

Transcriptomic and Single-Cell Analysis of the Murine Parotid Gland

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APPENDIX

Appendix Materials and Methods

Animal Experiments

All animal experiments and procedures were performed in accordance with the State University of New York at Buffalo (University at Buffalo) Institutional Animal Care and Use Committee (IACUC) regulations. All procedures were approved by University at Buffalo IACUC. Wild type C57BL/6J (Stock No. 000664) mice were purchased from The Jackson Laboratory (Bar Harbor, Maine). Animals were euthanized by CO₂ inhalation. Parotid and submandibular glands were dissected from postnatal day 18 (P18, young) and 12-week old (adult) male mice as indicated.

RNA Isolation and Sequence Mapping

Total RNA was extracted from whole mouse salivary gland tissues at indicated time points (P18 and adult) as previously described (Gluck et al. 2016). For each RNA sample, 50bp cDNA-libraries were generated using the TrueSeq RNA Sample Preparation Kit (Illumina). Libraries were single-end sequenced on the Illumina HiSeq 2500. Quality metrics were generated using FASTQC (Andrews 2010) v0.4.3, and high quality reads were mapped to the Mouse genome (mm9 build) with the Tophat2 (Kim et al. 2013) v2.0.13 wrapper for Bowtie2 (Langmead and Salzberg 2012) v2.2.6. The reads that

aligned to the mouse genome were counted using featureCounts (Liao et al. 2014). New sequencing data generated for this study has been deposited in the Gene Expression Omnibus (GEO) database under the accession number GSE131285.

Bioinformatics Analysis

All computational analysis was performed on the R Statistical Platform (R Development Core Team 2018) v 3.5.1., heatmaps were generated using Pretty Heatmaps Package (Kolde 2019), and differential gene expression analysis was performed using DESeq2 package (Love et al. 2014) v1.22.2. All differentially expressed genes were called at a log₂ Fold Change of 1 and an adjusted *p*-value of 0.1 unless otherwise specified.

Parotid Gland Signature

We have previously described the compilation of a comprehensive mouse tissue RNA-sequencing dataset (Gluck et al. 2016) using data obtained from the mouse ENCODE consortium (Yue et al. 2014), skin (Rizzo et al. 2015) and adult submandibular salivary gland (Gluck et al. 2016). This dataset was combined with the newly generated adult parotid gland dataset (this study). The raw sequencing files for each of the publicly available datasets were processed using the same RNA-sequencing pipeline (described above). The combination of these datasets resulted in a 20,028 x 53 counts matrix. The counts matrix was normalized using the DESeq2 package (Love et al. 2014) in R, and a data frame of Transcripts Per Million (TPM) values were generated as previously described (Wagner et al. 2012). Contrasts were iteratively generated between the parotid gland and the other tissues to identify differentially expressed genes. For the comparison

between parotid gland and epithelial tissues such as bladder, colon, skin, duodenum, submandibular salivary gland and pancreas; a log₂ Fold Change cut off of 1.2 instead of 1 was used given their similarities to parotid glands. The intersect of the upregulated genes (parotid gland enriched genes) generated across all contrasts was identified and this served as the parotid gland signature. The parotid gland gene signature using the Gao et al. dataset (Gao et al. 2018) was generated using the same pipeline used for our PG gene signature to ensure consistency. Briefly the male SMG, PG, and SLG FASTQ files were downloaded from the GEO database (GSE96747) and aligned to the mouse genome (*mm9*). Subsequent to alignment, the dataset was subjected to the same DEG analysis as described above.

Hierarchical Clustering Analysis

A subset of the full data frame containing TPM values of all expressed genes was created using the parotid gland signatures to generate a smaller matrix. Hierarchical clustering analysis for Figure 4A and 4B was then performed on this smaller subset using Pearson Correlation as similarity metric and Average Linkage as a distance measure. The resulting matrix was the z-scaled row-wise across tissues for visualization using the Pretty Heatmap Package.

Correlation Analysis

Correlation analyses (Fig. 3) were performed by calculating the pairwise Pearson Correlation of the top 2,500 most variable genes that were expressed in at least one sample replicate across all tissues. The resulting matrix was then reordered by

hierarchical clustering using Average Linkage as a distance measure while preserving the pair-wise correlation.

Differential Gene Expression Analysis

Counts from the young parotid and young submandibular datasets were combined with those from the adult parotid and adult submandibular glands into one data frame. Gene expression analysis was performed by generating contrasts between adult submandibular and parotid glands (Fig. 1A), adult parotid and young parotid (Appendix Fig. 2A) and young submandibular and young parotid glands (Appendix Fig. 2C). The differentially expressed genes (DEGs) were then further filtered by level of expression to identify genes that are expressed at 5 TPM values or higher in at least one replicate. Counts from the alignment of the male submandibular and parotid glands from the Gao et al. dataset were imported into one matrix. Differential gene expression analysis was performed by setting up contrast between the parotid and submandibular gland samples. The result was further filtered by focusing on genes that are similarly enriched in the respective glands in our own dataset.

Gene Ontology Analysis

Gene ontology analysis for identification of enriched pathways was done using the Database for Analysis Visualization and Integrated Discovery (DAVID) (Huang et al. 2007; Sherman et al. 2007) v6.8. The database was queried by providing the list of official names of genes of interest. The resulting KEGG Pathway (Du et al. 2014; Kanehisa and

Goto 2000; Ogata et al. 1999; Wixon and Kell 2000) table was then imported into R for generating bar plots.

Single-cell RNA sequencing

Single cell suspensions from freshly isolated young male (P18) murine parotid glands were generated for scRNA-seq analysis as previously described (Song et al. 2018). A total of 492 cells were sequenced to a depth of 394,442 mean reads per cell and 1,632 median genes per cell. Output from 10X Genomics Cellranger v2.0.2 pipeline was used as input into the R analysis package Seurat (Stuart et al. 2018) v2.3.4. Cells with high unique molecular index counts (nUMI), high mitochondrial transcript counts, and high transcript counts for red blood cell markers were filtered from the analysis. The data was normalized using Seurat's LogNormalize, with a scale factor of 10,000. Principal Component Analysis (PCA), and cluster analysis was performed, and the t-Distributed Stochastic Neighbor Embedding (tSNE) algorithm was used for dimensionality reduction and visualization. Using the called clusters, cluster-to-cluster differential expression testing using the Wilcoxon Rank Sum identified unique gene markers for each cluster. A complete list of differentially expressed genes are provided in Appendix Table 7. Datasets have been deposited in the Gene Expression Omnibus (GEO) database under the accession number GSE132867.

Immunostaining and Imaging

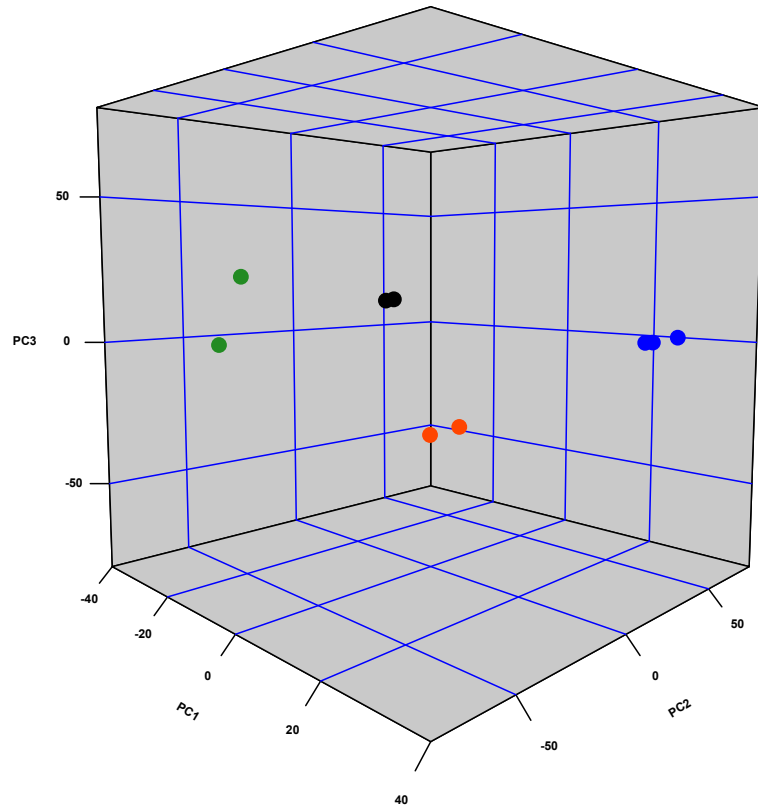
Paraffin embedded parotid and submandibular gland tissue sections were processed for immunofluorescence analysis as previously described (Song et al. 2018). Primary

antibodies used at the indicated dilutions include Ngfr (1:25, Santa Cruz Biotechnology), Ngf (1:25, Santa Cruz Biotechnology), K14 (1:100 (Rizzo et al. 2016)), Pax9 (1:25, Santa Cruz Biotechnology), Crabp-I/II (1:25, Santa Cruz Biotechnology), and Nkcc1 (1:100, Cell Signaling Technology, D2O8R). Sections were mounted using VECTASHIELD Antifade Mounting Medium with DAPI (Vector Laboratories) and imaged using a ZEISS Confocal microscope with ZEISS ZEN imaging software.

