00021427	0.00069423
lqub	-4.185582328	1.13114127	0.00021533	0.00069737
Tpd52l1	-2.242049068	0.6062361	0.00021704	0.00070277
Hmgb1-ps4	-1.289363426	0.34864569	0.00021713	0.00070291
Rab17	-1.134661346	0.30690548	0.00021807	0.00070568
Fmnl2	1.429651616	0.38695493	0.00022022	0.00071233
Faah	2.739432044	0.74154399	0.00022056	0.00071328
Adam19	1.295670493	0.35140767	0.00022684	0.000733
Zbtb38	1.114614235	0.30233887	0.00022724	0.00073414
AABR07025328.1	1.706594655	0.46294186	0.00022744	0.00073464
Slc16a2	1.201975134	0.32607137	0.0002276	0.00073501
Rbl2	-1.163730098	0.31576505	0.00022832	0.00073718
Hlcs	1.091634561	0.2962086	0.00022838	0.00073724
Pecr	-1.029016206	0.27928636	0.0002292	0.00073973
Dlg4	1.263425141	0.34302331	0.00023032	0.00074275
LOC688754	2.290801425	0.62200306	0.00023056	0.00074336
LOC100911825	-1.004021359	0.27263433	0.00023081	0.00074387
Dhcr24	1.098088018	0.29819361	0.00023099	0.0007443
M6pr	3.488534968	0.94752095	0.00023164	0.00074605
Actr6	-1.099280617	0.29861017	0.00023203	0.00074704
LOC103690006	-1.687648998	0.458543	0.00023281	0.00074941
Hsd17b10	-1.114776946	0.30294927	0.00023346	0.00075122
Dhrs9	2.270275202	0.61772108	0.00023762	0.00076398
Smtnl2	1.216137736	0.33101025	0.00023877	0.00076719
LOC100909524	-1.211594708	0.32993776	0.00024048	0.00077192
Gtf2h2	-1.19644988	0.32589634	0.00024136	0.00077458
LOC100912481	-1.113599002	0.30350281	0.00024335	0.00078012
Wt1	2.816501686	0.76762102	0.00024338	0.00078012
Usp35	1.893091272	0.5160306	0.00024392	0.00078169
Bbx	1.165571774	0.31776746	0.00024445	0.00078325
Trib1	1.386554459	0.37808658	0.00024513	0.00078527
LOC108348052	1.36002291	0.3709355	0.00024592	0.00078765
Neurl2	-1.082778643	0.29543736	0.00024734	0.00079201
Pla2g2d	2.034086656	0.55517306	0.00024842	0.00079534
Shc2	2.364028764	0.64528427	0.00024875	0.00079589
Mbl1	-1.39406092	0.38069036	0.00025032	0.00080029
Pik3r1	-1.207211848	0.32980906	0.00025189	0.00080512
Cux1	-1.130237502	0.30895547	0.00025394	0.0008112
Polr2l	2.298841461	0.62843831	0.00025417	0.00081177
RGD1310819	3.44426955	0.94160595	0.00025432	0.0008121
Ksr2	-1.121062447	0.30661384	0.00025591	0.00081702
Klhl8	-1.009365038	0.27612464	0.00025671	0.00081924
AABR07055826.1	-2.71261722	0.74234282	0.00025806	0.00082303

Mib1	1.006558907	0.27559707	0.00025992	0.00082864
Wdr82	1.003229044	0.27470822	0.00026023	0.00082945
Lrfn4	1.402420523	0.38440278	0.00026397	0.00084089
Slc52a3	1.279295687	0.35065993	0.00026403	0.00084091
Trip11	-1.190880652	0.32643051	0.00026409	0.00084094
Ctgf	1.849804064	0.50723234	0.00026547	0.00084473
Plcd3	1.248703901	0.34244179	0.00026587	0.00084574
Hyls1	-1.476123074	0.40496637	0.00026734	0.00085009
Mmp9	2.463136424	0.67616267	0.00026967	0.00085716
Tnfrsf25	-3.240153117	0.88966072	0.00027052	0.00085968
Plcb4	-1.383696783	0.37996424	0.0002709	0.00086071
Bhmt	-2.512227163	0.68999253	0.00027164	0.00086272
Adh7	-2.249727571	0.61789481	0.00027163	0.00086272
Frmf8	1.775519918	0.48769568	0.00027197	0.00086359
Spag5	-1.658597715	0.45576971	0.00027358	0.00086837
Dock2	1.53028264	0.42053507	0.00027381	0.00086893
Pdcp	1.511218909	0.41543427	0.0002751	0.00087285
Tspan17	3.296638983	0.90643314	0.0002759	0.00087521
AC119015.1	-1.175382486	0.32332069	0.00027761	0.00087993
AC097890.1	-1.222895504	0.33650438	0.00027894	0.00088397
Ptn	-1.269122443	0.3492568	0.0002793	0.00088494
Cdkn1c	-1.255109814	0.34550195	0.00028046	0.00088825
Gngt2	-1.136188432	0.31296309	0.00028296	0.00089564
Cygb	1.252283329	0.34510354	0.00028483	0.00090122
AC128848.1	-2.374300893	0.65435765	0.00028513	0.00090199
Zfp420	-2.568690768	0.70805979	0.00028586	0.00090393
Ubxn11	2.076890177	0.57252454	0.00028607	0.00090441
Maob	-1.547154825	0.42681414	0.00028908	0.00091303
Serpina6	-1.582725362	0.43670558	0.00028981	0.00091498
Ppp1r16b	1.678939914	0.46367406	0.00029352	0.00092559
AABR07038567.1	-2.844910519	0.78591974	0.00029478	0.00092891
Slc12a3	2.353731912	0.65023488	0.00029481	0.00092891
Spry2	1.058558354	0.29250254	0.00029578	0.00093159
RGD1309362	-3.484020908	0.96279697	0.00029615	0.00093239
Col8a1	1.779594007	0.4917809	0.00029612	0.00093239
Steap1	2.472106616	0.68334377	0.00029728	0.00093539
Osbpl3	1.268504696	0.35078184	0.00029894	0.00094024
Prodh1	-1.910631657	0.52856871	0.00030066	0.0009453
Plp1	-1.798459016	0.49762982	0.00030145	0.00094721
Daam2	1.332464264	0.3686863	0.00030141	0.00094721
Sema3c	1.825055775	0.50503078	0.0003018	0.00094767
Vsig10	-1.234203717	0.34176124	0.00030466	0.00095598
Ttpa	-1.501062082	0.41566659	0.00030476	0.00095612
Stx17	-1.046966027	0.2899641	0.0003054	0.00095793
C1s	-1.30534581	0.36170044	0.00030748	0.00096426
Gprasp1	-1.026319612	0.28468189	0.00031198	0.00097721
Bspry	1.660744568	0.46073591	0.0003127	0.00097927
LOC103691744	-1.784037722	0.49518348	0.00031483	0.00098556

LOC108348215	-3.369860954	0.93607746	0.00031824	0.00099556
Wdr35	-1.248043983	0.34687591	0.00032073	0.00100265
Nudt13	-1.048660022	0.29157622	0.0003225	0.00100779
LOC100911515	1.422106364	0.39547581	0.00032323	0.00100966
Myct1	1.17001188	0.32539994	0.00032363	0.00101053
Fgb	-1.234404924	0.34339748	0.00032479	0.00101394
Card19	1.058418009	0.29449575	0.00032564	0.0010162
Cadm4	-1.117747083	0.31100823	0.00032571	0.00101621
Smug1	1.086927424	0.30252088	0.00032702	0.00101991
Slc1a7	2.160840272	0.60154657	0.00032797	0.00102208
Mcmdc2	-2.048422499	0.57027678	0.00032818	0.00102252
LOC500350	-2.177297301	0.60632242	0.00032943	0.00102621
Idnk	-1.189608815	0.33151161	0.00033267	0.00103549
Nampt	1.187403364	0.33105019	0.00033479	0.0010417
RGD1307830	-1.303734376	0.36361508	0.00033646	0.00104649
Zfp865	-1.013621487	0.28274134	0.00033711	0.00104829
Dpyd	-1.329702922	0.37092657	0.00033732	0.00104875
Jmjd1c	-1.16152214	0.32405638	0.00033796	0.00105053
Zwint	1.114009814	0.31085727	0.0003388	0.00105294
Pik3c2g	-1.369047338	0.38204112	0.00033901	0.00105339
Srpx	1.165669942	0.32535257	0.00033994	0.00105526
Rhoc	1.09602318	0.30596578	0.00034074	0.00105734
Sntb1	1.933945545	0.53998045	0.00034161	0.00105983
lyd	-1.466730743	0.41001659	0.00034723	0.00107642
Faap24	-1.219053441	0.34087344	0.00034854	0.00108026
Atp6v1c2	-2.575589181	0.7204888	0.00035052	0.00108598
Slc6a17	5.427107143	1.5189011	0.00035285	0.00109298
LOC100362110	-4.974836282	1.39259131	0.00035378	0.00109501
Tmem178a	1.06626396	0.29853653	0.00035476	0.00109761
Gstm6l	-2.664821771	0.7461366	0.00035495	0.001098
Bcl6b	-1.020765848	0.28584515	0.00035556	0.00109957
Klf1	2.948341546	0.82614463	0.00035863	0.00110872
Trip6	1.003805514	0.28129479	0.00035901	0.00110968
Mutyh	-1.155206604	0.32407173	0.00036432	0.00112437
Bicdl1	1.151102513	0.32294152	0.00036465	0.00112515
Dio3	2.243946742	0.6300533	0.00036872	0.00113727
Plcd4	5.329584745	1.49716677	0.00037117	0.00114444
AABR07018556.1	-2.219575271	0.62367407	0.00037245	0.00114813
Phf20	1.011868867	0.28439692	0.00037377	0.00115173
Rcbtb2	-1.007343439	0.28313503	0.00037395	0.00115184
Efna4	-1.082591624	0.30428445	0.00037393	0.00115184
Ccdc14	-1.367855241	0.38448934	0.00037427	0.00115262
AABR07014259.1	-4.563026672	1.28345817	0.00037761	0.00116221
Nupr2	-1.318999057	0.37103093	0.00037804	0.00116333
Rad51	2.36054923	0.66411428	0.0003788	0.00116543
Acpp	-1.199763239	0.33802738	0.00038625	0.00118582
Pcdhga11	2.304545462	0.64945653	0.00038755	0.00118937
Bag5	-2.265582153	0.6385675	0.0003883	0.00119143

Gpx1	-1.228369943	0.34632222	0.00038979	0.00119534
Btbd7	1.111336766	0.31339186	0.00039089	0.00119825
AABR07002779.1	7.938041342	2.23868701	0.00039135	0.00119943
Rn60_2_1877.6	-2.066405529	0.5828082	0.00039172	0.00120032
Mpzl2	-1.057051975	0.29816771	0.00039238	0.0012021
Pkib	2.235833511	0.63097481	0.00039491	0.00120895
Ing3	-1.388820515	0.39193875	0.00039491	0.00120895
Pthr1	1.419967028	0.40072036	0.0003948	0.00120895
Rn50_10_0892.1	-2.594070178	0.7323098	0.00039664	0.00121398
Rasl11a	-1.515206241	0.42780096	0.00039733	0.00121588
Cyp3a23/3a1	-1.731849449	0.48919275	0.0003998	0.00122271
Nsdhl	-1.004010125	0.28391624	0.00040579	0.00123986
LOC365839	-1.128021825	0.31912315	0.00040815	0.00124661
Bhlhb9	-1.595320573	0.45149842	0.00041026	0.00125257
C8a	-1.21567727	0.34405948	0.00041035	0.0012526
Sp5	2.14334202	0.60676948	0.00041183	0.00125688
Cav2	-1.205474922	0.34133664	0.00041301	0.00126021
Tmem47	-1.016545164	0.28787792	0.00041373	0.00126194
Tmem200a	3.906696568	1.10652591	0.00041462	0.00126418
Nrip3	1.603860913	0.45435661	0.00041562	0.00126698
Runx2	1.912041846	0.54205066	0.00041963	0.00127846
LOC100912228	1.608865841	0.45617236	0.00042048	0.00128083
Gpc6	2.503157708	0.70981242	0.00042108	0.0012824
Tia1	-1.487637069	0.42199688	0.00042311	0.00128834
Med12l	1.679053803	0.47701777	0.00043171	0.00131302
Pnoc	2.02460201	0.57526736	0.00043251	0.00131518
Prkcg	-3.197885958	0.90887116	0.00043395	0.00131908
Rnf152	1.27398433	0.36212317	0.00043465	0.00132096
LOC365238	-1.684953664	0.47902075	0.00043564	0.0013237
Nr4a3	2.486032441	0.70693468	0.00043705	0.00132748
Rad9b	-1.502363197	0.42726808	0.00043776	0.00132913
LOC103692167	-1.031489132	0.29335167	0.00043774	0.00132913
LOC103690175	4.007071746	1.14018033	0.00044072	0.0013376
Clybl	-1.663172972	0.47336117	0.00044218	0.00134152
Socs2	-1.946709554	0.55431372	0.00044487	0.00134943
Clec1b	-1.234674781	0.35198211	0.00045187	0.00136961
Slc2a6	2.357402902	0.67253417	0.00045617	0.00138187
Prkaa2	1.094509751	0.3124341	0.00045976	0.00139167
Anxa13	-2.17851259	0.62186662	0.00045973	0.00139167
Nim1k	-2.420191909	0.6909739	0.00046077	0.00139422
Cyp2c6v1	-1.139175684	0.32523753	0.00046075	0.00139422
Akap2	1.26947079	0.36248445	0.00046154	0.00139627
Tmf1	-1.132697831	0.32351999	0.00046322	0.00140084
Chst12	1.183165499	0.33796013	0.00046369	0.00140197
Adcy7	1.560709071	0.44620853	0.00046927	0.00141804
Gimap4	-1.635462781	0.46764481	0.00047011	0.00142026
Chaf1b	2.621428054	0.75029162	0.00047606	0.0014361
Fez1	-2.44452454	0.69972236	0.00047662	0.00143753

Rgs3	-1.158830742	0.33171697	0.00047685	0.00143796
Zfp148	-1.068693433	0.30592926	0.00047714	0.00143829
Dclk1	1.656538847	0.47420775	0.00047713	0.00143829
Zfp560	-2.100870118	0.6015515	0.00047867	0.00144261
Senp7	-1.035293688	0.29655268	0.00048104	0.0014495
Gimap1	-2.090867661	0.59984844	0.00049092	0.0014776
Kcnk10	5.972483586	1.71355116	0.00049132	0.00147852
Tmem156	-2.027707882	0.58185614	0.00049233	0.00148098
Lrrc3	2.463793618	0.70716951	0.00049394	0.00148527
Vars	1.113691617	0.31975534	0.00049592	0.00149095
AABR07013566.1	-2.494167264	0.7162836	0.00049751	0.00149431
Tuba1c	1.169755988	0.33612026	0.00050109	0.00150451
Trim23	-1.077275109	0.30968418	0.00050399	0.00151265
Krt4	2.018991487	0.58050357	0.00050517	0.00151589
Pagr1	-1.083858001	0.31164861	0.00050551	0.00151662
Nit2	-1.120967522	0.32235811	0.00050631	0.00151846
AABR07027854.1	-2.644671019	0.76062847	0.00050714	0.00152066
Clec7a	1.296372247	0.37294727	0.00050891	0.00152483
Crym	-1.692426362	0.48688541	0.0005089	0.00152483
Mapk4	2.468540348	0.71017504	0.00050903	0.00152488
Echs1	-1.05134498	0.30251044	0.00051009	0.00152778
H2afx	1.046219749	0.30107301	0.00051091	0.00152966
Eda2r	4.118212535	1.18518608	0.00051135	0.00153069
Atoh8	-1.15553617	0.33265113	0.0005133	0.00153566
Atp7a	1.371560185	0.39497635	0.00051561	0.00154229
Abhd18	-1.23232122	0.35513967	0.00052053	0.00155554
Abcc9	-1.196585583	0.34483804	0.00052047	0.00155554
RGD1564854	-1.073544923	0.30950378	0.00052318	0.00156257
Rab15	3.761930915	1.08495601	0.0005256	0.00156922
Erbin	-1.09909593	0.3171487	0.00052914	0.00157949
Unc13b	1.254333829	0.36195144	0.00052929	0.00157966
Csgalnact1	-1.982234249	0.57223028	0.00053211	0.00158775
Depdc7	-1.06594109	0.30795907	0.00053756	0.00160169
Orai1	1.073073506	0.31019077	0.00054138	0.00161206
Cebpd	1.331857346	0.38500706	0.00054157	0.00161206
Postn	2.992981225	0.8654496	0.0005436	0.00161751
Prss56	5.247444377	1.5177174	0.0005453	0.00162225
Tdrp	1.267993123	0.36677119	0.00054587	0.00162364
Ethe1	-1.517242925	0.43907348	0.00054916	0.00163282
Ttc14	-1.312970714	0.38004075	0.00055067	0.0016364
Rnf212	-2.522650521	0.73017373	0.00055057	0.0016364
Ramp3	3.462635489	1.00230226	0.00055094	0.0016366
Prss39	-4.452621367	1.29068609	0.00056098	0.00166425
Nup107	-1.262128436	0.36588852	0.00056165	0.00166591
Gchfr	-1.431383808	0.4150162	0.0005627	0.00166811
RT1-DMa	-5.464489555	1.58499655	0.00056552	0.00167583
Apln	2.409494822	0.69890094	0.0005657	0.00167606
Grap2	2.862156759	0.83045642	0.00056793	0.00168204

Hist2h3c2	3.958251816	1.14863653	0.00056886	0.00168417
Polr3g	-1.126340939	0.32707757	0.00057392	0.00169788
Rn50_5_0814.8	-4.212694436	1.22366126	0.00057595	0.00170357
Aaed1	-1.033010063	0.30007754	0.00057641	0.00170463
Npdc1	1.046133023	0.30401012	0.00057933	0.00171268
LOC103690164	-1.24011421	0.3605641	0.00058306	0.00172334
Ang2	-1.331654241	0.38725108	0.00058444	0.00172644
Hspb11	-1.145124045	0.33301808	0.00058468	0.00172683
Tlcd2	-1.788871493	0.52026761	0.00058523	0.00172815
Rn50_X_0631.1	3.435859742	0.99937483	0.00058601	0.0017298
Sall1	1.29481951	0.37663653	0.00058635	0.00173018
Catsperg	-1.279231561	0.37210176	0.00058634	0.00173018
Smc4	-1.489875507	0.43338949	0.00058662	0.00173047
Sall2	1.162299941	0.33810367	0.00058667	0.00173047
Neu2	1.599237832	0.4652646	0.00058762	0.00173295
Rn50_5_0814.20	-2.621694985	0.7627901	0.00058824	0.00173445
Spp1	3.227743506	0.9391623	0.00058856	0.00173476
Dnah9	-2.174813952	0.63287368	0.00058948	0.00173714
Pcdh20	4.436826527	1.29117439	0.00058978	0.00173771
Cdkn2b	1.583862487	0.46098274	0.00059072	0.00174017
Bbof1	-2.384422781	0.69400943	0.00059098	0.0017406
Mfsd7	-1.476431965	0.42974158	0.00059118	0.00174064
Ccl7	2.929101724	0.852633	0.00059177	0.00174195
Ldhd	-1.061183749	0.30891498	0.00059212	0.00174241
Lrfn1	1.447482825	0.42137058	0.00059217	0.00174241
BC028528	-1.58783623	0.4622333	0.00059225	0.00174241
Alg13	-1.059472519	0.30843259	0.00059251	0.00174285
Sox5	-1.063608816	0.30965599	0.00059297	0.0017439
Gbp4	-2.344078528	0.68252512	0.00059382	0.00174607
Myof	1.447523853	0.42150889	0.00059442	0.00174718
LOC100910636	-3.065612961	0.89272533	0.00059476	0.00174786
Tpbgl	4.679637134	1.36292478	0.00059579	0.00175014
Lin7c	1.116683798	0.32525144	0.0005963	0.00175076
Dzf17	-1.650036485	0.48078435	0.00059922	0.00175837
Fgl1	-1.6419353	0.47884637	0.00060594	0.00177745
Eln	1.61652879	0.47154977	0.00060778	0.00178185
Hivep2	1.399458147	0.40823666	0.00060792	0.00178193
Psca	2.551879227	0.74531567	0.00061731	0.00180748
AABR07014289.1	-6.764445403	1.97591673	0.00061832	0.0018101
Numbl	1.80060164	0.52600442	0.00061896	0.00181098
Zzz3	-1.081924906	0.31606693	0.00061914	0.00181116
AABR07058914.1	1.090906042	0.31881786	0.00062226	0.00181199
LOC100362751	5.723100304	1.67286808	0.00062361	0.00182324
RGD1559588	-3.10834322	0.90909671	0.00062816	0.00183552
Morn2	-1.007044863	0.29456166	0.000629	0.00183764
Zfp36	1.018653025	0.29796513	0.00062921	0.00183793
Taf9b	-1.183570562	0.34634986	0.00063253	0.00184659
Ptges3l	-1.848774172	0.54108576	0.00063365	0.00184919

AABR07010460.1	-1.382457205	0.40460706	0.00063364	0.00184919
Abhd3	3.35003886	0.98066821	0.0006353	0.00185299
Prmt6	1.893359369	0.55434216	0.00063663	0.00185654
RGD1304622	3.16438516	0.92682639	0.00063966	0.00186502
AABR07027575.1	3.211189011	0.9406526	0.00064066	0.00186726
Rftn1	1.191214862	0.34895072	0.00064086	0.00186749
Rab12	1.032026053	0.30239726	0.00064295	0.00187291
Fat1	1.175612126	0.34458761	0.00064571	0.0018806
Ssc5d	1.722175541	0.50484738	0.00064659	0.00188281
Edem3	1.043190549	0.30582626	0.00064712	0.00188401
Nat8f5	1.787376864	0.52402366	0.00064756	0.00188495
Fhdc1	2.267102491	0.6648017	0.00064917	0.00188894
Fam110c	-1.257581528	0.36891826	0.00065241	0.00189733
Pdgfb	1.327504702	0.38945455	0.00065291	0.00189844
F2	-1.160975172	0.34070256	0.00065539	0.00190461
Stk39	1.982931313	0.58197561	0.00065623	0.00190671
Tcea3	-1.333309652	0.39149018	0.00065988	0.0019166
AABR07030603.1	1.372105815	0.40316212	0.00066563	0.00193295
Spib	1.620383978	0.47657989	0.00067379	0.00195382
Sqle	-1.165528308	0.34282363	0.00067438	0.00195515
Upb1	-1.458912273	0.42923712	0.0006767	0.00196153
Sestd1	1.146727074	0.33739659	0.00067694	0.00196188
Tspoap1	-3.705881191	1.09087701	0.0006809	0.0019719
Me3	-1.766578135	0.52029405	0.00068542	0.0019832
Zc3h12d	-1.949079756	0.57410073	0.00068625	0.00198525
Tbc1d16	1.331631592	0.39256593	0.00069354	0.00200521
Gstp1	1.109572589	0.32714014	0.00069452	0.00200733
Lilra5	-1.30679938	0.38537155	0.00069635	0.00201227
Klf12	1.079021582	0.31831335	0.00069941	0.00202002
RGD1559482	1.233750395	0.36395501	0.00069933	0.00202002
Svop	2.781102866	0.82094009	0.0007048	0.0020341
Tbx2	1.266918457	0.37417692	0.0007095	0.0020473
Hps4	-1.016645655	0.30035579	0.00071229	0.0020546
Mysm1	-1.384732175	0.40913275	0.00071294	0.0020561
Taf1b	-1.418093171	0.41914242	0.00071615	0.00206424
AABR07020815.1	-1.118293146	0.3305486	0.00071661	0.0020652
Ca5a	-1.482034886	0.43816234	0.00071859	0.00207052
Ezh2	-1.480911935	0.43793672	0.00072074	0.00207634
Zfp78	-2.056910442	0.60858	0.00072525	0.00208745
Nrarp	1.294957102	0.38316332	0.00072579	0.00208824
Emsy	-1.987995129	0.58822012	0.00072571	0.00208824
Inafm1	-1.676568704	0.49625018	0.00072889	0.0020968
Snca	3.204228068	0.94847773	0.00072939	0.00209786
Pcdhgb5	1.317240503	0.38992463	0.00072964	0.00209819
Zfp90	-1.276654315	0.37801424	0.0007321	0.00210414
AC098750.1	6.497380446	1.92384145	0.00073202	0.00210414
Ahctf1	-1.100314396	0.32581114	0.0007324	0.00210461
Chmp4c	-1.02122467	0.30263378	0.00073961	0.00212458

Golt1a	-1.27706685	0.37851662	0.00074119	0.00212871
AC103024.2	1.023054517	0.30323316	0.00074132	0.00212872
Kif5b	-1.098777971	0.32574178	0.00074312	0.00213271
Ppip5k2	-1.223781659	0.36286547	0.00074476	0.00213704
Mzf1	-1.46651094	0.43512174	0.00075074	0.00215342
Mamdc4	-2.842568672	0.84343102	0.00075102	0.00215383
Nr3c2	1.184212247	0.35147905	0.0007538	0.00216142
Izumo4	-2.1772332	0.64652139	0.00075822	0.00217254
Ucma	-1.928501033	0.57279356	0.00076036	0.0021779
Phf11b	-1.162132609	0.34526378	0.00076287	0.00218468
Stard9	-1.483860429	0.44090517	0.00076409	0.00218778
LOC686087	1.413849621	0.42019389	0.00076612	0.00219279
LOC684762	1.136133997	0.33792817	0.00077364	0.00221234
Stk10	1.414961379	0.42092839	0.00077513	0.00221582
Xylt1	2.295964939	0.68307176	0.00077595	0.00221775
Ezr	1.24911371	0.37173563	0.0007788	0.00222471
Sema5a	1.402390332	0.41745821	0.00078125	0.00223049
Card9	-1.502249583	0.44724429	0.00078253	0.00223375
Xxylt1	1.18642545	0.35325785	0.0007836	0.0022356
Lims1	1.131206393	0.33684797	0.00078449	0.00223774
Sh3yl1	-1.114965519	0.33203014	0.00078501	0.00223885
Atp8b2	1.181489843	0.35190205	0.00078668	0.00224319
Gtf3c3	-1.011606228	0.30136745	0.00078873	0.00224863
Pcdhga2	3.038584682	0.90557502	0.00079245	0.00225842
Knop1	-1.107375598	0.33008379	0.00079413	0.00226242
Nhp2	1.133823139	0.33812666	0.00079869	0.00227458
Rn50_X_0729.6	2.030580222	0.60586788	0.00080368	0.00228758
Pikfyve	-1.04238855	0.31103695	0.00080423	0.00228833
Armcx3	1.047284443	0.31259215	0.00080718	0.00229588
Milr1	-4.046689249	1.20832668	0.00081103	0.00230479
Atp8b5p	-1.583301885	0.47286148	0.00081297	0.00230947
Gpr37	1.145992541	0.34232698	0.00081498	0.00231479
Zfp9	-1.395666262	0.41720005	0.00082189	0.00233315
LOC24906	1.239798766	0.37065245	0.0008231	0.00233574
Ppp1r14a	-1.208592668	0.3613381	0.00082351	0.0023365
Poc1a	1.287141074	0.38493538	0.00082644	0.00234398
Mepce	3.288939287	0.98375529	0.00082803	0.00234767
Zfp367	1.801939301	0.5391399	0.00083103	0.00235574
Sfrp1	1.893772877	0.56699521	0.00083774	0.00237349
Tuba1b	1.069197205	0.32017309	0.00083949	0.00237803
Gpr84	3.903274567	1.16891751	0.00084014	0.00237944
Cldn23	2.074048663	0.62130844	0.00084325	0.00238697
Ank1	2.911542175	0.87223495	0.00084376	0.00238801
Prob1	1.07432547	0.32186203	0.00084431	0.00238914
Mycl	1.06985807	0.32055813	0.0008454	0.00239138
Inhbe	-1.01544636	0.30432387	0.0008477	0.00239747
Ugp2	-1.236834635	0.37082065	0.00085177	0.00240854
Xirp2	6.764758693	2.02824407	0.00085214	0.00240916

Kctd20	1.269824124	0.38075418	0.00085292	0.00241051
Pbld1	-1.102669875	0.33094292	0.00086254	0.00243511
Echdc2	-1.169666239	0.35116543	0.00086593	0.0024438
AABR07038021.1	-2.387232584	0.71680536	0.00086728	0.00244719
AABR07049574.1	1.274831514	0.38284649	0.00086885	0.00245073
LOC690871	-1.128103854	0.33889856	0.00087241	0.00246035
Dnajb1	1.52867817	0.4593807	0.00087568	0.00246827
Penk	3.225942734	0.97012506	0.00088328	0.00248837
Lrrn4	3.804567889	1.14458275	0.00088743	0.00249962
Ttc3	-1.243134602	0.37400349	0.00088781	0.00250025
Vdr	2.53773116	0.76355131	0.00088867	0.00250222
Pwwp2b	1.296982072	0.39024667	0.00088898	0.00250264
Bach1	1.0660029	0.3208594	0.00089267	0.00251082
Notum	-1.57505705	0.47415711	0.00089437	0.00251468
LOC102556092	1.040244265	0.31317136	0.00089488	0.00251527
AABR07066871.3	-4.213384656	1.26882474	0.00089792	0.00252293
Ccne1	1.8256286	0.55011524	0.0009046	0.0025399
Slco1b2	-1.724500129	0.51965156	0.0009048	0.00254
Pigl	-1.265131675	0.38158403	0.00091488	0.00256514
AABR07066144.1	-1.060910119	0.31998294	0.00091473	0.00256514
Tnnt3	-3.819036068	1.15205417	0.0009165	0.00256923
Rps6kl1	-2.489506491	0.75104844	0.00091739	0.00257046
Rn50_5_0814.6	-3.369238889	1.01645413	0.00091742	0.00257046
Pigz	1.86501813	0.56273496	0.00091905	0.00257456
Sec23a	1.104651824	0.33335435	0.00092055	0.00257831
Pdgfa	1.127238135	0.34027304	0.00092385	0.00258619
Abl2	1.561085418	0.47133991	0.00092626	0.00259249
Nkx2-1	-4.494229131	1.35725695	0.00092877	0.00259861
Sprtn	1.035674193	0.31279491	0.00092952	0.00260025
Cyp27b1	4.306064649	1.3018687	0.00094098	0.00263138
Lrrc10b	4.380631199	1.32460176	0.00094257	0.00263536
Uhrf1	2.609379029	0.78909906	0.00094374	0.00263817
Nptx2	2.867771868	0.86754234	0.00094764	0.00264814
Dnajc28	-1.623635451	0.49128086	0.00095009	0.00265453
LOC100909840	1.961598921	0.59363198	0.00095179	0.00265881
Aifm3	-2.226878182	0.67418889	0.0009564	0.00267028
Slc24a3	2.87093759	0.86929525	0.00095792	0.00267405
Cys1	1.529512478	0.46322541	0.00096041	0.00268053
F2r	1.147777385	0.34764397	0.00096139	0.0026828
Olfml2b	1.339260025	0.40566337	0.00096201	0.00268406
Gjc3	1.428907915	0.43284079	0.00096261	0.00268527
RGD1304728	-1.12061155	0.33968146	0.00097027	0.00270475
F2rl1	2.444041879	0.74106997	0.00097379	0.00271361
Slc26a2	1.249537601	0.37888553	0.00097401	0.00271373
Dpysl3	1.420195323	0.43072892	0.00097657	0.00271993
Pgm5	1.290053467	0.39151622	0.00098415	0.00273959
Tuba3b	-1.347025966	0.40892577	0.00098751	0.002748
Cachd1	1.286868223	0.39074924	0.00099006	0.00275413

Nusap1	-2.336889991	0.70987483	0.00099487	0.00276684
Il10ra	1.00858118	0.30639974	0.00099578	0.00276858
Mknk2	1.0631756	0.32306508	0.00099867	0.00277467
Cux2	2.530897196	0.76991509	0.00101174	0.00280805
Atp13a5	-1.262642803	0.38410254	0.00101169	0.00280805
Tipin	-1.841379258	0.56015447	0.00101164	0.00280805
Pard6g	1.031154181	0.31378706	0.00101564	0.00281789
Vamp5	-1.096674295	0.33390237	0.00102194	0.00283341
Fxyd5	1.508883485	0.45950387	0.00102446	0.00283989
Wdr97	-3.739259145	1.13890601	0.00102635	0.00284464
Aebp1	1.489091793	0.45362391	0.00102834	0.00284965
Hal	-1.219048167	0.37143872	0.00103087	0.00285549
Ccl3	1.904293006	0.58024388	0.00103116	0.00285549
AABR07000534.1	-2.344727629	0.71448991	0.0010319	0.00285706
Ghr	-1.001806578	0.30553071	0.0010421	0.00288279
Mt1m	5.901421902	1.79994037	0.00104295	0.00288464
Eif5b	-1.520367555	0.46406576	0.00105218	0.00290864
Ephb3	1.492717008	0.45576274	0.00105585	0.00291777
Wnt4	1.290984413	0.39418405	0.00105632	0.00291806
Ptpn5	4.991032818	1.52483817	0.00106354	0.00293597
Nek2	3.811874742	1.16568115	0.00107516	0.00296473
Ldoc1l	1.367143105	0.4181505	0.00107738	0.00297006
Rsl1d1	-3.349903347	1.02466362	0.00107825	0.00297195
AABR07049353.1	6.969652069	2.13365165	0.00108872	0.00299717
Psmc3ip	-1.050046405	0.32165628	0.00109658	0.00301778
NEWGENE_1308171	-1.805168662	0.55338464	0.00110609	0.0030429
Tril	1.45541214	0.44622595	0.00110784	0.00304718
Pcolce	1.137335571	0.34902712	0.00111968	0.00307763
Ms4a6c	2.043256975	0.62719077	0.00112283	0.00308463
Rn50_1_0959.1	-3.395851617	1.04243236	0.0011235	0.00308545
Ahsp	1.968418371	0.60463166	0.00113167	0.00310628
Cd24	-1.528411165	0.46950907	0.00113257	0.00310823
Bmp4	-2.570618363	0.79014858	0.00114059	0.0031285
Gpt	-1.202902718	0.36980869	0.00114286	0.00313376
AABR07042542.1	-2.113131441	0.64969484	0.00114395	0.00313622
Itgax	1.993034041	0.61292629	0.00114729	0.0031443
Duxbl1	-4.746826819	1.45995815	0.00114861	0.00314682
Apoc1	-1.402179242	0.43155327	0.00115752	0.00316907
Cacna1b	5.083483273	1.56460967	0.00115794	0.00316967
Zfp131	-1.119979537	0.34501757	0.00116976	0.00320038
Synj2	1.067575613	0.32894172	0.0011725	0.00320568
Ybx2	3.018328499	0.93083454	0.00118442	0.00323494
Ak7	-1.703990554	0.52556356	0.00118604	0.00323824
Pappa2	4.573126554	1.4107166	0.00118817	0.0032435
Cntf	-1.584939312	0.48927665	0.00119802	0.0032687
Naaa	1.054259875	0.32548504	0.00119932	0.00327113
LOC102555635	-1.506173364	0.46551068	0.00121417	0.00330886
Wtip	1.366621339	0.42256963	0.00122038	0.00332428