Appendix References

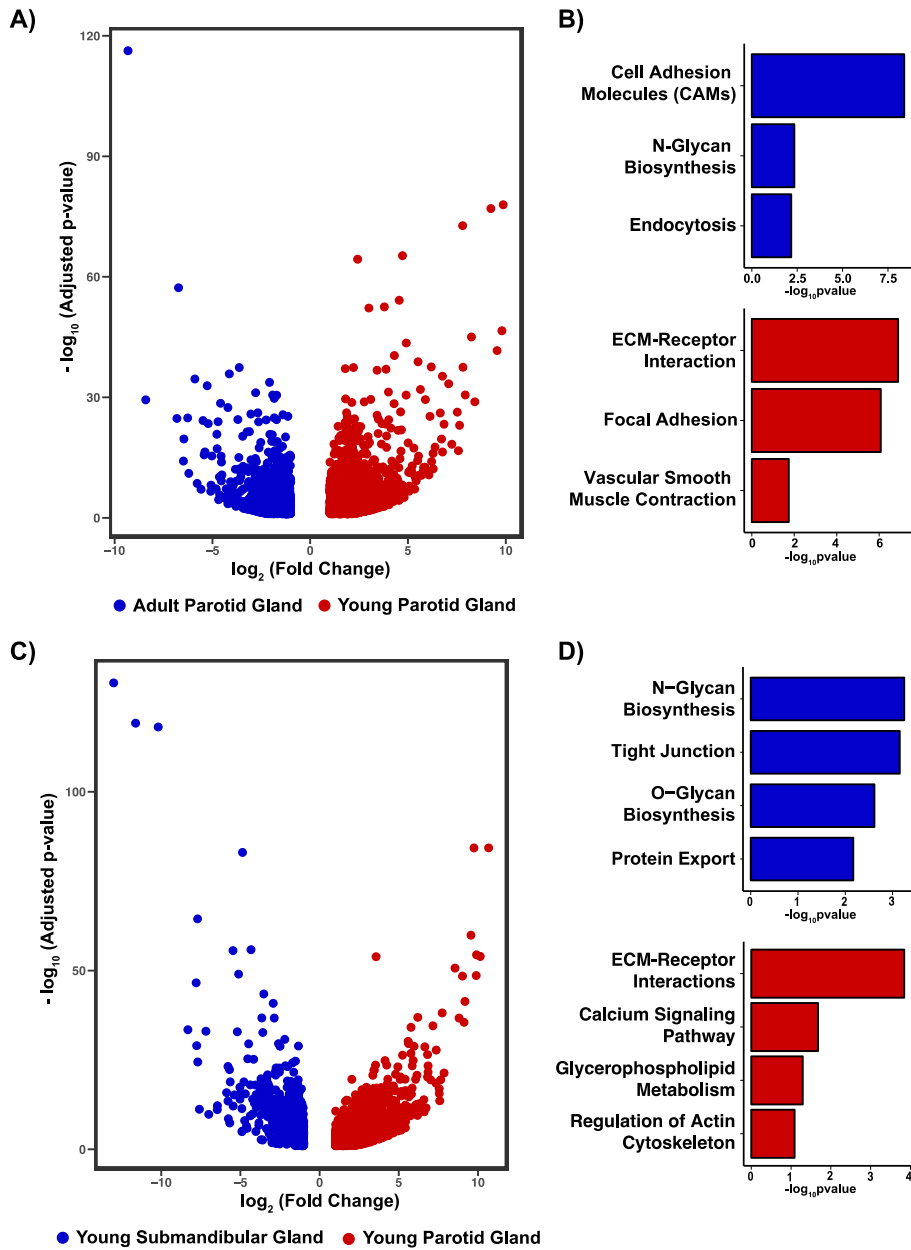
- Andrews S. 2010. Fastqc: A quality control tool for high throughput sequence data.
- Du J, Yuan Z, Ma Z, Song J, Xie X, Chen Y. 2014. Kegg-path: Kyoto encyclopedia of genes and genomes-based pathway analysis using a path analysis model. *Mol Biosyst.* 10(9):2441-2447.
- Gao X, Oei MS, Ovitt CE, Sincan M, Melvin JE. 2018. Transcriptional profiling reveals gland-specific differential expression in the three major salivary glands of the adult mouse. *Physiol Genomics.* 50(4):263-271.
- Gluck C, Min S, Oyelakin A, Smalley K, Sinha S, Romano RA. 2016. Rna-seq based transcriptomic map reveals new insights into mouse salivary gland development and maturation. *BMC Genomics.* 17(1):923.
- Huang DW, Sherman BT, Tan Q, Collins JR, Alvord WG, Roayaei J, Stephens R, Baseler MW, Lane HC, Lempicki RA. 2007. The david gene functional classification tool: A novel biological module-centric algorithm to functionally analyze large gene lists. *Genome Biol.* 8(9):R183.
- Kanehisa M, Goto S. 2000. Kegg: Kyoto encyclopedia of genes and genomes. *Nucleic Acids Res.* 28(1):27-30.
- Kim D, Pertea G, Trapnell C, Pimentel H, Kelley R, Salzberg SL. 2013. Tophat2: Accurate alignment of transcriptomes in the presence of insertions, deletions and gene fusions. *Genome Biol.* 14(4):R36.
- Kolde R. 2019. Pretty heatmaps.
- Langmead B, Salzberg SL. 2012. Fast gapped-read alignment with bowtie 2. *Nat Methods.* 9(4):357-359.
- Liao Y, Smyth GK, Shi W. 2014. Featurecounts: An efficient general purpose program for assigning sequence reads to genomic features. *Bioinformatics.* 30(7):923-930.
- Love MI, Huber W, Anders S. 2014. Moderated estimation of fold change and dispersion for rna-seq data with deseq2. *Genome Biol.* 15(12):550.
- Ogata H, Goto S, Sato K, Fujibuchi W, Bono H, Kanehisa M. 1999. Kegg: Kyoto encyclopedia of genes and genomes. *Nucleic Acids Res.* 27(1):29-34.

- R Development Core Team. 2018. R: A language and environment for statistical computing. R Foundation for Statistical Computing.
- Rizzo JM, Oyelakin A, Min S, Smalley K, Bard J, Luo W, Nyquist J, Guttman-Yassky E, Yoshida T, De Benedetto A et al. 2016. Deltanp63 regulates il-33 and il-31 signaling in atopic dermatitis. *Cell Death Differ.*
- Rizzo JM, Romano RA, Bard J, Sinha S. 2015. Rna-seq studies reveal new insights into p63 and the transcriptomic landscape of the mouse skin. *J Invest Dermatol.* 135(2):629-632.
- Sherman BT, Huang da W, Tan Q, Guo Y, Bour S, Liu D, Stephens R, Baseler MW, Lane HC, Lempicki RA. 2007. David knowledgebase: A gene-centered database integrating heterogeneous gene annotation resources to facilitate high-throughput gene functional analysis. *BMC Bioinformatics.* 8:426.
- Song EC, Min S, Oyelakin A, Smalley K, Bard JE, Liao L, Xu J, Romano RA. 2018. Genetic and scrna-seq analysis reveals distinct cell populations that contribute to salivary gland development and maintenance. *Sci Rep.* 8(1):14043.
- Stuart T, Butler A, Hoffman P, Hafemeister C, Papalexi E, Mauck WMI, Stoeckius M, Smibert P, Satija R. 2018. Comprehensive integration of single cell data. *bioRxiv.*
- Wagner GP, Kin K, Lynch VJ. 2012. Measurement of mrna abundance using rna-seq data: Rpkm measure is inconsistent among samples. *Theory Biosci.* 131(4):281-285.
- Wixon J, Kell D. 2000. The kyoto encyclopedia of genes and genomes--kegg. *Yeast.* 17(1):48-55.
- Yue F, Cheng Y, Breschi A, Vierstra J, Wu W, Ryba T, Sandstrom R, Ma Z, Davis C, Pope BD et al. 2014. A comparative encyclopedia of DNA elements in the mouse genome. *Nature.* 515(7527):355-364.

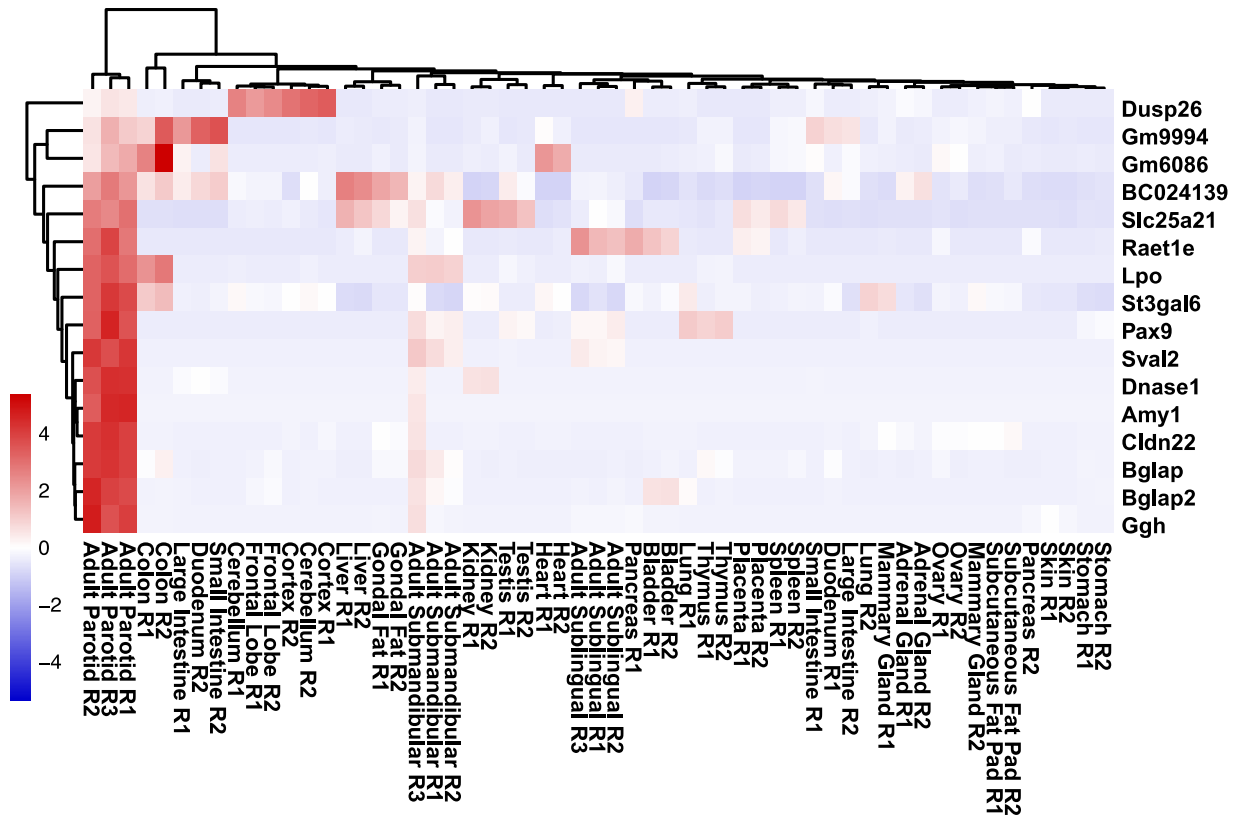


- Young Parotid Gland
 - Young Submandibular Gland
- Adult Parotid Gland
 - Adult Submandibular Gland

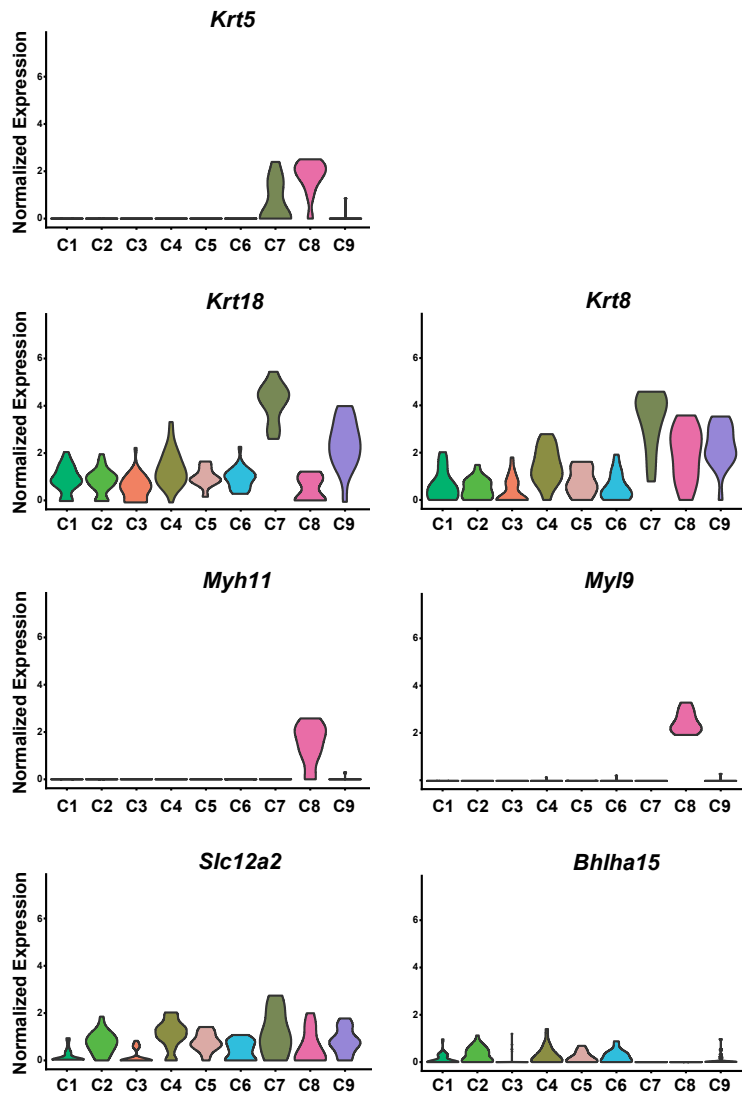
Appendix Figure 1. Three-dimensional projection plot shows the Principal Component Analysis (PCA) coordinates for each salivary gland sample, which are indicated by different colors.



Appendix Figure 2. (A) Volcano plot showing the distribution of genes enriched in the adult parotid (blue) and young parotid (red) glands. (B) Bar plots highlighting KEGG pathway terms enriched in the adult (blue) and young (red) PGs. (C) Volcano plot showing the distribution of genes enriched in the young submandibular (blue) and young parotid (red) glands. (D) Bar plots highlighting KEGG pathway terms enriched in the young submandibular (blue) and young parotid (red) glands.



Appendix Figure 3. Visualization of a parotid gland gene signature. Hierarchical clustering of the gene expression values selected from the PG gene signature generated utilizing the SMG, PG and SLG datasets from Gao et al. (Gao et al. 2018).



Appendix Figure 4. Violin plots demonstrate cluster specific expression of known basal (*Krt5*), ductal (*Krt8*, *Krt18*), myoepithelial (*Myh11*, *Myl9*), and acinar (*Slc12a2*, *Bhlha15*) genes in the PG as identified by scRNA-seq.

Appendix Table 1

Young PG Enriched Biological Pathways and Associated Genes

Term	P-Value	Genes
ECM-receptor interaction	4.51E-07	COL4A2, COL4A1, TNXB, COL3A1, ITGA1, ITGA11, COL5A2, COL5A1, HMMR, LAMA2, LAMA4, CD36, ITGA6, COL6A6, ITGB8, COL6A2, COL1A2, COL6A1, COL1A1, LAMC1, FN1
Focal adhesion	1.12E-06	CAV1, TLN2, COL3A1, ITGA11, ARHGAP5, COL6A6, ITGB8, PPP1R12A, COL6A2, COL6A1, PDGFD, AKT3, FN1, COL4A2, COL4A1, FLT1, VAV3, TNXB, MET, ITGA1, FLNC, FLNB, COL5A2, COL5A1, KDR, LAMA2, LAMA4, ITGA6, PDGFRA, COL1A2, GRLF1, PDGFRB, LAMC1, COL1A1
Vascular smooth muscle contraction	1.60E-02	PPP1R12B, MRVI1, GNA12, PRKG1, ARHGEF12, ITPR1, ITPR2, ADCY9, AGTR1A, PPP1R12A, GUCY1A3, ADRA1A, GUCY1B3, GNAS, PLCB1, ADRA1D

Appendix Table 2

Adult PG Enriched Biological Pathways and Associated Genes

Term	P-Value	Genes
Cell adhesion molecules (CAMs)	1.17E-09	ITGAL, CLDN7, CD8A, CLDN4, CLDN3, H2-D1, ITGB2, VCAM1, ITGB7, CD22, CD4, SELPLG, H2-K1, ICAM1, H2-Q10, ICOSL, CD8B1, H2-M3, SELL, CLDN22, H2-DMB1, H2-AB1, CD40, H2-DMB2, CD86, H2-OA, H2-EB1, H2-OB, H2-AA, H2-T23, H2-DMA
N-Glycan biosynthesis	1.35E-02	MGAT4A, ALG1, ALG3, DAD1, MAN1A, DPM2, ALG5, MAN1C1
Endocytosis	1.85E-02	H2-K1, GIT1, STAMBP, EPN3, IL2RB, H2-Q10, H2-M3, RAB4A, H2-D1, PIP5K1B, VPS37B, CBLC, ADRB3, SMAP2, CXCR4, ACAP1, H2-T23, IL2RG, EGF, EHD3

Appendix Table 3

Young SMG Enriched Biological Pathways and Associated Genes

Term	P-Value	Genes
N-Glycan biosynthesis	5.66E-04	MGAT4A, MGAT3, GLT28D2, ALG3, RPN1, DPM2, ALG5, ALG6, RPN2, ALG14
Tight junction	7.03E-04	CLDN8, PRKCZ, CLDN7, INADL, MAGI3, OCLN, CLDN4, MAGI1, CLDN3, CRB3, PRKCD, SRC, LLGL2, IGSF5, CGN, PCP4, CLDN1, MYH14, TJP3
O-Glycan biosynthesis	2.42E-03	ST3GAL1, GALNT3, C1GALT1C1, GALNT10, GALNT7, GALNT5, GALNT12
Protein export	6.76E-03	SRPR, SRP54C, SRP19, SRP9

Appendix Table 4

Young PG Enriched Biological Pathways and Associated Genes

Term	P-Value	Genes
ECM-receptor interaction	3.08E-04	TNXB, COL3A1, ITGA11, VTN, ITGA4, ITGB3, COL5A3, COL5A1, SDC3, VWF, ITGA9, LAMA4, CD36, ITGA5, ITGB7, ITGA7, COL1A2, RELN, COL1A1, THBS3, ITGA2B, SPP1, THBS4, FN1
Calcium signaling pathway	1.52E-02	ADCY3, PHKA2, ADCY4, ADCY7, TNNC2, ADORA2A, TNNC1, ITPKA, EDNRB, ADRB3, ATP2B4, PDE1B, PTK2B, PDE1A, PLCD3, NOS3, PRKACA, CAMK2A, PLCB2, PTGER1, PTGER3, SLC25A4, PHKG1, MYLK2, CACNA1S, PRKCB, ITPR2, P2RX5, CD38, AGTR1A, ATP2A1, RYR1, ADRA1A, PDGFRB, PTAFR, ADRA1D, F2R
Glycerophospholipid metabolism	5.11E-02	GPD2, GPD1, CRLS1, CHKB, DGKH, PNPLA3, AGPAT6, DGKD, GNPAT, PHOSPHO1, AGPAT4, AGPAT3, GPAM, PLA2G2D, AGPAT2
Regulation of actin cytoskeleton	8.17E-02	ITGAL, PDGFB, SSH1, MRAS, SSH2, ITGA11, ITGB2, ITGB3, ITGAM, RAC2, ITGB7, PIK3R5, MSN, FGF2, FGD3, FN1, ARHGEF1, ARHGEF6, PIK3CD, MYLK2, MYLPF, NCKAP1L, ACTN2, ACTN3, ITGA4, WAS, VAV1, ITGA9, ITGA5, ITGA7, CYFIP2, PDGFRB, PIP4K2A, ITGA2B, MYH10, PIP4K2B, F2R