Cidea	-1.059765027	0.32769498	0.0012207	0.00332433
Rtn4rl2	1.434355463	0.44378125	0.00122874	0.00334566
Fam217a	-3.859108373	1.19429243	0.00123232	0.00335424
Cct6b	-2.992293949	0.92644457	0.00123847	0.00336985
Slc2a13	1.66338062	0.51499893	0.00123846	0.00336985
Sh2d1b	1.832555401	0.5675045	0.0012416	0.00337778
Eif4ebp1	1.036093057	0.3210065	0.00124816	0.0033939
AABR07045405.1	1.432654119	0.4439661	0.0012512	0.00340098
Nek1	-1.228167757	0.38067365	0.00125401	0.00340632
B3gnt1	-1.88338669	0.58376045	0.00125402	0.00340632
LOC102552659	6.384459242	1.97992982	0.00126154	0.00342617
Rell2	1.277968984	0.39649293	0.00126775	0.00344069
Commd6	-1.037153144	0.32201574	0.00127827	0.00346687
Zfp617	-1.559527147	0.48455044	0.00128862	0.00349316
Gstm7	-1.103168604	0.34279439	0.00129014	0.00349551
Sept08	1.109177396	0.34468928	0.00129131	0.00349807
Nipal2	1.151054334	0.35774832	0.00129314	0.00350245
Obp1f	-3.909428392	1.21561596	0.00129988	0.00351891
Rprm	-1.712226906	0.53274173	0.00130904	0.00354304
Cars2	-1.061081392	0.33014902	0.00130924	0.00354304
Pla2g7	1.72042736	0.53551886	0.00131523	0.00355803
E2f8	4.158737252	1.29484596	0.00131924	0.00356827
Il2rg	1.242888233	0.38709963	0.00132379	0.00357878
Nxpe2	1.658277876	0.51685073	0.00133463	0.00360502
Endod1	1.417328936	0.44187787	0.00133888	0.00361589
Car7	-1.065586928	0.33243526	0.00134876	0.00364011
Spry4	1.090405941	0.34020951	0.00135015	0.00364323
RGD1309540	1.106761736	0.3454214	0.00135489	0.00365418
Ttc30b	-1.235740201	0.38571591	0.00135647	0.00365718
Cdh3	1.777952506	0.55511886	0.00136083	0.00366771
Zkscan4	-1.471226602	0.45942569	0.00136327	0.00367366
Fzd9	3.352334572	1.04710006	0.00136694	0.00368293
RGD1305928	-4.599086793	1.43698081	0.0013718	0.00369413
Pkp1	4.171188156	1.3040475	0.00138074	0.00371601
Akr1c14	-1.122827617	0.35107321	0.00138254	0.00371929
Fasn	1.47518709	0.4612728	0.00138346	0.00372115
Vsig4	-1.001602538	0.31328147	0.00138801	0.00373275
Tlx3	4.683012387	1.46510699	0.00139172	0.00374148
RGD1560324	-1.09735017	0.34338938	0.00139519	0.00374908
Tnks2	8.967839365	2.80628202	0.00139526	0.00374908
Gas2l3	2.064294285	0.64683476	0.00141596	0.00380214
RGD1565131	4.319111961	1.35348773	0.00141733	0.00380404
Gpr176	2.024953838	0.63471713	0.00142113	0.00381217
Fosb	2.614510844	0.81974691	0.00142562	0.00382358
AC107446.2	3.081522826	0.96641068	0.0014295	0.0038327
Ptpre	1.263557147	0.39628658	0.00143016	0.00383382
Rn50_10_0644.1	-2.05152061	0.64354461	0.00143337	0.00384113
Arhgap25	-1.020546268	0.32021415	0.0014372	0.00385009

Mybl1	-1.950940849	0.61245471	0.00144532	0.00386988
Hist1h2bo	1.902221427	0.59721253	0.00144671	0.00387295
Slc10a6	2.016093376	0.63331664	0.00145562	0.0038955
Adgrg2	4.899881351	1.53922695	0.00145587	0.00389552
Fbxl16	1.054405887	0.33129876	0.00145937	0.00390423
Ankrd26	-1.1874537	0.37324128	0.00146533	0.00391851
Lef1	2.99854313	0.94253435	0.00146584	0.00391851
Cxcl14	-1.227570515	0.38586547	0.00146594	0.00391851
Slc28a2	-1.311140928	0.41232661	0.00147346	0.0039373
Plpp4	2.165541276	0.68152092	0.00148544	0.00396666
Spata6	1.109708426	0.34956939	0.00150094	0.00400351
Blnk	1.436407254	0.45276213	0.0015111	0.0040291
Fen1	1.096542094	0.34573903	0.00151607	0.00404168
Lgals1	1.62934942	0.51420905	0.00153148	0.0040807
Ephb6	1.26394114	0.39899673	0.00153598	0.00409064
LOC100909657	-1.328317379	0.4195837	0.00154658	0.00411681
Mcm3	1.9296135	0.60953029	0.0015469	0.00411697
Rsph3	-1.95473379	0.61774329	0.00155449	0.00413648
LOC100360380	-2.286084994	0.72279012	0.00156227	0.00415579
Gadd45b	1.287273199	0.4071994	0.00157075	0.00417765
Gatsl2	1.07586419	0.34058365	0.00158375	0.00420871
Sell	1.514318444	0.47953365	0.00158911	0.00422085
Mtcp1	-3.260954381	1.03277166	0.0015914	0.00422552
Tmem30b	1.327894363	0.42058736	0.00159271	0.00422831
Ankrd22	-3.855909234	1.2216618	0.00159794	0.00424078
Myo5a	1.247737956	0.39531478	0.00159776	0.00424078
Gata1	4.64047512	1.47151096	0.00161301	0.00427862
Hic1	1.000262852	0.3172163	0.00161463	0.0042822
Abca7	-1.135441564	0.36038933	0.00162937	0.00431699
Chchd4	1.816386925	0.57658718	0.00163137	0.00432158
Slc4a5	2.220086999	0.70490508	0.00163559	0.00433204
Abl1	2.210369392	0.7022177	0.00164562	0.00435641
Pacsin1	2.001751996	0.63628209	0.00165512	0.0043794
Osbp16	-1.795074291	0.57083674	0.00166293	0.00439714
AABR07058479.1	-2.957477867	0.94081195	0.00166919	0.00441295
LOC100363372	-1.605774033	0.51086648	0.00167091	0.00441603
Nop58	-1.122007798	0.35697932	0.00167191	0.00441794
Clec1a	-1.678717251	0.53420539	0.00167537	0.00442488
LOC687679	-1.820867827	0.57972235	0.00168412	0.00444578
Zfp867	-2.046006779	0.65143521	0.00168506	0.00444752
LOC103692716	-1.17757195	0.37511758	0.00169405	0.00446905
Avil	2.609070462	0.8313343	0.00169865	0.00447896
Bdh2	-1.097601548	0.34995711	0.00171042	0.00450925
Aplf	-2.122421087	0.67699068	0.00171806	0.00452683
Frk	-1.109474174	0.35390525	0.00171885	0.00452772
AABR07054189.1	1.332336418	0.42516285	0.00172612	0.00454612
Hist1h2ail1	1.864371683	0.59589329	0.00175581	0.00461668
LOC100360218	4.170315685	1.33423027	0.00177422	0.00466278

Wnt7b	2.961826585	0.94870536	0.00179647	0.00471892
Zfp518a	-1.326739317	0.42503308	0.00179934	0.00472568
Fign	1.069179607	0.34265765	0.00180694	0.00474251
Fancm	-1.663242104	0.53306566	0.00180762	0.00474352
AABR07028795.1	2.079613938	0.66719986	0.00182746	0.00479243
Adamts3	2.488458218	0.798387	0.0018279	0.00479279
Topbp1	-1.055476475	0.33870996	0.00183219	0.00480325
Gas7	1.658508699	0.53229787	0.00183476	0.00480761
Optc	-1.679729007	0.53919662	0.00183793	0.00481354
Acox2	-1.470435272	0.47202709	0.00183851	0.00481399
Sptbn4	2.000869877	0.64230932	0.00183871	0.00481399
Atp13a3	1.234045273	0.396239	0.00184322	0.00482342
Igsf3	2.076691803	0.66678608	0.0018427	0.00482342
Oasl2	-1.930862703	0.62007529	0.00184622	0.00483048
Stox2	1.105017345	0.35487196	0.00184665	0.00483081
Usp53	-1.098752087	0.35323711	0.00186756	0.00488152
Arhgap10	1.273923656	0.40967253	0.00187332	0.00489495
Sapcd2	2.689180947	0.86483945	0.00187432	0.00489676
Ston1	1.468177627	0.4721792	0.0018749	0.00489748
Glis3	2.261204389	0.72725616	0.00187578	0.00489817
Mk1	-1.309834893	0.42130502	0.00187725	0.00490122
Hgd	-1.101198754	0.35425966	0.00188071	0.00490864
AABR07013583.1	-5.075002036	1.63421442	0.00189978	0.00495759
Ccl12	2.677888134	0.86270966	0.00190895	0.00497909
Kcnh1	-2.158052509	0.69536943	0.00191271	0.00498588
Gli3	1.565129781	0.5043199	0.00191281	0.00498588
Gbp2	-1.013147658	0.32645557	0.00191261	0.00498588
RGD1559588	-3.944157673	1.27365883	0.00195678	0.0050955
Steap2	1.873708562	0.60532238	0.00196555	0.00511665
Prrg4	1.392448425	0.45010309	0.0019773	0.00514556
Csrp2	1.737178672	0.56176646	0.00198578	0.00516511
Rp1	-3.650209225	1.18138901	0.00200318	0.00520781
Gng4	-2.556451667	0.82747648	0.00200524	0.00521061
Dcp2	4.108710873	1.33202738	0.00203857	0.00529464
Ccng1	1.165068049	0.3778149	0.00204443	0.00530899
Ces1f	-2.038150396	0.66110084	0.0020495	0.00532128
Lpar2	1.300836847	0.42205904	0.00205532	0.00533465
Sgk1	-1.399123732	0.45418154	0.00206627	0.00536132
Atp6v0d2	-1.429211315	0.46398777	0.00206807	0.00536514
Tnfrsf10b	1.223631373	0.39730435	0.00207116	0.0053698
Hoxb5	1.196623152	0.38854247	0.00207157	0.00536985
Apoc3	-1.422573865	0.46202827	0.00207714	0.00538287
Tdo2	-1.273307762	0.41360789	0.00208019	0.00538955
Fxyd1	-1.308566664	0.42541642	0.00209821	0.00543319
Myef2	-1.029110536	0.33476082	0.00211091	0.00546294
Hsd17b6	-1.274306507	0.41459	0.00211454	0.00547089
Micu3	-1.547602284	0.50351072	0.00211476	0.00547089
AABR07013425.1	-4.675446743	1.52116934	0.00211502	0.00547089

Cabp2	-1.415128916	0.46043302	0.00211582	0.00547208
Epha2	1.024200685	0.33325497	0.00211688	0.00547393
Rn50_5_0815.11	-2.451187749	0.79827255	0.00213618	0.00552026
Vgf	5.190926215	1.69146059	0.00214847	0.00555112
Chst7	1.050286484	0.34224703	0.00214923	0.00555218
Rn60_10_0648.2	4.250977785	1.38537643	0.00215162	0.00555656
Epm2a	2.348735653	0.76560835	0.00215639	0.00556706
Afm	-1.248705016	0.40720193	0.00216545	0.00558773
AABR07015639.1	-5.188722123	1.69208747	0.00216608	0.00558847
LOC367746	-3.471576676	1.13303925	0.00218435	0.00563012
Iqgap3	1.875300842	0.61285648	0.00221385	0.00570248
Nme3	-1.122503854	0.3668564	0.00221492	0.00570429
Rn60_1_0253.2	4.286605186	1.40136621	0.00222169	0.00572082
Mlc1	-5.168233151	1.69259743	0.00226239	0.00582186
Gli2	2.136054943	0.69992912	0.00227461	0.00585142
Zfp12	-1.445236844	0.47384692	0.00228835	0.00588487
RT1-M6-1	3.925050693	1.28736502	0.00229679	0.0059056
Fgd6	1.229811793	0.40338703	0.00229823	0.00590836
Agt	1.103398986	0.36193902	0.00229928	0.00590974
Ttll13	-1.858435218	0.60961347	0.00229951	0.00590974
AABR07060886.1	2.695762073	0.88483194	0.00231417	0.00594645
AC108588.1	-2.182970754	0.71663412	0.00231797	0.00595387
Hecw2	1.333778024	0.43815591	0.00233399	0.00599257
AABR07025316.1	-2.111714517	0.6938024	0.00233701	0.00599838
Pnpla8	-1.069165465	0.3516512	0.00236253	0.00605801
Rn50_5_0815.7	-3.753579121	1.23514426	0.0023738	0.00608595
Vcan	2.4492549	0.80598717	0.00237502	0.00608809
Txlng	-1.07116473	0.35281166	0.00239675	0.00613984
Cbs	-1.23751857	0.40799764	0.00242014	0.00619106
AABR07069282.1	2.267172196	0.74755069	0.00242296	0.00619602
Tex13b	-5.619760207	1.85308967	0.00242422	0.00619825
Espl1	2.593869427	0.85546063	0.00242833	0.00620677
AABR07040840.1	1.023981182	0.33809705	0.00245641	0.0062735
AC094246.1	4.097099429	1.35286045	0.00245794	0.00627541
Pik3r6	-1.311751178	0.43385346	0.00249878	0.00637049
Akap11	-1.030293158	0.34081497	0.00250259	0.00637817
Pla2g2a	3.379015706	1.11809534	0.00251013	0.00639431
Fam189a2	3.240100886	1.07215791	0.0025108	0.00639499
C2cd4c	1.826598823	0.60458283	0.00251729	0.00641051
Prdm1	1.160183536	0.38408883	0.00252264	0.00642207
Apoa2	-1.589948699	0.52642937	0.00252565	0.00642872
Kif3c	1.715757667	0.568331	0.0025366	0.00645452
Lrriq3	-2.467702264	0.81779172	0.00254853	0.00648383
Rnasel	-1.144065531	0.3795762	0.00257777	0.00655194
Prss36	-1.112647672	0.36917392	0.00257926	0.00655469
Upk1b	3.881660056	1.28833749	0.00258746	0.00657447
Tmsb10	1.31908194	0.43810463	0.00260489	0.00661139
Cxcl2	4.491154653	1.49167835	0.00260555	0.00661201

Klkb1	-1.326240016	0.44058425	0.00261089	0.00662307
AABR07062799.2	1.620728907	0.53843973	0.00261207	0.00662435
Da2-19	-2.233549821	0.74247401	0.00262754	0.00666145
Rn50_5_0814.26	-2.361711603	0.78519077	0.0026313	0.00666992
Vwa5a	-1.334835334	0.44438803	0.00266665	0.00675416
Trip13	1.68861279	0.56266679	0.00269016	0.00680614
Emb	1.080935399	0.36038222	0.002705	0.00684041
Asf1b	2.505521161	0.83567498	0.00271579	0.00686552
AABR07067042.4	4.272556444	1.42631915	0.00273984	0.00692084
Mis12	-1.127211917	0.37633123	0.00274206	0.00692534
Ace2	-3.11782558	1.04124369	0.0027505	0.00694445
Acpt	-2.447028102	0.81728361	0.00275257	0.00694857
Ticam2	-1.202394883	0.4022701	0.0027987	0.00706057
Grk4	-1.157453677	0.38752566	0.00281933	0.00710923
Dnase1l2	-3.780118257	1.26627765	0.00283374	0.00713991
Rbbp8nl	-3.33894582	1.11926906	0.002853	0.00718616
Hjurp	3.161510701	1.06025353	0.00286518	0.00721456
Ier5l	1.339836836	0.44950075	0.0028757	0.00723761
AC229945.1	-2.828033667	0.94880037	0.00287645	0.00723838
Enpep	-1.165753489	0.39124129	0.00288599	0.00725664
Tnnt2	-3.823464775	1.28400215	0.00290353	0.00729959
Arhgap28	1.844052757	0.61945887	0.00291201	0.00731745
Zfp866	-1.750361233	0.58812927	0.00291892	0.00733134
Fkbp7	-1.423776969	0.47841295	0.00291995	0.00733278
RGD1566189	1.471577622	0.49503568	0.00295222	0.00740798
Wnt2	1.364228403	0.45896851	0.00295502	0.00741383
AABR07043347.1	-4.077808535	1.3723256	0.00296389	0.00743492
Mipol1	-1.545554925	0.52032038	0.00297421	0.00745846
Rnase13	-2.723606236	0.91742159	0.00299002	0.0074934
Aim2	-3.526645301	1.1879468	0.00299073	0.00749398
AABR07027088.1	1.507779934	0.50801635	0.00299769	0.00751024
Arhgap29	-1.036159356	0.34924148	0.00300833	0.00753573
Kif26a	1.170865052	0.39507689	0.00304025	0.00761026
RT1-S2	1.748077352	0.5898627	0.0030413	0.00761113
Lmtk3	3.419662253	1.15401905	0.00304396	0.0076154
AABR07011733.1	-2.200563991	0.7431613	0.00306557	0.00766465
Apon	-1.531475151	0.51726526	0.00306926	0.00767145
Padi3	4.09770532	1.38421416	0.00307328	0.00768031
Slc15a1	2.920691073	0.98692708	0.0030826	0.00769636
Hs3st1	1.250554858	0.42265634	0.00308841	0.00770845
Rnase4	-1.295576057	0.4379634	0.00309458	0.00772143
S100b	-4.518492682	1.52768025	0.00309896	0.00773114
Mme	-2.105667748	0.71231838	0.0031158	0.0077695
AABR07027096.1	5.507424396	1.86342179	0.00312119	0.00777929
Zfp445	-1.098396849	0.37173437	0.00312882	0.0077971
AC123251.1	-2.204923193	0.74625197	0.00313011	0.00779786
RGD1562378	-1.319213842	0.44655199	0.00313458	0.00780657
Sfn	1.961252143	0.6643066	0.00315386	0.00785335

LOC100912489	4.10121369	1.38940591	0.00315953	0.00786624
Zfp300	-3.154288255	1.06928015	0.00317859	0.00790628
AABR07024742.1	3.187834638	1.08084686	0.00318406	0.00791618
LOC100911313	2.749421522	0.93232822	0.0031882	0.00792524
Lrrc73	2.884454747	0.97868016	0.00320572	0.0079663
LOC100911319	1.945487423	0.66075152	0.00323628	0.00803723
Cacng4	2.756735589	0.93642107	0.00324098	0.00804766
Rn50_5_0814.17	-4.240573959	1.44178402	0.00326944	0.00811327
AABR07006142.1	-3.349553687	1.13901652	0.00327427	0.00812146
Ceacam1	-1.148120149	0.39063846	0.00329181	0.00815989
Zfp605	-1.453046053	0.49437898	0.00329131	0.00815989
Slc13a3	-2.161914598	0.73566075	0.00329551	0.00816778
Ackr3	1.162954422	0.39598684	0.00331563	0.00821382
Slc25a27	-1.319454565	0.44930057	0.0033174	0.00821692
Ccdc8	1.843227856	0.62774215	0.00332172	0.00822635
AABR07045047.1	-2.231241472	0.760609	0.00335171	0.00829803
Krt71	5.496758599	1.87431669	0.00336057	0.00831739
Esr1	1.082058138	0.36898582	0.00336224	0.00832022
Frmd4a	1.183448782	0.40365306	0.00336953	0.00833226
G6b	4.133181722	1.409762	0.00336972	0.00833226
AABR07057495.1	1.374970185	0.46960273	0.00341212	0.00842796
Aldh1a2	1.776344697	0.60690238	0.00342355	0.00845357
Wfikkn1	-1.105431966	0.37782037	0.00343557	0.0084793
Gcat	-1.157473578	0.39600958	0.00346852	0.00855665
Nqo1	1.257539151	0.43051395	0.00348889	0.00860025
Slc6a8	1.151478699	0.39435663	0.00350153	0.00862873
Il17re	1.559471135	0.53424483	0.00351134	0.0086489
AABR07004876.1	3.471775292	1.18936056	0.00351126	0.0086489
RGD1562161	-1.605966869	0.55025009	0.00351593	0.00865886
AABR07028414.1	-2.816375578	0.96576246	0.00354301	0.00872016
Cryab	2.487314971	0.85297239	0.00354487	0.0087234
Zfp780b	-1.460881221	0.50131061	0.00356688	0.0087735
C4a	1.013069486	0.34764843	0.00356758	0.00877385
Slc9a7	1.354944039	0.46498761	0.00356903	0.00877473
Akr1c13	-1.738237642	0.59652577	0.00356904	0.00877473
Ift88	-1.170609456	0.40194192	0.00358681	0.00881706
LOC259245	-2.529990338	0.86910192	0.00360228	0.00884418
Ubap1l	-1.655513159	0.56868944	0.00360156	0.00884418
AABR07006451.1	4.105385878	1.41036707	0.00360432	0.00884509
Ptprc	-1.336227255	0.45943887	0.00363295	0.00890714
RGD1565472	7.584526828	2.6086576	0.00364395	0.00893273
Rab7b	1.85179235	0.63798723	0.00370133	0.00905946
Ugt2b37	-1.499002942	0.51657255	0.00370996	0.00907639
AC102976.1	-1.912500154	0.65974769	0.00374551	0.00915633
Wdr86	-2.166785153	0.7474887	0.0037465	0.00915734
Abca8a	-1.173624074	0.40491663	0.00375031	0.00916526
Serping1	-1.052231204	0.36322755	0.00376879	0.00920453
AABR07018132.1	-3.241969142	1.11934276	0.00377573	0.00921749

Zfp551	-4.334609383	1.49665631	0.00377717	0.00921958
Syt2	-2.697349723	0.93170618	0.0037908	0.00924719
LOC691354	-1.712861835	0.59168685	0.00379305	0.00925125
Fcmr	1.177706716	0.40683705	0.00379416	0.00925254
Wnt9b	1.255883543	0.43398709	0.00380578	0.00927804
Clec11a	1.052207187	0.36363947	0.0038092	0.00928495
Hspa8	1.19936787	0.41512268	0.00386237	0.00940162
Sema3e	2.706309927	0.9370373	0.00387508	0.00942967
Tex12	-1.655786873	0.57363989	0.00389606	0.00947783
Ptprv	2.025539516	0.70206678	0.00391278	0.00951559
LOC688765	-2.882976389	0.99949331	0.00392113	0.00953446
Lrrc4c	-1.468453682	0.50920852	0.00392913	0.00955074
Rbm12b	-2.327185823	0.80748574	0.00395141	0.00960076
Cdk6	1.079750347	0.37484378	0.00397002	0.00964303
Tspan18	-1.165457144	0.40463644	0.00397351	0.0096499
AABR07041604.1	3.88455372	1.34870336	0.00397406	0.0096499
Tfdp2	-1.093982952	0.37983751	0.00397506	0.00965087
Hmgn3	-1.16251783	0.40387782	0.00399711	0.00970143
Znf354b	-1.974280952	0.68594073	0.0039994	0.00970551
RGD1561520	4.136461225	1.43732972	0.00400358	0.00971272
RGD1566138	-3.836267571	1.33433858	0.00403985	0.00979622
Fos	2.134967762	0.74282848	0.00405173	0.00982055
A1bg	1.968112487	0.68541075	0.00408613	0.0098994
AABR07003187.1	-4.162535099	1.45011678	0.00409846	0.00992474
Btbd11	1.183519569	0.41254894	0.00412035	0.00997472
AABR07017999.1	-2.098556472	0.73190103	0.00414032	0.01002003
Prrt1	1.234836645	0.4307511	0.00414769	0.01003194
Arntl	-1.112118915	0.38794394	0.00414776	0.01003194
Kcnk13	1.002224603	0.35007463	0.00419798	0.01014417
LOC103693189	2.566048618	0.8974624	0.00424675	0.01025579
Hes6	-1.589886	0.55619767	0.00425661	0.01027027
Senp1	1.026010595	0.35893112	0.00425627	0.01027027
Zfp287	-1.218372949	0.42634994	0.00426747	0.0102949
Tmod1	1.798600886	0.62941917	0.00426917	0.01029744
Aldh6a1	-1.147987788	0.40214923	0.00430868	0.01038489
Igsf10	1.063504639	0.37270345	0.00432422	0.0104206
Rn50_5_0815.3	-2.323454686	0.81474997	0.00434807	0.0104735
Rtp4	-1.17208651	0.41122605	0.00436884	0.01051716
Ankrd65	-2.573467233	0.90343652	0.00439215	0.01056447
Fam83d	2.735938924	0.9605242	0.00439423	0.0105671
AABR07063829.1	1.737743146	0.61025556	0.00440549	0.01059211
Zfp772	-1.318145149	0.46328793	0.00443841	0.01066851
Fam110d	1.176035163	0.41360584	0.0044639	0.01072655
Osbpl10	1.435069691	0.50503502	0.00448983	0.01078236
Rufy2	-1.453362229	0.51158103	0.00449832	0.01080112
Rhox5	-1.986406573	0.69980416	0.00453236	0.01087466
AC133265.1	1.174325732	0.413737	0.0045349	0.01087913
Dact3	1.195510688	0.42135863	0.00455003	0.01091212

AABR07029467.2	-3.154524971	1.11195802	0.00455524	0.01092299
LOC100909784	4.735995862	1.67222226	0.00462352	0.0110717
Fcho1	-1.209128476	0.42702126	0.00463242	0.01108969
AABR07034098.1	-1.869718431	0.66046793	0.00464173	0.01110363
Aass	-1.222256146	0.43180712	0.00464665	0.01110708
Hrc	-1.65638789	0.58546115	0.00466642	0.01114764
Gata5	4.897000061	1.73141159	0.00467918	0.01117645
Dusp6	-1.087780971	0.38461151	0.00468019	0.01117719
AABR07015559.1	-2.813709441	0.99506046	0.00468871	0.01119585
Gbp3	-2.801553671	0.99095954	0.00469699	0.01121394
Slc35f1	-3.431415867	1.21377818	0.00469785	0.01121431
Ank2	2.446275313	0.86554346	0.00470909	0.01123777
Magix	-1.042804395	0.36903467	0.00471682	0.01125454
Spef2	-3.339349401	1.18231076	0.00473654	0.0112982
Gfpt2	1.314943762	0.46575832	0.00475422	0.01133528
Dgki	4.639549916	1.64362031	0.00476118	0.01134865
Ankle1	-3.866227484	1.37040241	0.00478391	0.01139585
Acad10	-1.061240445	0.37645985	0.00481735	0.01147207
Lgsn	-2.411444346	0.85549284	0.00482069	0.0114783
AABR07068285.2	2.504926216	0.88879456	0.00482725	0.0114905
Ccr7	1.595458728	0.56702771	0.00489715	0.0116447
Ulk4	2.998026867	1.06572157	0.00490599	0.01166398
Dbil5	-2.014054472	0.7160237	0.00491073	0.01167177
Crlf1	3.687407124	1.31139608	0.00492624	0.01170339
AABR07058192.1	-4.328641106	1.53980931	0.00493642	0.01172408
Ccl4	1.563955467	0.55639252	0.00494054	0.01173038
LOC685048	-2.901501655	1.03223197	0.0049403	0.01173038
Pak6	1.776162048	0.63258493	0.00498836	0.01183144
Col11a2	-2.206725241	0.78597428	0.00499075	0.01183372
Bend5	-3.71427577	1.32315926	0.00499856	0.01184694
Zfp112	-1.335915718	0.47591661	0.00499994	0.01184847
AABR07059198.1	-1.383203643	0.4927797	0.00500144	0.01185024
Car3	-3.035686113	1.08181075	0.00501427	0.01187888
AC126581.1	-2.233446787	0.79642915	0.00504219	0.01193971
Celf5	-2.559823974	0.91316652	0.00505922	0.0119729
Rn60_1_1877.2	3.731804437	1.33124437	0.00505912	0.0119729
Cd244	-1.262273923	0.4505772	0.0050872	0.01203376
Vps37c	3.097350261	1.10605725	0.00510468	0.01207333
Vps37c	3.097350261	1.10605725	0.00510468	0.01207333
LOC100910669	-1.53343658	0.54763774	0.00510879	0.01207946
AABR07045454.1	3.541175438	1.26487335	0.00511615	0.01209505
Rgs4	2.084095243	0.74471316	0.00513373	0.01213482
LOC297568	-1.510528126	0.54001278	0.00515463	0.01217701
Lmntd2	-3.034686318	1.08508565	0.00516234	0.0121898
Nck2	1.115627483	0.39894817	0.00516719	0.01219762
Cage1	-1.246064778	0.44584218	0.00519228	0.01225504
AABR07024757.1	-3.297804056	1.17999952	0.00519398	0.01225724
Mkxn2os	-2.598902693	0.93001418	0.00519838	0.01226581

Gpm6b	1.101479841	0.39438804	0.00522405	0.01232262
Fmo1	-2.844601062	1.01882588	0.00523771	0.0123513
Gnat3	-1.836376408	0.65799149	0.00525647	0.01239002
Gpr132	1.372893229	0.49217619	0.00528002	0.01244185
Zgrf1	-1.709580249	0.61300319	0.00528939	0.01246025
AABR07066339.1	-4.921576825	1.76477238	0.00529056	0.01246117
Dhdh	-1.452170388	0.52122495	0.0053351	0.0125605
Fam227b	-1.293997978	0.46446742	0.00533658	0.01256213
Fbn2	2.454710159	0.88115918	0.00534001	0.01256835
Myom1	-1.467333096	0.52675293	0.00534256	0.01257249
Fam83b	-3.693366336	1.32595968	0.0053457	0.0125743
Igsf7	4.96465055	1.78235352	0.0053454	0.0125743
Rn50_13_0873.1	3.941818082	1.41644698	0.00538768	0.01266372
Hsf4	-1.083906899	0.38979325	0.00542381	0.01273923
Pdpm	2.783129251	1.00126139	0.0054422	0.01278055
Pon1	-1.120929731	0.40330674	0.00544682	0.01278887
Art2b	-3.095600563	1.11379937	0.00544735	0.01278887
St8sia1	-1.868926964	0.67246207	0.00544879	0.01279036
Ccdc71l	2.123554597	0.76412289	0.0054514	0.01279461
Ddit4l	2.627260559	0.94541255	0.00545338	0.01279737
Cfhr1	-1.192891709	0.4294591	0.00547517	0.01284473
Ttc25	-1.036812689	0.37340429	0.00549224	0.01287645
Tlr8	1.16716816	0.42065053	0.0055257	0.01294612
Calcbl	4.935942839	1.78017644	0.00555888	0.0130181
LOC103690319	-4.066948932	1.46681904	0.0055605	0.01301999
Cyp4b1	1.567994796	0.56564326	0.00557035	0.01304112
Trpm6	-1.929082252	0.69658939	0.00561726	0.01313167
Ago4	1.020528821	0.36872833	0.00564537	0.0131935
AABR07034445.1	1.340897144	0.48454207	0.00565142	0.0132057
Ndnf	2.141598433	0.77392276	0.00565402	0.01320985
Padi2	1.752899174	0.63366908	0.00567017	0.01323594
RT1-DOb	-1.25160121	0.45261117	0.00568722	0.01327184
Gjc2	1.303379107	0.47137563	0.00569134	0.01327951
Kbtbd3	-1.042515229	0.37716748	0.00570863	0.0133179
Fam65b	1.386359842	0.50173834	0.00572529	0.01335482
LOC103689943	1.626368952	0.58880181	0.00574191	0.01338966
Khk	-1.001647143	0.36269114	0.00574998	0.01340653
Nat8l	3.322189655	1.20389233	0.00578827	0.01348396
Itga8	1.498579699	0.54314026	0.00579603	0.0134981
Scnn1a	-1.193368704	0.43254752	0.00579908	0.0134995
Gsta2	-1.7821466	0.64594959	0.00579863	0.0134995
Dbn1	1.029960746	0.37339078	0.00580853	0.01351731
Cnksr1	1.528031877	0.55398687	0.00581125	0.01352168
Lrrc52	3.559508265	1.2908249	0.00582371	0.01354672
Ccl27	-1.222297124	0.44343185	0.00584328	0.01358628
Clip3	2.022870922	0.73403455	0.00585443	0.01360823
LOC108348128	2.430505344	0.88249864	0.00588506	0.01366594
Plac9	-1.588393504	0.57680626	0.00589126	0.0136759

Il9r	-1.71330589	0.62221722	0.00589529	0.01367926
Col5a3	2.088970408	0.75888004	0.00591057	0.01370874
AABR07043598.1	-4.002238074	1.45497941	0.00594648	0.01378786
Orc4	-1.006632992	0.36603316	0.00595745	0.0138034
Ddc	-1.213967277	0.44151534	0.00596777	0.01382329
Cntln	-3.074363094	1.11881129	0.00599813	0.01387748
Kazn	1.512544318	0.55049328	0.00600302	0.01388461
Trim36	1.602569293	0.58344809	0.00601943	0.01391463
AABR07030162.1	1.936186618	0.70495485	0.00602276	0.01392031
Mphosph9	-1.205513298	0.43895314	0.00602648	0.01392689
Crb2	4.085783731	1.48852266	0.0060537	0.0139817
Letm2	-1.155166055	0.42103411	0.00607621	0.01402149
Ncr1	-2.063296216	0.75218598	0.00608683	0.0140399
LOC100911374	7.662882524	2.79378315	0.00609115	0.01404579
AABR07012775.1	-4.148010279	1.51256716	0.00609986	0.01406181
LOC100360143	-2.172953607	0.79286911	0.00613232	0.01412841
Kcnj5	-1.969677693	0.71877645	0.00613793	0.01413595
Siglec8	2.297631047	0.83889451	0.00616489	0.01419529
Rup2	-1.294122551	0.47260677	0.00617643	0.0142198
Acsn5	-1.368673106	0.49999772	0.00619347	0.01425697
Anxa8	-2.042074425	0.74618934	0.00620644	0.01428477
XAF1	-1.110990018	0.40633867	0.0062542	0.01438636
Zfp2	-1.521922976	0.55678513	0.00626819	0.0144144
Brms1l	-3.315182305	1.21291756	0.00627166	0.01442029
Olr1644	-3.293664736	1.20514507	0.00627598	0.01442815
Sspo	-2.166513555	0.79283023	0.00628304	0.01444021
Izumo1r	3.68244616	1.34783419	0.0062928	0.01446056
Vom2r44	-2.483479706	0.90989678	0.00634481	0.01457198
LOC100912027	4.251635537	1.55771732	0.00634495	0.01457198
Carf	-1.396044954	0.51177165	0.00637453	0.01462727
AABR07051532.1	3.000681064	1.10020109	0.00638369	0.01463775
Casc1	-1.583442336	0.58065832	0.00639173	0.01465409
Ddhd1	-1.176097885	0.43159225	0.00642974	0.01472654
RGD1311084	-3.027217566	1.11106179	0.00643762	0.01473807
Adcy8	4.440646688	1.6306752	0.00646539	0.0147974
AABR07037923.1	-3.748682686	1.37684801	0.00647596	0.01481095
AABR07065265.1	-3.072855052	1.1286805	0.00647861	0.0148149
Alox12	1.459096642	0.53598526	0.00648351	0.01482398
Slc25a2	-1.976589125	0.72625762	0.0064965	0.01484941
LOC100910934	5.273706671	1.93793049	0.00650241	0.01485864
Ccdc65	-2.926506913	1.07562193	0.00651324	0.01488128
Arhgap15	-2.179516754	0.80140772	0.00653589	0.01492873
Zfp74	-1.120518216	0.41208015	0.00654449	0.01494624
Wfdc21	1.011455688	0.37200418	0.00654922	0.01495276
Tigit	3.91521243	1.44077853	0.00657914	0.01501891
LOC691422	-2.430232925	0.89433939	0.0065807	0.01502033
Mmrn1	-3.08954801	1.1378963	0.00662477	0.01510793
Mcub	1.485317584	0.54750753	0.0066703	0.015202