Appendix Table 5

SMG Enriched Biological Pathways and Associated Genes

Term	P-Value	Genes
Focal adhesion	7.57E-05	PRKCA, VAV3, MET, MYL9, LAMB3, ITGA6, ITGA8, VEGFA, ITGB6, PPP1R12A, LAMC2, PAK1, PDGFD, THBS1, EGF, PIK3R3, MYLK
Gastric acid secretion	4.72E-04	PRKCA, KCNJ16, KCNJ15, CAMK2D, CFTR, KCNQ1, CALM2, MYLK, ITPR1
Synaptic vesicle cycle	9.70E-04	ATP6V1A, STX3, ATP6V1E1, STXBP1, ATP6V1H, ATP6V1G3, UNC13B, ATP6V0D2
Protein processing in endoplasmic reticulum	1.22E-03	ATF6, HYOU1, HSP90B1, PDIA3, CKAP4, PDIA6, PDIA4, ERO1L, HSPA5, CALR, DDIT3, SEC23B, UBE2E1
Metabolic pathways	1.51E-03	ALPL, ME3, GCLC, SGMS2, ENPP1, HEXB, UPP1, HK1, UPP2, GGT1, ANPEP, CKB, GSS, ALDH1A1, ST3GAL5, INPP5J, ST3GAL4, DHCR7, CKMT1, PAFAH1B3, GALC, PNPO, GALE, PAPSS1, ATP6V0D2, BDH1, ACSL3, SHMT1, PLD1, MOCS2, NOS1, PDXK, CMAS, PIK3C2A, PGAP1, ATP6V1H, ALDH3B2, LPIN2, ATP6V1A, ACSM1, UOX, ATP6V1E1, PI4K2A, ATP6V1G3, EXT1, IPPK, ABO, DEGS1, PYGB, ALOX12
Thyroid hormone synthesis	1.99E-03	PRKCA, GPX1, FXYD2, HSP90B1, DUOXA2, HSPA5, PDIA4, ITPR1
Tight junction	2.07E-03	CLDN8, CLDN7, CTTN, OCLN, CLDN4, CLDN1, MYH11, PPP2R2C, MYL9
Proteoglycans in cancer	2.09E-03	PRKCA, MET, TIMP3, ITPR1, WNT4, CTTN, ANK3, MAPK13, VEGFA, PPP1R12A, CAMK2D, PAK1, PIK3R3, THBS1
Glutathione metabolism	2.67E-03	GSS, GPX1, GSTA4, GCLC, GSTK1, ANPEP, GGT1
Leukocyte transendothelial migration	3.19E-03	PRKCA, CLDN8, CLDN7, OCLN, VAV3, CLDN4, MAPK13, CLDN1, PIK3R3, MYL9

Appendix Table 6

PG Enriched Biological Pathways and Associated Genes

Term	P-Value	Genes
Metabolic pathways	5.23E-04	IMPA2, GALNT1, GALNT6, ACOT1, GLB1, ASAH2, ARG1, INPP5K, ARG2, PLA2G12A, GALNS, FASN, GCNT1, GALNT12, GPT2, B4GALT1, AMY1, SHMT2, ADSSL1, COX8B, AK1, UGCG, CDO1, MAN2A2, CD38, GLUL, PCX, CYP27A1, RRM2, PLA2G7, GPAM
Arginine biosynthesis	1.78E-03	ARG1, GLUL, ARG2, GPT2
Biosynthesis of amino acids	2.99E-03	ARG1, PCX, GLUL, SHMT2, ARG2, GPT2
Mucin type O-Glycan biosynthesis	5.52E-03	GALNT1, GALNT6, GALNT12, GCNT1
Alanine, aspartate and glutamate metabolism	1.20E-02	GLUL, ADSSL1, GPT2, DDO
PPAR signaling pathway	2.00E-02	SLC27A1, CYP27A1, FABP3, DBI, ANGPTL4
Transcriptional misregulation in cancer	6.34E-02	CEBPA, CDKN2C, TGFB2, FOXO1, ZBTB16, MLF1
Renin secretion	6.47E-02	ACE, CALML3, PDE3B, AQP1
Lysosome	7.41E-02	CTSL, CTSZ, GALNS, CTSB, GLB1
Renin-angiotensin system	7.55E-02	ACE, PRCP, ENPEP

Appendix Table 7

Cluster 1

Gene Name	p-value	log ₂ FoldChange
Bpifa2	3.80E-12	0.97746
Smr3a	1.14E-09	1.0802
Ttr	2.27E-09	0.59636
Crisp1	6.43E-09	0.90869
Ggh	1.14E-08	0.89189
Esp8	1.86E-08	0.42245
Prpmp5	6.21E-08	0.60408
Amy1	8.79E-08	0.9223
Prb1	1.32E-07	0.5842
2310057J18Rik	1.59E-07	0.84237
Cldn22	1.76E-07	0.40811
Aqp5	5.00E-07	0.39226
Cst10	6.76E-07	0.76781
Bglap3	7.41E-07	0.92258
Tcn2	9.67E-07	0.53091
Pip	1.46E-06	0.73257
Chia1	1.56E-06	0.70531
Dnase1	2.01E-06	0.64281
A630073D07Rik	2.70E-06	0.41121
Wfdc12	7.39E-06	0.80798
Oit1	1.76E-05	0.26062
Kcnn4	1.92E-05	0.35427
Eif4ebp1	2.22E-05	0.32079
Lpo	2.38E-05	0.34643
Car6	3.68E-05	0.97089
Gm8882	3.94E-05	0.3498
Scgb2b27	4.80E-05	0.31688
Prol1	5.42E-05	0.7302
Bglap2	8.96E-05	0.2878
Rnase1	9.78E-05	0.28569
Fxyd3	1.40E-04	0.2667
Asns	2.70E-04	0.34328
BC037156	1.67E-03	0.52064
Mup5	4.70E-03	0.56732

Cluster 2

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Etv1	5.11E-16	0.76401	Ttr	5.83E-07	0.355279
Gm8882	3.17E-13	0.852932	Mup5	6.06E-07	0.32702
Fam174b	2.22E-12	0.265877	Pla2g12a	8.96E-07	0.272339
Prb1	7.18E-12	0.967873	Esp8	1.59E-06	0.408442
Bhlha15	1.10E-11	0.258833	Car6	1.76E-06	0.91574
Cldn22	2.77E-11	0.60247	Npdc1	2.18E-06	0.279464
Lpo	4.89E-11	0.722049	Smr3a	3.13E-06	0.791056
Kcnn4	8.46E-11	0.701993	Bpifa2	3.83E-06	0.769342
2310057J18Rik	1.75E-10	1.000129	Agt	3.87E-06	0.382662
Lrrc26	2.67E-10	0.514151	Wfdc12	4.14E-06	0.978943
Cldn10	4.74E-10	0.337678	Fxyd3	4.16E-06	0.335482
Crisp1	1.11E-09	0.967346	Scgb2b27	5.71E-06	0.433177
Prpmp5	1.27E-09	0.819824	Eif4ebp1	1.58E-05	0.299059
Aqp5	1.72E-09	0.572292	Tmed3	2.25E-05	0.270467
Cracr2b	1.84E-09	0.341797	BC037156	3.05E-05	0.498224
Rap1gap	2.53E-09	0.255599	Scgb1b27	3.45E-05	0.300593
Tcn2	3.63E-09	0.66677	Reep5	3.44E-04	0.289475
Cited4	3.85E-09	0.490395	Pdcd4	1.38E-03	0.314139
Dnase1	4.33E-09	0.986079	Bglap3	3.51E-03	0.267354
Pax9	4.89E-09	0.282258			
Cst10	7.97E-09	0.930543			
Pip	9.58E-09	0.904632			
Oit1	1.86E-08	0.330781			
Slc12a2	1.96E-08	0.322672			
Bglap2	2.42E-08	0.28891			
Amy1	2.76E-08	0.894856			
5330417C22Rik	2.79E-08	0.25384			
Fkbp11	3.54E-08	0.373573			
Folr1	3.66E-08	0.319765			
Ggh	4.52E-08	0.862705			
Pigr	9.09E-08	0.293315			
A630073D07Rik	1.30E-07	0.517784			
Pdk4	1.85E-07	0.356715			
Chia1	1.98E-07	0.820489			
Chchd10	2.60E-07	0.311779			

Cluster 3

Gene Name	p-value	log ₂ FoldChange
Bpifa2	6.25E-18	1.06667
Crisp1	2.55E-12	0.963969
Prpmp5	3.13E-12	0.717456
Amy1	5.24E-12	1.028137
Prb1	6.99E-12	0.721493
Smr3a	2.53E-11	1.085898
Ggh	3.05E-11	0.93153
Pip	1.00E-09	0.816554
Wfdc12	1.91E-09	0.807078
Cst10	4.41E-09	0.829971
2310057J18Rik	1.04E-08	0.805311
Chia1	2.75E-08	0.665569
Car6	3.32E-08	0.949799
Gm8882	5.62E-08	0.50145
A630073D07Rik	7.43E-08	0.500864
Scgb2b27	3.66E-07	0.733093
Scgb1b27	5.89E-07	0.81077
Rnase1	1.37E-06	0.353941
BC037156	7.61E-06	0.495629
Dnase1	1.23E-05	0.381593
Lpo	3.66E-05	0.27077
Nucb2	1.08E-04	0.281538
Cldn22	2.02E-04	0.27054
Tcn2	2.06E-04	0.333262
Oit1	2.30E-04	0.265367
Esp8	6.45E-04	0.318824

Cluster 4

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Pdk4	1.02E-17	0.67359	Cst10	3.65E-07	0.803918
Etv1	5.38E-17	0.906218	Fkbp11	3.67E-07	0.311384
Tacc2	9.39E-15	0.443686	Nucb2	3.71E-07	0.342719
Lpo	9.91E-15	1.148157	Nupr1	4.43E-07	0.438139
Cldn3	1.87E-14	0.346377	Foxo3	4.52E-07	0.273979
Slc12a2	2.66E-14	0.796938	Gadd45g	4.59E-07	0.413721
Cracr2b	3.26E-14	0.536924	Cldn22	4.74E-07	0.498922
Kcnn4	4.95E-13	0.860204	Trabd	4.87E-07	0.351555
Syne4	5.04E-13	0.405214	Ttr	8.00E-07	0.414781
Dnase1	2.41E-12	1.328259	Prb1	9.45E-07	0.49776
Lmf1	3.25E-12	0.316562	Rnase1	1.41E-06	0.274507
Cdo1	3.35E-12	0.34403	A630073D07Rik	1.47E-06	0.678627
Krt23	5.65E-12	0.280759	Bglap	1.86E-06	0.315655
Lrrc26	1.11E-11	0.651474	Mcf2	2.69E-06	0.27642
Krt8	1.43E-11	0.352508	Amy1	3.20E-06	0.669679
Pigr	4.78E-11	0.83473	lfrd2	4.69E-06	0.256525
Aqp5	8.34E-11	0.650328	Ggh	5.65E-06	0.638917
Tcn2	1.19E-10	0.767448	Gm8882	6.02E-06	0.325332
Bglap2	1.86E-10	0.451313	Bglap3	6.10E-06	0.647985
5330417C22Rik	3.29E-10	0.426961	Prpmp5	6.13E-06	0.347583
Cited4	3.35E-10	0.567789	Bckdk	7.70E-06	0.301566
Pax9	4.45E-10	0.4115	Wfdc12	1.64E-05	0.522306
Plet1	6.75E-10	0.375371	Esp8	1.73E-05	0.291805
Furin	9.15E-10	0.551509	Eif4ebp1	2.19E-05	0.338164
Atp9a	9.86E-10	0.278824	Pip	2.54E-05	0.703592
Rab3d	1.01E-09	0.293125	St3gal6	2.66E-05	0.299485
Pgp	1.37E-09	0.426151	2310057J18Rik	2.80E-05	0.702872
Phlda1	1.59E-09	0.5202	Chka	3.22E-05	0.278703
Npdc1	6.85E-09	0.39815	Neat1	3.31E-05	0.271028
Rap1gap	7.96E-09	0.295935	Tmed3	5.26E-05	0.293142
Chpt1	8.28E-09	0.369757	Crisp1	6.21E-05	0.457791
Chia1	8.57E-09	1.188493	Scgb2b27	6.44E-05	0.417442
Bhlha15	1.47E-08	0.252836	Map3k1	8.59E-05	0.28924
Ildr1	1.51E-08	0.280742	Bpifa2	8.67E-05	0.676153
Asns	4.19E-08	0.310078	Agt	9.89E-05	0.377904
Wwc1	4.74E-08	0.281018	Smr3a	1.71E-04	0.659113
Folr1	1.07E-07	0.276497	P4hb	1.74E-04	0.374738
Fxyd3	1.38E-07	0.482544	Reep5	1.39E-03	0.279059
BC037156	1.56E-07	0.762544	Car6	1.71E-03	0.546329

Cluster 5

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Slc46a1	6.24E-11	0.339384	Kcns1	7.48E-04	0.252669
Prol1	7.38E-07	0.427599	Pdcd4	9.51E-04	0.715549
Mlph	2.52E-06	0.423956	Smr3a	1.18E-03	0.930145
Pigr	2.59E-06	0.978306	Gm8882	1.87E-03	0.332147
Amy1	3.20E-06	0.669679	A630073D07Rik	2.27E-03	0.549297
Fkbp11	4.88E-06	0.488252	Reep5	2.37E-03	0.397803
Fuom	7.22E-06	0.372479	Tcn2	2.75E-03	0.509986
Shisa2	1.11E-05	0.257162	Pax9	2.85E-03	0.300955
Syne4	1.18E-05	0.293468	Mcf2	3.00E-03	0.283553
Homer2	1.65E-05	0.301317	Agt	3.63E-03	0.260899
BC037156	1.86E-05	1.024192	Scgb1b27	3.84E-03	1.130134
Wfdc12	1.99E-05	1.26558	Tmed3	4.09E-03	0.392755
Barx2	2.55E-05	0.357158	Car6	4.32E-03	0.904162
Chpt1	2.56E-05	0.406236	Nucb2	4.64E-03	0.385876
Pip	3.06E-05	1.008369	Ttr	7.02E-03	0.34964
Tmem238	3.45E-05	0.346651	Chchd10	8.60E-03	0.256504
Prmp5	5.06E-05	0.655926			
Lpo	5.78E-05	0.757013			
Slc5a8	6.83E-05	0.269303			
Etv1	8.44E-05	0.274472			
Tpd52l1	8.62E-05	0.296256			
Cst10	1.08E-04	0.986546			
Oit1	1.24E-04	0.371455			
Bglap2	1.34E-04	0.453779			
Lrrc26	1.39E-04	0.561351			
Aqp5	1.73E-04	0.619067			
Kcnn4	1.83E-04	0.580212			
Rab3d	2.38E-04	0.293109			
Cldn22	2.95E-04	0.587805			
Hid1	3.11E-04	0.280962			
Folr1	4.54E-04	0.274222			
Slc12a2	4.57E-04	0.306585			
Fxyd3	4.79E-04	0.491026			
Scgb2b27	5.27E-04	1.249707			
Cdo1	6.40E-04	0.274931			
Ppp1r1b	6.85E-04	0.259125			
Ckmt1	7.46E-04	0.288072			

Cluster 6

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Bglap	9.15E-10	0.34581	Cited4	2.02E-04	0.315226
Cldn22	2.42E-09	0.598973	Eif4ebp1	2.50E-04	0.331134
A630073D07Rik	2.54E-09	0.885416	Smpdl3a	2.00E-03	0.282476
Gjb1	4.35E-09	0.304975			
Pip	5.32E-09	1.130925			
Ggh	6.30E-09	1.030604			
2310057J18Rik	7.17E-09	0.983039			
Gm8882	1.15E-08	0.589146			
Bglap2	2.67E-08	0.573052			
Prb1	3.66E-08	0.682822			
Cst10	5.11E-08	0.947393			
Mup5	6.09E-08	0.743427			
Scgb2b27	1.43E-07	1.569407			
Prmp5	1.86E-07	0.926265			
Folr1	4.09E-07	0.432987			
Amy1	4.32E-07	0.891682			
Prol1	7.38E-07	0.427599			
Crisp1	1.02E-06	0.92841			
Copz2	1.52E-06	0.33093			
Fxyd3	1.76E-06	0.442278			
Ttr	2.10E-06	0.368115			
Scgb1b27	2.63E-06	1.943153			
Bpifa2	3.52E-06	0.801353			
Wfdc12	4.30E-06	0.880102			
Tcn2	4.32E-06	0.501582			
Chia1	4.49E-06	0.902556			
Esp8	7.23E-06	0.326646			
Car6	9.75E-06	0.890933			
Dnase1	1.07E-05	0.764745			
Aqp5	1.27E-05	0.422672			
Agt	1.44E-05	0.355792			
Lpo	2.53E-05	0.462915			
BC037156	3.35E-05	0.90461			
Kcnn4	6.03E-05	0.410056			
Smr3a	1.08E-04	0.712058			
Nucb2	1.51E-04	0.274056			
Lrrc26	1.82E-04	0.259807			

Cluster 7

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Cldn4	3.68E-38	2.928547	Serinc2	6.87E-16	0.4354
Esp18	1.05E-33	1.055194	Erc1	8.53E-16	0.560559
Gpx2	2.84E-31	0.673394	Prkci	1.16E-15	0.634238
S100a14	3.76E-31	0.582089	Itgb4	1.63E-15	1.029064
Tmem171	3.82E-30	0.58437	Cldn1	2.60E-15	0.897233
Lancl3	3.82E-30	0.346175	Arhgef17	2.76E-15	0.345579
Krt7	1.77E-28	1.86303	5730559C18Rik	7.07E-15	0.300331
Ppargc1a	1.90E-28	1.419873	Sox4	7.63E-15	1.638386
Tfcp2l1	2.20E-28	1.478233	Etv6	8.27E-15	0.843492
F2rl1	4.33E-28	0.812924	Fat1	1.50E-14	0.464536
Sgms2	3.23E-27	0.939501	Lgr4	1.77E-14	0.401191
Wnt5b	1.54E-24	0.537678	Auts2	1.87E-14	0.954598
Cdcp1	2.63E-24	0.850172	Myo1b	1.87E-14	0.780226
Mal2	2.88E-24	0.259003	Twsg1	3.39E-14	0.826197
Hp	3.77E-24	0.511067	Lamc2	5.61E-14	0.851563
Dennd2c	5.99E-21	0.536369	Gfra3	8.58E-14	0.822187
Fhdc1	8.39E-21	0.45553	Shroom3	9.98E-14	0.573585
Ocln	9.19E-21	0.62216	Efna5	1.04E-13	0.417454
Ntng1	1.67E-20	0.356504	Gm26532	1.38E-13	0.95359
Esrrg	2.43E-20	0.256822	lgsf3	1.71E-13	1.032142
Tuft1	5.32E-19	0.354735	Nedd4l	1.93E-13	0.657577
Wnt10a	7.45E-19	0.602474	Met	2.93E-13	0.478501
Cdh1	1.12E-18	1.773091	Epha2	3.57E-13	0.701907
Ptn	1.13E-18	0.771619	Pkp2	3.86E-13	0.690289
Dsp	1.15E-18	1.191239	Mast4	9.16E-13	1.437669
Wfdc2	3.25E-18	1.589543	Hbegf	1.00E-12	1.383982
Slc2a1	3.71E-18	0.879556	Gtf2ird1	1.50E-12	0.316064
Elovl7	7.99E-18	0.453258	Cx3cl1	2.07E-12	0.878096
Tead1	1.04E-17	0.848771	Anxa3	2.23E-12	0.771873
Gm20186	1.53E-17	1.21696	Fam83h	2.78E-12	0.426017
Ucma	1.57E-17	1.164192	Sfn	4.01E-12	2.240991
Mcam	2.30E-17	0.268512	Hmga1	5.05E-12	0.364299
Sprr1a	3.06E-17	0.530901	Olfml2a	5.05E-12	0.276902
Bcam	5.44E-17	0.695572	Nbea	5.10E-12	0.429352
Plagl1	1.04E-16	0.538685	Krt14	6.25E-12	1.09187
Cxcl17	2.69E-16	1.95048	Cas21	9.45E-12	0.796974
Celsr1	3.24E-16	0.409296	Cxadr	1.35E-11	1.704223
Foxq1	3.56E-16	1.058559	Slc30a1	1.63E-11	0.350411
Irx3	4.84E-16	0.541456	Tnfrsf12a	1.71E-11	1.440007