Actr3b	1.796663796	0.66227984	0.00667079	0.015202
AABR07001519.1	-2.065353545	0.76139012	0.00667559	0.01521075
Mip	-1.472752023	0.5433124	0.00671432	0.01529463
AABR07014239.1	1.481627745	0.54660142	0.00671579	0.0152958
LOC108348118	2.582181159	0.95281446	0.00672717	0.01531734
LOC102549115	5.847548912	2.15889419	0.00675708	0.01538323
Igflr1	-1.843901761	0.68078219	0.00675872	0.01538376
Top1	2.027114398	0.74874416	0.00678222	0.01542945
Pik3c2a	-1.000840592	0.36971953	0.00678888	0.0154424
RatNP-3b	-5.283423017	1.95428072	0.00686108	0.01559772
Esco2	-2.970051357	1.09865212	0.00686425	0.01560187
Pld6	-1.383039015	0.51160575	0.00686486	0.01560187
AC114343.1	-1.113476195	0.41194001	0.00687156	0.01561486
AABR07002068.1	-2.254019338	0.83403282	0.00688089	0.0156316
Slc23a1	-1.021026179	0.37779681	0.00688036	0.0156316
Nup62cl	4.233863532	1.5678919	0.00692657	0.01571969
Tma16	-1.138626985	0.42189438	0.00695809	0.01578897
Cenpa	1.397958465	0.51838335	0.00700165	0.0158833
AABR07064747.1	3.311244649	1.22833138	0.00702354	0.0159307
Nemp1	1.209050226	0.44854487	0.00702842	0.0159395
Slc5a11	3.959050923	1.46886905	0.00703241	0.01594627
Glyat	-1.249431831	0.46385992	0.00706947	0.01602345
A1cf	1.137766559	0.42275588	0.00711723	0.01611567
N5	-3.231169922	1.20098577	0.00713597	0.01615351
Csf3r	1.162641563	0.43219472	0.00714333	0.01616558
Acly	1.037016087	0.38566972	0.00716941	0.01621309
Mctp2	-1.226902994	0.45633764	0.00717554	0.01622057
Mbl2	-3.239299832	1.20483875	0.00717576	0.01622057
Micalcl	-1.16813607	0.43448526	0.00717627	0.01622057
Sox11	5.604585728	2.08540522	0.0071983	0.01626456
Cd3e	1.277998607	0.47554741	0.0072005	0.01626723
AABR07048303.1	-3.673032877	1.3671701	0.00721843	0.01630081
Pcdh17	2.020163527	0.75206105	0.00722764	0.01631929
Ryr1	-1.064263546	0.3962223	0.00723074	0.01632397
Dnaaf1	-2.620096995	0.97593382	0.00725933	0.01637691
Lrrc31	2.020692493	0.75266137	0.00725884	0.01637691
AABR07001807.1	-4.295585678	1.60011008	0.00726261	0.01638201
Bcl2l1-ps1	2.504760476	0.93318362	0.00727248	0.01640194
Prr5l	1.131132027	0.42145245	0.0072771	0.01641005
Sec14l5	3.989222545	1.48680417	0.00729464	0.01644493
F2rl2	2.178367557	0.81278404	0.00735934	0.01657906
Cd72	-1.558718441	0.58179649	0.00738099	0.0166255
Gcnt4	1.098303816	0.41032371	0.00743564	0.01673675
Fam69c	-2.576157519	0.96305445	0.00747323	0.01679777
Cd9	1.123044065	0.41996273	0.00749186	0.01683238
Gng13	-4.048206911	1.51393842	0.0074962	0.01683738
AABR07053179.1	-2.971153244	1.11180525	0.00753179	0.01691256
Kif18b	2.279605459	0.85378685	0.00758527	0.01701826

Acnat2	-1.347084455	0.50481646	0.0076199	0.01709114
Prdm11	1.008520171	0.37801945	0.00763257	0.01711305
Itpripl1	1.254193679	0.47009053	0.00763081	0.01711305
Crygs	-3.457538366	1.29688403	0.00767517	0.01720058
Ccp110	-1.186898762	0.44527493	0.00768645	0.01721859
Dbp	1.804125294	0.67693159	0.00769536	0.01723614
LOC103690163	-1.318812426	0.4948686	0.00769941	0.01724277
Scd	1.860755972	0.69829181	0.00770512	0.01725314
Lrrcc1	-1.945056454	0.73033709	0.00773942	0.01731779
Ttc12	-1.470166894	0.55209133	0.00774692	0.01733213
Apoa4	-1.279608479	0.48067468	0.00776527	0.01737074
Tssk1b	-2.509950855	0.94504636	0.00790965	0.01767635
Cxcr3	3.375478984	1.27123817	0.00792452	0.01769718
Slco1a4	-1.447687379	0.54520425	0.00792351	0.01769718
AABR07031674.4	1.423928442	0.53661247	0.00796498	0.01777258
Mmp11	1.519292586	0.57259688	0.00797002	0.01778134
Dnah17	-1.189649779	0.44845392	0.00798318	0.01780697
Ms4a6e	-7.355705416	2.77318818	0.00799132	0.01781887
AABR07065823.2	3.521727878	1.32831338	0.00801878	0.01787511
Mpp2	2.130182614	0.80411309	0.00807045	0.01798273
Pih1d2	-1.435119152	0.54176107	0.00807329	0.01798656
Cenpn	1.230734294	0.46466265	0.00808111	0.01800146
Il15	-1.304497682	0.49256918	0.00808847	0.01801534
Gpld1	-1.039703853	0.39286574	0.00813389	0.01810637
Ren	3.201066563	1.20993083	0.00815315	0.01814165
Qrich2	-2.606688583	0.98563625	0.00817692	0.01819198
Slc6a6	-1.160095702	0.43878956	0.00819679	0.01823111
LOC288978	-1.19445207	0.45182563	0.00820264	0.01823903
Ifit2	-1.110762997	0.42031126	0.00822442	0.0182849
Ocstamp	1.215677857	0.46014741	0.00824348	0.01832216
LOC100911186	-2.393872227	0.90619617	0.00824981	0.01833368
Irx5	-1.634433129	0.61882682	0.00826178	0.01835771
Il1b	-1.116996062	0.42306417	0.00828444	0.0184055
Ncapg2	-1.185843078	0.44951298	0.00833814	0.01851705
Acyp2	-1.163181411	0.44127767	0.00839046	0.01862546
Klhl23	1.036619759	0.39329168	0.00839508	0.01863313
Rbl1	1.158765097	0.43967834	0.00840175	0.01864066
Gprc5d	2.642373432	1.00261786	0.00840198	0.01864066
Il7	-1.109659252	0.42107276	0.00840593	0.01864682
Ptbp2	-1.113150449	0.42247064	0.00841723	0.01866669
Slc6a4	2.802456928	1.06369683	0.00842269	0.01867619
Klhl30	2.812101351	1.0675675	0.00843556	0.01869918
LOC100359600	1.307308557	0.49628904	0.00843438	0.01869918
AABR07017104.1	-5.309704363	2.01577229	0.00843657	0.01869918
Nmt2	1.195458811	0.45469325	0.00855975	0.01894732
Zfp799	-1.019408303	0.38774918	0.00856262	0.01894812
Sncg	-2.801035987	1.06580067	0.0085862	0.01899383
Senp8	-1.563226513	0.59482873	0.00858815	0.01899549

Prss12	2.856075881	1.0873789	0.00862505	0.01906652
Trem3	2.027048103	0.77188344	0.00863678	0.01908981
Nbl1	1.295481814	0.49336987	0.00864501	0.01910536
RGD1565767	3.995345588	1.52282018	0.00869934	0.01921742
Tmem158	2.466996692	0.94053603	0.00871672	0.01925049
Usp49	-1.08596714	0.41411148	0.00873121	0.01927982
Rpl30l1	2.89934077	1.10734936	0.00883766	0.01949865
Tsga10	-3.824787819	1.4609009	0.00884203	0.0195056
Pla2g4c	-2.916537525	1.11406624	0.00884673	0.01951325
RT1-Ha	-3.919522144	1.49752528	0.00886199	0.01953339
Ccdc158	-2.019731287	0.77190567	0.00888229	0.01956731
Cxcl10	1.246597163	0.476476	0.00888922	0.01957989
Pparg	-1.038784175	0.39719361	0.00891467	0.01962779
Tnnc2	-2.741748479	1.04923772	0.00897287	0.01974502
NEWGENE_6497122	-1.003116357	0.38389407	0.00897505	0.0197471
Prdm5	-2.797282804	1.07073805	0.00898877	0.01977455
AABR07049286.1	-5.002043838	1.91539816	0.00901485	0.01982645
Mtmt7	-1.987218143	0.76102402	0.00902139	0.01983701
LOC100910833	5.456162443	2.08951179	0.00902214	0.01983701
Smim3	1.087956434	0.41667008	0.00902584	0.01984239
RGD1307182	1.130993611	0.43348615	0.00907899	0.019951
Trim24	1.349050767	0.5172716	0.00910696	0.02000411
Olr1353	-1.474670173	0.56542815	0.00910572	0.02000411
Srsf12	-2.678802566	1.02764895	0.00914116	0.020071
Epha3	-1.68939504	0.64814505	0.00914708	0.02008123
RGD1566325	-1.13605475	0.43604348	0.0091775	0.02013692
Dixdc1	-1.008127966	0.38728943	0.00924025	0.02026344
Eva1c	1.145112872	0.44003118	0.00925887	0.02029868
Asic5	-3.945406686	1.51859172	0.00937495	0.0205447
AC114845.1	-2.489093101	0.95822807	0.00938778	0.02056433
AC096404.1	3.512539616	1.35275645	0.00941571	0.02062267
Htra3	1.503953406	0.57934755	0.00943316	0.02065238
AABR07002774.2	-3.893664373	1.49988366	0.00943222	0.02065238
Mylk3	-1.998990415	0.77026233	0.00945339	0.02068813
Ccrl2	1.090234106	0.42054952	0.00953079	0.02084606
Fanca	1.738222688	0.67064093	0.00954523	0.02087192
Boc	1.354747775	0.52275006	0.00955368	0.02088752
Srxp2	1.669673155	0.64450368	0.00957993	0.0209389
RGD1304810	1.629515851	0.62901305	0.00958112	0.0209389
Wfdc18	6.043996696	2.33460424	0.00962903	0.02103783
AC109844.1	-3.087700354	1.19319589	0.00966033	0.02110043
Thy1	1.892891878	0.73174634	0.00968678	0.02115261
Enox1	-1.94422507	0.75181784	0.00970879	0.02118886
Ar	1.903670817	0.73622699	0.00971781	0.02119984
Adrg5	-1.203670843	0.46550167	0.00971674	0.02119984
Gen1	-1.427202579	0.55225126	0.00975668	0.0212788
LOC688286	-1.082477461	0.41934078	0.00984065	0.02143846
Slc36a2	1.823253858	0.70730784	0.00994495	0.02165385

Mt-nd6	-1.091968804	0.42447504	0.01009623	0.02195024
B3gnt9	1.185192781	0.46083109	0.0101154	0.02198291
AABR07028185.1	-1.667383703	0.64850487	0.01013703	0.02201191
Scn4b	3.86915925	1.50500996	0.01014484	0.02202287
Stap1	1.384044121	0.53846789	0.01015995	0.02204462
Adam12	2.393413977	0.93156386	0.01019209	0.02210137
AABR07058102.1	-2.928607677	1.14008714	0.01020638	0.02212632
Ccne2	2.187887808	0.85178504	0.01021128	0.02213392
Car11	-1.567793906	0.6103982	0.01021464	0.02213821
Egln3	1.15071484	0.44815387	0.01023822	0.02218328
Lingo1	2.880956033	1.1220482	0.01024092	0.02218515
Uchl1	3.161254003	1.23126547	0.01024396	0.02218666
Spata1	-1.810428433	0.7056476	0.01029896	0.02229427
Btbd8	-1.402414645	0.54728658	0.01039255	0.02246879
Fam179a	-2.32782129	0.90887328	0.01043063	0.02253888
AABR07051733.2	2.835872172	1.10756083	0.01045318	0.0225723
Krt20	-1.935254654	0.75586389	0.01045753	0.02257864
Tceal1	-1.475232895	0.57623048	0.01046289	0.02258407
Tmem184c	1.019793056	0.39841052	0.01047764	0.02261287
AABR07042385.1	-1.752092322	0.68455504	0.01048344	0.02262232
Fam198a	-1.856081521	0.72557154	0.01052471	0.02270829
Fbln1	1.284576032	0.5023777	0.01055815	0.02277119
Enpp5	-1.211823805	0.47441815	0.01063903	0.0229332
Erfe	3.727653222	1.45931747	0.01063767	0.0229332
C7	1.199858822	0.4697469	0.01064117	0.02293473
LOC100912565	-2.393835582	0.93751808	0.01066844	0.02298729
AC124926.2	-2.706387209	1.06006243	0.01067857	0.02300599
LOC500877	1.085340636	0.42532364	0.01071682	0.02307904
Plxdc1	1.648968989	0.64663387	0.01076978	0.02317429
Cdh13	1.229331975	0.48218101	0.01078701	0.02320198
Dcdc2	-1.696799391	0.66573135	0.0108102	0.02324872
Ust5r	-1.24512305	0.48853088	0.01081225	0.02324998
Fut1	1.465458698	0.5753096	0.01085749	0.02332741
Galnt6	1.150050141	0.45149233	0.01085851	0.02332741
Chn1	-1.26651871	0.49730707	0.01087301	0.02335542
Hspa4l	1.271862031	0.49952751	0.01089246	0.02339089
B4galt2	1.02590602	0.40299537	0.01090583	0.02341646
Rn60_18_0172.2	3.170216123	1.24570365	0.01093028	0.02346578
Uroc1	-1.151333288	0.45265274	0.01097404	0.02355021
Thap6	-1.084258862	0.42644628	0.01100484	0.02361314
Slc25a48	-1.344209321	0.52882328	0.01102556	0.02365441
Enkd1	-1.2147125	0.47832104	0.01110003	0.02380135
AABR07021930.1	-1.680480942	0.66233597	0.01117421	0.02393143
RGD1559724	-1.285783509	0.50701354	0.01121285	0.02400129
AABR07065291.1	-3.295340118	1.30106276	0.01131534	0.02420116
Akr1c12l1	-2.461539735	0.97245709	0.01136542	0.02429849
AABR07068127.1	-1.144716702	0.45239658	0.01139524	0.02434916
Rcor2	4.875651272	1.92778869	0.01143418	0.02442582

RGD1564887	-8.57929018	3.39390586	0.01147629	0.0245092
Arnt2	2.166068858	0.85852644	0.01163558	0.02482279
Pyroxd2	-1.007135842	0.39991513	0.01178981	0.02513161
Mup4	-6.771577928	2.69193723	0.01188624	0.02532702
Rn50_11_0375.8	1.24382779	0.49476359	0.01193758	0.0254296
Cchcr1	-1.013131028	0.40319867	0.01197996	0.02550965
AABR07034637.1	-7.944024781	3.16339043	0.01203087	0.02559411
Nr5a1	3.701686696	1.47422892	0.01204133	0.02561295
LOC100911403	-5.041635198	2.01101162	0.01217557	0.02587318
Fzd3	1.1394101	0.4545296	0.01218332	0.02588387
Mrfap1	-3.560968052	1.4208911	0.01220534	0.02592602
Cpne4	-2.301217531	0.91886016	0.01226502	0.02604008
Msln	2.508651183	1.00202944	0.01229472	0.02608947
Tbx19	-1.855006257	0.74209735	0.01243054	0.02635988
AC107331.1	-2.189714128	0.87613048	0.01244384	0.02638459
AABR07061825.1	-1.019091091	0.40811815	0.01252316	0.0265457
AABR07000156.1	3.712554279	1.48734216	0.01255673	0.02661332
Upk3b	2.365697857	0.94885169	0.01265897	0.02681218
St6galnac3	-1.298908159	0.5213291	0.01271935	0.02692575
Zfp296	2.108749372	0.84735898	0.01282421	0.02712251
Abi2	1.030251668	0.41401155	0.01282972	0.02713057
Rtn4r	2.531519124	1.01741151	0.0128393	0.02714001
AC131360.1	2.128743559	0.85608737	0.01289717	0.02724093
LOC102550314	-3.973546974	1.59844871	0.01292326	0.02729214
AABR07029863.3	1.074226577	0.43242126	0.01298381	0.02740911
Arap2	2.267826883	0.91320614	0.01301466	0.0274706
Dnah6	-1.865010828	0.75110199	0.01302691	0.02749282
Wscd1	1.035247415	0.41711983	0.0130686	0.02756984
Ccdc68	-3.516891046	1.41722588	0.0130819	0.02759061
LOC100911558	-2.56440575	1.03402603	0.01313748	0.02769317
Ccdc152	-2.404435048	0.96963444	0.01314806	0.02770813
Ly75	1.636117408	0.65991447	0.01316453	0.02773551
Efcab2	-2.084859966	0.84155618	0.01323485	0.02786523
Armcx6	-1.227985722	0.49568867	0.01323685	0.02786576
Dgke	-1.160495685	0.46884108	0.01331455	0.02801453
LOC108348091	5.555258592	2.24439168	0.01331715	0.0280163
Heph	-1.290722154	0.52151065	0.01332481	0.02802872
Rn60_2_0036.1	2.545198905	1.02964393	0.0134389	0.02826125
Lrp8	1.591102836	0.64390338	0.01347255	0.02832454
Mdk	-1.19459861	0.48356797	0.01349681	0.02836804
AC124874.1	-5.843820375	2.36550774	0.01349509	0.02836804
AABR07033887.1	1.118469767	0.45306586	0.01356165	0.02849305
Sctr	1.587153267	0.64300006	0.01357351	0.02851422
Mgst3	-1.144889377	0.46386631	0.01358152	0.02852729
Nlrp10	-3.170321835	1.28491446	0.01361207	0.02858769
Col7a1	1.606685915	0.65121418	0.01361683	0.0285939
Stard6	-1.420568442	0.57594394	0.01364389	0.02863187
Ctps1	1.027403832	0.41656231	0.01364838	0.02863752

AABR07024972.1	-1.525330996	0.61867463	0.01368292	0.0287062
Ccdc34	-1.30211131	0.52816403	0.01368779	0.0287099
Ctnnd2	2.266659916	0.91998697	0.01374745	0.02881123
Abca16	-1.435239179	0.58305979	0.01383326	0.02897964
AABR07027752.2	1.924299578	0.78183313	0.01384475	0.02899991
Ggt7	1.288447284	0.52356811	0.01385901	0.02902595
Efr3b	2.059657992	0.83710077	0.01387567	0.02905703
Nilr1	-2.830493927	1.15053669	0.01388786	0.02907873
AC123253.2	-3.132027781	1.27365764	0.0139293	0.02915785
Col6a5	1.795395367	0.73021976	0.01394389	0.02918455
FAM120C	1.98670739	0.80812224	0.01395482	0.02920196
Cst7	1.254034098	0.51022697	0.01397923	0.02924699
Lilrb3	-1.617440316	0.65851457	0.01404169	0.02935453
Phf19	-1.445293812	0.58893464	0.01412448	0.029516
Lpar5	1.465740418	0.59764134	0.01418509	0.02963086
AC105577.1	-4.356361857	1.77629708	0.01418689	0.02963086
Slc1a6	2.165244145	0.88339475	0.01424404	0.02973465
Colq	3.573396778	1.45860099	0.0142904	0.02982361
Ccdc155	-2.565456509	1.04722813	0.01429519	0.02982969
Efna2	1.968270614	0.80347112	0.01429716	0.0298299
Cel	-3.610115488	1.47457674	0.01435566	0.02994412
Lmo3	-1.350317724	0.5515773	0.01436108	0.02995151
Mslnl	-3.091635693	1.26332191	0.01439601	0.03000863
Nrxn1	-1.880448987	0.76856146	0.01441658	0.03004758
AC128901.1	1.355772605	0.55435649	0.01445836	0.03011705
Cpe	1.314058878	0.53738555	0.01447392	0.03014343
Mpa2l	-1.688697294	0.6916656	0.01462664	0.03044955
AABR07059925.1	1.532363983	0.62789644	0.01466806	0.03051984
Ly49si3	-2.923460108	1.19804658	0.01467958	0.03053327
Dnajb13	-1.624228647	0.66631448	0.01478387	0.03072468
Fam81a	-2.489265185	1.02147991	0.01481294	0.03077708
Gnal	1.640640402	0.67329659	0.01482084	0.03078947
Rn50_2_2782.1	-4.218746356	1.73152114	0.01483265	0.03081
Frem1	1.277829058	0.5245375	0.01484632	0.03083438
Aff3	1.039612082	0.42691981	0.01488578	0.03090827
Zc2hc1a	1.06269259	0.43641877	0.01489058	0.03091419
LOC102549842	-2.087341755	0.85765064	0.01494165	0.03101215
Xrcc2	1.024380677	0.42101633	0.01496959	0.03105748
Mcpt8l2	-2.043769469	0.84079274	0.01506699	0.0312438
LOC102556347	1.022235277	0.42065445	0.01509437	0.03129244
Rnf24	2.803940659	1.15619458	0.01530223	0.03169862
Cx3cl1	1.278381921	0.52720762	0.01531611	0.03172325
Tmem102	1.233924408	0.50937113	0.01541639	0.03191434
Podnl1	-3.001562587	1.23923154	0.01543042	0.03193501
Gdf6	2.862843032	1.18216295	0.01544813	0.03195515
Lrrc4	2.362114502	0.97658624	0.01557409	0.03219063
Rif1	-1.006723312	0.41647392	0.01563809	0.03229778
AABR07025787.1	3.001787304	1.24234071	0.01568193	0.03237992

Erich5	1.737981464	0.71971479	0.015743	0.0324976
Wnt9a	2.720589265	1.12707126	0.01578464	0.03257511
LOC685699	-4.17267234	1.72962605	0.01584481	0.03268235
Lamb3	-1.058716396	0.43949954	0.01600009	0.03298983
LOC102548541	-3.520594249	1.4615311	0.01600332	0.03299223
Syt12	5.73545679	2.38135796	0.01601903	0.03302035
Mcpt1l4	-3.016256688	1.25307752	0.01608069	0.03313029
Psme1-ps1	2.950707536	1.22658312	0.01614452	0.0332575
AABR07037645.1	-2.655596706	1.10404693	0.01615789	0.03328074
AABR07032751.1	1.623674407	0.67517424	0.01618031	0.03331831
LOC688459	3.93093678	1.63475276	0.0161899	0.03333374
Asb15	-5.246200721	2.18187189	0.01619684	0.03334374
AABR07060588.2	-3.343372275	1.39085142	0.01622426	0.03339154
Znf454	-2.465873313	1.0270242	0.01635085	0.03362602
Apcdd1	-1.652362674	0.68823912	0.01635679	0.03363391
Trim46	1.993174996	0.83032198	0.01637339	0.03366368
Lipg	1.903834004	0.79342151	0.0164164	0.03374341
Slc29a4	1.453197513	0.60571391	0.01643326	0.03376587
Lhx1	-2.579841977	1.07532002	0.01643368	0.03376587
Mad2l1	1.128196851	0.47023641	0.0164304	0.03376587
Agbl3	-2.711679926	1.13225408	0.01662311	0.03412722
RGD1310081	1.21566576	0.50775721	0.01665725	0.03418555
Ugt2a1	-1.395745109	0.58365127	0.01678414	0.03441937
Rtkn	2.163242211	0.90585669	0.01693747	0.0347204
Hist3h2ba	2.507605396	1.05015663	0.01694775	0.03473252
Hist1h2bl	3.499569366	1.46592355	0.01697358	0.03478099
Elfn1	3.130405189	1.31174234	0.017012	0.03485525
AC098622.1	3.36508965	1.41062538	0.01705452	0.03491728
Pcyox1l	1.048855714	0.43970843	0.01706317	0.03492865
Gins3	-1.277561122	0.53626495	0.01720338	0.03519296
Fbxo41	2.763643252	1.16013535	0.0172108	0.0351992
Rn60_16_0588.3	1.413627951	0.59344264	0.01721515	0.03520357
Phactr1	1.442046626	0.60563011	0.01726251	0.03529136
AABR07013111.1	1.227428061	0.51564903	0.01729594	0.03535062
Chrdl1	-2.913651008	1.22480375	0.01736572	0.03547959
Taf1d	-1.214051093	0.51042264	0.01738224	0.03550424
Dnah1	-1.110890089	0.46728521	0.01743859	0.03561477
Pcdh19	3.44584183	1.45025815	0.01750053	0.03573212
Slc10a1	-1.244298722	0.52372631	0.01750826	0.03573873
Disp2	1.83377968	0.77192713	0.01752108	0.03576034
LOC100909836	2.139175031	0.90058441	0.0175338	0.03578171
Bicdl2	-1.692439925	0.71326442	0.01765341	0.03601197
Pde4c	-1.087780561	0.45854038	0.01767927	0.03605549
Kdm5d	-1.074034652	0.45296208	0.01773351	0.03614297
LOC100362987	5.969772719	2.51870635	0.01777971	0.03622786
Gpr18	1.755938487	0.7416839	0.0179086	0.03644388
Nox4	-2.023232983	0.85464906	0.01791714	0.03645661
AABR07048698.1	-2.791935115	1.17940549	0.01792134	0.03646049

AABR07000248.1	-1.382354271	0.58458219	0.01804528	0.03666584
Cyp4f37	5.370357267	2.27233195	0.01810966	0.03679196
Rasgrp1	1.139784698	0.48236256	0.01813153	0.03683168
Ndrp2	-1.313713962	0.55612037	0.01816275	0.03689041
Fndc1	2.131618367	0.90246159	0.01817642	0.03690876
Lrtm2	-2.185803151	0.92581596	0.0182283	0.03700467
Ecm2	-3.868619809	1.64280534	0.01852837	0.03754688
Ccdc141	-1.097907031	0.46630768	0.01854919	0.03758427
Rn50_13_0841.1	2.79706291	1.18891413	0.01864168	0.03775729
Lhx4	3.872494515	1.64667208	0.01868736	0.03784018
RGD1309651	-2.117768647	0.90152257	0.01881874	0.03806751
Dbh	4.59863819	1.95765914	0.01882141	0.03806807
Thbs1	1.602261265	0.68211768	0.01882636	0.03807214
Zc2hc1c	-2.844449723	1.21124826	0.01885617	0.03812387
Reg4	-1.181922553	0.50337729	0.01887526	0.03815762
Cdo1	-1.081320994	0.46066155	0.01890891	0.03822079
Gng7	-1.888259723	0.8049788	0.01899006	0.03837023
Rgcc	2.052165541	0.87540102	0.019065	0.03850699
Fam25a	2.326682638	0.99255368	0.01907112	0.03851448
RGD1561212	3.008480753	1.28430909	0.01915557	0.03865073
Dnah2	4.091649911	1.74688611	0.0191677	0.03867031
RT1-T24-1	1.012130942	0.43262448	0.01930886	0.03892552
Hsbp1l1	-2.351895147	1.00534176	0.01931481	0.0389326
Bbs12	-1.580061923	0.67544671	0.01932072	0.03893959
RGD1561730	-1.480037818	0.63332854	0.01944337	0.03917191
AC142180.1	-2.903709434	1.24299555	0.01948823	0.03925236
Gpr171	-1.802779838	0.7730086	0.01969227	0.03959826
Bora	-1.180817805	0.50678692	0.01980571	0.03981129
Syt15	-2.973189714	1.27612379	0.01981355	0.03982205
Mst1r	1.273741939	0.54705109	0.01989202	0.03996462
Rnf207	-2.191601645	0.94255846	0.02006327	0.04029852
Ccr8	2.984728028	1.28394025	0.02009	0.04034204
Gimap9	-1.057495307	0.45503668	0.02012667	0.0404047
Begain	-1.826749529	0.78633443	0.02017269	0.04048257
Kntc1	2.322268112	0.99973327	0.02018519	0.04049745
LOC103690149	-2.280225813	0.98214603	0.02025034	0.04061793
AABR07057108.1	-2.192691761	0.94491089	0.02031236	0.04072183
AC118490.1	4.482606322	1.93187323	0.02032239	0.04073682
Snx32	-2.004491147	0.86538291	0.0205416	0.04114517
Cdca7l	1.645620195	0.71071359	0.02058844	0.04122135
Mug2	-1.104487661	0.47708463	0.02060872	0.0412485
Arsi	2.392265197	1.03359602	0.02063993	0.04130578
LOC680579	2.666691924	1.15231936	0.02065702	0.0413296
Krt10	-1.281183645	0.55399802	0.02074386	0.04147273
Ms4a4a	2.061786039	0.89154132	0.02074417	0.04147273
Trabd2b	2.241435115	0.9694145	0.02076923	0.04151761
Fam102b	1.424215318	0.61637559	0.02085335	0.0416701
Eme1	-1.756734738	0.7603997	0.02087277	0.04170108

Cxcl13	-2.17792901	0.94272273	0.02087409	0.04170108
Col8a2	1.097274057	0.47560127	0.02104756	0.04202655
RGD1561648	-3.20150176	1.38795177	0.02107503	0.04207085
Cd46	-1.426501176	0.61846151	0.02108093	0.04207736
Serpina4	-1.063950486	0.46131619	0.02109182	0.04209383
Rmi2	4.634093677	2.00962297	0.02111333	0.04212619
AABR07011951.1	-1.899592415	0.8240691	0.02115889	0.0422118
Ikzf3	1.511839016	0.65593281	0.02117393	0.04223652
Csf1	1.156261382	0.50189647	0.02123474	0.04234192
Stmn3	-2.113105728	0.91727013	0.02124007	0.04234726
Clec2d	-1.039977645	0.45217232	0.02145056	0.04274019
Etv4	2.87922932	1.25183724	0.02144805	0.04274019
Zfp366	1.200433697	0.52204638	0.02147786	0.04278388
AABR07062390.2	-6.089238674	2.64897998	0.02152137	0.04285983
Creb3l4	-2.94017654	1.28052486	0.0216718	0.04315401
RGD1566226	-4.407593522	1.92025778	0.02171517	0.04323497
Txk	-1.305820413	0.56934407	0.02181623	0.0434199
Mterf2	-1.029062415	0.44895669	0.02189875	0.04356237
Mpl	3.481509662	1.52054935	0.02204223	0.04382592
Clstn2	3.386796584	1.47940448	0.02206209	0.04385993
LOC108351936	2.608958324	1.13975004	0.02207576	0.04388163
Clec2d	3.545803531	1.54915684	0.02208747	0.04389944
Lin9	-4.148079149	1.81249214	0.02210229	0.04392342
Cc2d2a	-1.05576565	0.46140638	0.02212896	0.04397092
Jph4	-1.431714303	0.62573387	0.02213424	0.04397594
Rn60_11_0606.3	3.671482334	1.60576065	0.02222828	0.04413525
Mybl2	1.726314324	0.75507313	0.02223744	0.04414794
Kcnd1	1.281769445	0.56073829	0.02226243	0.04418103
AABR07014114.1	-3.16439321	1.38433023	0.02226211	0.04418103
LOC500475	-2.276818108	0.99646738	0.02231929	0.04428286
Fabp2	-1.590380924	0.69618685	0.02234705	0.04432605
Gabpb1l	3.269776192	1.43163603	0.02237484	0.04437096
AABR07027451.1	2.550340964	1.11691136	0.02240758	0.04442483
Akr1b7	4.177457834	1.83002683	0.02244626	0.0444849
Neurl1	3.20415492	1.40390574	0.02247076	0.04452793
Myo16	3.96445319	1.73828812	0.02256827	0.0446878
Hmgb2	-1.499996594	0.65866679	0.02276698	0.0450477
Batf3	-1.702933954	0.74826093	0.02285464	0.0452043
Mfap5	2.337603847	1.02741111	0.02289171	0.045272
Ntrk1	2.010308931	0.88359889	0.02289769	0.04527326
LOC499229	-1.341980675	0.59033392	0.0230107	0.04546219
Gpx2	1.769948979	0.77922687	0.02312176	0.04564199
Tmem132b	3.088975236	1.36082029	0.02321145	0.04579068
LOC497963	2.509251802	1.10574777	0.02325128	0.04586356
Ddr2	1.595484518	0.70336625	0.02330756	0.0459689
Cacna1h	-2.288146834	1.00928903	0.02338486	0.04608713
Nrgn	1.0941332	0.48269047	0.02340619	0.04612345
Cldn15	1.750068208	0.77211917	0.02341603	0.04613713

Cyp1b1	2.111346517	0.93191308	0.02347561	0.04623165
Tceal9	1.014394489	0.44788943	0.02352297	0.0463192
Alpk3	2.467931478	1.08993657	0.02355634	0.04637345
Kif15	-1.618880812	0.71511213	0.02358556	0.04642524
Stxbp5l	-1.154565526	0.51036211	0.0236821	0.04659224
Gp1ba	2.212868569	0.97831872	0.02370299	0.04662182
Ly49si1	-1.306549858	0.57768389	0.02371571	0.04662958
Sema3a	-1.577587671	0.69764499	0.02374042	0.0466724
Klri1	-1.767178233	0.78255249	0.02393174	0.04701959
Trim68	-1.159339575	0.51374174	0.02402943	0.04718237
Dnajb3	3.372884723	1.49476461	0.0240415	0.04720025
LOC100361547	1.289582412	0.57153174	0.02404798	0.04720716
Gulp1	-1.265693666	0.56131317	0.02414088	0.04737319
Hist2h4a	2.74294772	1.2164548	0.02414148	0.04737319
Poli	-1.049542316	0.46591917	0.02428265	0.04763848
Tex38	-3.351538789	1.48826631	0.02432384	0.04770754
Csad	-1.083520251	0.48126622	0.02436055	0.04777365
Carmil3	-2.690486831	1.19521615	0.02438261	0.04781104
Dusp13	1.73848101	0.77289289	0.02449234	0.04800082
Slc6a1	-1.986062975	0.88365832	0.02460514	0.04820586
Hrct1	-1.822985894	0.81112682	0.02460979	0.04820905
Patl2	-3.125078633	1.39058903	0.0246205	0.04822409
AABR07002997.1	-1.067993863	0.47525911	0.02462838	0.0482336
Mum1l1	-2.824253597	1.25767364	0.02472854	0.0484119
Slc25a30	-1.439004576	0.64172273	0.02493497	0.0487801
Mms22l	1.121164798	0.50009571	0.02496781	0.04882634
AABR07034730.1	-4.499318665	2.00739222	0.0250018	0.04888121
Igip	-1.731609917	0.77300992	0.02508524	0.0490259
P3h4	1.148559138	0.51277677	0.02509863	0.04904513
Smarca1	-1.313943675	0.58682604	0.02515146	0.04911918
Zfp541	-1.573958324	0.70325648	0.02521454	0.04923029
Gnrh1	-2.370302013	1.05939955	0.02526012	0.04931325
Spata17	-3.450879624	1.54244276	0.02526791	0.04932241
Smpdl3b	1.29944374	0.58092092	0.02529493	0.04934521
AABR07035375.1	4.51681052	2.01920518	0.02529124	0.04934521
Ust	1.16195102	0.51976031	0.02538116	0.04950708
Osm	1.390099823	0.62186114	0.025392	0.04952218
LOC100134871	2.829421354	1.26747802	0.02559357	0.04989697
Mycn	3.193297614	1.43098964	0.02564598	0.04998692

Appendix 5.D

Common differently expressed genes in the comparisons between FOF1F2
and FOF1 and FOF1F2 and FOF1

Aaas	Grap2	Ptbp2
AABR07001807.1	Gtf2h1	Ptges3l
AABR07007121.1	Gtpbp1	Ptn
AABR07011951.1	Hbb	Pum3
AABR07027854.1	Hgf	Rab43
AABR07039694.1	Hmgn3	Rabl2a
AABR07041586.1	Hnrnpa3	Rad50
AABR07043347.1	Hoxb5	Ranbp2
AABR07048397.1	Hpx	Rars
AABR07051532.1	Hrc	Rasl11a
AABR07057495.1	Hspa9	Rassf6
AABR07058914.1	Iffo1	Rb1cc1
AABR07059198.1	Ifih1	Rbbp8
AABR07059925.1	Ift57	Rbm14
AABR07062799.2	Ift80	Rbm25
AABR07064747.1	Ift88	Rbm28
Abca3	Il7	Rbm34
AC094246.1	Inafm1	Rev1
AC098750.1	Ing3	Rexo4
AC105577.1	Iqce	RGD1305178
AC107446.2	Irf2bp1	RGD1307235
AC126530.2	Irfg2	RGD1561145
Ace2	Jaml	RGD1562161
Adam28	Jmjd1c	RGD1566085
Adamts10	Kbtbd6	Rhbdd3
Adck1	Kcnj5	Rin3
Adcy9	Kdm3a	Rn50_10_0892.1
Add2	Kel	Rn50_X_0744.1
Ager	Klf1	Rnf20
Aim2	Klhl42	Rnf25
Aimp1	Klhl8	Rpf2
Akip1	Kmt5b	Rpl26-ps2
Ankrd24	Knop1	Rprm
Ankrd42	Krit1	Rps6kl1
Anks1a	Ktn1	Rps8
Anxa13	Lamb3	Rrm1
Aqp11	Lig4	Rrp15
Asb2	LOC100360380	RT1-DMa
Asb7	LOC100361547	Rtel1
Asic5	LOC100362149	Rtkn
Atp2a2	LOC100362366	Rtn4rl2
Atp8b1	LOC100362987	Rxra
B3gntl1	LOC100910833	Sec16a

Baz2b	LOC100911545	Senp6
Bcl6b	LOC100911766	Serbp1
Bcorl1	LOC100912481	Setd2
Bhlhb9	LOC102546648	Slc11a2
Bloc1s2	LOC102548541	Slc16a2
Brox	LOC102555183	Slc1a6
C4a	LOC103690120	Slc29a4
Card9	LOC103692716	Slc2a2
Caskin2	LOC103694855	Slc35d1
Cbx1	LOC103694857	Slc35e2b
Ccdc124	LOC108348080	Slc35e3
Ccdc155	LOC108348215	Slc4a1
Ccdc65	LOC317456	Slc9a7
Cchcr1	LOC679894	Slnf13
Ccnt2	LOC680227	Smarca1
Cd24	LOC685699	Smarca5
Cd47	LOC687679	Snapc4
Cd52	LOC688906	Snca
Cdc25c	LOC690142	Sp140
Cep162	Lox	Speg
Cep89	Lrg1	Srcin1
Chmp4c	Lrrc31	Srfbp1
Cic	Lrrc4	Srp72
Cltb	Lsm4	Srsf11
Col6a5	Ly6g6f	Srsf5
Commd6	Map3k11	Ss18
Coq10b	Mdk	Stk35
Cpne4	Mettl3	Stox2
Cpne7	Mip	Supt16h
Cpt1b	Mipol1	Supt20h
Creb3l4	Mme	Surf4
Csgalnact1	Mmp15	Syng2
Ctdsp1	Mmp19	Sypl1
Dbp	Mnda	Syt15
Dcaf17	Morc3	Taf1b
Ddx27	Mpa2l	Taf1d
Ddx39b	mrpl9	Taf8
Ddx3x	Ms4a6e	Taok3
Ddx55	Msh6	Tceal8
Derl1	Msr1	Tef
Dmtf1	Mt-nd1	Tesk1
Dnah1	NA	Tex13b
Dnajc16	Naa16	Tipin1
Dopey1	Ncl	Tm6sf2
Dzf17	Ndst1	Tm9sf1
Eef1a2	Nek6	Tm9sf2
Eif4a2	Net1	Tm9sf4
Eif5b	Neu2	Tma16

Elk1	NEWGENE_1308171	Tmbim4
Epb41	Ninl	Tmem131
Eprs	Nob1	Tmod3
Erbin	Nop58	Tnfrsf14
Ergic2	Nrxn1	Tnnt3
Esf1	Nvl	Tpd52l1
F2rl2	Nxpe2	Tpm2
Faah	Optc	Traf3ip3
Fabp2	Orai1	Trmt2a
Faim	Orm1	Tsen2
Fam136a	Ormdl3	Ttc14
Fam227b	Pbdc1	Ttc27
Fam53b	Pcdh1	Txnl4b
Fam81a	Pcf11	U2surp
Fasn	Pcsk5	Uaca
Fbxo18	Per3	Usp16
Fbxo21	Pfdn4	Uspl1
Fem1a	Phactr1	Utp14a
Fer	Pik3r6	Utp18
Fgfr1op	Pla2g4b	Vmac
Fgfr1op2	Plp1	Wdr3
Fign	Pnpla8	Wdr35
Frk	Poli	Wdr60
Frmd4b	Polr2a	Wsb1
Ftsj3	Pomt1	XAF1
Gab1	Por	Ybx2
Gas8	Ppara	Zc3h11a
Gata1	Ppp1r21	Zdhhc9
Gatsl2	Ppp1r26	Zfp202
Gbas	Ppt2	Zfp263
Gbp3	Prdm15	Zfp28
Gcnt2	Prdm5	Zfp280d
Ggcx	Prf1	Zfp292
Gimap8	Prkcg	Zfp407
Gins3	Prkdc	Zfp62
Git2	Prob1	Zfp791
Glrx3	Prpf4b	Zfp866
Gnat2	Prss39	Zfp951
Gnl2	Psme1-ps1	Zscan30
Gorab		

Appendix 5.E

RNA sequencing comparison between **FOF1F2** and FOF1

Gene	log2FoldChange	lfcSE	p-value	p-adjust
AABR07067267.1	9.028206477	0.5122231	1.57E-69	2.61E-65
Bcas2	-1.927471851	0.12634389	1.51E-52	1.26E-48
Eny2	-1.864943118	0.12393772	3.59E-51	1.99E-47
AABR07004894.1	6.834078513	0.46331212	3.05E-49	1.27E-45
AABR07073181.1	4.58935233	0.32199619	4.31E-46	1.43E-42
RGD1559972	3.461255465	0.24529614	3.27E-45	9.08E-42
Mrps9	-1.887278753	0.13794619	1.31E-42	3.13E-39
Phgdh	6.850018557	0.50560898	8.14E-42	1.69E-38
Psma4	-1.551131256	0.12198182	4.81E-37	8.91E-34
Derl3	6.098080138	0.49136191	2.29E-35	3.81E-32
Derl3	6.098080138	0.49136191	2.29E-35	3.81E-32
LOC688815	3.878294406	0.3144973	6.11E-35	9.26E-32
Tnfrsf21	5.242193497	0.42562662	7.39E-35	1.03E-31
Naca	-1.957953761	0.15960834	1.36E-34	1.74E-31
Tbca	-1.979061563	0.16164565	1.83E-34	2.17E-31
Sdhaf2	-1.980854474	0.16224548	2.78E-34	3.09E-31
Rn60_1_1138.1	3.837336045	0.31490045	3.70E-34	3.85E-31
Klf11	2.493440509	0.20494897	4.71E-34	4.61E-31
Col4a2	3.864491011	0.31930009	1.02E-33	9.42E-31
Slc7a1	7.300357611	0.60536148	1.73E-33	1.52E-30
Cox7b	-3.298376861	0.27445302	2.86E-33	2.38E-30
Spag7	-2.511836619	0.21086071	1.02E-32	8.10E-30
Creb3l2	2.108590698	0.17925357	6.04E-32	4.57E-29
Ckap4	5.062339628	0.4322461	1.11E-31	8.04E-29
Slc6a9	3.215797282	0.27546788	1.73E-31	1.20E-28
Ssbp1	-2.385834348	0.20449948	1.89E-31	1.26E-28
Cops5	-1.307375222	0.1134759	1.03E-30	6.61E-28
Myadm	3.423725934	0.29747809	1.19E-30	7.32E-28
Col3a1	3.433229017	0.29843648	1.26E-30	7.49E-28
Selenon	2.844440659	0.24960874	4.40E-30	2.53E-27
Dchs1	2.443064125	0.2145041	4.72E-30	2.62E-27
Pin4	-2.128713768	0.18702757	5.15E-30	2.77E-27
Hid1	4.817546505	0.42458866	7.73E-30	4.02E-27
Zmat2	-1.747177284	0.15408093	8.38E-30	4.23E-27
LOC103690018	6.18707812	0.5469255	1.14E-29	5.58E-27
Cmip	1.998083407	0.17676445	1.26E-29	5.89E-27
Sarnp	-2.703788432	0.23921821	1.27E-29	5.89E-27
Rbm8a	-1.255693366	0.11113974	1.34E-29	6.02E-27
Pop4	-1.658528897	0.14697336	1.56E-29	6.86E-27
Ssr1	1.978816802	0.17548007	1.71E-29	7.31E-27
Ndufa5	-2.219727779	0.19732682	2.34E-29	9.75E-27
RGD1304884	2.081704118	0.18511301	2.43E-29	9.89E-27
Slc40a1	11.67912214	1.03993357	2.88E-29	1.14E-26

Pfkfb3	4.668375503	0.41802396	5.87E-29	2.27E-26
RGD1565641	-2.859983944	0.25700426	9.15E-29	3.46E-26
Bhlha15	3.948154525	0.35598982	1.39E-28	5.16E-26
Mesdc1	2.433313591	0.2203848	2.42E-28	8.75E-26
Dnajc8	-1.106193379	0.10041547	3.19E-28	1.13E-25
Cdc123	-1.058847549	0.0961826	3.47E-28	1.20E-25
Ube2k	-1.496162905	0.13611291	4.17E-28	1.42E-25
Chpf	4.840225051	0.44457645	1.33E-27	4.42E-25
Phf13	1.490112965	0.13712833	1.66E-27	5.43E-25
LOC100911672	11.80772066	1.08705853	1.75E-27	5.60E-25
Serpine1	7.449470876	0.68852117	2.78E-27	8.74E-25
Rab9a	-2.263098972	0.20935276	3.09E-27	9.52E-25
Dnajc1	-1.51228807	0.13993897	3.20E-27	9.68E-25
Spsb1	3.54882381	0.32973594	5.17E-27	1.54E-24
Soga1	4.478046254	0.41724922	7.18E-27	2.10E-24
Map3k7	11.24044171	1.04941115	9.02E-27	2.59E-24
Sec61-ps	9.219888009	0.86126159	9.63E-27	2.72E-24
Soat1	4.264017634	0.39861629	1.05E-26	2.92E-24
RGD1561149	2.869421066	0.26882603	1.35E-26	3.62E-24
Wee1	3.873981537	0.36288995	1.33E-26	3.62E-24
Txndc17	-2.351825657	0.22124579	2.16E-26	5.72E-24
Cirbp	-2.376152732	0.22364575	2.29E-26	5.96E-24
Ensa	-1.022766998	0.09628093	2.34E-26	5.99E-24

Appendix 5.F

Common differently expressed genes in the comparisons between FOF1F2 and FOF1; FOF1F2 and FOF1; and FOF1F2 and FOF1

Aaas	Frmd4b	Pik3r6
AABR07007121.1	Gas8	Pla2g4b
AABR07048397.1	Gbas	Por
AABR07057495.1	Gnl2	Ppara
AABR07062799.2	Grap2	Ppp1r26
AABR07064747.1	Gtpbp1	Rasl11a
AC098750.1	Hrc	Rev1
AC107446.2	Iffo1	Rexo4
Aimp1	Inafm1	RGD1305178
Akip1	Ing3	Rpf2
Anxa13	LOC100362149	Rpl26-ps2
Asb2	LOC100910833	Rprm
Bcl6b	LOC100911766	Rps8
Ccdc124	LOC680227	Slc1a6
Ccdc65	Lrrc31	Slc29a4
Cd47	Lrrc4	Slc35e3
Cep89	Ly6g6f	Srsf11
Coq10b	Mettl3	Supt20h
Cpne7	Mmp19	Sypl1
Cpt1b	mrpl9	Tm9sf2
Creb3l4	Msh6	Tmem131
Dcaf17	NA	Tnnt3
Ddx39b	Ndst1	Traf3ip3
Ddx55	Net1	Ttc27
Eef1a2	Optc	Txnl4b
Eprs	Orm1	Uaca
Ergic2	Ormdl3	Vmac
Esf1	Pcdh1	Wdr60
F2rl2	Phactr1	Zfp62
Faim		

Appendix 5.G

WGBS comparison between FOF1 and FOF1

Gene	Direction	lfcSE
Inpp4b	hyper	0.377537576
Inpp4b	hypo	-0.472721855
AABR07032622.1	hyper	0.349385114
AABR07032622.1	hypo	-0.3035012
Mycbp2	hyper	0.31608951
Mycbp2	hypo	-0.344264054
Myo18b	hyper	0.302495069
Myo18b	hypo	-0.348170158
Hs6st3	hyper	0.413125168
Hs6st3	hypo	-0.35270403
RGD1560034	hyper	0.30521065
RGD1560034	hypo	-0.317095098
Gabrb1	hyper	0.312405672
Gabrb1	hypo	-0.318944994
Lrrc4c	hyper	0.425095147
Lrrc4c	hypo	-0.31327438
Aff1	hyper	0.373012947
Aff1	hypo	-0.553853796
Oxr1	hyper	0.367912281
Oxr1	hypo	-0.322954492
Camta1	hyper	0.330635917
Camta1	hypo	-0.300525616
Ldb2	hyper	0.361954226
Ldb2	hypo	-0.369795893
Ptprm	hyper	0.327651321
Ptprm	hypo	-0.401844695
RF00015	hyper	0.35422749
RF00015	hypo	-0.315939527
Pik3c2g	hyper	0.318952751
Pik3c2g	hypo	-0.351783423
Scn3a	hyper	0.413026637
Scn3a	hypo	-0.349983118
Col19a1	hyper	0.325342783
Col19a1	hypo	-0.30354185
AABR07024473.2	hyper	0.317829339
AABR07024473.2	hypo	-0.364405484
St6galnac3	hyper	0.351125897
St6galnac3	hypo	-0.392876312
AABR07052405.1	hyper	0.353826962
AABR07052405.1	hypo	-0.334983619
Hcrtr2	hyper	0.440308827
Hcrtr2	hypo	-0.345309209
Runx1	hyper	0.390807448

Runx1	hypo	-0.3096745
LOC498414	hyper	0.456883822
LOC498414	hypo	-0.362834239
Zfp52	hyper	0.382642807
Zfp52	hypo	-0.315092512
Cp	hyper	0.338328798
Cp	hypo	-0.349207769
Tmem232	hypo	-0.340199196
Ptpn14	hyper	0.454855574
Uxt	hypo	-0.345386569
Serpinb13	hypo	-0.304790262
Galnt2	hyper	0.357261649
Frem3	hypo	-0.328621686
Pamr1	hypo	-0.317235073
AABR07002353.2	hypo	-0.31334082
Cdh13	hyper	0.343647468
Kif13a	hyper	0.317275278
Trpm8	hypo	-0.378884
Tmco5b	hypo	-0.317572158
Zfp385d	hypo	-0.423524776
Trhde	hypo	-0.390577997
Fundc1	hypo	-0.321664317
Atp11a	hypo	-0.368206561
Hps3	hypo	-0.367064036
Ksr2	hypo	-0.347421259
Chaf1b	hypo	-0.307595619
Kif5c	hypo	-0.328495801
Rab27a	hypo	-0.343171421
AABR07052573.1	hypo	-0.576679132
Hspa12b	hyper	0.344073706
Ephx2	hypo	-0.392291052
Slco1c1	hypo	-0.345289263
Dlc1	hyper	0.315093959
Olfm2	hypo	-0.363099371
Ticam2	hyper	0.339487096
Opcml	hypo	-0.319283632
Runx1t1	hypo	-0.3096745
AABR07033285.1	hypo	-0.347146074
Tpmt	hypo	-0.415227014
AABR07068046.1	hypo	-0.314725046
PnlDC1	hyper	0.330338763
AABR07003433.1	hypo	-0.381791393
AABR07007121.1	hypo	-0.408251975
Scarb1	hyper	0.389169942
AABR07037243.1	hypo	-0.354660064
Tecta	hyper	0.371798204
Mpzl1	hypo	-0.335159946
AC121204.3	hypo	-0.300516912

Arhgap28	hyper	0.303788849
Slc39a8	hypo	-0.415845708
Abcb1a	hyper	0.357344103
AABR07067076.1	hypo	-0.334198027
Mmp2	hyper	0.3783748
Sema3a	hypo	-0.366077707
AABR07054367.1	hyper	0.374272926
Cep70	hyper	0.302469222
AABR07011057.1	hypo	-0.405259793
Tnr	hypo	-0.304650658
Klhl18	hypo	-0.346448162
Ntrk2	hyper	0.327218451
Metap1d	hyper	0.363409889
Synpr	hypo	-0.363123336
Cfap44	hyper	0.366632546
AABR07057219.1	hyper	0.416721788
Drgx	hypo	-0.327253655
Ttc22	hyper	0.326576973
RT1-CE1	hyper	0.310982056
Shld1	hypo	-0.309186194
AABR07065124.2	hyper	0.30692123
Pam	hypo	-0.312123655
AABR07072017.1	hyper	0.340967236
Abca12	hyper	0.407434489
Agbl1	hyper	0.303184152
Rab31	hypo	-0.408735685
Daw1	hypo	-0.363011735
Acer1	hypo	-0.322072224
Nadsyn1	hyper	0.321444495
Mybn	hypo	-0.311858285
AABR07061455.1	hypo	-0.302990759
Col6a6	hyper	0.321982325
Alox5ap	hyper	0.343348582
Fli1	hyper	0.336627179
Rln1	hyper	0.35283459
Pla2g4a	hypo	-0.427115812
Efcab3	hypo	-0.325838602
Adgrl3	hypo	-0.306344238
Veph1	hyper	0.344626604
Arhgef33	hypo	-0.364336342
AABR07059495.1	hyper	0.342107045
Tanc1	hypo	-0.31198728
RF00548	hypo	-0.349018765
AABR07019088.1	hypo	-0.365117999
Gria2	hypo	-0.306715846
AABR07058647.1	hypo	-0.363649158
Proca1	hyper	0.382092751
Slc9a2	hyper	0.374791704

Zfp521	hypo	-0.315092512
Stxbp4	hyper	0.385196141
Masp1	hyper	0.303180072
Gm45713	hyper	0.328917917
Hcn1	hyper	0.432395384
Trpm6	hypo	-0.320943741
Lhfpl1	hypo	-0.308244965
Bicral	hyper	0.357184449
AABR07039033.1	hypo	-0.354451876
Hecw1	hyper	0.382693483
Vtcn1	hyper	0.321659118
Ltbp1	hyper	0.347230102
Brdt	hyper	0.326880001
Lama2	hyper	0.326480412
AABR07008287.2	hypo	-0.350643503
Pou2af1	hyper	0.328783649
Adamts18	hyper	0.320672544
Maats1	hyper	0.313760612
Ccdc178	hyper	0.386209754
Dnah8	hypo	-0.346309974
Ptprr	hypo	-0.323966795
Tex14	hyper	0.35422749
AABR07021355.1	hypo	-0.330524114
Fam149a	hypo	-0.32077739
Espn	hyper	0.348394888
Bicc1	hypo	-0.317718887
Cd163	hypo	-0.308656938
Spred2	hyper	0.389695313
Ankrd33b	hyper	0.328848402
Cps1	hypo	-0.331351502
Pla1a	hyper	0.304087655
Sept06	hyper	0.521797212
AC107505.1	hypo	-0.442906116
Pcbp3	hypo	-0.310475912
Susd5	hyper	0.320157099
GxyIt1	hyper	0.312834407
Swsap1	hyper	0.32106235
Alox5	hyper	0.324966982
Zdhhc14	hyper	0.310033788
Ptpn21	hypo	-0.33916447
Pafah2	hyper	0.333012924
Papln	hyper	0.312720321
Zmynd8	hypo	-0.311784775
Zfp385b	hyper	0.336556406
Fer1l5	hyper	0.389007327
Timd2	hyper	0.384792089
Mctp1	hypo	-0.310803687
Dnah7	hyper	0.454872412

RGD1307443	hyper	0.391938371
Clvs1	hyper	0.309844182
Pah	hyper	0.319231182
Arhgef10l	hyper	0.317743029
Rapgef4	hypo	-0.361487897
Adamts19	hypo	-0.320604299
Mogat1	hypo	-0.321522613
Arhgap15	hypo	-0.309054619
Nmt1	hypo	-0.335294612
Coil	hyper	0.372354423
Rbpjl2	hyper	0.371035113
Mxra7	hyper	0.309402267
Sulf1	hyper	0.349557145
Cnksr2	hypo	-0.34254629
Glra3	hypo	-0.346135457
Ephb1	hyper	0.565928657
Ndufs3	hyper	0.377250963
Glcci1	hypo	-0.400804275
Cdhr2	hypo	-0.308713657
Lrrc69	hypo	-0.314877853
Golph3l	hypo	-0.388027526
Slc20a2	hyper	0.319796142
Clmp	hyper	0.377016265
Reln	hyper	0.382323817
Hoxc13	hyper	0.349580449
Scg2	hyper	0.453472901
Frem1	hyper	0.313232693
Magea11	hypo	-0.312226981
Gtf2e1	hyper	0.305879699
Astn2	hyper	0.334624819
Timmdc1	hyper	0.500619229
Galk2	hyper	0.340245881
AABR07025368.1	hypo	-0.383092191
Atp6v0e1	hyper	0.344609362
AABR07068161.1	hypo	-0.37060591
Taf1b	hyper	0.342315559
Rhd	hypo	-0.332872674
Klf6	hyper	0.311205805
Atn7l1	hyper	0.332127043
Mettl24	hyper	0.326750536
Zfp407	hypo	-0.34217801
Pou1f1	hypo	-0.322253304
Fam214b	hyper	0.306808587
AABR07031533.1	hyper	0.327130792
Adgrg5	hyper	0.314028772
AABR07052585.1	hyper	0.357412342
Limk2	hyper	0.316147232
Slc27a6	hypo	-0.336932139

RGD1562683	hypo	-0.310472775
Pde8b	hyper	0.314100082
Ets2	hypo	-0.318686767
Oprm1	hyper	0.344689735
Lemd3	hypo	-0.311559108
Fam204a	hyper	0.31669812
AABR07021402.1	hyper	0.318542792
Sptbn4	hyper	0.344406047
Txlnb	hyper	0.3070684
Sez6l	hyper	0.32101999
Hydin	hyper	0.322884535
Fam91a1	hypo	-0.344933062
Map2k6	hyper	0.305857937
Acvrl1	hypo	-0.304054946
Cdkn2a	hyper	0.366895179
RGD1307947	hyper	0.426094586
Slc25a20	hyper	0.300007931
Macrodl	hyper	0.328854095
RGD1565959	hyper	0.307970072
Ddx52	hyper	0.318252664
Efhb	hypo	-0.35246756
Zfp277	hypo	-0.334414093
Nars2	hyper	0.307069402
Tbx5	hyper	0.50558099
AABR07029451.1	hyper	0.320194856
RGD1560242	hyper	0.345942421
Zmym1	hyper	0.324668223
Acaca	hypo	-0.394419482
LOC292543	hyper	0.443963533
Ptbp2	hypo	-0.370510155
Ptprc	hyper	0.446851024
Il1rapl1	hypo	-0.414594918
Dnah5	hyper	0.320726002
Nebi	hypo	-0.338740758
Ddx10	hyper	0.345443735
Map3k13	hyper	0.310002961
Slc2a13	hyper	0.336727439
AABR07021508.3	hyper	0.399304428
AABR07057997.1	hyper	0.397435761
Dgkb	hypo	-0.310980146
Ehbp1	hyper	0.305145102
Dlgap1	hyper	0.317218615
Rufy1	hyper	0.303637343
Ube2d4	hyper	0.347506881
Epm2a	hyper	0.399020961
Klhl7	hyper	0.435172435
Musk	hypo	-0.367197256
Ush2a	hyper	0.32233956

Svop	hyper	0.345518296
Kiz	hypo	-0.328367156
Rnf125	hyper	0.453195481
Ehbp1l1	hyper	0.305734161
AABR07001099.2	hyper	0.369272949
Igbp1	hyper	0.328358837
Tmem144	hypo	-0.316617473
Tmem117	hyper	0.321191045
Adcy9	hyper	0.31933326
Ankrd44	hyper	0.315609657
Pnpla1	hypo	-0.397541481
Rab19	hyper	0.429068266
Chst8	hyper	0.309205009
Hypk	hyper	0.351558002
Rgmb	hyper	0.316302366
AABR07035382.1	hyper	0.322211659
LOC108349009	hyper	0.310350417
Zbtb7c	hyper	0.362043522
Fbxo5	hyper	0.311532871
LOC102549842	hyper	0.395681139
Mep1a	hyper	0.347015297
Car10	hyper	0.345174387
Ank2	hyper	0.383446418
Hid1	hyper	0.303065244
Wdr88	hyper	0.307541573
Fbln2	hyper	0.301638776
Syt4	hypo	-0.379145511
Ston2	hypo	-0.392780116
Fam129b	hyper	0.309770742
AABR07013323.1	hyper	0.306885844
Rnls	hypo	-0.353610076
Fam240b	hyper	0.313215647
Rpl30	hyper	0.323217623
Psmc3	hyper	0.330359639
Cct4	hypo	-0.326080997
Pard3	hyper	0.397377346
Ccpg1os	hypo	-0.357049987
Kdm4b	hypo	-0.373778449
Scml4	hypo	-0.42942273
Prkd1	hyper	0.353288685
AC129815.1	hyper	0.325275209
Tsen2	hyper	0.35340269
Emc2	hyper	0.477235248
Gja1	hypo	-0.33378457
AC094784.1	hypo	-0.412288876
Mrps27	hyper	0.356275589
AABR07026989.1	hyper	0.351847139
Galnt11	hyper	0.342140943

Cntn1	hyper	0.407983946
Hey2	hyper	0.362354078
Foxp2	hypo	-0.309791586
Asb4	hyper	0.340439651
LOC102553386	hyper	0.386272639
Zfp366	hypo	-0.313859101
Tmco2	hyper	0.459343189
Cstf1	hypo	-0.340800663
Sytl3	hyper	0.408228563
AABR07028669.1	hyper	0.381926667
Vwa8	hyper	0.410867963
RGD1560925	hyper	0.322555217
Foxi1	hyper	0.320332085
AABR07001493.1	hyper	0.412704199
Dytn	hyper	0.315077882
Galnt6	hyper	0.303903254
Oit3	hyper	0.378860748
AABR07042654.2	hyper	0.375459691
Tnfsf14	hyper	0.31810728
Ebf1	hyper	0.426256182
AABR07055789.1	hypo	-0.403802859
AABR07008293.1	hypo	-0.385325242
LOC499796	hyper	0.373009425
Luzp2	hyper	0.351658211
Nrsn1	hyper	0.404577732
Spata3	hyper	0.333898439
Apod	hyper	0.328573013
Tp73	hyper	0.405695741
Mdp1	hyper	0.370736283
Slc2a9	hyper	0.319339345
Gys2	hyper	0.354680827
C2cd6	hyper	0.314006488
RGD1562378	hyper	0.44370553
Tmprss11e	hypo	-0.334730185
Ptprd	hypo	-0.356493771
Rgs8	hyper	0.312317483
Grm1	hyper	0.373368381
Cox10	hyper	0.36197784
LOC100362110	hyper	0.377130139
Cpne8	hyper	0.338328798
Wdr66	hyper	0.413151632
Galnt5	hyper	0.34010156
LOC498236	hyper	0.43160481
AABR07070312.1	hyper	0.334646904
Uvssa	hypo	-0.352613381
Txk	hyper	0.30458815
Trpm1	hyper	0.314651731
Kat8	hyper	0.355715071

Nedd4l	hyper	0.305480431
Zxdc	hyper	0.346682185
AC131521.1	hyper	0.327463386
AABR07054818.1	hyper	0.339408728
AC141220.4	hyper	0.431495541
Baalc	hyper	0.308843051
Lgr4	hyper	0.358075701
Kcnk10	hyper	0.313647822
Grxcr2	hyper	0.352876649
Ptar1	hyper	0.353503229
Abca13	hyper	0.431342123
Mrpl33	hyper	0.363307115
Arl13b	hyper	0.364047274
Plcb1	hyper	0.329102328
Dock7	hyper	0.331305776
Utp6	hyper	0.328100594
Prex2	hypo	-0.31306017
Gna15	hyper	0.344396388
Stx8	hypo	-0.309239419
Csf1	hyper	0.392827621
AABR07049790.1	hyper	0.378730109
AABR07033882.1	hypo	-0.306347061
Proz	hypo	-0.357904222
Vstm2l	hyper	0.316896198
Lsg1	hyper	0.375924409
Nox3	hyper	0.353269944
B3glct	hyper	0.338760208
Pbx3	hyper	0.520827026
Usp29	hypo	-0.345981514
Mdga1	hyper	0.344230453
Nenf	hyper	0.340831673
Mttp	hyper	0.378263971
Nphp3	hyper	0.319019259
Ftl1	hypo	-0.433112936
Spata16	hypo	-0.31546694
Ppm1h	hyper	0.313857669
AABR07018326.1	hyper	0.308838819
Mas1	hypo	-0.358983589
AC094212.1	hyper	0.403997661
Ncaph2	hyper	0.377617544
Sbf2	hyper	0.324136784
Mapkapk5	hyper	0.331005557
Dab1	hyper	0.320724265
Tex26	hyper	0.395225534
AABR07026778.1	hyper	0.344520873
Scn4b	hypo	-0.319826519
Mill1	hyper	0.306522273
AABR07012131.1	hyper	0.380848172

Cryga	hyper	0.416274248
Mcm8	hypo	-0.311873663
Mtus2	hyper	0.404830162
Apc2	hyper	0.321675291
Slx1b	hyper	0.342181411
Lrrc29	hyper	0.31104674
PCOLCE2	hypo	-0.323820117
RF00026	hyper	0.381515244
Dnhd1	hyper	0.414214659
Slc7a11	hyper	0.488105029
Pax9	hyper	0.328559456
Pcdha12	hyper	0.309178775
LOC100909595	hyper	0.350493714
Plppr5	hypo	-0.430285978
Saxo1	hypo	-0.36917206
AABR07058884.1	hyper	0.361554753
Slc15a5	hyper	0.300390719
Serpinb9	hyper	0.345495015
Sertm1	hyper	0.321171929
Hmgcll1	hyper	0.521209493
Psm11	hyper	0.305850123
Arpc1a	hyper	0.302052281
Atp6v1b1	hyper	0.325135167
Tcf20	hyper	0.3619194
Prss21	hyper	0.300048603
Mtnr1a	hyper	0.339269204
Lix1	hypo	-0.33360438
Uprt	hyper	0.454411199
ST7	hyper	0.30476063
Agmo	hypo	-0.306560433
Mgmt	hyper	0.371129315
Got1l1	hyper	0.302308059
Parp6	hyper	0.308917609
Itga11	hyper	0.328765952
Mrap2	hyper	0.337824228
RGD1560436	hypo	-0.300592785
Mrpl45	hyper	0.34848904
Ranbp2	hyper	0.338813765
Nudt11	hyper	0.475204438
Chn2	hyper	0.348294152
Ifngr1	hyper	0.367492035
Aff3	hypo	-0.303523565
Ctsc	hyper	0.383599326
Atp8b1	hyper	0.455857055
Aip	hyper	0.305281664
Gdnf	hypo	-0.320961582
Txndc12	hyper	0.327159744
Dmrt1	hyper	0.301116998

Scnn1g	hyper	0.320148762
Ptprg	hyper	0.375086081
Hdhd5	hyper	0.301864035
Slc9a9	hyper	0.319462667
LOC103689965	hypo	-0.373195909
Ank3	hyper	0.413230377
Slc5a7	hyper	0.423102879
Ckap2l	hyper	0.307689672
Nhlrc3	hyper	0.329619514
AC094053.1	hypo	-0.434234341
Zrsr2	hypo	-0.403824468
Cenpn	hyper	0.348141997
Lman1l	hyper	0.317270318
Cntn5	hyper	0.34554797
Nrde2	hyper	0.389730192
LOC691083	hyper	0.374700438
Acot6	hyper	0.368616333
Adgrb3	hypo	-0.350087295
Ogt	hyper	0.530230227
Pls3	hyper	0.317330756
Rims2	hypo	-0.3659945
Rhot1	hyper	0.320932061
LOC102548286	hyper	0.334606043
Rbms3	hypo	-0.48168954
Nkain2	hyper	0.402911271
AABR07071278.1	hypo	-0.305642135
Unc45b	hyper	0.352598165
AABR07047872.1	hyper	0.321172448
Stk38l	hypo	-0.340722732
Cbfa2t2	hyper	0.350789123
Chat	hyper	0.371034335
Sltm	hypo	-0.300801162
Klhl28	hyper	0.331628592
Ccdc39	hyper	0.344340624
RGD1305713	hyper	0.351676014
Ntn4	hyper	0.353252032
Dcc	hyper	0.307228804
AC134204.1	hypo	-0.30529642
Pdzrn4	hyper	0.300330017
Eif3f	hyper	0.373793197
Zdhhc1	hyper	0.308364042
Mboat4	hyper	0.30923405
Fggy	hyper	0.360274968
AABR07044668.1	hyper	0.33070619
Adam12	hyper	0.402494349
Xpr1	hyper	0.304151745
Haus7	hyper	0.400380349
Arhgef6	hyper	0.473954504

Dera	hyper	0.325475142
Gata6	hyper	0.323111982
Six4	hyper	0.310302717
AABR07015800.2	hyper	0.331819156
Adam8	hyper	0.303944507
Nuf2	hyper	0.335424271
AABR07030086.1	hyper	0.342096413
Rpp40	hyper	0.354456013
Lctl	hyper	0.311609984
Manea	hypo	-0.355346322
Camk2d	hypo	-0.336199197
Dock5	hyper	0.300675381
Csrnp3	hypo	-0.319984121
Echdc3	hypo	-0.311417051
Atl1	hyper	0.313431086
Pced1b	hyper	0.398676858
Samd14	hypo	-0.332238009
Myo7a	hyper	0.307834743
Taf7	hyper	0.327824965
Dhrs3	hyper	0.355250337
Cbs	hyper	0.324488446
Kynu	hypo	-0.300574835
Gpc6	hyper	0.370580013
Senp17	hyper	0.407094264
Atp10d	hyper	0.392408491
Hdgfl1	hyper	0.31041816
Stxbp5l	hyper	0.357275221
Rnf212	hyper	0.323926883
Prorsd1	hyper	0.363902271
Lpin1	hyper	0.322698289
Cox5b	hyper	0.309403246
Unc5cl	hyper	0.310133701
Adam32	hypo	-0.393023874
Zmym6	hyper	0.300865987
Baz2b	hyper	0.354087967
Morc2	hyper	0.310447986
Ptges3l	hyper	0.320709921
Robo1	hyper	0.300072684
Spata48	hyper	0.343244153
Cdk17	hypo	-0.320824632
Phldb2	hyper	0.332992745
Plscr1	hyper	0.374582915
C8b	hyper	0.348124194
Srrm3	hyper	0.3327576
Colgalt2	hyper	0.327352142
Cacna2d1	hypo	-0.301239558
Trim42	hyper	0.300370393
Noct	hyper	0.310884685

Glo1	hypo	-0.300271304
Fam3a	hyper	0.459040296
AC118165.1	hyper	0.316758402
Them4	hyper	0.305794166
Abcb11	hyper	0.330824403
Olr163	hyper	0.386391782
AABR07026623.1	hyper	0.394523046
Tnpo3	hyper	0.332366811
AABR07035946.1	hyper	0.308392059
AC141334.3	hyper	0.326410071
Ccdc32	hyper	0.304927836
LOC108348215	hyper	0.381049076
Rin3	hypo	-0.324164394
Cald1	hyper	0.355273072
Nts	hyper	0.358724325
Magi2	hyper	0.330805713
AABR07007035.1	hypo	-0.442217037
Mmp24	hyper	0.352407193
Bmp4	hyper	0.42757792
AABR07044198.1	hypo	-0.323062428
Nrxn1	hyper	0.300382704
Jade1	hyper	0.30204464
Rmdn1	hyper	0.307500255
AC098008.5	hypo	-0.305506579
Brinp3	hyper	0.415327349
Tnfrsf14	hyper	0.390475202
Greb1l	hypo	-0.302404251
Skap2	hyper	0.32656823
Thsd7b	hyper	0.353426897
Best1	hyper	0.363334282
Serpib5	hyper	0.310014959
Ero1a	hyper	0.305316157
Casr	hyper	0.310971581
Prokr2	hyper	0.369875692
Klf17	hyper	0.311396464
Ivd	hyper	0.337146427
Clec4g	hyper	0.335741813
Pcsk1	hyper	0.314365409
AC099302.1	hyper	0.37695911
Capn2	hyper	0.312711824
Ccnh	hyper	0.337769924
AABR07050423.1	hypo	-0.315448985
LOC498750	hyper	0.319307471
Cemip2	hyper	0.302201282
Pank3	hypo	-0.389807703
Nrxn3	hyper	0.420978634
Ccnb1	hyper	0.300657082
Lmo7	hyper	0.33051368

Skap1	hyper	0.338410431
Adcy10	hyper	0.377131091
Il15ra	hyper	0.309752486
Ddc	hyper	0.336153747
Rev3l	hyper	0.333579147
Dpys	hyper	0.313250032
Robo2	hyper	0.335513464
Trim54	hyper	0.328339818
Cdh8	hyper	0.331711417
Ccdc148	hyper	0.322818767
Cngb1	hyper	0.313454325
Gap43	hyper	0.376384644
Rassf3	hyper	0.339199534
Xkrx	hyper	0.457334042
Peg3	hyper	0.348797476
Ptprt	hyper	0.35302072
Atf7	hyper	0.317944353
Arrb1	hyper	0.311213938
Ugcg	hyper	0.329030114
Grin2d	hyper	0.330123888
Ppp3ca	hypo	-0.316651738
Tnnt1	hyper	0.312354793
Atp2b3	hyper	0.347003888
Map7d3	hyper	0.456350051
Mctp2	hyper	0.310724013
Mfsd13a	hyper	0.397207687
Lcp1	hyper	0.332002115
AABR07049079.1	hyper	0.344526611
Lrit3	hyper	0.32250417
Acta2	hypo	-0.333325072
Rxrg	hyper	0.312686351
Slc27a5	hyper	0.330296771
Naglt1	hyper	0.391124078
Tjp2	hyper	0.31340999
Zfhx4	hyper	0.304273998
Spon1	hyper	0.307618726
RGD1565641	hyper	0.349492256
Igsf21	hyper	0.389421277
Nr3c2	hyper	0.336852034
Krtdap	hyper	0.386766004
Pcdh15	hyper	0.339210175
Hhat	hyper	0.32798901
Cd109	hyper	0.352794516
RF00619	hyper	0.410796483
AABR07067471.2	hyper	0.313108278
RF00560	hypo	-0.304406873
LOC100364002	hyper	0.398550679
AC127084.2	hyper	0.325112235