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Erb2ip	1.71E-11	0.878363	Stx3	4.76E-10	0.430637
2010111I01Rik	1.72E-11	1.156886	Elf3	5.57E-10	1.098196
F11r	1.87E-11	1.04887	Reep3	6.39E-10	0.969782
Lcn2	2.24E-11	0.580513	Tpbp	6.97E-10	0.915808
Etl4	2.39E-11	0.448683	Krt18	7.00E-10	3.324031
Morc2a	2.86E-11	0.386079	Cep170b	7.08E-10	0.473095
Oplah	3.04E-11	0.289021	Bicd2	7.49E-10	0.398771
Fbxo32	3.04E-11	0.609257	Yap1	7.79E-10	0.614913
Tubb2b	3.16E-11	0.619543	Epcam	8.15E-10	2.09161
Farp1	3.62E-11	0.351697	Cdh3	8.80E-10	0.268918
Rbpms	4.51E-11	0.638272	Kdm5b	1.24E-09	0.452427
Perp	5.31E-11	1.727769	Cldn7	1.56E-09	1.094073
Ldhd	5.42E-11	0.655683	Map7	1.62E-09	0.47644
Capsl	6.65E-11	0.299919	Nab2	1.73E-09	0.621896
St14	7.43E-11	0.947187	Pfkl	1.97E-09	0.659064
Mdfi	7.51E-11	0.480765	Bok	2.04E-09	0.527386
Tinagl1	7.58E-11	0.580207	Nfib	2.09E-09	1.22422
Nmd3	7.89E-11	0.638147	C77080	2.23E-09	0.756349
Kctd1	8.30E-11	0.441481	Krt8	2.40E-09	2.800698
Vcl	8.79E-11	0.642434	Emp1	2.59E-09	0.701417
Anxa1	1.01E-10	2.094997	Uaca	2.62E-09	0.52807
Crb3	1.17E-10	0.851769	Egfr	3.38E-09	0.558174
Sertad2	1.30E-10	0.949936	Sdc4	3.41E-09	1.742729
Fam134b	1.31E-10	0.99415	Iqgap1	3.54E-09	1.382655
Runx1	1.33E-10	1.101026	Dusp7	3.99E-09	0.401359
Klf5	1.48E-10	0.962246	Otud7b	4.09E-09	0.396824
Fosl1	1.59E-10	1.042735	Ppp2ca	4.21E-09	1.022288
Phf13	1.76E-10	0.492827	Trip6	4.26E-09	0.347678
Plxnb2	2.15E-10	0.722941	Ptprf	4.28E-09	0.546701
Mpzl2	2.58E-10	0.838811	Pknx1	4.67E-09	0.588931
Rbm47	2.66E-10	0.916678	Rrad	4.93E-09	1.573601
Krt17	2.87E-10	1.359016	Tpm1	5.39E-09	1.101309
Mex3d	3.12E-10	0.271921	Actn4	5.57E-09	1.265805
Wisp1	3.48E-10	0.452872	N4bp3	5.61E-09	0.369392
Wnt4	3.48E-10	0.341634	Reps2	5.72E-09	0.429427
Serinc5	3.49E-10	0.418398	Cbr2	6.06E-09	0.456463
Pvrl3	3.68E-10	0.293259	Vwa5a	6.25E-09	0.57688
Fhl2	4.13E-10	0.809434	Epb41l5	6.29E-09	0.25666
Krt5	4.20E-10	0.897603	Itch	6.33E-09	0.57091
Mllt6	4.50E-10	0.436603	Srf	6.77E-09	0.674419

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Mycl	7.26E-09	0.279341	Sirt1	4.92E-08	0.260666
Ahnak	7.38E-09	1.362689	Net1	5.30E-08	0.603765
0610040J01Rik	7.40E-09	0.406678	Ctdspl	5.37E-08	0.587719
Lcor	8.36E-09	0.279482	Rtn4	5.48E-08	1.183812
Jup	8.55E-09	0.990272	Spin1	5.56E-08	0.739917
Cnksr1	8.62E-09	0.458991	Crip2	5.90E-08	1.049594
Ncor2	9.11E-09	0.544369	App	5.99E-08	0.786417
Cyr61	1.02E-08	1.401975	Tmem176a	6.29E-08	0.899251
Zfp142	1.11E-08	0.282482	Ttc3	6.76E-08	0.649833
Pacsin2	1.17E-08	0.591757	Kdm1a	7.01E-08	0.445474
Map2k3	1.25E-08	1.152393	Svil	7.02E-08	0.4028
Dstn	1.27E-08	1.724226	Spint2	7.56E-08	1.284897
Plet1	1.27E-08	1.864286	Icam1	7.69E-08	1.202108
Ccdc120	1.32E-08	0.361843	Krt10	7.78E-08	0.435374
Enpep	1.37E-08	1.250598	Ddr1	7.79E-08	0.685148
Mir17hg	1.37E-08	0.289297	Clstn1	8.11E-08	0.935675
Hcar2	1.47E-08	0.263399	Plec	8.16E-08	1.045187
Wwc2	1.52E-08	0.312475	Smek1	8.35E-08	0.428782
Pvrl2	1.59E-08	0.788874	Zkscan17	8.78E-08	0.303357
Klhl24	1.59E-08	0.539955	Smoc2	8.99E-08	0.955523
Pbx1	1.62E-08	1.05357	Klf4	9.15E-08	1.071364
Cd9	1.83E-08	1.612963	Purb	9.41E-08	0.780249
Frmd6	2.01E-08	0.503905	Zfp131	9.69E-08	0.578332
Nfix	2.19E-08	0.918372	Serpib6a	9.86E-08	0.616871
Ptp4a2	2.44E-08	1.288929	Pdgfc	1.04E-07	0.451312
Pard6g	2.51E-08	0.580324	Cox8a	1.04E-07	1.025316
Klf6	2.61E-08	1.573319	Hras	1.14E-07	0.696563
Elmsan1	2.64E-08	0.377635	Timp3	1.19E-07	1.377316
Urah	3.06E-08	0.844085	Prkag2	1.22E-07	0.293517
Mapk8	3.23E-08	0.578594	Rras	1.23E-07	0.434289
Rc3h2	3.25E-08	0.373704	Erlin2	1.30E-07	0.333623
Inf2	3.68E-08	0.315459	Evi5	1.39E-07	0.298411
Dsg2	4.01E-08	0.726007	Klf10	1.41E-07	0.718834
Tsc22d1	4.04E-08	1.125098	Arhgap35	1.43E-07	0.28484
B4galt3	4.17E-08	0.3351	Mtf1	1.51E-07	0.336999
Zfp704	4.19E-08	0.358454	Cryab	1.63E-07	1.717595
Egln3	4.36E-08	0.480812	Msl2	1.78E-07	0.523827
Setd2	4.40E-08	0.582146	Pvrl1	1.84E-07	0.425755
Tmem176b	4.48E-08	1.138755	Phyh	1.84E-07	0.728113
Pgrmc1	4.78E-08	0.658564	Pigp	1.88E-07	0.569049

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Slc16a2	1.94E-07	0.273811	lrf2bpl	4.34E-07	0.91856
Atf3	2.01E-07	1.406696	Trp53inp1	4.40E-07	0.479355
Wbscr27	2.10E-07	0.384502	Atn1.1	4.63E-07	0.553713
Mpzl3	2.15E-07	0.4066	Clmn	4.75E-07	0.453156
Mfn2	2.16E-07	0.35158	Spint1	4.76E-07	0.569846
Ptprs	2.20E-07	0.423761	Lsr	4.83E-07	0.72134
Vps4b	2.21E-07	0.653225	Nipbl	4.85E-07	0.439747
Ppp4r1	2.23E-07	0.449139	Wipf2	4.96E-07	0.350875
BC005537	2.24E-07	0.699687	lffo2	4.96E-07	0.533938
Neat1	2.29E-07	1.647708	Cpeb2	4.96E-07	0.404889
Skp1a	2.37E-07	0.708555	ltgb5	5.01E-07	0.359203
Baiap2	2.42E-07	1.157823	Adgrg6	5.01E-07	0.802581
Mprlp	2.49E-07	0.719642	Elf2	5.18E-07	0.438997
Ddb1	2.51E-07	0.638276	Acsl3	5.27E-07	0.436226
Hdac5	2.57E-07	0.521544	Wdr46	5.41E-07	0.313071
Actg1	2.60E-07	1.237598	Atp1b1	5.45E-07	1.377943
Syne2	2.63E-07	0.787608	Hs6st1	5.60E-07	0.355127
S100a11	2.66E-07	1.303781	Tab2	5.93E-07	0.667524
Cd24a	2.70E-07	1.323525	Rsf1	6.10E-07	0.428216
Atp5a1	2.77E-07	0.968739	ltgav	6.12E-07	0.605654
Ndfip2	2.77E-07	0.728081	Azi2	6.12E-07	0.599404
Prss8	2.83E-07	1.069109	Npc1	6.15E-07	0.389685
Cox4i1	2.89E-07	0.932665	Tiam1	6.15E-07	0.589572
Stk40	3.01E-07	0.775531	Mafg	6.23E-07	0.747245
Ndufa4	3.09E-07	0.91375	Piezo1	6.37E-07	0.447063
Rhou	3.31E-07	0.993058	Uqcr11	6.40E-07	1.039429
Slc25a25	3.33E-07	0.545744	Lmo4	6.43E-07	0.599222
Mgst1	3.40E-07	0.536345	Thbs1	6.64E-07	1.44998
Sox9	3.51E-07	1.337485	Csnk1a1	6.93E-07	0.840887
Calm2	3.66E-07	1.292636	1110059G10Rik	7.02E-07	0.367297
Mcc	3.75E-07	0.269946	Ly6d	7.31E-07	1.503323
Hnrnpab	3.80E-07	1.160287	Rin2	7.56E-07	0.410793
Ly6e	3.86E-07	1.126053	Samd4b	7.61E-07	0.390965
Cstb	3.88E-07	1.548849	Tagln2	7.86E-07	1.058257
Gpx4	3.96E-07	1.182317	Ralgds	7.89E-07	0.900026
Casp4	3.97E-07	0.612148	Zc3h18	7.90E-07	0.421158
Noct	4.03E-07	0.832554	lgfbp2	8.22E-07	0.32619
Cxcl16	4.06E-07	0.777764	Csrp1	8.38E-07	1.738291
Ythdf2	4.31E-07	0.564939	Chd3	8.43E-07	0.703992
Vsig10	4.31E-07	0.436667	Tgif1	8.53E-07	0.888328

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Bcl2l1	8.61E-07	0.532401	Ehd4	2.45E-06	0.649169
Map1lc3a	8.77E-07	1.391504	Nras	2.50E-06	0.840936
Abcc1	8.79E-07	0.317829	Eif3a	2.50E-06	0.803592
Amd1	9.04E-07	0.594503	Sik1	2.52E-06	0.498688
Mbnl2	9.30E-07	0.737945	Ero1l	2.56E-06	0.546339
Gng12	9.31E-07	0.451307	Nebi	2.67E-06	0.41063
Mafk	9.66E-07	0.750586	Wipi2	2.74E-06	0.552476
Ddah2	1.05E-06	0.611675	Atp1a1	2.77E-06	1.376076
Zfand5	1.07E-06	0.983869	Tuba1cA	2.79E-06	0.750624
Rnf38	1.09E-06	0.32776	Enpp4	2.82E-06	0.331526
Ankrd50	1.11E-06	0.300358	Stat3	2.85E-06	0.846068
Nfkb1	1.11E-06	0.888273	Mgat4b	3.05E-06	0.264476
Fosb	1.12E-06	1.520421	Klhl21	3.07E-06	0.943082
Dot1l	1.15E-06	0.47944	Rtkn	3.15E-06	0.431008
S100a10	1.19E-06	1.091571	Aldoa	3.17E-06	0.895246
Nt5c2	1.19E-06	0.364442	Gan	3.28E-06	0.467476
Arl13b	1.19E-06	0.396157	Jund	3.32E-06	1.040984
Wiz	1.24E-06	0.307417	Txnrd1	3.32E-06	0.540767
Col17a1	1.26E-06	0.27731	Nr1d2	3.45E-06	0.423329
Tes	1.27E-06	0.523842	Zyx	3.48E-06	0.626193
Arhgef16	1.30E-06	0.324384	Cox6c	3.51E-06	0.892324
Whrn	1.30E-06	0.274466	Gabarapl1	3.64E-06	0.922896
Zfhx3	1.33E-06	0.524323	Hivep2	3.66E-06	0.955479
Rai14	1.36E-06	0.25997	Foxp1	3.74E-06	1.204817
Atp5l	1.48E-06	0.98098	Adgrl2	3.76E-06	0.372703
Phc2	1.49E-06	0.629379	Pafah1b3	3.78E-06	0.418806
Chka	1.50E-06	1.069344	Rb1cc1	3.85E-06	0.438299
Scmh1	1.55E-06	0.489214	Fubp1	3.93E-06	0.834401
Bod1	1.60E-06	0.584517	Cep295	3.93E-06	0.308796
Ctnnb1	1.60E-06	1.01392	Nhp2	4.14E-06	0.711864
Zfp260	1.62E-06	0.415651	Upf1	4.15E-06	0.515075
Nedd4	1.65E-06	0.631703	Ptpn9	4.29E-06	0.312451
Por	1.71E-06	0.482155	Zbtb20	4.31E-06	0.678122
Insig2	1.75E-06	0.604936	Ets2	4.38E-06	0.781475
Hbp1	1.95E-06	0.588084	Rhbdf1	4.41E-06	0.493625
Mcl1	1.97E-06	0.85463	Minpp1	4.41E-06	0.376318
Tgfb1	2.05E-06	0.572808	Ddx5	4.55E-06	0.922796
2010300C02Rik	2.10E-06	0.471584	Atp5g3	4.71E-06	1.021846
Oser1	2.22E-06	0.575165	Pitpnc1	4.76E-06	0.723711
Acsf2	2.29E-06	0.388243	Daam1	4.78E-06	0.355441

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
ErbB3	4.82E-06	0.407725	Tmem127	8.97E-06	0.374446
Wls	4.92E-06	0.602993	Tbl3	9.15E-06	0.369495
Myh9	4.93E-06	0.806265	Cnih4	9.38E-06	0.513635
Mical3	5.41E-06	0.362032	Trp53bp1	9.38E-06	0.251174
Tcp11l2	5.46E-06	0.567039	Suco	9.45E-06	0.378021
Bptf	5.59E-06	0.663364	1110001J03Rik	9.62E-06	0.689708
Arhgef7	5.60E-06	0.257908	Il17re	9.63E-06	0.413608
Isg20l2	5.71E-06	0.277765	Lpin2	9.97E-06	0.28172
Rbm12	5.74E-06	0.363703	Nr4a1	1.00E-05	0.751932
Rnd3	5.74E-06	0.480577	Ahctf1	1.01E-05	0.477209
Bsg	5.74E-06	0.723583	Zfr	1.01E-05	0.495693
Eif6	5.79E-06	0.732537	Myl12a	1.01E-05	0.934664
Bap1	5.84E-06	0.348477	Itga3	1.10E-05	0.439835
Arid5b	6.05E-06	0.924544	Vmp1	1.13E-05	0.889669
Clk1	6.05E-06	0.598125	Itgb1	1.14E-05	0.600249
Med22	6.05E-06	0.348546	Hipk3	1.15E-05	0.487941
Cmtm8	6.39E-06	0.447773	Spty2d1	1.17E-05	0.547292
Trak1	6.49E-06	0.385457	Cox7c	1.17E-05	0.857119
Dpysl3	6.57E-06	0.354611	Rnf11	1.18E-05	0.61063
Mark2	6.62E-06	0.624611	Tns3	1.18E-05	0.645747
Ifitm3	6.62E-06	1.055033	Sun2	1.19E-05	0.483977
Parp8	6.70E-06	0.33067	Sp3	1.19E-05	0.449045
Uqcr10	6.73E-06	0.858073	Ubxn6	1.21E-05	0.608083
Ptprk	7.13E-06	0.464545	Pkn2	1.22E-05	0.6063
Six1	7.27E-06	0.53082	Ptp4a1	1.23E-05	0.809994
Hivep3	7.28E-06	0.55956	Ahcyl1	1.26E-05	0.460731
Flii	7.45E-06	0.435623	Naa50	1.29E-05	0.595168
Smtn	7.46E-06	0.355738	Vps37a	1.30E-05	0.367245
Atl2	7.76E-06	0.420387	Serinc1	1.31E-05	0.685553
Mccc1	7.77E-06	0.348556	Itm2b	1.35E-05	0.758965
Zfp655	7.92E-06	0.443881	Ppp6r3	1.36E-05	0.335207
Raph1	8.25E-06	0.68124	Fdx1	1.37E-05	0.497901
Maff	8.36E-06	0.847137	BC003965	1.40E-05	0.460094
Smad1	8.40E-06	0.532321	Atrx	1.41E-05	0.527268
Top1	8.41E-06	1.056276	Anxa11	1.41E-05	0.497943
Pias2	8.43E-06	0.318623	Flnb	1.43E-05	0.482342
Chchd10	8.47E-06	1.158182	Cbx6	1.43E-05	0.362554
Lmna	8.70E-06	0.95727	Kank1	1.45E-05	0.504977
Cyp2f2	8.81E-06	2.150214	Rab11fip1	1.46E-05	0.671094
Ptpn14	8.83E-06	0.387715	Midn	1.47E-05	0.786801

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Chp1	1.50E-05	0.637561	Sorbs2	2.31E-05	0.846298
Ndufa12	1.53E-05	0.650388	Cnot6	2.32E-05	0.285065
Enah	1.54E-05	0.379288	Ywhaq	2.33E-05	0.58936
Ces1d	1.55E-05	1.221092	Pdcl3	2.39E-05	0.50425
Map1lc3b	1.56E-05	0.605372	Tbk1	2.45E-05	0.316515
Ptpn23	1.59E-05	0.318859	Rce1	2.50E-05	0.47237
Arhgap10	1.59E-05	0.264896	Atf6	2.52E-05	0.319628
Jmjd1c	1.60E-05	0.583297	Kif5b	2.57E-05	0.783289
Fam102b	1.65E-05	0.367716	Wdr13	2.58E-05	0.340108
Wbp5	1.66E-05	0.787336	Son	2.59E-05	0.826882
Ehf	1.66E-05	0.92203	Efna1	2.60E-05	0.704254
Myef2	1.70E-05	0.315959	Ubc	2.61E-05	1.120379
Eif4g2	1.70E-05	0.950955	Dsc2	2.63E-05	0.491752
Rap2b	1.70E-05	0.926735	Ripk4	2.63E-05	0.329025
Brd2	1.73E-05	0.604436	Itga6	2.64E-05	0.841254
Tgfb2	1.73E-05	0.606205	Phf23	2.67E-05	0.370299
Sf1	1.74E-05	0.633002	Uqcrq	2.68E-05	0.635377
Atp5b	1.79E-05	0.848346	Hk1	2.69E-05	0.381484
Nup153	1.82E-05	0.285103	Zfp644	2.70E-05	0.498359
Elf1	1.84E-05	0.594431	Sec62	2.71E-05	0.678231
Thoc6	1.90E-05	0.422327	Dnmt3a	2.75E-05	0.28692
Klf13	1.92E-05	0.853859	Errfi1	2.77E-05	1.427617
Ctbp2	1.93E-05	0.310807	Atp5d	2.78E-05	0.742251
Ncoa7	1.96E-05	0.835103	Pias4	2.79E-05	0.280936
Ralbp1	1.96E-05	0.701351	Plekhm2	2.81E-05	0.312516
Tcf12	1.99E-05	0.414672	Ski	2.92E-05	0.324059
Ctnnd1	2.03E-05	0.586183	Rbms1	2.95E-05	0.510458
Snrnp200	2.06E-05	0.324034	Ncl	2.97E-05	0.721439
S100a1	2.06E-05	0.786632	Rab14	3.05E-05	0.627431
Nbr1	2.08E-05	0.326994	Ndufa11	3.08E-05	0.508958
Socs5	2.19E-05	0.306018	Rock2	3.09E-05	0.417904
Atp11a	2.19E-05	0.66865	Cox6a1	3.10E-05	0.618703
H2-K1	2.20E-05	0.793897	Zfp326	3.13E-05	0.35175
Lgals7	2.23E-05	0.597079	Cdk19	3.23E-05	0.348045
Aplp2	2.24E-05	0.785912	Tacc2	3.27E-05	0.692902
Stk11	2.25E-05	0.613262	Plscr1	3.29E-05	0.664937
S100a16	2.26E-05	0.490087	Ccnd1	3.32E-05	0.305119
Zbtb21	2.28E-05	0.372278	Sqstm1	3.36E-05	1.085635
Kif1b	2.29E-05	0.484221	Cln8	3.37E-05	0.281311
Ndufb2	2.29E-05	0.685287	Herc1	3.41E-05	0.345945