AABR07012826.1	hypo	-0.315929754
RGD1560171	hypo	-0.309551247
AABR07007916.1	hyper	0.388512868
Zfp474	hyper	0.336595925
Ppfia2	hyper	0.304445858
Grid2	hyper	0.343830519
LOC499643	hyper	0.337741856
Clec4a3	hyper	0.360681842
Asph	hyper	0.315369325
Elovl7	hyper	0.330081187
Fam49a	hyper	0.304797296
Dpyd	hyper	0.420780688
AABR07043825.1	hyper	0.309185516
LOC498152	hyper	0.312714974
Zfp281	hyper	0.408347374
Neurod4	hyper	0.338917089
LOC367830	hypo	-0.327218664
Plekhg1	hyper	0.327043064
AC129395.2	hyper	0.321592808
Zkscan8	hyper	0.455442494
Syndig1	hyper	0.305396532
Ssbp2	hypo	-0.321156163
AABR07016586.1	hyper	0.331334549
Krt25	hyper	0.339950271
Npsr1	hyper	0.358838195
Kdm2a	hyper	0.300030066
AABR07007775.1	hypo	-0.301999013
Gabra2	hypo	-0.343732357
RGD1308601	hypo	-0.3035012
AABR07011057.2	hypo	-0.405259793
RT1-CE7	hyper	0.310982056
Flt3lg	hyper	0.328917917
Pla2g7	hypo	-0.315939527
AABR07038578.1	hypo	-0.414594918
Evi5	hyper	0.347506881
Mfap1a	hyper	0.351558002
AABR07024463.1	hypo	-0.364405484
Lepr	hyper	0.325275209
Dhrs11	hyper	0.386272639
Dhtkd1	hyper	0.431495541
Scn2a	hyper	0.347650143
AABR07054361.1	hyper	0.350789123
AABR07015800.1	hyper	0.331819156
AABR07030086.2	hyper	0.342096413
Tepp	hyper	0.313454325
Apeg3	hyper	0.348797476
Nfkbil1	hyper	0.310982056
RT1-CE4	hyper	0.310982056

Appendix 5.H

WGBS comparison between FOF1 and FOF1

Gene	Direction	lfcSE
Tmem232	hyper	0.32878019
Tmem232	hypo	-0.3732365
Il1rap	hyper	0.30485363
Il1rap	hypo	-0.3003883
Mycbp2	hyper	0.30195328
Mycbp2	hypo	-0.3024787
Ptprn2	hypo	-0.3154545
Prrx1	hyper	0.37000684
Zfp605	hypo	-0.7522852
Pag1	hyper	0.60107502
Csmd1	hypo	-0.3523528
Mindy3	hypo	-0.326876
Lpin1	hypo	-0.3298325
Shisa1	hyper	0.40348298
Nsg2	hyper	0.32225749
Sgcg	hyper	0.37959425
Tor3a	hypo	-0.3458061
Dach1	hypo	-0.3281002
Myzap	hypo	-0.3073186
Inpp4b	hyper	0.32246013
Cd109	hypo	-0.3034754
Svep1	hypo	-0.3518091
Hecw1	hypo	-0.3273474
LOC691083	hypo	-0.3042286
LOC498308	hypo	-0.3269797
Xxylt1	hyper	0.30196265
Ppp1r3c	hyper	0.31620093
Cped1	hypo	-0.3168626
Scn3a	hypo	-0.4210099
Kcnc2	hypo	-0.3092243
Ust	hypo	-0.3037795
Creb3l1	hyper	0.35706646
Slc8b1	hyper	0.34275591
Tmem132b	hyper	0.32211312
Plppr1	hypo	-0.3287358
Mmd2	hypo	-0.3206737
Chd1l	hyper	0.38577203
Tenm4	hypo	-0.3204318
Dock9	hyper	0.36931203
Cpeb3	hyper	0.45396343
Stard13	hypo	-0.3069985
Itga8	hypo	-0.4163128
Adamts9	hyper	0.40502259

Pdcd2l	hyper	0.41887186
AABR07035946.1	hyper	0.31885446
AABR07027819.1	hypo	-0.3303312
Ndst4	hypo	-0.3293091
AABR07024769.1	hyper	0.33926187
Rpl3	hyper	0.33510986
Banp	hypo	-0.332418
Gkn3	hyper	0.3227537
LOC108348061	hyper	0.31136207
Prss35	hypo	-0.3272471
Usp53	hypo	-0.3350362
Mmp16	hypo	-0.4431868
Hs3st5	hypo	-0.3246688
Rbfox1	hyper	0.31381889
AABR07061178.1	hyper	0.44350728
Rps6ka2	hypo	-0.3204991
Slain1	hypo	-0.3024787
Rims2	hypo	-0.3758394
Scg2	hyper	0.34804617
Golph3l	hypo	-0.3517962
Rnls	hypo	-0.3979124
Casp8	hyper	0.32084316
Ldb2	hypo	-0.4022655
Tmem154	hyper	0.4448957
Alox5ap	hyper	0.33391636
Cyp7b1	hyper	0.32573282
Satb2	hypo	-0.459205
Eef1akmt3	hypo	-0.3578173
Gria3	hypo	-0.3011768
AABR07028785.1	hyper	0.34349887
Slc17a6	hypo	-0.3028725
Cdkl5	hypo	-0.3076129
Sept06	hyper	0.36558785
Oprm1	hyper	0.35196162
Usp29	hypo	-0.3776205
Nfkb1	hypo	-0.3385745
Stxbp5	hyper	0.35229685
Nmi	hypo	-0.3197296
Tmed5	hyper	0.35568622
Tmprss11e	hypo	-0.3062093
Tbc1d5	hyper	0.32883857
Usp54	hypo	-0.319273
Pde1b	hyper	0.38369295
Rbms3	hypo	-0.3366303
Prr4	hypo	-0.4437344
Jph2	hyper	0.31315415
Arhgap15	hyper	0.32539965
Espn	hyper	0.34108333

D2hgdh	hypo	-0.3806518
AABR07068046.1	hyper	0.30752001
Fam3a	hyper	0.59016921
Tnfaip8	hyper	0.33378241
Klhl7	hyper	0.41158498
Usp4	hypo	-0.3124654
Ints4	hyper	0.40562811
AABR07025368.1	hypo	-0.3114977
Ndst3	hyper	0.42552602
Nipal2	hyper	0.35474459
Rnf169	hypo	-0.3617198
AABR07042654.2	hyper	0.34340092
Dnajb13	hyper	0.36335823
Cbx5	hyper	0.47936618
Cntn5	hyper	0.32655657
AABR07069282.1	hyper	0.33086477
Ptger4	hyper	0.39190891
Akr7a3	hyper	0.30772089
Sptlc2	hypo	-0.3204015
Camta1	hypo	-0.3164576
Saxo1	hyper	0.36155658
Nt5c1b	hyper	0.32267552
Vwa5b1	hyper	0.35020375
Ntrk2	hyper	0.36037634
Ephb1	hyper	0.35892743
RGD1560860	hyper	0.31104067
LOC499796	hyper	0.3095253
Zkscan3	hyper	0.40202084
AABR07007035.1	hypo	-0.4021594
Ispd	hyper	0.30602616
Itpr1	hyper	0.30332999
Plec	hypo	-0.3049955
Igsf21	hyper	0.31009926
Cdh13	hyper	0.39415599
Onecut2	hyper	0.31339556
Zpbp	hyper	0.38813306
Slit2	hyper	0.30549969
Atp6v0a4	hyper	0.36137684
Prorsd1	hyper	0.31871285
Megf10	hypo	-0.313363
Wdr41	hypo	-0.3272696
Blk	hypo	-0.3396888
Rxrg	hyper	0.32760956
AC099302.1	hyper	0.43660504
Pxmp2	hyper	0.3123119
Ptprm	hypo	-0.400567
Rest	hyper	0.33246532
Colgalt2	hypo	-0.3108205

AC107505.1	hyper	0.35388329
Pde4d	hypo	-0.3114226
Lama4	hypo	-0.3682812
Atp13a4	hyper	0.36548063
AC122968.1	hyper	0.42114115
AABR07062751.1	hyper	0.37533244
Nrxn3	hyper	0.31704787
AC103335.1	hypo	-0.3453299
Bmp6	hypo	-0.3123759
Hebp1	hypo	-0.3105518
Nectin4	hyper	0.30635955
Spata4	hyper	0.33051994
Hormad2	hyper	0.30712841
LOC103689965	hypo	-0.3420579
Npc1l1	hyper	0.35556106
AABR07015800.2	hyper	0.30476158
Lrrtm4	hypo	-0.3383274
Hmgcll1	hyper	0.44114328
Igsf1	hyper	0.39500985
Rgs1	hyper	0.352566
Mnat1	hyper	0.30404205
Zp3r	hyper	0.38766722
AABR07011057.1	hyper	0.36838658
Nrxn1	hyper	0.3613031
Nkain2	hyper	0.32718949
Ntn4	hyper	0.31321278
Spef2	hyper	0.36881103
Magi2	hypo	-0.3141634
Plcb1	hyper	0.31850584
LOC499219	hypo	-0.3281007
Ppfia2	hyper	0.44635811
Arhgef40	hyper	0.31601408
S100a3	hyper	0.33730227
Vwde	hyper	0.40977047
Utrn	hyper	0.35933529
Crb1	hypo	-0.3854771
RGD1563861	hyper	0.33497821
AABR07060487.1	hyper	0.32215768
Oprd1	hypo	-0.3096751
Serpinb13	hyper	0.34123876
Cntn6	hypo	-0.3042415
Nkain3	hypo	-0.3161189
Zfp281	hyper	0.30582678
Samd12	hyper	0.3484585
Thsd7b	hyper	0.35507038
Lsamp	hyper	0.34227132
AABR07017902.1	hyper	0.31834829
AABR07044408.1	hypo	-0.3300561

Luzp2	hyper	0.37423115
Cggbp1	hypo	-0.3218483
Map7d3	hyper	0.33929328
Zfp219	hyper	0.31948608
Il1rapl2	hyper	0.30485363
Kcnab1	hyper	0.30514927
Robo2	hyper	0.31011836
Rassf9	hyper	0.30885477
Mdga2	hyper	0.35418434
Erc2	hyper	0.30843367
Hacd2	hyper	0.32528347
Plcx1	hypo	-0.7522852
Abl2	hypo	-0.3458061
AABR07052405.1	hypo	-0.4210099
Rs1	hypo	-0.3076129
Scn9a	hyper	0.42114115
AABR07015800.1	hyper	0.30476158
AABR07017902.3	hyper	0.31834829

Appendix 5.I

Common differently methylated genes in the comparisons
between FOF1 and FOF1 and FOF1 and FOF1

AABR07007035.1	Luzp2
AABR07015800.2	Magi2
AABR07025368.1	Map7d3
AABR07035946.1	Mycbp2
AABR07042654.2	Nkain2
AABR07068046.1	Nrxn1
AC099302.1	Nrxn3
AC107505.1	Ntn4
Alox5ap	Ntrk2
Arhgap15	Oprm1
Camta1	Plcb1
Cd109	Ppfia2
Cdh13	Prorsd1
Cntn5	Ptpm
Colgalt2	Rbms3
Ephb1	Rims2
Espn	Rnls
Fam3a	Robo2
Golph3l	Rxrg
Hecw1	Saxo1
Hmgcll1	Scg2
Igsf21	Scn3a
Inpp4b	Sept6
Klhl7	Serpinb13
Ldb2	Thsd7b
LOC103689965	Tmem232
LOC499796	Tmprss11e
LOC691083	Usp29
Lpin1	Zfp281

Appendix 5.J

WGBS comparison between FOF1 and FOF1

Gene	Direction	lfcSE
Chd1l	hyper	0.41819129
Chd1l	hypo	-0.3637106
Nrxn3	hyper	0.31519847
Nrxn3	hypo	-0.3066047
AABR07033882.1	hyper	0.30185172
AABR07033882.1	hypo	-0.3024919
Alox5	hyper	0.34341862
Alox5	hypo	-0.3195727
Tmem232	hypo	-0.3493218
Cmtm5	hypo	-0.3808458
Mindy3	hypo	-0.3111531
Atrnl1	hyper	0.40772901
Csmd1	hypo	-0.3187976
Alox5ap	hyper	0.34341862
Tmem132d	hypo	-0.3123286
Pag1	hyper	0.49205101
Tor3a	hypo	-0.3624388
Vti1a	hyper	0.32739285
Grik4	hypo	-0.3890391
AABR07071440.1	hypo	-0.3325471
Ksr2	hypo	-0.3123101
Atp11a	hypo	-0.3639456
Klhl32	hyper	0.48045464
AABR07072371.1	hypo	-0.4930887
Nsg2	hyper	0.30743758
Ptpn13	hypo	-0.3006502
Arhgef28	hypo	-0.3138637
Mmd2	hypo	-0.3574899
Cpe	hyper	0.33184538
AABR07052573.1	hypo	-0.4719973
Ssbp2	hypo	-0.3104203
AABR07026473.1	hypo	-0.4309141
Cdyl2	hypo	-0.3196973
Pclo	hypo	-0.3464368
Sgk1	hypo	-0.3058618
Hs3st5	hypo	-0.366162
Adgrv1	hyper	0.34507835
Hacd2	hyper	0.34774107
Acvrl1	hypo	-0.3215601
Sept06	hyper	0.39877291
AABR07057765.1	hypo	-0.3340828
Banp	hypo	-0.3245303
Asb18	hypo	-0.3053416

Lama4	hyper	0.41484533
Dpp6	hypo	-0.3825699
Ildr2	hypo	-0.3187355
Insr	hypo	-0.3070732
Cacna2d3	hyper	0.40062327
Caln1	hypo	-0.3164666
Zfyve26	hypo	-0.305045
LOC100362149	hyper	0.39760098
Enpp5	hyper	0.31895
Fry	hypo	-0.3247508
Tll1	hypo	-0.3610738
Nr3c2	hyper	0.41467289
Smarca2	hyper	0.33314019
Mapk10	hyper	0.35657791
Abca12	hypo	-0.3831003
Akr1e2	hypo	-0.3042433
LOC103689965	hypo	-0.3855967
Sema3e	hypo	-0.3225528
Ly49i4	hyper	0.37425428
Btbd11	hypo	-0.3013976
D2hgdh	hypo	-0.3084105
Magi2	hypo	-0.3821335
Blk	hypo	-0.3066376
Anks1b	hypo	-0.3110122
Ust	hypo	-0.3280749
Rbms3	hypo	-0.3245393
Dlgap2	hypo	-0.3320932
Vangl1	hypo	-0.326296
Themis	hyper	0.31952017
Rab31	hypo	-0.3164097
Grm8	hypo	-0.3620101
LOC103690241	hypo	-0.3561594
Saxo1	hyper	0.3064764
Mycbp2	hypo	-0.3343666
Pank3	hypo	-0.3670624
AABR07032469.1	hypo	-0.3078381
Clcn4	hypo	-0.365331
Ddr2	hyper	0.32151626
Grm5	hypo	-0.3107274
Dmd	hyper	0.31383949
LOC103694491	hyper	0.31672179
Slc26a7	hypo	-0.3016402
Hyal4	hypo	-0.3033682
LOC102555749	hyper	0.30713691
Sh2d1a	hypo	-0.307248
St6galnac3	hypo	-0.3084101
AABR07017902.1	hyper	0.33761364
AABR07065161.1	hyper	0.31519847

Abl2	hypo	-0.3624388
Ly49s4	hyper	0.37425428

Appendix 5.K

Common differently methylated genes
in the comparisons between FOF1 and
FOF1, FOF1 and FOF1, and FOF1 and
FOF1

Alox5ap
LOC103689965
Magi2
Mycbp2
Nrnx3
Rbms3
Saxo1
Sept6
Tmem232

Appendix 5.L

Sperm proteome comparison between FOF1 and FOF1

Gene	log2foldchange	p-value
Spesp1	-0.904717267	0.01687052
Ca1	-2.700170026	9.40E-05
Fam24a	-1.147281309	0.000932648
Cul3	-0.744769988	0.034769076
Spata31	-1.99531488	0.000105069
Alb	-6.740321594	0.000176998
Hspa2	-0.765944199	0.017262244
Sdhb	0.975009393	0.041822276
Hmox2	-0.650906708	0.017844127
Ca2	-2.293708026	0.000431082
Acr	-1.40812272	0.01959626
Gclm;Gcln	-0.708924803	0.014510681
Fabp9	-0.730355397	0.029919402
Ppp2cb	-0.683437586	0.020138923
Hint1	-1.009503632	0.004189828
Phb	1.117817576	0.030847173
Acta1	-0.732545807	0.031610966
Eqtn	-0.69487057	0.022638803
Yod1	-0.793677568	0.020588434
Gas8	0.839575903	0.045701893
Msrb2	0.996981695	0.041541666
Ppp2r1b	-0.677536225	0.025378311
Nudcd2	-0.747433823	0.04490185
Tcp11	-0.787568458	0.009212434
Lpp	-0.997960558	0.005466709
Ccin	-0.924475125	0.018860934
MENT	-0.786058152	0.039737557
Actl7a	-0.818304662	0.02191648
Smcp	1.079328064	0.014325474
Mpi	-0.658091057	0.045089476
Gsto2	-1.055611783	0.010254916
Cdyl	-0.859428863	0.021305499
Dnajb6	-0.86825563	0.004854103
Klhl10	-0.771151061	0.023094183
Gde1	-0.827875925	0.035867284
Vapa	-0.592081096	0.044201772
Psmb6	-0.792947193	0.023502381
Ppp2r2d	-0.887065748	0.029963297
Hba-a2	-1.392553272	0.005263878
Spata31d3	-0.873335542	0.012551057
LOC681067	-0.824967877	0.034352073
Fam205c	-0.801377433	0.01799836
Pde1a	-0.818667279	0.032990738

Plekhh2	-0.961246264	0.009958082
Actn4	-0.757413191	0.022912129
ANTXR-like	-1.11062819	0.003753073
Antxrl	-1.113752123	0.016334526
Cdc14b	-1.192968005	0.006207715
Nup155	-1.414804605	0.003061133
LOC689589	-1.052004937	0.003488148
Sun5	-0.757035654	0.024983882
Pdia3	-1.469518048	0.004831439
Fank1	-1.125067565	0.003085942
Spem2	-0.786412491	0.026038155
Fam71b	-0.720815062	0.025113094
Dnajb1	-1.023788791	0.003680588
Dnajc11	1.063668042	0.031295016
Ptges3	-0.595964823	0.034245162
Actl9	-1.046377123	0.00601722
Tsga10	1.306453324	0.033951717
Nup210l	-0.873118925	0.042962692
Fndc8	-0.909188777	0.01143401
Satl1	-1.047979071	0.001641023
Tppp2	-1.661214809	0.001379933
LOC100911971	-1.528690343	0.001577259
LOC102548013	-1.26513349	0.001306249
lqcf5	-0.694359972	0.049910799
RGD1560958	-1.002497752	0.007756819
Fam209a	-0.776903426	0.034792643
Gm7073	-1.024657039	0.005044125
Spata31d1d	-0.85473387	0.009028936
Hmgb4	-0.897184276	0.02209543
RGD1309139	0.642957632	0.042055187
Spata31d1c	-1.319349811	0.006949976
LOC100364680	-1.101943804	0.001722066
Prr30	-1.175545673	0.003058006
Spem1	-1.168408581	0.008581237
Atp6v1a	-0.754909833	0.009520879
RGD1311870	-0.93574083	0.010211102
Tmco2	-0.728030626	0.039955727
lpo5	-0.911007369	0.03096276
LOC689725	-1.222534059	0.002093991
Csnka2ip	-1.026351131	0.020422811
Usp25	-1.406057459	0.008490762
Hspb9	-0.663665979	0.036723763
LOC689458	-1.17884758	0.000608849
Dsp	0.987077568	0.039786216
ldh3a	1.044429472	0.012557529
Ndufb4	1.223431617	0.033926608
Hagh	-0.54348274	0.03502324
Spata20	-0.634220342	0.025299949

Spata31d1b	-0.979691058	0.003996437
Fam205a	-0.864342681	0.005888621
Ndufa12	1.217599987	0.028578258
Cyhc2	-0.780972334	0.027444245
Impa1	0.722312166	0.049481605
MGC112692	-0.615114681	0.026887824
Fam71e2	-0.75671482	0.026584981
Nrd1	-1.189174908	0.016639474
Ptpmt1	0.655143651	0.036436645
Cpt2	0.715640609	0.049898517
LOC299271	-2.299595846	0.00220736
LOC102547069	-1.044525945	0.003534314
Actl11	-1.071053332	0.003049917
LOC684444	-0.87085559	0.030256923
Ubxn6	-0.841050709	0.007511287
LOC684270	0.89377741	0.045203697
FAM75	-1.3190565	0.000605445
LOC100359615	-1.016709022	0.016316566
Dpy1912	-0.903560936	0.028001657
Pxn	-0.973546789	0.0122156
Rab2b	-0.79062277	0.012781725
Dnaja4	-0.748395467	0.008057127
Tesb	-1.040503613	0.004891454
Thns11	0.670921679	0.033193989
Trim42	-0.757834468	0.038697241
Mtx2	0.679661406	0.044682938
Actrt2	-0.750027713	0.028001389
Hbb-b1	-2.041423544	0.002213044
Fam71d	-0.866393412	0.02553846
Capza3	-0.887795742	0.024548209
Ppp1cc	-0.930540217	0.009745968
Gstm1	-1.570200628	0.002475051
Eif4a1	-0.820101413	0.007227428
Tssk2	-0.86805578	0.009631337
Dermcidin	0.743085824	0.030303456
Crisp2	-0.753196952	0.024602214

Appendix 5.M

Sperm proteome comparison between FOF1 and FOF1

Gene	log2foldchange	p-value
Fam24a	-0.537450155	0.047328608
Cul3	-0.580117888	0.010293338
Spata31	-0.983311073	0.042932276
Atp5f1	0.501278081	0.012978672
Hspe1	0.6267628	0.026707186
Fabp9	-0.689464187	0.008582663
Phb	0.693182824	0.038875424
Atp5o	0.609769647	0.005619231
Eqtn	-0.757788923	0.009008296
Yod1	-0.536365035	0.040111038
Lpp	-0.76427117	0.004258543
Ccin	-0.54358876	0.023799525
Actl7a	-0.509880901	0.023938483
Acrbp	-0.910026997	0.013976291
C7orf61 homolog	-0.556866903	0.025609493
Saraf	-0.728063513	0.016040876
Dnajb6	-0.581765235	0.032289338
Klhl10	-0.693061003	0.019848737
Fam205c	-0.557096879	0.013223823
Plekhh2	-0.61182798	0.016295122
Actn4	-0.569441151	0.011790717
Uncharacterized protein	-0.632723522	0.026425056
ANTXR-like	-1.030743612	0.010655327
LOC689589	-0.806044397	0.006670015
Lemd1	-0.708284999	0.02238891
Sun5	-0.524544008	0.033446194
Fank1	-0.8696157	0.02375906
Fam71b	-0.541572517	0.012971165
Fndc8	-0.572118506	0.011193897
Satl1	-0.621800664	0.011604412
Dnajb3	-0.55634086	0.019810515
SPATA31 subfamily E	-0.850383753	0.009283703
LOC102548013	-1.055516729	0.03022113
RGD1560958	-0.600969625	0.024750531
Gm7073	-0.523890439	0.015202877
Spata31d1d	-0.530558985	0.008987067
RGD1309139	0.520420883	0.04463622
Spata31d1c	-0.822076146	0.016489754
Fam71a	-0.591711189	0.021500737
LOC100364680	-0.7344834	0.016062058
Prr30	-0.655307252	0.011144639
Spem1	-0.513100367	0.044624875

RGD1311870	-0.76852958	0.004360065
LOC689725	-0.849310204	0.017885717
Izumo4	-0.898322952	0.048025187
Usp25	-0.956120121	0.007228704
Hspb9	-0.613500582	0.01880611
LOC689458	-0.880303168	0.019618036
Spata31d1b	-0.666261592	0.012779839
Fam205a	-0.620144401	0.013188109
Cylc2	-0.561870213	0.045029931
MGC112692	-0.691134067	0.008102704
Nrd1	-0.599726657	0.03834906
LOC102547069	-0.594192519	0.023861262
Actl11	-0.561719553	0.01586922
FAM75	-1.016736998	0.000921866
LOC100359615	-0.689265013	0.006256
Tesb	-0.657822989	0.008578338
Trim42	-0.505504008	0.029645619
Psm12	0.561338965	0.020209029
Actrt2	-0.724405906	0.004780882
Sod1	1.001685976	0.038025199
Psm6	0.647913034	0.031262733
Tssk2	-0.559884758	0.022424459

Appendix 5.N

Common differently expressed proteins in the comparisons between FOF1 and FOF1 and FOF1 and FOF1

A0A0G2K688	LOC689458
Actl11	LOC689589
Actl7a	LOC689725
Actn4	Lpp
Actrt2	MORAS5
Antxrl	MGC112692
Ccin	Nrd1
Cul3	Phb
Cylc2	Plekhh2
Dnajb6	Prr30
Eqtn	RGD1309139
Fabp9	RGD1311870
Fam205a	RGD1560958
Fam205c	Satl1
Fam24a	Spata31
Fam71b	Spata31d1b
Fank1	Spata31d1c
Fndc8	Spata31d1d
Gm7073	Spem1
Hspb9	Sun5
Klhl10	Tesb
LOC100359615	Trim42
LOC100364680	Tssk2
LOC100911971	Usp25
LOC102547069	Yod1
LOC102548013	

Appendix 5.O

Sperm proteome comparison between FOF1 and FOF1

Gene	log2foldchange	p-value
Psmc13	0.534481871	0.038137564
Fam24a	-0.640985455	0.026253557
Erlin2	-0.879162133	0.010767927
Cul3	-0.56387026	0.020393418
Spata31	-0.772628729	0.005899141
Abca17	1.010981606	0.004048938
Akap4	0.632794555	0.035617174
Alb	-8.920082809	2.94E-08
Hk1	0.500337615	0.026118388
Hspa5	-0.8050809	0.047678653
HBB2	-2.583546699	0.047541597
Ca2	-2.477077706	0.013778948
Hint1	-0.977744596	0.014366705
Pfn1	-0.741547308	0.048675168
Phb	0.67222288	0.036720035
Eqtn	-0.678423218	0.007652917
Yod1	-0.586954892	0.030504793
Lpp	-0.544025288	0.031328516
Atp1b3	0.647756526	0.034756045
Smcp	0.966107057	0.007085216
Hadha	0.512328215	0.031196921
Nup93	-0.992239654	0.014035951
Tmem38b	-0.586100194	0.047268746
Gsto2	-0.514037129	0.041679498
C7orf61 homolog	-0.640317776	0.008849183
Saraf	-0.708849844	0.007311791
Tepp	0.618508466	0.010345937
Klhl10	-0.590774001	0.034405123
Gpi	-1.695190474	0.022143394
Tekt1	0.506739964	0.045714793
Gde1	-0.639607287	0.033475064
Fsip2	0.612284931	0.046854752
Slc2a3	0.629778646	0.008938286
Hba-a2	-2.226356708	0.006030639
Spata31d3	-0.581209274	0.020872476
Fam205c	-0.503907448	0.034954473
Plekhh2	-0.550544238	0.017017928
Cylc1	-0.608801179	0.022393297
Actn4	-0.601266805	0.009401387
Uncharacterized protein	-0.584306502	0.022323025
Cdc14b	-0.685548068	0.014447434
Nup155	-0.739435898	0.034466617

LOC689589	-0.601880521	0.021339044
Armc12	0.563748641	0.032589082
RGD1564114	0.546262836	0.009492662
Actl9	-1.436587218	0.002130548
Satl1	-0.64119628	0.009880039
Tppp2	-1.878271016	0.005877763
Mlf1	-1.151289169	0.000580659
LOC100911971	-1.226491799	0.002459002
LOC102548013	-0.562702554	0.010814871
Spata31d1d	-0.529622044	0.027662318
Spata31d1c	-0.578249977	0.04914043
Spaca4	-0.679578639	0.028002306
Fam71a	-0.550237774	0.023093195
LOC100364680	-0.731780708	0.004344294
Prr30	-0.631110906	0.018626024
Prss42	0.633268432	0.037169192
Atp6v1a	-0.733688339	0.008121029
Fam71e1	-0.534406025	0.026486329
LOC681006	0.601639917	0.022763625
RGD1311870	-0.540634998	0.030270451
Tmco2	-0.624427193	0.027757374
Ipo5	-1.106994048	0.005673264
Ttc39d	-0.697815011	0.049685212
LOC689725	-0.548897318	0.034071138
Actrt3	-0.554416586	0.020653579
Uchl3	-0.527089546	0.04280115
Csnka2ip	-0.585962291	0.022191327
Usp25	-0.724658914	0.012633093
LOC689458	-0.707676619	0.003962054
Ppef1	0.539961317	0.025567029
Spata31d1b	-0.50750224	0.033388291
Efcab6	0.530722748	0.040962403
Cylc2	-0.642963593	0.032538669
MGC112692	-0.586375849	0.012700164
LOC299271	-1.959855134	0.005655133
Actl11	-0.539047753	0.023299564
LOC684444	-0.543205335	0.04584398
FAM75	-0.893285401	0.003189554
LOC100359615	-0.598883107	0.010980008
Dpy19l2	-0.554243803	0.030011904
Rsph6a	0.726110135	0.0096199
Tesb	-0.5403334	0.017850387
Enah	-0.73154966	0.012090061
Actrt2	-0.525137779	0.033712381
Akap3	0.621026913	0.029390366
Slc16a7	0.60596645	0.016740098
Tekt5	0.518802109	0.037189614
Ppp1cc	-0.543345021	0.031976397

Bsg	0.509930152	0.013378301
Gstm1	-1.33626329	0.018211906
Eif4a1	-0.529509173	0.024711164
Spa17	0.531590157	0.043202096

Appendix 5.P

Common differently expressed proteins in
the comparisons between FOF1 and FOF1;
FOF1 and FOF1; and FOF1 and FOF1

A0A0G2K688	LOC689725
Actl11	Lpp
Actn4	MORAS5
Actrt2	MGC112692
Cul3	Phb
Cylc2	Plekhh2
Eqtn	Prr30
Fam205c	RGD1311870
Fam24a	Satl1
Klhl10	Spata31
LOC100359615	Spata31d1b
LOC100364680	Spata31d1c
LOC100911971	Spata31d1d
LOC102548013	Tesb
LOC689458	Usp25
LOC689589	Yod1

Appendix 6

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Appendix 6.A

Putative mRNA targets for the 15 miRNA differently expressed in fully activated HSCs and conserved between rat and human.

mRNA targeted	miRNAs
AAK1	hsa-miR-139-5p, hsa-miR-24-3p
ABCB10	hsa-miR-194-5p
ABCB9	hsa-let-7i-5p, hsa-miR-150-5p, hsa-miR-24-3p
ABCC5	hsa-let-7i-5p
ABCD1	hsa-miR-34a-5p
ABHD17C	hsa-let-7i-5p
ABHD2	hsa-miR-24-3p
ABL2	hsa-let-7i-5p, hsa-miR-146a-5p, hsa-miR-146b-5p
ABR	hsa-miR-34a-5p
ABT1	hsa-let-7i-5p
ACBD3	hsa-miR-194-5p, hsa-miR-34a-5p
ACER2	hsa-let-7i-5p, hsa-miR-150-5p
ACHE	hsa-miR-194-5p
ACKR4	hsa-miR-150-3p
ACSL1	hsa-miR-34a-5p
ACSL4	hsa-miR-150-5p, hsa-miR-34a-5p
ACSL6	hsa-let-7i-5p
ACTA1	hsa-let-7i-5p, hsa-miR-155-5p
ACTL7A	hsa-miR-155-5p
ACVR1B	hsa-miR-24-3p
ACVR1C	hsa-let-7i-5p
ACVR2A	hsa-let-7i-5p
ACVR2B	hsa-miR-132-3p, hsa-miR-194-5p
ADAM12	hsa-miR-150-3p
ADAM19	hsa-miR-150-5p
ADAM22	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-34a-5p
ADAMTS15	hsa-let-7i-5p
ADAMTS5	hsa-miR-132-3p
ADAMTS8	hsa-let-7i-5p
ADCY1	hsa-miR-139-5p
ADCY3	hsa-miR-132-3p
ADD2	hsa-miR-24-3p, hsa-miR-34a-5p
ADGRA1	hsa-miR-139-3p
ADGRG2	hsa-miR-21-5p
ADGRL4	hsa-miR-139-5p
ADIPOR2	hsa-miR-150-5p, hsa-miR-34a-5p
ADO	hsa-miR-34a-5p
ADPGK	hsa-miR-24-3p

ADRB2	hsa-let-7i-5p
ADRB3	hsa-let-7i-5p
ADSSL1	hsa-miR-24-3p
AEBP2	hsa-miR-132-3p, hsa-miR-139-5p
AEN	hsa-let-7i-5p
AGAP1	hsa-let-7i-5p
AGO1	hsa-miR-132-3p
AGO4	hsa-let-7i-5p, hsa-miR-34a-5p
AGPAT1	hsa-miR-24-3p
AGPS	hsa-miR-24-3p
AGTPBP1	hsa-miR-221-3p, hsa-miR-222-3p
AHCTF1	hsa-let-7i-5p
AHCYL2	hsa-miR-34a-5p
AHI1	hsa-miR-150-5p
AHRR	hsa-miR-155-5p
AICDA	hsa-miR-150-5p, hsa-miR-155-5p
AIDA	hsa-miR-221-3p, hsa-miR-222-3p
AIFM2	hsa-miR-150-5p
AKAP12	hsa-miR-21-5p
AKAP5	hsa-miR-221-3p, hsa-miR-222-3p
AKAP6	hsa-let-7i-5p
AKIP1	hsa-miR-34a-5p
AKIRIN2	hsa-miR-139-5p
AKTIP	hsa-miR-155-5p
ALDOA	hsa-miR-34a-5p
ALG10B	hsa-miR-150-3p
ALG13	hsa-miR-34a-5p
ALKAL1	hsa-miR-132-3p
ALX4	hsa-miR-21-5p
AMD1	hsa-miR-132-3p, hsa-miR-150-3p
AMELY	hsa-miR-150-3p
AMER1	hsa-miR-34a-5p
AMER2	hsa-miR-132-3p
AMOT	hsa-let-7i-5p
AMOTL2	hsa-miR-24-3p
AMPH	hsa-miR-146a-5p, hsa-miR-146b-5p
AMT	hsa-let-7i-5p
ANGPTL1	hsa-miR-194-5p
ANGPTL5	hsa-miR-139-5p, hsa-miR-21-5p
ANGPTL7	hsa-miR-150-3p
ANK2	hsa-miR-139-5p, hsa-miR-34a-5p
ANK3	hsa-miR-34a-5p
ANKFY1	hsa-miR-155-5p
ANKRA2	hsa-let-7i-5p
ANKRD12	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p

ANKRD44	hsa-miR-24-3p
ANKRD52	hsa-miR-34a-5p
ANKRD6	hsa-miR-150-5p
ANKS1A	hsa-miR-34a-5p
ANKS1B	hsa-miR-21-5p
ANP32A	hsa-miR-34a-5p
ANTXR2	hsa-miR-155-5p
ANXA2R	hsa-miR-139-3p
AOC3	hsa-miR-150-5p
AP1S1	hsa-let-7i-5p, hsa-miR-139-5p
AP3B2	hsa-miR-221-3p, hsa-miR-222-3p
APBA1	hsa-miR-24-3p
APBB2	hsa-miR-24-3p
APBB3	hsa-let-7i-5p
APLP2	hsa-miR-139-5p
APOLD1	hsa-miR-221-3p, hsa-miR-222-3p
APPBP2	hsa-miR-139-5p
APPL1	hsa-miR-146a-5p, hsa-miR-146b-5p
APPL2	hsa-miR-24-3p
AQP1	hsa-miR-139-5p
AQP3	hsa-miR-221-3p, hsa-miR-222-3p
ARF4	hsa-miR-221-3p, hsa-miR-222-3p
ARF6	hsa-miR-139-5p
ARG2	hsa-let-7i-5p
ARHGAP1	hsa-miR-34a-5p
ARHGAP21	hsa-miR-194-5p
ARHGAP24	hsa-miR-150-3p, hsa-miR-21-5p
ARHGAP26	hsa-miR-34a-5p
ARHGAP28	hsa-let-7i-5p
ARHGEF2	hsa-miR-150-3p
ARHGEF33	hsa-miR-34a-5p
ARHGEF38	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
ARID1B	hsa-miR-132-3p, hsa-miR-150-3p
ARID2	hsa-miR-132-3p, hsa-miR-155-5p, hsa-miR-194-5p
ARID3A	hsa-let-7i-5p
ARID3B	hsa-let-7i-5p
ARID4B	hsa-miR-34a-5p
ARL1	hsa-miR-21-5p
ARL10	hsa-miR-146a-5p, hsa-miR-146b-5p
ARL5A	hsa-let-7i-5p
ARL6IP5	hsa-miR-155-5p
ARMC2	hsa-miR-139-5p
ARMC8	hsa-miR-132-3p
ARMT1	hsa-let-7i-5p
ARNT	hsa-miR-132-3p

ARPP21	hsa-miR-150-3p
ARVCF	hsa-miR-155-5p
ARX	hsa-miR-139-5p
ASAP1	hsa-let-7i-5p
ASAP2	hsa-miR-155-5p
ASB1	hsa-miR-34a-5p
ASB4	hsa-miR-34a-5p
ASF1A	hsa-miR-132-3p
ASH1L	hsa-miR-139-5p
ASIC2	hsa-miR-34a-5p
ASPA	hsa-miR-221-3p, hsa-miR-222-3p
ATAD2B	hsa-miR-221-3p, hsa-miR-24-3p
ATG4B	hsa-miR-34a-5p
ATG5	hsa-miR-34a-5p
ATL2	hsa-let-7i-5p, hsa-miR-139-5p
ATMIN	hsa-miR-34a-5p
ATP10D	hsa-miR-132-3p
ATP13A2	hsa-miR-24-3p
ATP1B1	hsa-miR-221-3p, hsa-miR-222-3p
ATP2A2	hsa-let-7i-5p
ATP2B2	hsa-miR-139-5p
ATP2C1	hsa-miR-155-5p, hsa-miR-194-5p
ATP5MPL	hsa-miR-24-3p
ATP6V0E2	hsa-miR-24-3p
ATP6V1H	hsa-miR-150-5p, hsa-miR-194-5p
ATP8B4	hsa-let-7i-5p
ATRX	hsa-miR-139-5p, hsa-miR-24-3p
ATXN1	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
ATXN10	hsa-miR-21-5p
ATXN1L	hsa-miR-155-5p
AVL9	hsa-miR-24-3p
AXL	hsa-miR-34a-5p
AZIN1	hsa-miR-132-3p
B3GALT5	hsa-miR-24-3p
B3GNT7	hsa-let-7i-5p
B4GAT1	hsa-let-7i-5p, hsa-miR-24-3p
BACH1	hsa-let-7i-5p, hsa-miR-155-5p
BAHD1	hsa-miR-21-5p
BASP1	hsa-miR-150-5p
BAZ2B	hsa-miR-139-5p
BBC3	hsa-miR-221-3p, hsa-miR-222-3p
BBX	hsa-miR-150-3p
BCKDHA	hsa-miR-194-5p
BCL11A	hsa-miR-21-5p
BCL11B	hsa-miR-21-5p

BCL2L11	hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p
BCL2L13	hsa-miR-34a-5p
BCL3	hsa-miR-150-3p
BCL7A	hsa-miR-21-5p, hsa-miR-24-3p
BCORL1	hsa-miR-146a-5p, hsa-miR-146b-5p
BEAN1	hsa-miR-221-3p, hsa-miR-222-3p
BEGAIN	hsa-let-7i-5p
BEND4	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
BEST3	hsa-miR-21-5p
BHLHE41	hsa-miR-146a-5p, hsa-miR-146b-5p
BICD2	hsa-miR-194-5p
BICDL1	hsa-miR-221-3p, hsa-miR-222-3p
BIN3	hsa-let-7i-5p
BIVM	hsa-miR-146a-5p, hsa-miR-146b-5p
BMP3	hsa-miR-34a-5p
BMP6	hsa-miR-150-3p
BMPR1A	hsa-miR-139-5p
BNC2	hsa-miR-155-5p, hsa-miR-34a-5p
BNIP2	hsa-miR-194-5p
BNIP3L	hsa-miR-24-3p
BOC	hsa-miR-155-5p
BOK	hsa-miR-24-3p
BOLL	hsa-miR-132-3p
BRI3	hsa-miR-132-3p
BRINP1	hsa-miR-34a-5p
BRK1	hsa-miR-146a-5p, hsa-miR-146b-5p
BRMS1L	hsa-miR-194-5p
BRPF3	hsa-miR-34a-5p
BRWD1	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
BRWD3	hsa-miR-221-3p, hsa-miR-222-3p
BSDC1	hsa-miR-155-5p
BSN	hsa-let-7i-5p, hsa-miR-150-5p
BTAF1	hsa-miR-24-3p
BTBD11	hsa-miR-34a-5p
BTBD7	hsa-miR-194-5p
BTG2	hsa-miR-21-5p
BTN2A2	hsa-miR-155-5p, hsa-miR-24-3p
BVES	hsa-miR-24-3p
BZW1	hsa-let-7i-5p
C10orf90	hsa-miR-155-5p
C12orf40	hsa-miR-155-5p
C12orf74	hsa-miR-150-3p
C14orf119	hsa-miR-150-3p
C14orf28	hsa-let-7i-5p, hsa-miR-24-3p
C15orf39	hsa-let-7i-5p

C17orf49	hsa-miR-24-3p
C17orf75	hsa-miR-139-5p
C17orf78	hsa-miR-24-3p
C18orf25	hsa-miR-194-5p
C18orf32	hsa-miR-194-5p
C19orf47	hsa-let-7i-5p
C1GALT1	hsa-miR-155-5p
C1orf21	hsa-miR-150-5p
C1QL4	hsa-miR-139-3p
C20orf194	hsa-let-7i-5p
C21orf91	hsa-miR-194-5p
C22orf46	hsa-miR-150-5p
C2orf49	hsa-miR-139-5p
C2orf72	hsa-miR-24-3p
C2orf80	hsa-miR-155-5p
C3orf14	hsa-miR-139-5p
C3orf38	hsa-miR-146a-5p, hsa-miR-146b-5p
C3orf70	hsa-miR-221-3p, hsa-miR-222-3p
C5orf51	hsa-let-7i-5p
C5orf58	hsa-miR-150-5p
C5orf64	hsa-miR-155-5p
C6	hsa-miR-221-3p, hsa-miR-222-3p
C6orf118	hsa-miR-221-3p, hsa-miR-222-3p
C6orf120	hsa-miR-150-5p
C7	hsa-miR-21-5p
C7orf65	hsa-miR-194-5p
C7orf77	hsa-miR-139-5p, hsa-miR-150-3p
C8orf44-SGK3	hsa-miR-132-3p, hsa-miR-155-5p
C8orf58	hsa-let-7i-5p, hsa-miR-24-3p
C8orf88	hsa-miR-146a-5p, hsa-miR-146b-5p
C9orf47	hsa-miR-34a-5p
C9orf72	hsa-miR-146a-5p, hsa-miR-146b-5p
CA10	hsa-miR-34a-5p
CA7	hsa-miR-34a-5p
CAAP1	hsa-miR-139-5p
CAB39	hsa-miR-155-5p
CACHD1	hsa-miR-24-3p
CACNA1C	hsa-miR-34a-5p
CACNA1E	hsa-miR-34a-5p
CACNA2D1	hsa-miR-139-5p
CACNB1	hsa-miR-132-3p
CACNB3	hsa-miR-34a-5p
CACNG2	hsa-miR-132-3p
CACUL1	hsa-miR-155-5p
CADM1	hsa-miR-194-5p

CADM2	hsa-let-7i-5p
CALCR	hsa-miR-24-3p
CALU	hsa-miR-132-3p
CAMK2B	hsa-miR-24-3p
CAMK2G	hsa-miR-150-5p
CAMK4	hsa-miR-34a-5p
CAMSAP2	hsa-miR-132-3p
CAMTA1	hsa-miR-34a-5p
CAPN6	hsa-miR-34a-5p
CAPS2	hsa-miR-194-5p
CARD10	5p
CARD11	hsa-miR-155-5p
CARNMT1	hsa-let-7i-5p
CASK	hsa-miR-194-5p
CASKIN1	hsa-miR-21-5p
CASP3	hsa-let-7i-5p
CASP7	5p
CASR	hsa-miR-221-3p, hsa-miR-222-3p
CASTOR2	hsa-miR-24-3p
CASZ1	hsa-miR-221-3p, hsa-miR-222-3p
CAV2	hsa-miR-150-3p
CBFA2T3	hsa-miR-34a-5p
CBL	hsa-miR-150-5p, hsa-miR-155-5p
CBLL1	hsa-miR-132-3p, hsa-miR-139-5p
CBWD1	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
CBWD2	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
CBWD3	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
CBWD5	hsa-miR-221-3p, hsa-miR-222-3p
CBWD6	hsa-miR-221-3p, hsa-miR-222-3p
CBX1	hsa-miR-139-5p
CBX3	hsa-miR-34a-5p
CBX5	hsa-let-7i-5p
CC2D1B	hsa-miR-132-3p
CCDC157	hsa-miR-24-3p
CCDC18	hsa-miR-221-3p, hsa-miR-222-3p
CCDC34	hsa-miR-132-3p
CCDC43	hsa-miR-150-3p
CCDC58	hsa-miR-24-3p
CCDC71L	hsa-miR-132-3p, hsa-let-7i-5p, hsa-miR-139-3p
CCDC88A	hsa-miR-132-3p
CCK	hsa-miR-146a-5p, hsa-miR-146b-5p
CCL1	hsa-miR-21-5p
CCL20	hsa-miR-21-5p
CCL5	hsa-miR-146a-5p, hsa-miR-146b-5p
CCL7	hsa-let-7i-5p

CCN1	hsa-miR-221-3p, hsa-miR-222-3p
CCN2	hsa-miR-132-3p
CCND2	hsa-let-7i-5p
CCNE2	hsa-miR-34a-5p
CCNJ	hsa-let-7i-5p
CD164	hsa-let-7i-5p, hsa-miR-150-3p
CD28	hsa-miR-24-3p
CD300LF	hsa-miR-132-3p
CD36	hsa-miR-155-5p
CD38	hsa-miR-150-5p
CD59	hsa-let-7i-5p
CD80	hsa-miR-146a-5p, hsa-miR-146b-5p
CD84	hsa-miR-150-5p
CD96	hsa-miR-146a-5p, hsa-miR-146b-5p
CDC25A	hsa-let-7i-5p, hsa-miR-34a-5p
CDC34	hsa-let-7i-5p
CDC42EP4	hsa-miR-155-5p
CDCP1	hsa-miR-150-3p
CDH13	hsa-miR-34a-5p
CDH2	hsa-miR-150-3p, hsa-miR-221-3p, hsa-miR-222-3p
CDH20	hsa-miR-139-5p
CDH4	hsa-miR-150-3p, hsa-miR-34a-5p
CDH7	hsa-miR-150-5p, hsa-miR-21-5p, hsa-miR-24-3p
CDH9	hsa-miR-34a-5p
CDK14	hsa-miR-194-5p
CDK16	hsa-miR-24-3p
CDK17	hsa-miR-24-3p
CDK19	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
CDK6	hsa-miR-34a-5p
CDKN1A	hsa-let-7i-5p
CDKN1B	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p
CDV3	hsa-miR-24-3p
CDX1	hsa-miR-155-5p
CDX2	hsa-miR-24-3p
CEBPB	hsa-miR-155-5p
CELF3	hsa-miR-34a-5p
CELSR3	hsa-miR-132-3p
CEMIP2	hsa-let-7i-5p
CEP120	hsa-let-7i-5p
CEP135	hsa-let-7i-5p
CEP170	hsa-miR-194-5p
CEP68	hsa-miR-150-3p
CERCAM	hsa-let-7i-5p
CERS3	hsa-miR-150-5p

CERS6	hsa-miR-34a-5p
CFAP300	hsa-miR-21-5p
CHAF1A	hsa-miR-155-5p
CHD1	hsa-miR-132-3p, hsa-miR-194-5p
CHD2	hsa-miR-150-5p
CHD4	hsa-let-7i-5p, hsa-miR-194-5p
CHD5	hsa-miR-24-3p
CHD6	hsa-miR-194-5p
CHIC1	hsa-miR-21-5p
CHM	hsa-miR-34a-5p
CHMP4C	hsa-miR-150-5p
CHORDC1	hsa-miR-194-5p
CHST4	hsa-miR-24-3p
CHSY1	hsa-miR-221-3p, hsa-miR-222-3p
CIDEA	hsa-miR-24-3p
CIPC	hsa-miR-194-5p
CITED4	hsa-miR-24-3p
CLCN3	hsa-miR-155-5p, hsa-miR-24-3p, hsa-miR-34a-5p
CLCN5	hsa-let-7i-5p, hsa-miR-194-5p
CLDN12	hsa-let-7i-5p
CLDN16	hsa-let-7i-5p
CLDN8	hsa-miR-21-5p
CLEC2A	hsa-miR-194-5p
CLGN	hsa-miR-221-3p, hsa-miR-222-3p
CLIC2	hsa-miR-21-5p
CLMN	hsa-miR-132-3p
CLOCK	hsa-miR-34a-5p
CLP1	hsa-let-7i-5p
CLRN1	hsa-miR-221-3p, hsa-miR-222-3p
CLSPN	hsa-miR-150-5p
CLVS1	hsa-miR-150-5p
CLVS2	hsa-miR-221-3p, hsa-miR-222-3p
CMTM4	hsa-miR-24-3p
CMTM6	hsa-miR-150-5p
CMYA5	hsa-miR-139-5p
CNOT4	hsa-miR-139-5p
CNOT6	hsa-miR-21-5p, hsa-miR-24-3p, hsa-miR-34a-5p
CNOT6L	hsa-let-7i-5p
CNOT7	hsa-miR-150-3p, hsa-miR-155-5p
CNPY1	hsa-miR-194-5p
CNR1	hsa-miR-132-3p, hsa-miR-194-5p
CNTF	hsa-miR-146a-5p, hsa-miR-146b-5p
CNTN2	hsa-miR-34a-5p
CNTRL	hsa-let-7i-5p
COIL	hsa-let-7i-5p

COL11A1	hsa-miR-132-3p
COL19A1	hsa-miR-150-5p
COL1A2	hsa-let-7i-5p
COL26A1	hsa-miR-34a-5p
COL27A1	hsa-let-7i-5p
COL3A1	hsa-let-7i-5p
COL4A1	hsa-let-7i-5p
COL4A2	hsa-let-7i-5p
COL4A3BP	hsa-let-7i-5p
COL4A6	hsa-let-7i-5p
COL5A2	hsa-let-7i-5p
COL9A1	hsa-miR-150-3p
COLEC10	hsa-miR-146a-5p, hsa-miR-146b-5p
COP1	hsa-miR-24-3p
CORO1C	hsa-miR-34a-5p
CPA4	hsa-let-7i-5p
CPD	hsa-miR-150-5p
CPEB1	hsa-let-7i-5p
CPEB2	hsa-let-7i-5p
CPEB3	hsa-let-7i-5p, hsa-miR-21-5p
CPED1	hsa-miR-194-5p
CPLX2	hsa-miR-34a-5p
CPM	hsa-miR-146a-5p, hsa-miR-146b-5p
CRAMP1	hsa-miR-150-3p
CRAT	hsa-miR-24-3p
CREB3L2	hsa-miR-34a-5p
CREBBP	hsa-miR-150-3p
CREBL2	hsa-miR-221-3p
CREBRF	hsa-miR-150-3p, hsa-miR-21-5p
CRIP1	hsa-miR-24-3p
CRTAM	hsa-let-7i-5p
CSDE1	hsa-miR-132-3p
CSF1R	hsa-miR-155-5p
CSGALNACT2	hsa-miR-150-3p
CSNK1G2	hsa-miR-155-5p
CSRNP2	hsa-miR-139-5p
CSRNP2	hsa-miR-155-5p
CSRNP3	hsa-miR-21-5p
CTAGE4	hsa-miR-146a-5p, hsa-miR-146b-5p
CTAGE8	hsa-miR-146a-5p, hsa-miR-146b-5p
CTAGE9	hsa-miR-146a-5p, hsa-miR-146b-5p
CTDSPL2	hsa-miR-194-5p, hsa-miR-221-3p, hsa-miR-222-3p
CTH	hsa-miR-150-5p
CTNND2	hsa-miR-34a-5p
CTNS	hsa-miR-24-3p

CTSC	hsa-miR-150-3p
CTTNBP2NL	hsa-miR-155-5p
CTU1	hsa-miR-139-3p
CUEDC1	hsa-miR-34a-5p
CUL3	hsa-miR-139-5p
CUL4B	hsa-miR-194-5p
CUX1	hsa-miR-21-5p
CXADR	hsa-miR-146a-5p, hsa-miR-146b-5p
CXCL12	hsa-miR-221-3p, hsa-miR-222-3p
CXCL3	hsa-miR-194-5p
CXCR4	hsa-miR-139-5p
CXXC4	hsa-miR-146a-5p, hsa-miR-146b-5p
CYB561D1	hsa-miR-155-5p
CYFIP2	hsa-miR-150-3p
CYP20A1	hsa-miR-150-5p
CYP27B1	hsa-miR-146a-5p, hsa-miR-146b-5p
CYP4X1	hsa-miR-150-5p
CYREN	hsa-miR-34a-5p
DAAM1	hsa-miR-132-3p, hsa-miR-34a-5p
DACH1	hsa-miR-194-5p
DAGLA	hsa-miR-34a-5p
DAZAP2	hsa-miR-132-3p
DCAF11	hsa-miR-24-3p
DCAF12	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-221-3p, hsa-miR-222-3p
DCAF15	hsa-let-7i-5p
DCAF6	hsa-miR-150-5p
DCAF7	hsa-miR-34a-5p
DCBLD2	hsa-miR-139-5p
DCC	hsa-miR-132-3p
DCDC1	hsa-miR-146a-5p, hsa-miR-146b-5p
DCN	hsa-miR-150-3p
DCUN1D1	hsa-miR-221-3p, hsa-miR-222-3p
DCUN1D2	hsa-let-7i-5p
DCUN1D3	hsa-miR-155-5p
DCUN1D4	hsa-miR-132-3p
DDHD1	hsa-miR-146a-5p, hsa-miR-146b-5p
DDI2	hsa-let-7i-5p
DDIT4	hsa-miR-221-3p, hsa-miR-222-3p
DDTL	hsa-let-7i-5p
DDX19A	hsa-let-7i-5p
DDX19B	hsa-let-7i-5p
DDX3Y	hsa-miR-155-5p
DDX5	hsa-miR-132-3p
DENND1B	hsa-miR-221-3p, hsa-miR-222-3p

DENND4A	hsa-miR-150-5p
DENND4C	hsa-miR-150-3p
DENR	hsa-miR-139-5p
DET1	hsa-miR-155-5p
DGKK	hsa-miR-24-3p
DGKZ	hsa-miR-34a-5p
DHX40	hsa-miR-155-5p
DHX57	hsa-let-7i-5p
DIP2A	hsa-let-7i-5p
DIP2C	hsa-miR-139-5p
DIPK1A	hsa-miR-155-5p
DIPK2A	hsa-miR-132-3p
DISC1	hsa-miR-194-5p
DIXDC1	hsa-miR-150-3p, hsa-miR-34a-5p
DLC1	hsa-let-7i-5p, hsa-miR-24-3p
DLGAP1	hsa-miR-21-5p
DLGAP4	hsa-miR-24-3p
DLL1	hsa-miR-24-3p, hsa-miR-34a-5p
DLST	hsa-let-7i-5p
DMAC1	hsa-miR-155-5p
DMAC2L	hsa-miR-34a-5p
DMD	hsa-let-7i-5p, hsa-miR-139-5p
DMRT3	hsa-miR-221-3p, hsa-miR-222-3p
DMWD	hsa-miR-34a-5p
DNA2	hsa-let-7i-5p
DNAJA2	hsa-let-7i-5p
DNAJB1	hsa-miR-155-5p
DNAJB12	hsa-miR-24-3p
DNAJC1	hsa-let-7i-5p
DNAJC16	hsa-miR-34a-5p
DNAJC6	hsa-miR-221-3p, hsa-miR-222-3p
DNM1L	hsa-miR-34a-5p
DOCK3	hsa-miR-150-3p
DOCK8	hsa-miR-194-5p
DOCK9	hsa-miR-150-3p
DPH3	hsa-let-7i-5p
DPH6	hsa-miR-221-3p, hsa-miR-222-3p
DPP3	hsa-miR-34a-5p
DPP6	hsa-let-7i-5p
DPP8	hsa-miR-221-3p, hsa-miR-222-3p
DPY19L1	hsa-miR-155-5p
DPY30	hsa-miR-139-5p
DPYSL3	hsa-miR-132-3p
DPYSL4	hsa-miR-34a-5p
DSTYK	hsa-miR-194-5p

DTNA	hsa-miR-146a-5p, hsa-miR-146b-5p
DTX2	hsa-let-7i-5p
DTX4	hsa-let-7i-5p
DUSP1	hsa-let-7i-5p
DUSP16	hsa-miR-24-3p
DUSP22	hsa-let-7i-5p
DUSP8	hsa-miR-21-5p, hsa-miR-24-3p
DUSP9	hsa-miR-132-3p
DVL1	hsa-miR-139-5p
DVL3	hsa-let-7i-5p, hsa-miR-24-3p
DYNC1I1	hsa-miR-155-5p
DYRK1A	hsa-miR-150-3p, hsa-miR-194-5p
DYRK1B	hsa-miR-150-3p
DYRK2	hsa-miR-132-3p, hsa-miR-155-5p, hsa-miR-24-3p
E2F2	hsa-let-7i-5p, hsa-miR-155-5p
E2F3	hsa-miR-34a-5p
E2F5	hsa-miR-132-3p, hsa-let-7i-5p, hsa-miR-34a-5p
E2F6	hsa-let-7i-5p
EBF1	hsa-miR-139-5p
EBF2	hsa-miR-24-3p
ECSCR	hsa-miR-155-5p
EDA2R	hsa-miR-24-3p
EDC3	hsa-miR-139-5p
EDEM3	hsa-let-7i-5p
EDN1	hsa-let-7i-5p
EEA1	hsa-let-7i-5p
EEF2K	hsa-let-7i-5p
EFCAB9	hsa-miR-132-3p
EFHD2	hsa-let-7i-5p
EHD1	hsa-miR-155-5p, hsa-miR-21-5p
EIF3J	hsa-miR-221-3p, hsa-miR-222-3p
EIF4G2	hsa-let-7i-5p, hsa-miR-139-5p, hsa-miR-146a-5p, hsa-miR-146b-5p
EIF5	hsa-miR-150-5p
EIF5A2	hsa-miR-221-3p, hsa-miR-222-3p
ELAVL2	hsa-miR-139-5p
ELF2	hsa-miR-21-5p
ELF4	hsa-let-7i-5p
ELK1	hsa-miR-139-3p
ELL	hsa-miR-24-3p
ELL2	hsa-miR-34a-5p
ELMOD1	hsa-miR-34a-5p
ELMSAN1	hsa-miR-132-3p, hsa-miR-194-5p
ELOVL3	hsa-miR-150-5p
ELOVL5	hsa-miR-139-5p

ELP1	hsa-let-7i-5p
EMCN	hsa-miR-194-5p
EML5	hsa-miR-34a-5p
EML6	hsa-miR-221-3p, hsa-miR-222-3p
ENPP2	hsa-miR-150-3p
ENPP4	hsa-miR-132-3p
ENSA	hsa-miR-150-5p
ENTPD5	hsa-miR-155-5p
ENTPD7	hsa-let-7i-5p
EP300	hsa-miR-132-3p
EPB41L5	hsa-miR-132-3p
EPC2	hsa-miR-194-5p
EPHA4	hsa-let-7i-5p, hsa-miR-21-5p, hsa-miR-34a-5p
EPHA5	hsa-miR-194-5p
EPHB2	hsa-miR-150-5p
EPM2A	hsa-miR-21-5p
EPN2	hsa-miR-150-3p, hsa-miR-34a-5p
EPS15L1	hsa-miR-34a-5p
ERBB4	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-221-3p, hsa-miR-222-3p
ERBIN	hsa-miR-139-5p
ERC1	hsa-miR-34a-5p
ERC2	hsa-miR-24-3p
ERCC4	hsa-let-7i-5p
ERCC6	hsa-let-7i-5p
ERG	hsa-miR-194-5p
ERGIC1	hsa-miR-34a-5p
ERGIC2	hsa-miR-194-5p
ERO1A	hsa-let-7i-5p
ESR1	hsa-miR-221-3p, hsa-miR-222-3p
ESR2	hsa-let-7i-5p
ESYT2	hsa-miR-146a-5p, hsa-miR-146b-5p
ESYT3	hsa-miR-34a-5p
ETNK1	hsa-miR-132-3p
ETS1	hsa-miR-139-5p, hsa-miR-155-5p
ETV3	hsa-miR-221-3p, hsa-miR-222-3p
EVC2	hsa-miR-194-5p
EXOG	hsa-miR-24-3p
EYA2	hsa-miR-155-5p
FADS1	hsa-miR-150-5p
FADS6	hsa-miR-24-3p
FAM104A	hsa-let-7i-5p
FAM107A	hsa-miR-34a-5p
FAM117B	hsa-miR-34a-5p
FAM122A	hsa-let-7i-5p

FAM135A	hsa-let-7i-5p, hsa-miR-155-5p
FAM13A	hsa-miR-21-5p
FAM167A	hsa-miR-132-3p, hsa-miR-34a-5p
FAM168B	hsa-miR-150-5p, hsa-miR-24-3p
FAM169A	hsa-miR-194-5p
FAM189A1	hsa-let-7i-5p
FAM199X	hsa-miR-155-5p
FAM214A	hsa-miR-221-3p, hsa-miR-222-3p
FAM214B	hsa-let-7i-5p
FAM222B	hsa-miR-139-5p
FAM227A	hsa-miR-132-3p
FAM3C	hsa-miR-21-5p
FAM45A	hsa-miR-24-3p
FAM76A	hsa-miR-34a-5p
FAM76B	hsa-miR-132-3p, hsa-miR-139-5p
FAM78B	hsa-miR-24-3p
FAM83A	hsa-miR-34a-5p
FAM91A1	hsa-miR-132-3p
FAR1	hsa-miR-155-5p
FAS	hsa-miR-24-3p
FASLG	hsa-let-7i-5p, hsa-miR-21-5p, hsa-miR-24-3p
FAXC	hsa-let-7i-5p
FBLIM1	hsa-miR-24-3p
FBN2	hsa-miR-139-5p
FBXL12	hsa-let-7i-5p
FBXL17	hsa-miR-155-5p
FBXL20	hsa-miR-132-3p
FBXL5	hsa-miR-150-5p
FBXO11	hsa-miR-150-3p
FBXO30	hsa-miR-34a-5p
FBXO33	hsa-miR-155-5p
FBXO4	hsa-miR-146a-5p, hsa-miR-146b-5p
FBXO48	hsa-miR-155-5p
FBXO9	hsa-miR-132-3p
FBXW11	hsa-miR-150-5p
FBXW2	hsa-miR-146a-5p, hsa-miR-146b-5p
FBXW7	hsa-miR-194-5p
FDX1	hsa-miR-21-5p
FEM1C	hsa-miR-132-3p
FERMT2	hsa-miR-221-3p, hsa-miR-222-3p
FGA	hsa-miR-194-5p
FGD6	hsa-let-7i-5p, hsa-miR-34a-5p
FGF11	hsa-let-7i-5p, hsa-miR-24-3p
FGF14	hsa-miR-221-3p, hsa-miR-222-3p
FGF18	hsa-miR-21-5p

FGF23	hsa-miR-34a-5p
FGF7	hsa-miR-155-5p
FIGN	hsa-let-7i-5p
FIGNL2	hsa-let-7i-5p
FKBP14	hsa-miR-150-5p
FKBP1B	hsa-miR-34a-5p
FLI1	hsa-miR-194-5p
FLNA	hsa-miR-146a-5p, hsa-miR-146b-5p
FLOT2	5p
FMNL2	hsa-miR-155-5p
FMR1	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
FN3K	hsa-miR-139-3p
FNDC3A	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
FNDC3B	hsa-let-7i-5p
FNIP1	hsa-let-7i-5p
FNIP2	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
FOS	hsa-miR-139-5p, hsa-miR-155-5p
FOXE1	hsa-miR-194-5p
FOXJ2	hsa-miR-34a-5p
FOXN2	hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-34a-5p
FOXO3	hsa-miR-132-3p
FOXP1	hsa-miR-34a-5p
FOXR2	hsa-miR-146a-5p, hsa-miR-146b-5p
FRA10AC1	hsa-miR-34a-5p
FRAS1	hsa-let-7i-5p
FREM2	hsa-miR-150-5p
FRMD3	hsa-miR-21-5p
FRMD4B	hsa-let-7i-5p
FRMD5	hsa-miR-34a-5p
FRMD7	hsa-miR-24-3p
FRS2	hsa-miR-132-3p
FSBP	hsa-miR-139-5p
FSHB	hsa-miR-150-5p
FST	hsa-miR-24-3p
FTH1	hsa-miR-150-3p
FTO	hsa-miR-150-5p
FURIN	hsa-miR-24-3p
FUT8	hsa-miR-34a-5p
FUT9	hsa-miR-34a-5p
FXN	hsa-miR-221-3p, hsa-miR-222-3p
FXR1	hsa-miR-155-5p
FYN	hsa-miR-150-3p
FZD1	hsa-miR-146a-5p, hsa-miR-146b-5p
FZD3	hsa-let-7i-5p
FZD4	hsa-let-7i-5p

FZD6	hsa-miR-194-5p
G2E3	hsa-miR-155-5p
G3BP2	hsa-miR-132-3p
GABARAPL1	hsa-miR-155-5p
GABBR2	hsa-let-7i-5p, hsa-miR-139-5p
GABRA1	hsa-miR-155-5p, hsa-miR-221-3p, hsa-miR-222-3p
GABRA3	hsa-miR-34a-5p
GABRB2	hsa-miR-139-5p, hsa-miR-21-5p
GABRG1	hsa-miR-221-3p, hsa-miR-222-3p
GABRG2	hsa-miR-150-5p
GAD1	hsa-miR-24-3p
GADL1	hsa-miR-150-3p
GAL3ST3	hsa-miR-24-3p
GALC	hsa-let-7i-5p
GALNT1	hsa-let-7i-5p
GALNT10	hsa-miR-146a-5p
GALNT15	hsa-miR-24-3p
GALNT2	hsa-let-7i-5p
GALNT3	hsa-miR-221-3p, hsa-miR-222-3p
GALNT7	hsa-miR-34a-5p
GALT	hsa-miR-155-5p
GAN	hsa-let-7i-5p
GAS1	hsa-miR-34a-5p
GAS7	hsa-let-7i-5p
GATAD1	5p
GATAD2B	hsa-miR-21-5p
GATM	hsa-let-7i-5p
GBA2	hsa-miR-24-3p
GBX2	hsa-miR-24-3p
GCFC2	hsa-miR-150-3p
GCNA	hsa-miR-24-3p
GCNT4	hsa-let-7i-5p
GDAP1L1	hsa-miR-146a-5p, hsa-miR-146b-5p
GDF10	hsa-miR-139-5p
GDF5	hsa-miR-132-3p
GDF6	hsa-let-7i-5p
GDF9	hsa-miR-221-3p, hsa-miR-222-3p
GDI1	hsa-miR-150-5p
GDPD1	hsa-miR-155-5p
GFM2	hsa-let-7i-5p
GGNBP2	hsa-miR-150-5p
GID4	hsa-miR-21-5p
GINS3	hsa-miR-34a-5p
GJA5	hsa-miR-155-5p
GJC1	hsa-let-7i-5p

GK5	hsa-miR-150-5p
GLCCI1	hsa-miR-21-5p
GLCE	hsa-miR-34a-5p
GLIS2	hsa-miR-21-5p
GLUL	hsa-miR-155-5p
GMFB	hsa-miR-132-3p, hsa-miR-34a-5p
GMNC	hsa-miR-34a-5p
GNAI3	hsa-miR-221-3p, hsa-miR-222-3p
GNE	hsa-miR-24-3p
GNG5	hsa-let-7i-5p
GNPTAB	hsa-let-7i-5p
GOLPH3L	hsa-miR-34a-5p
GOLT1B	hsa-let-7i-5p
GORAB	hsa-miR-194-5p
GOT2	hsa-miR-139-5p, hsa-miR-194-5p
GP5	hsa-miR-34a-5p
GPATCH2	hsa-let-7i-5p, hsa-miR-194-5p
GPATCH2L	hsa-miR-132-3p, hsa-miR-194-5p, hsa-miR-21-5p
GPBP1	hsa-miR-221-3p, hsa-miR-222-3p
GPCPD1	hsa-let-7i-5p
GPD2	hsa-miR-132-3p
GPM6A	hsa-miR-139-5p
GPM6B	5p
GPR158	hsa-miR-34a-5p
GPR22	hsa-miR-34a-5p
GPR26	hsa-let-7i-5p, hsa-miR-150-5p
GPR37	hsa-miR-139-5p
GRAMD2B	hsa-miR-21-5p
GRB10	hsa-miR-221-3p, hsa-miR-222-3p
GREM2	hsa-miR-34a-5p
GRHL2	hsa-miR-194-5p
GRIA3	hsa-miR-146a-5p, hsa-miR-146b-5p
GRIA3	hsa-miR-24-3p
GRIK1	hsa-miR-221-3p, hsa-miR-222-3p
GRIP1	hsa-miR-24-3p
GRM3	hsa-miR-132-3p
GRPEL2	hsa-let-7i-5p
GSK3B	hsa-miR-24-3p
GTF2H1	hsa-miR-132-3p
GTF2I	hsa-let-7i-5p
GUCY1A2	hsa-miR-221-3p, hsa-miR-222-3p
GULP1	hsa-miR-139-5p
GVQW2	hsa-miR-132-3p
GXYLT1	hsa-let-7i-5p
GYG1	hsa-miR-155-5p, hsa-miR-194-5p

GYG2	hsa-let-7i-5p
GYPE	hsa-miR-139-5p
H2AFV	hsa-miR-139-5p, hsa-miR-132-3p
H3F3A	hsa-miR-155-5p
HAND1	hsa-let-7i-5p
HAS2	hsa-let-7i-5p
HBEGF	hsa-miR-132-3p, hsa-miR-194-5p
HBP1	hsa-miR-155-5p
HCFC2	hsa-miR-150-3p
HCN3	hsa-miR-34a-5p
HDAC8	5p
HDLBP	hsa-let-7i-5p
HDX	hsa-let-7i-5p
HECTD2	hsa-let-7i-5p, hsa-miR-194-5p, hsa-miR-221-3p, hsa-miR-222-3p
HECW2	hsa-miR-150-3p
HEG1	hsa-miR-139-5p, hsa-miR-24-3p
HHIP	hsa-miR-132-3p
HHLA2	hsa-miR-194-5p
HIC2	hsa-let-7i-5p
HIF1AN	hsa-let-7i-5p
HILPDA	hsa-miR-150-5p
HIP1	hsa-let-7i-5p
HIPK1	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
HIPK3	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-21-5p
HIVEP2	hsa-miR-155-5p
HK1	hsa-miR-150-3p
HMBOX1	hsa-miR-221-3p, hsa-miR-222-3p
HMGA2	hsa-let-7i-5p
HNF1B	hsa-miR-194-5p, hsa-miR-24-3p
HNF4A	hsa-miR-34a-5p
HNRNPA3	hsa-miR-155-5p
HNRNPAB	hsa-miR-150-3p
HNRNPD	hsa-miR-146a-5p, hsa-miR-146b-5p
HNRNPH1	hsa-miR-132-3p
HNRNPH3	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p
HNRNPM	hsa-miR-132-3p
HOOK1	hsa-let-7i-5p
HOOK3	hsa-miR-194-5p
HOXA1	hsa-let-7i-5p
HOXA2	hsa-miR-150-5p
HOXB2	hsa-miR-139-5p
HOXD1	hsa-let-7i-5p
HSD17B4	hsa-miR-21-5p
HSP90B1	hsa-miR-150-5p

HSPA14	hsa-let-7i-5p
HSPA1B	hsa-miR-34a-5p
HSPA4L	hsa-miR-194-5p
HSPA8	hsa-miR-221-3p, hsa-miR-222-3p
HTR1E	hsa-let-7i-5p
HTR2C	hsa-miR-34a-5p
IBA57	hsa-miR-150-5p
ICA1L	hsa-miR-24-3p
IFFO2	hsa-miR-24-3p
IFNG	hsa-miR-24-3p
IGDCC3	hsa-let-7i-5p
IGDCC4	hsa-let-7i-5p
IGF1R	hsa-let-7i-5p, hsa-miR-194-5p
IGF2BP1	hsa-let-7i-5p
IGF2BP2	hsa-let-7i-5p
IGF2BP3	hsa-let-7i-5p, hsa-miR-34a-5p
IGSF11	hsa-miR-194-5p
IKBIP	hsa-miR-155-5p
IKBKE	hsa-miR-155-5p
IKZF2	hsa-let-7i-5p, hsa-miR-150-5p
IL12A	hsa-miR-21-5p
IL13	hsa-let-7i-5p
IL6R	hsa-miR-155-5p, hsa-miR-34a-5p
IL7	hsa-miR-150-5p
IMPACT	hsa-miR-150-5p
IMPG2	hsa-let-7i-5p
INA	hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-34a-5p
INAFM2	hsa-miR-132-3p
INPP5D	hsa-miR-155-5p
INPP5K	hsa-miR-132-3p
INSIG1	hsa-miR-24-3p
INSR	hsa-let-7i-5p
INSYN2	hsa-miR-150-3p
INTS6	hsa-miR-155-5p
INTS6L	hsa-let-7i-5p
IPO5	hsa-miR-150-5p
IPO9	hsa-miR-150-5p
IQCB1	hsa-let-7i-5p
IQCI-SCHIP1	hsa-miR-139-5p
IRAK1	hsa-miR-146a-5p, hsa-miR-146b-5p
IRF2	hsa-miR-221-3p, hsa-miR-222-3p
IRF2BP2	hsa-miR-155-5p
IRGQ	hsa-miR-150-5p
IRS2	hsa-let-7i-5p
IRX5	hsa-miR-221-3p, hsa-miR-222-3p

IST1	hsa-miR-150-5p
ISY1	hsa-miR-34a-5p
ITCH	hsa-miR-21-5p
ITGAX	hsa-miR-150-5p
ITGB3	hsa-let-7i-5p
ITK	hsa-miR-155-5p
ITPKB	hsa-miR-194-5p
ITSN1	hsa-miR-194-5p
IVNS1ABP	hsa-miR-194-5p
JADE1	hsa-miR-155-5p, hsa-miR-194-5p
JADE2	hsa-miR-24-3p
JADE2	hsa-miR-34a-5p
JAG1	hsa-miR-21-5p, hsa-miR-34a-5p
JAKMIP1	hsa-miR-34a-5p
JARID2	hsa-miR-155-5p
JMJD1C	hsa-miR-34a-5p
JPT2	hsa-miR-150-5p
JRK	hsa-miR-24-3p
JUN	hsa-miR-139-5p
KANSL1	hsa-miR-155-5p
KAT6A	hsa-miR-139-5p
KBTBD2	hsa-miR-139-5p
KBTBD6	hsa-miR-21-5p
KCMF1	hsa-miR-132-3p
KCNA6	hsa-miR-132-3p
KCNB1	hsa-miR-24-3p
KCNC2	hsa-let-7i-5p
KCNIP1	hsa-miR-150-5p
KCNJ10	hsa-miR-21-5p
KCNJ11	hsa-let-7i-5p
KCNJ16	hsa-miR-146a-5p, hsa-miR-146b-5p
KCNJ2	hsa-miR-24-3p
KCNK2	hsa-miR-132-3p, hsa-miR-24-3p
KCNK3	hsa-miR-34a-5p
KCNN3	hsa-miR-132-3p
KCTD17	hsa-let-7i-5p, hsa-miR-150-3p, hsa-miR-194-5p
KCTD21	hsa-let-7i-5p, hsa-miR-24-3p
KDM1B	hsa-miR-21-5p
KDM2A	hsa-miR-155-5p
KDM3A	hsa-let-7i-5p
KDM5A	hsa-miR-132-3p, hsa-miR-194-5p, hsa-miR-24-3p
KDM5B	hsa-miR-155-5p
KDM5D	hsa-miR-34a-5p
KDM7A	hsa-miR-139-5p, hsa-miR-21-5p
KDR	hsa-miR-221-3p, hsa-miR-222-3p

KHDC1	hsa-miR-21-5p
KHDC1L	hsa-miR-21-5p
KHDRBS2	hsa-miR-194-5p
KIAA0930	hsa-let-7i-5p
KIAA1143	hsa-miR-150-3p
KIAA1210	hsa-miR-194-5p
KIAA1217	hsa-miR-34a-5p
KIAA1841	hsa-miR-221-3p, hsa-miR-222-3p
KIAA1958	hsa-let-7i-5p
KIAA2026	hsa-miR-132-3p
KIF13A	hsa-miR-139-5p
KIF16B	hsa-miR-221-3p, hsa-miR-222-3p
KIF1C	hsa-miR-150-5p
KIF20A	hsa-miR-221-3p, hsa-miR-222-3p
KIF3C	hsa-miR-24-3p
KIT	hsa-miR-221-3p, hsa-miR-222-3p
KITLG	hsa-miR-150-3p, hsa-miR-34a-5p
KLF12	hsa-miR-194-5p
KLF3	hsa-miR-155-5p, hsa-miR-21-5p
KLF4	hsa-miR-150-3p, hsa-miR-34a-5p
KLF6	hsa-miR-21-5p
KLF7	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
KLF8	hsa-let-7i-5p
KLF9	hsa-let-7i-5p
KLHDC8B	hsa-let-7i-5p
KLHL1	hsa-miR-24-3p
KLHL15	hsa-miR-21-5p
KLHL3	hsa-miR-24-3p
KLHL31	hsa-let-7i-5p
KLHL4	hsa-miR-155-5p
KMT2A	hsa-miR-150-5p
KMT2C	hsa-miR-194-5p
KMT5A	hsa-miR-194-5p
KMT5C	hsa-miR-24-3p
KPNA4	hsa-miR-139-5p, hsa-miR-24-3p
KRAS	hsa-miR-155-5p
KRIT1	hsa-miR-21-5p
KRT25	hsa-miR-194-5p
KRTAP4-1	hsa-miR-132-3p
KRTAP5-9	hsa-miR-24-3p
L3MBTL1	hsa-miR-221-3p, hsa-miR-222-3p
L3MBTL3	hsa-miR-132-3p
LAMC1	hsa-miR-24-3p
LAMP2	hsa-let-7i-5p, hsa-miR-194-5p
LANCL1	hsa-miR-146a-5p, hsa-miR-146b-5p

LAT2	hsa-miR-155-5p
LATS1	hsa-miR-21-5p
LBR	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
LCOR	hsa-miR-194-5p
LCORL	hsa-miR-155-5p
LDHA	hsa-miR-34a-5p
LDLR	hsa-miR-150-5p
LDLRAD3	hsa-miR-155-5p
LEF1	hsa-miR-34a-5p
LEMD3	hsa-miR-132-3p
LEPR	hsa-miR-150-3p
LEPROTL1	hsa-let-7i-5p
LGR4	hsa-miR-34a-5p
LHFPL2	hsa-miR-221-3p, hsa-miR-222-3p
LHX2	hsa-miR-34a-5p
LILRA1	hsa-miR-34a-5p
LIMD1	hsa-miR-24-3p
LIMD2	hsa-let-7i-5p, hsa-miR-24-3p, hsa-miR-34a-5p
LIN28A	hsa-let-7i-5p
LIN28B	hsa-miR-132-3p, hsa-let-7i-5p, hsa-miR-34a-5p
LIN52	hsa-miR-194-5p
LIN7C	hsa-miR-194-5p
LINGO1	hsa-let-7i-5p
LINGO2	hsa-miR-194-5p
LIPH	hsa-let-7i-5p
LIPT2	hsa-let-7i-5p
LMAN1	hsa-miR-34a-5p
LMAN2L	hsa-miR-34a-5p
LMBR1L	hsa-miR-24-3p
LMO2	hsa-miR-139-3p
LOC100506388	hsa-miR-221-3p, hsa-miR-222-3p
LOC102723360	hsa-miR-150-5p
LOC102724219	hsa-miR-150-5p
LOC102724843	hsa-miR-150-5p
LOC102724951	hsa-miR-150-5p
LOC284898	hsa-miR-24-3p
LOC388813	hsa-miR-146a-5p, hsa-miR-146b-5p
LOX	hsa-miR-24-3p
LPA	hsa-miR-21-5p
LPAR6	hsa-miR-24-3p
LPGAT1	hsa-let-7i-5p
LPXN	hsa-miR-194-5p
LRCH1	hsa-miR-146a-5p, hsa-miR-146b-5p
LRCH2	hsa-miR-194-5p
LRFN5	hsa-miR-139-5p

LRIF1	hsa-miR-155-5p
LRIG2	hsa-let-7i-5p
LRIG3	hsa-let-7i-5p
LRP2	5p
LRPAP1	hsa-miR-24-3p
LRRC57	hsa-miR-21-5p
LRRC58	hsa-miR-132-3p, hsa-miR-150-5p
LRRC59	hsa-miR-155-5p
LRRC8B	hsa-miR-155-5p
LRRFIP1	hsa-miR-132-3p, hsa-miR-194-5p
LRRN3	hsa-miR-139-5p
LRRTM2	hsa-miR-139-3p, hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-155-5p
LSAMP	hsa-miR-194-5p
LSM11	hsa-miR-132-3p
LSM14A	hsa-miR-155-5p
LSM4	hsa-miR-24-3p
LTV1	hsa-miR-21-5p
LUC7L3	hsa-miR-194-5p
LURAP1L	hsa-miR-194-5p
LUZP2	hsa-miR-221-3p, hsa-miR-222-3p
LYN	hsa-miR-194-5p
LYPLA1	hsa-miR-221-3p, hsa-miR-222-3p
LYST	hsa-miR-34a-5p
MAFB	hsa-miR-150-3p
MAGI1	hsa-miR-24-3p
MALT1	hsa-miR-21-5p
MAOA	hsa-miR-132-3p
MAP2	hsa-miR-194-5p
MAP2K1	hsa-miR-34a-5p
MAP2K4	hsa-miR-150-3p
MAP3K1	hsa-let-7i-5p, hsa-miR-21-5p
MAP3K10	hsa-miR-155-5p
MAP3K14	hsa-miR-155-5p
MAP3K3	hsa-miR-132-3p
MAP3K7	hsa-miR-155-5p
MAP3K8	hsa-miR-146a-5p, hsa-miR-146b-5p
MAP3K9	hsa-let-7i-5p
MAP4K3	hsa-let-7i-5p, hsa-miR-155-5p
MAP7D3	hsa-miR-34a-5p
MAPK1	hsa-miR-132-3p
MAPK6	hsa-let-7i-5p
MAPK7	hsa-miR-24-3p
MAPK8	hsa-let-7i-5p
MAPKAPK2	hsa-miR-24-3p

MARCKSL1	hsa-miR-24-3p
MARF1	hsa-miR-221-3p, hsa-miR-222-3p
MARK1	hsa-miR-221-3p, hsa-miR-222-3p
MARS2	hsa-let-7i-5p
MASP1	hsa-let-7i-5p
MAST4	hsa-miR-21-5p
MATN2	hsa-miR-21-5p
MATN3	hsa-miR-24-3p
MATR3	hsa-miR-24-3p
MBD2	hsa-let-7i-5p
MBD6	hsa-miR-150-5p, hsa-miR-24-3p
MBLAC1	hsa-miR-34a-5p
MBNL3	hsa-miR-139-5p, hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-21-5p
MBOAT7	hsa-miR-24-3p
MBTD1	hsa-miR-150-5p, hsa-miR-155-5p
MCIDAS	hsa-miR-34a-5p
MCM8	hsa-miR-155-5p
MCMD2C	hsa-miR-21-5p
MDGA2	hsa-miR-139-5p
MDM4	hsa-let-7i-5p, hsa-miR-150-5p, hsa-miR-34a-5p
MED1	hsa-miR-146a-5p, hsa-miR-146b-5p
MED13L	hsa-miR-155-5p
MED20	hsa-miR-146a-5p, hsa-miR-146b-5p
MED21	hsa-miR-155-5p, hsa-miR-21-5p
MED28	hsa-let-7i-5p
MED4	hsa-miR-139-5p
MED8	hsa-let-7i-5p, hsa-miR-24-3p
MED9	hsa-miR-132-3p
MEF2A	hsa-miR-132-3p, hsa-miR-155-5p
MEF2C	hsa-let-7i-5p
MEGF9	hsa-miR-150-3p
MEI4	hsa-miR-21-5p
MEIS1	hsa-miR-155-5p
MEIS2	hsa-let-7i-5p, hsa-miR-139-5p
MELK	hsa-miR-132-3p
MEP1A	hsa-miR-194-5p
MET	hsa-miR-34a-5p
METAP1	hsa-miR-34a-5p
METAP2	hsa-miR-194-5p
METTTL25	hsa-miR-132-3p
MEX3C	hsa-miR-132-3p, hsa-miR-34a-5p
MFSD4A	hsa-let-7i-5p, hsa-miR-139-5p, hsa-miR-194-5p, hsa-miR-24-3p, hsa-miR-34a-5p
MGAT5B	hsa-miR-34a-5p

MIA3	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p
MIB1	hsa-let-7i-5p
MICAL2	hsa-miR-24-3p
MID1IP1	hsa-miR-194-5p
MIDN	hsa-miR-155-5p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p
MIER1	hsa-miR-132-3p
MIER2	hsa-miR-139-3p
MIER3	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
MINDY2	hsa-miR-150-5p, hsa-miR-194-5p, hsa-miR-21-5p
MIS12	hsa-miR-132-3p
MITF	hsa-miR-155-5p
MLEC	hsa-miR-24-3p
MLLT1	hsa-miR-34a-5p
MLLT3	hsa-miR-34a-5p
MMAB	hsa-miR-34a-5p
MMP16	hsa-miR-146a-5p, hsa-miR-146b-5p
MMS22L	hsa-let-7i-5p
MNT	hsa-miR-139-5p, hsa-miR-24-3p
MOB1B	hsa-miR-150-5p
MOB3C	hsa-miR-24-3p
MOCS2	hsa-miR-146a-5p, hsa-miR-146b-5p
MORN4	hsa-miR-139-5p
MPDU1	hsa-miR-24-3p
MPEG1	hsa-miR-155-5p
MPHOSPH6	hsa-miR-146a-5p, hsa-miR-146b-5p
MPP2	hsa-miR-34a-5p
MPP3	hsa-miR-150-3p
MPRIP	hsa-miR-21-5p
MRAP2	hsa-miR-221-3p, hsa-miR-222-3p
MRPL35	hsa-miR-150-3p
MRPL4	hsa-miR-24-3p
MRS2	hsa-let-7i-5p, hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-194-5p
MSANTD3-TMEFF1	hsa-miR-150-3p
MSH2	hsa-miR-21-5p
MSI2	hsa-miR-150-3p
MSL3	hsa-miR-139-5p
MT1M	hsa-miR-24-3p
MTCH2	hsa-miR-150-5p
MTDH	hsa-let-7i-5p
MTF2	hsa-miR-132-3p
MTHFR	hsa-miR-24-3p
MTMR10	hsa-miR-132-3p, hsa-miR-34a-5p

MTMR14	hsa-miR-24-3p
MTMR6	hsa-miR-194-5p
MTSS1	hsa-miR-194-5p
MTUS1	hsa-let-7i-5p
MTUS2	hsa-miR-24-3p
MUC13	hsa-miR-132-3p
MVB12B	hsa-miR-24-3p
MYB	hsa-miR-150-3p, hsa-miR-150-5p, hsa-miR-155-5p
MYBL1	hsa-miR-155-5p, hsa-miR-221-3p
MYCBP2	hsa-miR-132-3p
MYCN	hsa-let-7i-5p, hsa-miR-34a-5p
MYH9	hsa-miR-34a-5p
MYLIP	hsa-miR-221-3p
MYLIP	hsa-miR-222-3p
MYO10	hsa-miR-155-5p
MYO1D	hsa-miR-155-5p
MYO6	hsa-miR-150-3p
MYOZ2	hsa-miR-155-5p
MYRIP	hsa-miR-34a-5p
MYT1	hsa-miR-34a-5p
NAA25	hsa-miR-221-3p, hsa-miR-222-3p
NAA50	hsa-miR-194-5p
NACA	hsa-miR-194-5p
NACC2	hsa-miR-132-3p
NAIF1	hsa-miR-24-3p
NANOGNB	hsa-miR-139-5p
NAP1L1	hsa-let-7i-5p, hsa-miR-150-3p
NAP1L5	hsa-miR-221-3p, hsa-miR-222-3p
NARS	hsa-miR-155-5p
NAV1	hsa-miR-34a-5p
NAV2	hsa-miR-24-3p
NAV3	hsa-miR-34a-5p
NCDN	hsa-miR-34a-5p
NCEH1	hsa-miR-34a-5p
NCOA5	hsa-miR-24-3p
NDC1	hsa-miR-150-5p
NDFIP1	hsa-miR-139-5p
NDRG2	hsa-miR-139-5p
NDRG4	hsa-miR-139-5p, hsa-miR-24-3p
NDST1	hsa-miR-24-3p
NDST3	hsa-miR-24-3p
NDUFAF4	hsa-miR-24-3p
NDUFB5	hsa-miR-139-5p
NEB	hsa-miR-146a-5p, hsa-miR-146b-5p
NEBL	hsa-miR-150-3p

NECTIN1	hsa-miR-34a-5p
NECTIN3	hsa-miR-139-5p
NEFM	hsa-miR-24-3p
NEGR1	hsa-miR-21-5p
NEK3	hsa-let-7i-5p
NEMP1	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-194-5p, hsa-miR-24-3p
NEMP2	hsa-miR-24-3p
NFAT5	hsa-miR-194-5p, hsa-miR-24-3p
NFATC2	hsa-miR-132-3p
NFE2L2	hsa-miR-132-3p
NFIA	hsa-miR-21-5p
NFIB	hsa-miR-21-5p
NFXL1	hsa-miR-24-3p
NGF	hsa-let-7i-5p
NHLRC3	hsa-let-7i-5p
NIPAL1	hsa-miR-21-5p
NIPAL2	hsa-miR-21-5p
NIPAL4	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
NIPSNAP1	hsa-miR-24-3p
NIPSNAP3B	hsa-miR-194-5p
NKAPD1	hsa-let-7i-5p
NKIRAS1	hsa-miR-21-5p
NKX2-4	hsa-miR-150-5p
NLK	hsa-miR-132-3p, hsa-miR-24-3p
NLRP7	hsa-miR-150-5p
NMB	hsa-miR-194-5p
NME4	hsa-let-7i-5p
NME6	hsa-let-7i-5p
NMNAT2	hsa-miR-132-3p
NOS1	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-24-3p
NOS1AP	hsa-miR-34a-5p
NOTCH1	hsa-miR-139-5p, hsa-miR-34a-5p
NOTCH2	hsa-miR-34a-5p
NOVA1	5p
NOX4	hsa-miR-139-3p
NPEPL1	hsa-let-7i-5p
NPHP3	hsa-let-7i-5p
NPNT	hsa-miR-34a-5p
NPPA	hsa-miR-139-5p
NPPB	hsa-miR-21-5p
NPR3	hsa-miR-150-5p
NPTX1	hsa-miR-139-5p
NR1D2	hsa-miR-150-5p
NR3C2	hsa-miR-150-3p

NR5A2	hsa-miR-139-5p
NR6A1	hsa-let-7i-5p
NRAS	hsa-let-7i-5p
NRCAM	hsa-miR-150-5p
NREP	hsa-miR-132-3p
NRIP3	hsa-miR-34a-5p
NRK	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
NRN1	hsa-miR-194-5p, hsa-miR-34a-5p
NRP1	hsa-miR-150-3p, hsa-miR-24-3p
NRP2	hsa-miR-24-3p
NSD1	hsa-miR-34a-5p
NSD2	hsa-miR-24-3p
NSL1	hsa-miR-150-5p
NTF3	hsa-miR-21-5p
NTNG1	hsa-miR-132-3p, hsa-miR-194-5p
NTSR1	hsa-miR-24-3p
NUDC	hsa-miR-194-5p
NUF2	hsa-miR-194-5p
NUMB	hsa-miR-146a-5p, hsa-miR-146b-5p
NUMBL	hsa-miR-34a-5p
NUP210	hsa-miR-24-3p
NVL	hsa-miR-132-3p
NWD1	hsa-miR-150-5p
NWD2	hsa-miR-194-5p
NXPH1	hsa-miR-221-3p, hsa-miR-222-3p
NYAP2	hsa-miR-221-3p, hsa-miR-222-3p
NYNRIN	hsa-let-7i-5p
OAZ2	hsa-miR-34a-5p
OLFM3	hsa-miR-21-5p
OLFML3	hsa-miR-155-5p
OLIG3	hsa-miR-34a-5p
ONECUT2	hsa-let-7i-5p, hsa-miR-194-5p
OOEP	hsa-miR-155-5p
OPA3	hsa-let-7i-5p, hsa-miR-150-5p
OR51E2	hsa-miR-194-5p
ORAI2	hsa-miR-150-5p, hsa-miR-24-3p
OSBPL11	hsa-miR-194-5p
OSBPL3	hsa-let-7i-5p
OSBPL8	hsa-miR-132-3p, hsa-miR-194-5p
OSGIN2	hsa-miR-34a-5p
OSMR	hsa-let-7i-5p
OSR1	hsa-miR-21-5p
OSTM1	hsa-miR-194-5p
OTUB2	hsa-miR-155-5p
OTULIN	hsa-miR-194-5p

P4HA2	hsa-let-7i-5p
PACS1	hsa-miR-34a-5p
PAF1	hsa-miR-221-3p, hsa-miR-222-3p
PAFAH1B1	hsa-miR-150-3p
PAIP1	hsa-miR-221-3p, hsa-miR-222-3p
PAIP2	hsa-miR-194-5p
PAK4	hsa-miR-24-3p
PAK5	hsa-miR-155-5p
PALD1	hsa-let-7i-5p, hsa-miR-155-5p
PAM	hsa-miR-132-3p
PAN3	hsa-miR-21-5p
PANK3	hsa-miR-221-3p, hsa-miR-222-3p
PAPPA	hsa-let-7i-5p, hsa-miR-150-5p
PAQR3	hsa-miR-24-3p
PARP8	hsa-let-7i-5p
PARPBP	hsa-let-7i-5p
PARVA	hsa-miR-194-5p
PATJ	hsa-miR-155-5p
PAX5	hsa-miR-150-5p, hsa-miR-34a-5p
PBOV1	hsa-miR-132-3p
PBRM1	hsa-miR-21-5p
PBX1	hsa-let-7i-5p
PBX2	hsa-let-7i-5p
PBX3	hsa-let-7i-5p
PCDH10	hsa-miR-132-3p
PCDH19	hsa-let-7i-5p
PCDHA1	hsa-miR-155-5p
PCDHA10	hsa-miR-155-5p
PCDHA11	hsa-miR-155-5p
PCDHA12	hsa-miR-155-5p
PCDHA13	hsa-miR-155-5p
PCDHA2	hsa-miR-155-5p
PCDHA3	hsa-miR-155-5p
PCDHA4	hsa-miR-155-5p
PCDHA5	hsa-miR-155-5p
PCDHA6	hsa-miR-155-5p
PCDHA7	hsa-miR-155-5p
PCDHA8	hsa-miR-155-5p
PCDHA9	hsa-miR-155-5p
PCDHAC1	hsa-miR-155-5p
PCDHAC2	hsa-miR-155-5p
PCGF3	hsa-let-7i-5p
PCLAF	hsa-miR-139-3p
PCMTD1	hsa-miR-221-3p, hsa-miR-222-3p
PCSK6	hsa-miR-21-5p

PDCD4	hsa-miR-21-5p
PDE12	hsa-let-7i-5p
PDE3A	hsa-miR-139-5p
PDE4A	hsa-miR-139-5p, hsa-miR-139-5p
PDE7A	hsa-miR-150-5p
PDE7B	hsa-miR-34a-5p
PDE8B	hsa-miR-150-3p
PDGFRA	hsa-miR-34a-5p
PDGFRB	hsa-miR-24-3p
PDHB	hsa-miR-194-5p
PDK3	hsa-miR-194-5p
PDLIM5	hsa-miR-155-5p
PDP2	hsa-let-7i-5p, hsa-miR-24-3p
PDPR	hsa-let-7i-5p
PDXK	hsa-miR-34a-5p
PDZD2	hsa-miR-21-5p
PEA15	hsa-miR-34a-5p
PEG10	hsa-let-7i-5p, hsa-miR-34a-5p
PELI1	hsa-miR-21-5p
PELO	hsa-miR-194-5p
PER1	hsa-miR-24-3p
PER2	hsa-miR-24-3p
PERP	hsa-miR-150-5p
PEX11B	hsa-let-7i-5p
PFN2	hsa-miR-139-5p
PGM1	hsa-miR-34a-5p
PGM5	hsa-miR-132-3p
PGPEP1L	hsa-miR-221-3p, hsa-miR-222-3p
PGRMC1	hsa-let-7i-5p
PHACTR4	hsa-miR-221-3p, hsa-miR-222-3p
PHF11	hsa-miR-150-3p
PHF12	hsa-miR-132-3p
PHF6	hsa-miR-139-5p
PHKA1	hsa-miR-139-5p
PHKB	hsa-miR-146a-5p, hsa-miR-146b-5p
PHLDA1	hsa-miR-194-5p
PHLPP1	hsa-miR-194-5p
PHLPP2	hsa-miR-150-3p
PICALM	hsa-miR-155-5p
PIEZO1	hsa-miR-139-5p
PIEZO2	hsa-miR-221-3p, hsa-miR-222-3p
PIGA	hsa-let-7i-5p
PIK3AP1	hsa-miR-150-5p
PIK3IP1	hsa-let-7i-5p
PIK3R1	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p

PIK3R3	hsa-miR-150-3p
PIM1	hsa-miR-24-3p
PIM2	hsa-miR-24-3p
PIRT	hsa-miR-150-5p
PITPNC1	hsa-miR-24-3p, hsa-miR-34a-5p
PITPNM2	hsa-miR-194-5p
PITX2	hsa-miR-21-5p
PIWIL3	hsa-miR-155-5p
PJA2	hsa-miR-194-5p
PKP4	hsa-miR-150-5p, hsa-miR-34a-5p
PLA2G3	hsa-let-7i-5p
PLAA	hsa-miR-21-5p
PLAG1	hsa-miR-21-5p, hsa-miR-34a-5p
PLAGL1	hsa-miR-150-3p
PLAGL2	hsa-let-7i-5p
PLCB1	hsa-miR-139-5p
PLCH1	hsa-miR-139-3p, hsa-miR-24-3p
PLCL2	hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p
PLD5	hsa-miR-139-3p
PLEKHA1	hsa-miR-155-5p, hsa-miR-21-5p
PLEKHA8	hsa-let-7i-5p
PLEKHB2	hsa-miR-155-5p
PLEKHG6	hsa-let-7i-5p
PLEKHH2	hsa-miR-24-3p, hsa-miR-34a-5p
PLEKHO1	hsa-let-7i-5p
PLOD1	hsa-miR-34a-5p
PLOD2	hsa-miR-24-3p
PLP2	hsa-miR-150-5p
PLPP5	hsa-let-7i-5p
PLPP6	hsa-let-7i-5p
PLPPR4	hsa-miR-150-3p, hsa-miR-24-3p
PLSCR4	hsa-miR-146a-5p, hsa-miR-146b-5p
PLXNC1	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
PLXND1	hsa-let-7i-5p
PMEPA1	hsa-miR-221-3p, hsa-miR-222-3p
PMP22	hsa-miR-139-5p
PNOC	hsa-miR-34a-5p
POFUT2	hsa-miR-146a-5p, hsa-miR-146b-5p
POGLUT1	hsa-let-7i-5p
POGZ	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-34a-5p
POLH	hsa-miR-150-5p
POLL	hsa-let-7i-5p
POLR3D	hsa-let-7i-5p, hsa-miR-24-3p
POLR3E	hsa-miR-221-3p, hsa-miR-222-3p

POM121	hsa-miR-132-3p, hsa-miR-150-5p
POM121C	hsa-miR-150-5p
POU3F2	hsa-miR-150-5p
PPARGC1A	hsa-miR-150-5p
PPARGC1B	hsa-miR-139-5p
PPARGC1B	hsa-miR-34a-5p
PPBP	hsa-miR-146a-5p, hsa-miR-146b-5p
PPFIA1	hsa-miR-34a-5p
PPFIBP1	hsa-miR-194-5p
PPIL6	hsa-miR-24-3p
PPM1A	hsa-miR-34a-5p
PPM1D	hsa-miR-155-5p
PPM1G	hsa-miR-132-3p
PPM1K	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-24-3p
PPP1R10	hsa-miR-34a-5p
PPP1R11	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-34a-
PPP1R15B	hsa-let-7i-5p
PPP1R16B	hsa-let-7i-5p, hsa-miR-24-3p, hsa-miR-34a-5p
PPP1R3A	hsa-miR-150-5p, hsa-miR-21-5p
PPP1R3B	hsa-miR-21-5p
PPP1R3D	hsa-miR-21-5p
PPP2CA	hsa-miR-139-5p
PPP2R2A	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p
PPP2R3A	hsa-miR-34a-5p
PPP3CA	hsa-miR-194-5p
PPP3R1	hsa-miR-221-3p, hsa-miR-222-3p
PPTC7	hsa-miR-194-5p
PRDM1	hsa-miR-24-3p
PRDM11	hsa-miR-21-5p
PRDM16	hsa-miR-139-5p
PRELID1	hsa-miR-24-3p
PRICKLE2	hsa-miR-194-5p
PRKAA2	hsa-miR-150-3p
PRKAR1A	hsa-miR-150-5p
PRKAR2A	hsa-let-7i-5p
PRKCA	hsa-miR-150-5p
PRKCH	hsa-miR-24-3p
PRKD1	hsa-miR-34a-5p
PRKD3	hsa-miR-139-5p
PRKRA	hsa-miR-150-3p
PRLR	hsa-let-7i-5p
PROSER1	hsa-miR-139-5p
PRPF38B	hsa-let-7i-5p
PRPF4B	hsa-miR-139-5p
PRRC2B	hsa-miR-221-3p, hsa-miR-222-3p

PRRX1	hsa-let-7i-5p
PRSS22	hsa-let-7i-5p
PRTG	hsa-let-7i-5p
PSIP1	hsa-miR-155-5p
PSMB6	hsa-miR-150-5p
PSMD12	hsa-miR-132-3p
PSME4	hsa-miR-139-5p
PTAFR	hsa-let-7i-5p
PTBP2	hsa-miR-132-3p
PTGER4	hsa-miR-24-3p
PTGFR	hsa-miR-150-5p
PTGFRN	hsa-miR-150-3p
PTGIS	hsa-miR-34a-5p
PTHLH	hsa-miR-150-3p
PTPN12	hsa-miR-194-5p
PTPN2	hsa-miR-155-5p, hsa-miR-194-5p
PTPN20	hsa-miR-194-5p, hsa-miR-21-5p
PTPN4	hsa-miR-139-5p
PTPRA	hsa-miR-146a-5p, hsa-miR-146b-5p
PTPRD	hsa-let-7i-5p, hsa-miR-24-3p
PTPRF	hsa-miR-24-3p
PTPRJ	hsa-miR-155-5p
PTPRU	hsa-miR-139-5p
PURA	hsa-miR-150-5p, hsa-miR-24-3p
PURB	hsa-miR-34a-5p
PWWP3B	hsa-miR-139-5p
PXDN	hsa-let-7i-5p
PXT1	hsa-let-7i-5p
PYURF	hsa-miR-132-3p
QKI	hsa-miR-194-5p
RAB11FIP2	hsa-miR-155-5p
RAB11FIP4	hsa-let-7i-5p
RAB18	hsa-miR-221-3p, hsa-miR-222-3p
RAB1A	hsa-miR-221-3p, hsa-miR-222-3p
RAB21	hsa-miR-34a-5p
RAB38	hsa-miR-194-5p
RAB3B	hsa-miR-194-5p
RAB6D	hsa-miR-21-5p
RAB8B	hsa-let-7i-5p, hsa-miR-139-3p
RAD23B	hsa-miR-150-5p
RAD51AP1	hsa-miR-21-5p
RAD54B	hsa-miR-139-5p
RAD54L2	hsa-miR-132-3p
RAD9B	hsa-miR-34a-5p
RAI1	hsa-miR-194-5p

RALA	hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p
RALB	hsa-let-7i-5p
RALGPS1	hsa-miR-34a-5p
RALGPS2	hsa-miR-21-5p
RANBP10	hsa-miR-24-3p
RANBP2	hsa-let-7i-5p
RANBP9	hsa-miR-150-5p
RAP1A	hsa-miR-24-3p
RAP1B	hsa-miR-194-5p, hsa-miR-24-3p
RAP1GDS1	hsa-miR-34a-5p
RAP2C	hsa-miR-24-3p
RAPGEF2	hsa-miR-155-5p
RARB	hsa-miR-146a-5p, hsa-miR-146b-5p
RASA1	hsa-miR-132-3p, hsa-miR-21-5p, hsa-miR-24-3p
RASA2	hsa-miR-21-5p
RASGRF1	hsa-miR-139-5p
RASGRP1	hsa-let-7i-5p, hsa-miR-21-5p
RB1	hsa-miR-132-3p
RBBP4	hsa-miR-24-3p
RBFOX2	hsa-let-7i-5p
RBM48	hsa-miR-150-5p
RBMS3	hsa-miR-155-5p, hsa-miR-21-5p
RBMXL2	hsa-miR-150-5p
RBP2	hsa-miR-155-5p, hsa-miR-221-3p, hsa-miR-222-3p
RBPJ	hsa-miR-21-5p
RC3H1	hsa-miR-150-5p
RC3H2	hsa-miR-155-5p
RCAN1	hsa-miR-34a-5p
RCN2	hsa-miR-155-5p
RCOR1	hsa-miR-155-5p
RDH11	hsa-miR-34a-5p
RDX	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
RECK	hsa-miR-21-5p
RELA	hsa-miR-155-5p
RELN	hsa-miR-34a-5p
REM1	hsa-miR-139-5p
REPS2	hsa-miR-24-3p
RER1	hsa-miR-24-3p
REV3L	hsa-miR-194-5p
RFX3	hsa-miR-150-3p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-34a-5p
RFX6	hsa-let-7i-5p
RFX7	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
RFX8	hsa-miR-221-3p, hsa-miR-222-3p
RGP1	hsa-miR-155-5p

RGS16	hsa-let-7i-5p
RGS17	hsa-miR-34a-5p
RGS6	hsa-let-7i-5p, hsa-miR-221-3p, hsa-miR-222-3p
RGS7BP	hsa-miR-132-3p
RHEB	hsa-miR-194-5p
RHOBTB3	hsa-miR-146a-5p, hsa-miR-146b-5p
RHOQ	hsa-miR-132-3p
RICTOR	hsa-miR-132-3p, hsa-let-7i-5p, hsa-miR-155-5p
RIMS3	hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-34a-5p
RIT2	hsa-miR-221-3p, hsa-miR-222-3p
RMND5A	hsa-miR-21-5p
RNF103	hsa-miR-21-5p
RNF125	hsa-miR-194-5p
RNF138	hsa-miR-24-3p
RNF165	hsa-let-7i-5p, hsa-miR-24-3p
RNF2	hsa-miR-24-3p
RNF20	hsa-let-7i-5p
RNF217	hsa-miR-194-5p
RNF4	hsa-miR-221-3p, hsa-miR-222-3p
RNGTT	hsa-miR-194-5p
RNPS1	hsa-miR-221-3p, hsa-miR-222-3p
ROCK1	hsa-miR-139-5p
ROCK2	hsa-miR-139-5p
RORB	hsa-miR-150-5p
RP2	hsa-miR-21-5p
RPF1	hsa-miR-146a-5p, hsa-miR-146b-5p
RPGRIP1L	hsa-miR-34a-5p
RPL17-C18orf32	hsa-miR-194-5p
RPL22	hsa-miR-139-3p
RPL22L1	hsa-miR-139-5p
RPL31	hsa-miR-132-3p
RPP14	hsa-miR-132-3p
RPS6KA3	hsa-miR-155-5p
RPS6KA4	hsa-miR-34a-5p
RPS6KA5	hsa-miR-155-5p
RPS6KB1	hsa-miR-155-5p, hsa-miR-24-3p
RPS6KL1	hsa-miR-34a-5p
RRAGC	hsa-miR-34a-5p
RRAS	hsa-miR-34a-5p
RREB1	hsa-miR-155-5p
RRM2	hsa-miR-150-5p
RSAD2	hsa-miR-21-5p
RSBN1L	hsa-miR-194-5p, hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-24-3p
RSF1	hsa-miR-194-5p

RSPO2	hsa-let-7i-5p
RTL6	hsa-miR-34a-5p
RTL8A	hsa-miR-34a-5p
RTN4RL1	hsa-miR-34a-5p
RTP1	hsa-miR-150-3p
RUBCN	hsa-miR-24-3p
RUFY2	hsa-miR-155-5p, hsa-miR-194-5p
RUFY3	hsa-miR-132-3p, hsa-let-7i-5p
RXRA	hsa-miR-194-5p
S1PR1	hsa-miR-155-5p
SALL1	hsa-miR-132-3p, hsa-miR-155-5p, hsa-miR-194-5p
SALL3	hsa-let-7i-5p
SALL4	hsa-miR-132-3p, hsa-let-7i-5p
SAMD4A	hsa-miR-194-5p
SAP30L	hsa-miR-132-3p
SAR1A	hsa-miR-34a-5p
SARAF	hsa-miR-155-5p
SATB1	hsa-miR-155-5p, hsa-miR-194-5p
SATB2	hsa-miR-34a-5p
SAYSD1	hsa-miR-150-5p
SBK1	hsa-miR-221-3p, hsa-miR-222-3p
SCAPER	hsa-miR-139-5p
SCARB1	hsa-miR-24-3p
SCD	hsa-let-7i-5p
SCG2	hsa-miR-155-5p
SCHIP1	hsa-miR-139-5p
SCML1	hsa-miR-24-3p
SCML2	hsa-miR-21-5p, hsa-miR-24-3p
SCN11A	hsa-let-7i-5p
SCN1A	hsa-miR-150-3p
SCN2A	hsa-miR-150-3p
SCN2B	hsa-miR-34a-5p
SCN3A	hsa-miR-132-3p, hsa-miR-139-5p, hsa-miR-150-3p
SCN4B	hsa-let-7i-5p
SCUBE2	hsa-miR-155-5p
SCYL3	hsa-miR-150-3p
SDC4	hsa-miR-194-5p
SDK1	hsa-let-7i-5p
SDK2	hsa-miR-34a-5p
SEC14L5	hsa-miR-155-5p, hsa-miR-24-3p
SEC16A	hsa-miR-132-3p
SEC23IP	hsa-miR-146a-5p, hsa-miR-146b-5p
SEC24B	hsa-miR-194-5p
SEC24C	hsa-miR-221-3p, hsa-miR-222-3p
SEC62	hsa-miR-221-3p, hsa-miR-222-3p

SEMA3A	hsa-miR-150-5p
SEMA3C	hsa-miR-221-3p, hsa-miR-222-3p
SEMA3G	hsa-miR-146a-5p, hsa-miR-146b-5p
SEMA4A	hsa-miR-24-3p
SEMA4B	hsa-miR-24-3p, hsa-miR-34a-5p
SEMA4C	hsa-let-7i-5p
SEMA4G	hsa-let-7i-5p
SEMA5A	hsa-miR-155-5p
SEMA6A	hsa-miR-132-3p
SENP2	hsa-let-7i-5p
SENP5	hsa-let-7i-5p
SEPHS1	hsa-miR-194-5p
SERF2	hsa-let-7i-5p
SERP1	hsa-miR-132-3p
SERPINA10	hsa-miR-155-5p
SERPINF2	hsa-miR-34a-5p
SESN1	hsa-miR-24-3p
SESN3	hsa-miR-221-3p, hsa-miR-222-3p
SESTD1	hsa-let-7i-5p, hsa-miR-150-5p, hsa-miR-155-5p
SETD5	hsa-miR-132-3p, hsa-miR-150-5p, hsa-miR-194-5p
SETD7	hsa-miR-150-5p
SETD9	hsa-miR-24-3p
SETDB2-PHF11	hsa-miR-150-3p
SFMBT1	hsa-let-7i-5p
SFPQ	hsa-miR-150-3p
SFRP2	hsa-miR-194-5p
SFT2D1	hsa-miR-34a-5p
SFXN3	hsa-miR-194-5p
SFXN5	hsa-miR-24-3p
SGCE	hsa-miR-194-5p
SGCZ	hsa-miR-139-5p
SGK3	hsa-miR-132-3p, hsa-miR-155-5p
SGPP1	hsa-miR-34a-5p
SGSM2	hsa-miR-34a-5p
SGTA	hsa-miR-34a-5p
SH2B3	hsa-miR-24-3p
SHANK3	hsa-miR-34a-5p
SHCBP1	hsa-miR-146a-5p, hsa-miR-146b-5p
SHISA7	hsa-miR-34a-5p
SHKBP1	hsa-miR-34a-5p
SHLD2	hsa-miR-221-3p, hsa-miR-222-3p
SHOC2	hsa-miR-34a-5p
SIAH1	hsa-miR-150-3p
SIAH2	hsa-miR-146a-5p, hsa-miR-146b-5p
SIDT1	hsa-miR-34a-5p

SIDT2	hsa-miR-34a-5p
SIGLEC14	hsa-let-7i-5p
SIGLEC5	hsa-let-7i-5p
SIPA1L2	hsa-miR-132-3p
SIRT1	hsa-miR-132-3p
SIX1	hsa-miR-150-3p
SIX4	hsa-miR-132-3p
SKAP2	hsa-miR-132-3p
SKI	hsa-miR-21-5p
SKIDA1	hsa-miR-24-3p
SKIL	hsa-let-7i-5p
SKP2	hsa-miR-21-5p
SLC10A3	hsa-miR-146a-5p, hsa-miR-146b-5p
SLC10A7	hsa-let-7i-5p, hsa-miR-194-5p
SLC12A2	hsa-miR-194-5p
SLC12A6	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-194-5p, hsa-miR-24-3p
SLC16A12	hsa-miR-150-5p
SLC16A14	hsa-miR-146a-5p, hsa-miR-146b-5p
SLC16A2	hsa-miR-24-3p
SLC16A9	hsa-let-7i-5p
SLC17A6	hsa-miR-150-3p
SLC1A3	hsa-miR-132-3p, hsa-miR-194-5p
SLC1A7	hsa-miR-24-3p
SLC20A1	hsa-let-7i-5p, hsa-miR-150-5p
SLC22A23	hsa-let-7i-5p
SLC25A21	hsa-miR-139-5p, hsa-miR-150-3p
SLC25A26	hsa-miR-150-3p
SLC25A27	hsa-let-7i-5p, hsa-miR-194-5p, hsa-miR-34a-5p
SLC25A28	hsa-miR-132-3p
SLC25A3	hsa-miR-139-5p
SLC26A7	hsa-miR-132-3p
SLC27A4	hsa-miR-34a-5p
SLC28A1	hsa-miR-194-5p
SLC2A12	hsa-let-7i-5p
SLC2A13	hsa-miR-221-3p, hsa-miR-222-3p
SLC30A1	hsa-miR-194-5p
SLC30A10	hsa-miR-21-5p
SLC30A2	hsa-miR-24-3p
SLC30A4	hsa-let-7i-5p
SLC30A5	hsa-miR-150-5p
SLC30A6	hsa-miR-132-3p
SLC31A2	hsa-let-7i-5p
SLC35D2	hsa-let-7i-5p
SLC37A3	hsa-miR-34a-5p

SLC38A1	hsa-miR-146a-5p, hsa-miR-146b-5p
SLC38A2	hsa-miR-150-3p
SLC38A9	hsa-let-7i-5p
SLC39A3	hsa-miR-24-3p
SLC41A1	hsa-miR-150-3p
SLC44A2	hsa-miR-34a-5p
SLC4A4	hsa-miR-150-5p
SLC4A7	hsa-miR-221-3p, hsa-miR-222-3p, hsa-miR-34a-5p
SLC5A6	hsa-let-7i-5p
SLC5A9	hsa-let-7i-5p
SLC6A1	hsa-miR-132-3p
SLC6A17	hsa-miR-34a-5p
SLC6A4	hsa-miR-221-3p, hsa-miR-222-3p
SLC6A6	hsa-miR-24-3p
SLC7A11	hsa-miR-150-5p
SLC7A5	hsa-miR-194-5p
SLC8A1	hsa-miR-150-5p
SLC9A2	hsa-miR-139-5p
SLF2	hsa-let-7i-5p
SLITRK2	hsa-miR-150-5p
SLK	hsa-miR-194-5p
SMAD2	hsa-miR-155-5p
SMAD7	hsa-miR-21-5p
SMAGP	hsa-miR-24-3p
SMAP1	hsa-miR-150-3p
SMARCA4	hsa-miR-155-5p
SMARCA5	hsa-miR-221-3p, hsa-miR-222-3p
SMARCA1	hsa-let-7i-5p
SMARCD1	hsa-miR-21-5p
SMC1A	hsa-let-7i-5p
SMC3	hsa-miR-150-5p
SMCHD1	hsa-miR-150-3p
SMIM14	hsa-miR-150-5p
SMIM15	hsa-miR-34a-5p
SMIM3	hsa-let-7i-5p
SMKR1	hsa-miR-194-5p
SFOX	hsa-miR-139-5p
SMUG1	hsa-miR-155-5p
SNAI1	hsa-miR-34a-5p
SNAP23	hsa-miR-150-5p
SNAP29	hsa-miR-221-3p, hsa-miR-222-3p
SNAP91	hsa-miR-194-5p
SNCAIP	hsa-miR-24-3p
SNN	hsa-miR-24-3p
SNRNP48	hsa-miR-221-3p, hsa-miR-222-3p

SNTB1	hsa-miR-24-3p
SNTB2	hsa-miR-34a-5p
SNX12	hsa-miR-34a-5p
SNX15	hsa-miR-34a-5p
SNX16	hsa-let-7i-5p
SNX30	hsa-let-7i-5p, hsa-miR-150-5p
SNX4	hsa-miR-221-3p, hsa-miR-222-3p
SNX7	hsa-miR-150-5p
SNX9	hsa-miR-34a-5p
SOCS1	hsa-miR-155-5p
SOCS4	hsa-let-7i-5p
SOD2	hsa-miR-132-3p
SOGA1	hsa-miR-150-5p, hsa-miR-24-3p, hsa-miR-34a-5p
SON	hsa-miR-150-3p
SORT1	hsa-miR-146a-5p, hsa-miR-146b-5p
SOS2	hsa-miR-21-5p
SOWAHC	hsa-miR-150-5p
SOX11	hsa-miR-132-3p
SOX5	hsa-miR-132-3p, hsa-miR-194-5p, hsa-miR-21-5p
SP1	hsa-miR-150-5p, hsa-miR-155-5p
SP5	hsa-miR-150-5p
SPAG9	hsa-miR-24-3p
SPATA13	hsa-miR-132-3p
SPATS2L	hsa-miR-24-3p
SPEF2	hsa-miR-21-5p
SPOPL	hsa-miR-150-5p
SPPL3	hsa-miR-132-3p
SPRED1	hsa-miR-132-3p, hsa-miR-194-5p
SPRTN	hsa-miR-155-5p
SPRY1	hsa-miR-21-5p
SPRY2	hsa-miR-21-5p
SPRYD4	hsa-let-7i-5p
SPTY2D1	hsa-miR-194-5p
SRCIN1	hsa-miR-150-3p
SRD5A2	hsa-miR-146a-5p, hsa-miR-146b-5p
SRD5A3	hsa-let-7i-5p
SRGAP1	hsa-miR-132-3p, hsa-let-7i-5p
SRL	hsa-miR-24-3p
SRP72	hsa-miR-146a-5p, hsa-miR-146b-5p
SRPRA	hsa-miR-34a-5p
SRSF4	hsa-miR-139-5p
SRSF6	hsa-miR-146a-5p, hsa-miR-146b-5p
SS18	hsa-miR-132-3p
SSH2	hsa-miR-132-3p, hsa-miR-194-5p
SSR1	hsa-miR-24-3p

SSTR1	hsa-miR-24-3p
SSX2IP	hsa-miR-139-5p
SSX5	hsa-miR-34a-5p
ST3GAL1	hsa-miR-24-3p
ST6GAL1	hsa-miR-150-5p
STAB2	hsa-miR-34a-5p
STAG1	hsa-miR-132-3p
STAG2	hsa-miR-21-5p
STAP1	hsa-miR-150-3p
STARD13	hsa-let-7i-5p
STARD3NL	hsa-let-7i-5p
STARD9	hsa-let-7i-5p
STAT2	hsa-miR-24-3p
STAT3	hsa-miR-21-5p
STAU2	hsa-miR-194-5p
STC2	hsa-miR-24-3p
STEAP2	hsa-miR-194-5p
STIMATE	hsa-let-7i-5p
STK24	hsa-miR-139-5p
STK38L	hsa-miR-21-5p, hsa-miR-34a-5p
STK40	hsa-let-7i-5p, hsa-miR-21-5p
STOX1	hsa-miR-150-5p
STRADB	hsa-miR-24-3p
STRBP	hsa-let-7i-5p, hsa-miR-146a-5p, hsa-miR-146b-5p
STRN3	hsa-miR-150-3p, hsa-miR-155-5p
STRN3	hsa-miR-34a-5p
STX16	hsa-miR-132-3p
STX17	hsa-miR-34a-5p
STX3	hsa-let-7i-5p
STX5	hsa-miR-24-3p
STX6	hsa-miR-24-3p
STXBP5L	hsa-miR-155-5p
SUB1	hsa-let-7i-5p
SUCO	hsa-miR-34a-5p
SUFU	hsa-miR-194-5p
SUMO2	hsa-miR-194-5p
SUN2	hsa-miR-221-3p, hsa-miR-222-3p
SURF4	hsa-miR-34a-5p
SV2B	hsa-miR-150-5p
SVEP1	hsa-miR-150-3p
SVIP	hsa-miR-221-3p, hsa-miR-222-3p
SYBU	hsa-miR-221-3p, hsa-miR-222-3p
SYN2	hsa-miR-132-3p
SYNCRIP	hsa-miR-221-3p, hsa-miR-222-3p
SYNJ1	hsa-miR-34a-5p

SYT1	hsa-miR-34a-5p
SYT10	hsa-miR-221-3p, hsa-miR-222-3p
SYT15	hsa-miR-21-5p
SZRD1	hsa-miR-150-5p
TAB2	hsa-miR-155-5p
TAB3	hsa-miR-150-3p
TADA1	hsa-miR-150-5p
TAF4	hsa-miR-194-5p
TAF4B	hsa-miR-34a-5p
TAF5	hsa-miR-34a-5p
TAF7L	hsa-miR-24-3p
TAF9B	hsa-let-7i-5p
TANC2	hsa-miR-34a-5p
TAOK1	hsa-miR-194-5p, hsa-miR-24-3p
TAPT1	hsa-miR-155-5p
TASOR	hsa-miR-34a-5p
TBC1D22B	hsa-miR-24-3p
TBC1D24	hsa-miR-24-3p
TBCK	hsa-miR-34a-5p
TBKBP1	hsa-let-7i-5p
TBL1XR1	hsa-miR-34a-5p
TBR1	hsa-miR-155-5p
TBRG1	hsa-miR-194-5p
TBX1	hsa-miR-139-5p
TCEAL4	hsa-miR-194-5p
TCF12	hsa-miR-221-3p, hsa-miR-222-3p
TCF20	hsa-miR-146a-5p, hsa-miR-146b-5p
TCF7L2	hsa-miR-155-5p
TDRD9	hsa-miR-155-5p
TDRKH	hsa-miR-146a-5p, hsa-miR-146b-5p
TDRP	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p
TECPR2	hsa-let-7i-5p
TENM3	hsa-miR-155-5p
TENT5A	hsa-miR-194-5p, hsa-miR-21-5p, hsa-miR-34a-5p
TENT5C	hsa-miR-150-3p
TET3	hsa-let-7i-5p, hsa-miR-139-5p
TEX48	hsa-miR-24-3p
TFEC	hsa-miR-150-3p
TFG	hsa-miR-221-3p, hsa-miR-222-3p
TGDS	hsa-miR-150-5p
TGFBI	hsa-miR-21-5p
TGFBR1	hsa-let-7i-5p
TGFBR3	hsa-let-7i-5p
TGIF1	hsa-miR-139-5p
TGIF2	hsa-miR-34a-5p

TGS1	hsa-miR-132-3p, hsa-miR-221-3p, hsa-miR-222-3p
THAP2	hsa-miR-150-3p
THAP5	hsa-miR-146a-5p, hsa-miR-146b-5p
THEMIS	hsa-miR-150-3p
THOC2	hsa-let-7i-5p
THRB	hsa-miR-21-5p
THRSP	hsa-let-7i-5p
THSD4	hsa-miR-34a-5p
TIAL1	hsa-miR-150-3p
TIAM1	hsa-miR-21-5p
TIMM9	hsa-miR-132-3p
TIMP3	hsa-miR-21-5p
TJAP1	hsa-miR-132-3p
TLE3	hsa-miR-221-3p, hsa-miR-222-3p
TLE4	hsa-miR-155-5p, hsa-miR-24-3p
TLN2	hsa-miR-132-3p, hsa-miR-24-3p
TMBIM4	hsa-miR-194-5p
TMC7	hsa-let-7i-5p
TMCC1	hsa-miR-221-3p, hsa-miR-222-3p
TMED4	hsa-miR-150-5p
TMED5	hsa-miR-194-5p
TMEFF1	hsa-miR-150-3p
TMEM106B	hsa-miR-132-3p
TMEM108	hsa-miR-150-5p, hsa-miR-194-5p
TMEM109	hsa-miR-34a-5p
TMEM120B	hsa-miR-146a-5p, hsa-miR-146b-5p
TMEM121B	hsa-let-7i-5p, hsa-miR-24-3p
TMEM132D	hsa-miR-139-5p
TMEM136	hsa-miR-132-3p
TMEM150A	hsa-miR-150-3p
TMEM161B	hsa-miR-24-3p
TMEM164	hsa-miR-132-3p, hsa-miR-34a-5p
TMEM167A	hsa-let-7i-5p
TMEM170A	hsa-miR-21-5p
TMEM178B	hsa-miR-132-3p, hsa-miR-24-3p
TMEM179B	hsa-miR-150-3p
TMEM184B	hsa-miR-34a-5p
TMEM19	hsa-miR-146a-5p, hsa-miR-146b-5p
TMEM200B	hsa-miR-34a-5p
TMEM209	hsa-miR-24-3p
TMEM234	hsa-let-7i-5p
TMEM255A	hsa-miR-34a-5p
TMEM50B	hsa-miR-24-3p
TMEM64	hsa-miR-132-3p
TMEM65	hsa-let-7i-5p

TMEM70	hsa-miR-150-3p
TMEM74	hsa-miR-34a-5p
TMEM79	hsa-miR-34a-5p
TMF1	hsa-miR-139-5p
TMOD2	hsa-let-7i-5p
TMPO	hsa-miR-139-5p
TMPPE	hsa-let-7i-5p
TMPRSS11A	hsa-miR-150-5p
TMPRSS2	hsa-let-7i-5p
TMSB4Y	hsa-miR-150-5p
TMTC1	hsa-miR-24-3p
TNF	hsa-miR-150-5p
TNFRSF19	hsa-miR-24-3p
TNFSF14	hsa-miR-34a-5p
TNFSF9	hsa-let-7i-5p
TNPO1	hsa-miR-139-5p
TNRC18	hsa-miR-34a-5p
TNRC6B	hsa-miR-150-5p
TNRC6C	hsa-miR-221-3p, hsa-miR-222-3p
TNS1	hsa-miR-24-3p
TOB2	hsa-miR-34a-5p
TOP1	hsa-miR-24-3p
TOR1A	hsa-miR-146a-5p, hsa-miR-146b-5p
TOR2A	hsa-miR-24-3p
TP53BP2	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
TP53INP1	hsa-miR-155-5p
TPCN2	hsa-miR-34a-5p
TPD52	hsa-miR-34a-5p
TPPP	hsa-miR-34a-5p
TPPP3	hsa-miR-150-3p
TPRG1L	hsa-miR-21-5p
TPRKB	hsa-miR-155-5p
TRAF3	hsa-miR-155-5p
TRAF6	hsa-miR-146a-5p, hsa-miR-146b-5p
TRAF7	hsa-miR-24-3p
TRAM1	hsa-miR-155-5p
TRANK1	hsa-let-7i-5p, hsa-miR-34a-5p
TRDN	hsa-miR-132-3p
TRIM23	hsa-miR-194-5p
TRIM32	hsa-miR-155-5p
TRIM41	hsa-let-7i-5p
TRIM55	hsa-miR-24-3p
TRIM59	hsa-miR-150-3p
TRIM67	hsa-let-7i-5p, hsa-miR-34a-5p
TRIM71	hsa-let-7i-5p, hsa-miR-139-5p

TRIP11	hsa-miR-155-5p
TRIP13	hsa-miR-155-5p
TRMT10C	hsa-miR-139-5p
TRMT12	hsa-miR-150-5p
TRMT6	3p
TRNAU1AP	hsa-miR-132-3p
TRPC3	hsa-miR-221-3p, hsa-miR-222-3p
TRPC4AP	hsa-miR-24-3p
TRPM6	hsa-miR-24-3p
TRPM8	hsa-miR-155-5p
TRPS1	hsa-miR-155-5p
TSC22D2	hsa-miR-24-3p
TSC22D3	hsa-miR-221-3p, hsa-miR-222-3p
TSEN34	hsa-let-7i-5p
TSHZ3	hsa-miR-155-5p
TSN	hsa-miR-34a-5p
TSPAN1	hsa-miR-194-5p
TSPAN13	hsa-miR-221-3p, hsa-miR-222-3p
TSPAN14	hsa-miR-24-3p
TSPAN3	hsa-miR-139-5p
TSPAN6	hsa-miR-132-3p
TSPAN7	hsa-miR-194-5p
TSPEAR	hsa-let-7i-5p
TSPYL5	hsa-miR-150-5p
TTC17	hsa-miR-24-3p
TTC21B	hsa-miR-155-5p
TTC7B	hsa-miR-150-3p, hsa-miR-194-5p
TTLL4	hsa-let-7i-5p
TUB	hsa-miR-221-3p, hsa-miR-222-3p
TUBA1A	hsa-miR-221-3p, hsa-miR-222-3p
TUT4	hsa-miR-132-3p
TWF1	hsa-miR-155-5p
TXLNA	hsa-let-7i-5p
TXLNG	hsa-miR-139-5p
TXNDC16	hsa-miR-150-3p
TYRP1	hsa-miR-155-5p
U2SURP	hsa-miR-194-5p
UBE2D1	hsa-miR-21-5p
UBE2D2	hsa-miR-150-3p
UBE2D3	hsa-miR-21-5p
UBE2E3	hsa-miR-139-5p
UBE2G1	hsa-miR-139-3p, hsa-miR-150-3p
UBE2J1	hsa-miR-150-5p, hsa-miR-221-3p, hsa-miR-222-3p
UBL4A	hsa-miR-34a-5p
UBP1	hsa-miR-34a-5p

UBQLN1	hsa-miR-155-5p
UBR3	hsa-miR-139-5p, hsa-miR-21-5p
UBXN8	hsa-miR-155-5p
UCHL5	hsa-miR-150-3p
UCK1	hsa-miR-24-3p
UCN2	hsa-miR-34a-5p
UGCG	hsa-let-7i-5p, hsa-miR-24-3p
UGT2A3	hsa-miR-139-5p
UGT2B10	hsa-miR-24-3p
UHRF2	hsa-let-7i-5p, hsa-miR-34a-5p
UNC13C	hsa-miR-34a-5p
UNC80	hsa-miR-155-5p
UPP2	hsa-miR-146a-5p, hsa-miR-146b-5p
USF3	hsa-miR-24-3p
USH2A	hsa-miR-155-5p
USP15	hsa-miR-21-5p
USP20	hsa-miR-24-3p
USP24	hsa-let-7i-5p
USP27X	hsa-miR-221-3p, hsa-miR-222-3p
USP31	hsa-miR-34a-5p
USP32	hsa-miR-146a-5p, hsa-miR-146b-5p
USP38	hsa-miR-132-3p, hsa-let-7i-5p
USP44	hsa-let-7i-5p, hsa-miR-194-5p
USP54	hsa-miR-24-3p
USP6	hsa-miR-146a-5p, hsa-miR-146b-5p
USP6NL	hsa-miR-139-5p, hsa-miR-194-5p
USP9X	hsa-miR-132-3p, hsa-miR-155-5p
UST	hsa-miR-150-5p
UTRN	hsa-let-7i-5p
VAMP2	hsa-miR-34a-5p
VANGL2	hsa-miR-24-3p
VAPA	hsa-miR-150-5p
VAPB	hsa-miR-221-3p, hsa-miR-222-3p
VASH1	hsa-miR-221-3p, hsa-miR-222-3p
VASN	hsa-miR-146a-5p, hsa-miR-146b-5p
VAV3	hsa-let-7i-5p, hsa-miR-155-5p
VCL	hsa-miR-21-5p, hsa-miR-34a-5p
VCPIP1	hsa-miR-24-3p
VDAC2	hsa-miR-132-3p
VEZF1	hsa-miR-150-5p
VGLL3	hsa-miR-24-3p
VIRMA	hsa-let-7i-5p
VMA21	hsa-miR-155-5p
VPS18	hsa-miR-155-5p
VPS26A	hsa-miR-150-3p

VPS36	hsa-miR-155-5p
VPS53	hsa-miR-150-5p, hsa-miR-24-3p
VPS54	hsa-miR-146a-5p, hsa-miR-146b-5p
VSTM4	hsa-miR-24-3p
VXN	hsa-miR-24-3p
WAPL	hsa-miR-194-5p
WASF1	hsa-miR-34a-5p
WASHC4	hsa-miR-139-5p
WASL	hsa-miR-139-5p
WBP1L	hsa-miR-155-5p
WDR17	hsa-miR-150-3p
WDR35	hsa-miR-221-3p, hsa-miR-222-3p
WDR37	hsa-let-7i-5p, hsa-miR-194-5p
WDR44	hsa-miR-150-3p
WDR47	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
WDR5B	hsa-miR-132-3p
WDR72	hsa-miR-155-5p
WDR93	hsa-miR-139-5p
WEE1	hsa-miR-155-5p
WIPI2	hsa-miR-34a-5p
WNK3	hsa-miR-221-3p, hsa-miR-222-3p
WNT9B	hsa-let-7i-5p
WTAP	hsa-miR-139-5p, hsa-miR-150-5p
WWC1	hsa-miR-155-5p
WWC2	hsa-miR-146a-5p, hsa-miR-146b-5p
WWP1	hsa-miR-194-5p, hsa-miR-21-5p
XBP1	hsa-miR-34a-5p
XIAP	hsa-miR-24-3p
XK	hsa-let-7i-5p
XKR8	hsa-let-7i-5p
XPNPEP3	hsa-miR-150-5p, hsa-miR-194-5p
XPO5	hsa-miR-34a-5p
XRN1	hsa-let-7i-5p, hsa-miR-150-3p
XYLT1	hsa-let-7i-5p, hsa-miR-34a-5p
YAP1	hsa-miR-194-5p, hsa-miR-21-5p
YES1	3p
YOD1	hsa-let-7i-5p, hsa-miR-21-5p, hsa-miR-24-3p
YPEL2	hsa-let-7i-5p
YTHDC1	hsa-miR-34a-5p
YTHDF1	hsa-miR-194-5p
YWHAB	hsa-miR-146a-5p, hsa-miR-146b-5p
YWHAG	hsa-miR-139-5p
YWHAQ	hsa-miR-139-5p
ZBP1	hsa-let-7i-5p
ZBTB18	hsa-miR-132-3p

ZBTB2	hsa-miR-146a-5p, hsa-miR-146b-5p
ZBTB20	hsa-miR-132-3p, hsa-miR-34a-5p
ZBTB34	hsa-miR-139-5p
ZBTB38	hsa-miR-155-5p
ZBTB39	hsa-let-7i-5p
ZBTB4	hsa-miR-150-5p
ZBTB41	hsa-miR-155-5p, hsa-miR-21-5p
ZBTB44	hsa-miR-24-3p
ZBTB5	hsa-let-7i-5p
ZBTB8B	hsa-let-7i-5p
ZBTB9	hsa-miR-34a-5p
ZC2HC1B	hsa-miR-155-5p
ZC3HAV1	hsa-miR-150-5p
ZCCHC14	hsa-miR-24-3p
ZCCHC17	hsa-miR-34a-5p
ZCCHC2	hsa-miR-150-3p
ZCCHC3	hsa-miR-150-5p
ZCCHC9	hsa-let-7i-5p
ZCRB1	hsa-miR-24-3p
ZDHC16	hsa-miR-34a-5p
ZDHC17	hsa-miR-21-5p, hsa-miR-34a-5p
ZDHC20	hsa-miR-155-5p
ZEB1	hsa-miR-139-5p, hsa-miR-150-5p
ZEB2	hsa-miR-139-5p
ZFAND3	hsa-miR-139-5p
ZFAND5	hsa-miR-194-5p
ZFHX3	hsa-miR-150-3p, hsa-miR-194-5p
ZFHX4	hsa-miR-194-5p, hsa-miR-34a-5p
ZFP3	hsa-miR-132-3p
ZFP36L2	hsa-miR-221-3p, hsa-miR-222-3p
ZFP91	hsa-miR-150-5p
ZFPM2	hsa-miR-221-3p, hsa-miR-222-3p
ZFR2	hsa-miR-24-3p
ZFX	hsa-miR-150-5p
ZFYVE1	hsa-miR-146a-5p, hsa-miR-146b-5p
ZFYVE16	hsa-miR-221-3p, hsa-miR-222-3p
ZFYVE26	hsa-let-7i-5p
ZHX1	hsa-miR-132-3p
ZHX2	hsa-miR-150-5p
ZIC3	hsa-miR-155-5p
ZKSCAN5	hsa-miR-155-5p
ZMYM2	hsa-miR-150-3p, hsa-miR-155-5p, hsa-miR-221-3p, hsa-miR-222-3p
ZMYM3	hsa-miR-24-3p
ZMYM4	hsa-miR-34a-5p

ZMYND11	hsa-miR-34a-5p
ZNF136	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF16	hsa-miR-34a-5p
ZNF181	hsa-miR-139-5p, hsa-miR-221-3p, hsa-miR-222-3p
ZNF217	hsa-miR-150-3p, hsa-miR-24-3p
ZNF236	hsa-miR-155-5p
ZNF25	hsa-miR-150-5p
ZNF253	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF257	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF268	hsa-miR-150-3p
ZNF275	hsa-let-7i-5p, hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF280B	hsa-let-7i-5p
ZNF281	hsa-miR-34a-5p
ZNF304	hsa-miR-34a-5p
ZNF322	hsa-let-7i-5p
ZNF33A	hsa-miR-150-5p
ZNF346	hsa-miR-139-5p, hsa-miR-150-5p
ZNF347	hsa-miR-150-3p
ZNF354B	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF367	hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-21-5p
ZNF385A	hsa-miR-221-3p, hsa-miR-222-3p
ZNF395	hsa-miR-24-3p
ZNF431	hsa-miR-155-5p
ZNF451	hsa-miR-132-3p
ZNF460	hsa-miR-150-5p
ZNF490	hsa-miR-150-5p
ZNF492	hsa-miR-155-5p
ZNF493	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF506	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF512B	hsa-let-7i-5p
ZNF516	hsa-miR-132-3p, hsa-let-7i-5p, hsa-miR-194-5p
ZNF521	hsa-miR-132-3p
ZNF532	hsa-miR-194-5p
ZNF540	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF551	hsa-miR-34a-5p
ZNF555	hsa-miR-150-5p
ZNF572	hsa-miR-24-3p
ZNF583	hsa-let-7i-5p
ZNF615	hsa-miR-194-5p, hsa-miR-221-3p, hsa-miR-222-3p
ZNF624	hsa-miR-221-3p, hsa-miR-222-3p
ZNF630	hsa-miR-139-5p
ZNF641	hsa-miR-34a-5p
ZNF644	hsa-let-7i-5p, hsa-miR-34a-5p
ZNF649	hsa-miR-146a-5p, hsa-miR-146b-5p

ZNF652	hsa-miR-132-3p, hsa-miR-146a-5p, hsa-miR-146b-5p, hsa-miR-155-5p
ZNF662	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF676	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF677	hsa-miR-139-5p
ZNF678	hsa-miR-139-5p
ZNF689	hsa-let-7i-5p
ZNF697	hsa-miR-24-3p
ZNF704	hsa-miR-21-5p
ZNF71	hsa-miR-194-5p
ZNF710	hsa-let-7i-5p
ZNF711	hsa-miR-150-5p
ZNF761	hsa-miR-155-5p
ZNF780A	hsa-miR-150-3p
ZNF784	hsa-let-7i-5p
ZNF792	hsa-miR-139-5p
ZNF805	hsa-miR-150-5p
ZNF845	hsa-miR-150-3p, hsa-miR-155-5p
ZNF860	hsa-miR-155-5p
ZNF90	hsa-miR-146a-5p, hsa-miR-146b-5p
ZNF91	hsa-miR-221-3p, hsa-miR-222-3p
ZNF98	hsa-miR-155-5p
ZNF99	hsa-miR-139-5p
ZPLD1	hsa-miR-155-5p
ZRANB2	hsa-miR-139-5p
ZSCAN12	hsa-miR-155-5p
ZSWIM5	hsa-let-7i-5p
ZSWIM6	hsa-miR-155-5p
ZXDA	hsa-miR-24-3p
ZXDB	hsa-miR-24-3p
ZXDC	hsa-miR-24-3p
ZYG11A	hsa-miR-132-3p
ZYG11B	hsa-miR-34a-5p

Appendix 6.B

Overlap between mRNA targets (Appendix 6.A) and
differently expressed genes in fibrotic PCLSs
(Appendix 4.B)

SYT1	CAMK4
TGFBI	STAB2
UGT2B10	GATM
UCN2	IGF2BP3
NREP	FGF14
HAS2	USH2A
LEF1	LPA
THRSP	COL9A1
ADAM12	SLC5A9
RAB3B	GDF10
DPYSL3	MMP16
MYRIP	SEMA3A
BNC2	CPEB1
GABBR2	IGF1R
PRRX1	ESR1
HHIP	TMEM132D
RFX8	NMNAT2
VGLL3	UPP2

Appendix 6.C

Overlap between mRNA targets (Appendix 6.A) and
differently expressed genes in adapted rats
(Appendix 5.D)

ANKS1A	SLC16A2
SEC16A	CBX1
BCORL1	KRIT1
TMBIM4	NVL
ERGIC2	U2SURP
SURF4	ADD2
ATP2A2	WDR35
RXRA	BAZ2B
ELK1	CHMP4C
DNAJC16	PRPF4B
SS18	IL7
SRP72	JMJD1C
HNRNPA3	FIGN
NDST1	ERBIN
KDM3A	RANBP2
FRMD4B	SYT15
GTF2H1	LOX
AKIP1	KBTBD6
RNF20	SRCIN1
SMARCA5	PTBP2
LSM4	GINS3
GORAB	RPS6KL1