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Rfc1	3.42E-05	0.349208	Cltc	5.16E-05	0.629453
Atpif1	3.49E-05	0.934576	Csde1	5.22E-05	0.764709
Tfap2b	3.53E-05	0.323958	Slc38a2	5.23E-05	0.723661
Edn1	3.55E-05	0.924182	Cd164	5.24E-05	0.621276
Lpp	3.55E-05	0.455647	Rad23b	5.35E-05	0.599352
Gpx1	3.57E-05	0.708379	Hmgn1	5.41E-05	0.756367
Egr1	3.58E-05	1.478354	2010107E04Rik	5.43E-05	0.813282
Ltbp1	3.60E-05	0.279493	Atp5j	5.56E-05	0.754452
Tnrc18	3.62E-05	0.250275	Adgrg1	5.65E-05	0.408607
Vps72	3.63E-05	0.442024	Inpp1	5.69E-05	0.3181
Tecr	3.75E-05	0.661764	Nr2f2	5.79E-05	0.423203
Arhgef5	3.81E-05	0.317605	ldh2	5.79E-05	0.727584
Csnk1e	3.84E-05	0.355299	Mkfn1	5.80E-05	0.580504
Hspa9	3.90E-05	0.61413	Setd7	5.81E-05	0.25588
Tmcc3	3.97E-05	0.383366	Trib1	5.85E-05	0.692488
Notch2	4.06E-05	0.252911	Papss1	5.89E-05	0.509261
Dlg1	4.18E-05	0.367789	Fam213b	6.08E-05	0.697225
Acin1	4.24E-05	0.399788	Glul	6.14E-05	1.367442
Dyrk1a	4.26E-05	0.441057	Cebpb	6.17E-05	0.349017
Zbtb17	4.26E-05	0.276432	Slc25a3	6.19E-05	0.608175
Anxa2	4.28E-05	0.506478	Cat	6.21E-05	0.726292
Ywhae	4.29E-05	0.744946	Axin1	6.25E-05	0.269277
Stoml2	4.33E-05	0.552135	Ndr2	6.32E-05	0.260028
Rest	4.42E-05	0.359042	Nsmce2	6.37E-05	0.321874
Qk	4.52E-05	0.50478	Smg5	6.43E-05	0.311921
Arhgef2	4.53E-05	0.350374	Srsf10	6.44E-05	0.421438
4930402H24Rik	4.61E-05	0.264769	Pdha1	6.47E-05	0.507962
lfrd1	4.64E-05	1.079234	Arf2	6.51E-05	0.39076
Syncrin	4.70E-05	0.470264	Mex3c	6.58E-05	0.339996
Bri3	4.73E-05	0.560598	Zbtb10	6.67E-05	0.310581
Eny2	4.75E-05	0.570555	Selk	6.68E-05	0.624533
Sppl3	4.76E-05	0.401794	Atox1	6.81E-05	0.473558
Eif4b	4.84E-05	0.46962	Hdgf	7.13E-05	1.036859
Atf7	4.85E-05	0.349447	Cand1	7.14E-05	0.352275
Aig1	4.92E-05	0.637862	Rhoc	7.16E-05	0.325607
Lima1	4.92E-05	0.733028	Taok1	7.21E-05	0.362709
Serf1	5.03E-05	0.461599	Gatad2b	7.25E-05	0.605099
Gigyf1	5.13E-05	0.25624	Klf16	7.49E-05	0.405454
Atf4	5.14E-05	0.768282	Ptpn6	7.60E-05	0.305295
Tollip	5.14E-05	0.330627	Celf1	7.60E-05	0.34615

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Aco2	7.79E-05	0.644863	Arl5b	1.09E-04	0.47839
Srsf11	7.81E-05	0.559962	Cox6b1	1.10E-04	0.77611
Sash1	7.81E-05	0.414012	Ogt	1.12E-04	0.59511
Echdc2	8.07E-05	0.387143	ltpr1	1.14E-04	0.310957
Arrdc1	8.11E-05	0.586655	Pttg1ip	1.14E-04	0.87888
Nfic	8.27E-05	0.457645	Mia	1.15E-04	0.524642
Map3k1	8.34E-05	0.823984	Clk4	1.17E-04	0.514759
Brip1os	8.56E-05	0.298006	Psen1	1.17E-04	0.297978
Max	8.64E-05	0.654407	lp6k2	1.19E-04	0.286151
Ctnna1	8.68E-05	0.581773	Sag	1.22E-04	0.369111
Klf7	8.76E-05	0.514266	Cystm1	1.22E-04	0.915931
Prdx1	8.80E-05	0.880673	Srrt	1.26E-04	0.416461
Gpc4	8.85E-05	0.38484	Hes1	1.30E-04	1.095794
Foxc1	8.85E-05	0.718413	Npm3	1.31E-04	0.48671
Flna	8.85E-05	0.735721	Dst	1.32E-04	0.526194
Dhx32	8.91E-05	0.261677	Glg1	1.32E-04	0.420576
Rnf103	8.92E-05	0.28487	Hmox1	1.33E-04	0.325741
Atp6v1a	8.92E-05	0.711177	Nr1d1	1.33E-04	0.340213
Pabpc1	8.92E-05	0.629825	Ank3	1.33E-04	0.28657
Eif5b	8.98E-05	0.487713	2610507B11Rik	1.34E-04	0.466867
Timm17a	8.99E-05	0.554596	Dcl1	1.41E-04	0.367695
Ptges3	9.00E-05	0.735037	2810403A07Rik	1.42E-04	0.572186
Cdk9	9.17E-05	0.319454	Bdp1	1.43E-04	0.442105
Mat2a	9.35E-05	0.729458	Phlda1	1.51E-04	1.047314
Ctps	9.44E-05	0.321033	Zfp148	1.51E-04	0.28362
Herc2	9.53E-05	0.294778	Fbxw11	1.52E-04	0.327003
Cfap43	9.59E-05	0.348087	Ndufs6	1.55E-04	0.669349
Atp13a3	9.68E-05	0.469636	Hspa5	1.55E-04	0.408466
Atp8b1	9.74E-05	0.353077	Sestd1	1.57E-04	0.292895
Wwtr1	9.78E-05	0.509706	Srpk2	1.59E-04	0.665514
Ddx10	9.82E-05	0.346816	Prrc2c	1.61E-04	0.467775
Usmg5	9.84E-05	0.833392	Usp7	1.62E-04	0.457233
Usp6nl	1.03E-04	0.2819	Tbc1d10a	1.63E-04	0.435254
Uba1	1.04E-04	0.452128	Nxn	1.65E-04	0.350691
Fmo2	1.05E-04	0.453483	Akirin1	1.65E-04	0.430746
Mdm4	1.05E-04	0.394851	Wdr45b	1.66E-04	0.431418
Cbx3	1.05E-04	0.447907	Pqlc1	1.68E-04	0.647251
Brd7	1.06E-04	0.380626	Ppp3ca	1.69E-04	0.558872
Stxbp3	1.07E-04	0.413127	Krtcap3	1.71E-04	0.418576
Ctbp1	1.09E-04	0.506575	Prdx2	1.72E-04	0.625953

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Akap9	1.72E-04	0.456749	Ylpm1	2.58E-04	0.350686
Arhgap18	1.76E-04	0.258757	Arid1a	2.58E-04	0.318572
Pdlim5	1.76E-04	0.474652	Atxn2	2.64E-04	0.300124
Pvr	1.77E-04	0.695851	Kcnq1ot1	2.64E-04	0.87346
Wrnip1	1.84E-04	0.297441	Fgfbp1	2.68E-04	0.275012
Hipk1	1.87E-04	0.534866	Snx10	2.69E-04	0.298808
Ceacam1	1.87E-04	0.600591	Pum2	2.70E-04	0.382791
Trim2	1.89E-04	0.78513	Sdcbp	2.70E-04	0.514544
Chmp4b	1.91E-04	0.702829	Chchd5	2.71E-04	0.459908
Wdr45	1.94E-04	0.28775	Znrf1	2.75E-04	0.685307
Cd63	1.94E-04	0.809205	Pabpn1	2.78E-04	0.517757
Kit	1.96E-04	0.65874	Fmr1	2.78E-04	0.464479
4931406P16Rik	1.98E-04	0.271067	Rab34	2.85E-04	0.316536
Mpzl1	1.98E-04	0.261393	Ndufs4	2.86E-04	0.567061
Ndrp1	2.02E-04	1.146316	Dcaf12	2.86E-04	0.359381
Mif	2.02E-04	0.827034	Yrdc	2.91E-04	0.521785
Hnrnpa2b1	2.03E-04	0.669108	Ndufb11	2.92E-04	0.519417
Carhsp1	2.04E-04	0.382335	Rab20	2.93E-04	0.351041
Mrto4	2.05E-04	0.344149	Lgals3	2.96E-04	0.875786
Cfl2	2.05E-04	0.521926	Mtdh	2.98E-04	0.465746
Hspb8	2.05E-04	0.669049	Gtf2i	3.06E-04	0.330587
Ddx3x	2.11E-04	0.768568	Clic1	3.06E-04	0.613709
Pkp4	2.14E-04	0.546176	Mark3	3.07E-04	0.297437
Nip7	2.16E-04	0.31684	Rnf130	3.08E-04	0.39739
Tfip11	2.16E-04	0.294701	4930523C07Rik	3.10E-04	0.655853
Vamp8	2.16E-04	0.652702	Cast	3.15E-04	0.336703
Ube2s	2.17E-04	0.692827	Rbm39	3.22E-04	0.643808
Sfr1	2.18E-04	0.73247	Ralgapa2	3.39E-04	0.330319
Camk1	2.19E-04	0.384815	Rbm18	3.40E-04	0.464033
Nhp2l1	2.20E-04	0.540589	Erdr1	3.46E-04	0.511964
Pbrm1	2.23E-04	0.524853	Slc5a8	3.48E-04	0.371859
Pak1ip1	2.28E-04	0.336839	Barx2	3.50E-04	0.574915
Ankrd11	2.33E-04	0.573778	Eif5	3.56E-04	0.611508
Npepps	2.34E-04	0.392796	Ssbp3	3.59E-04	0.37699
Kat2b	2.38E-04	0.40087	Tomm20	3.61E-04	0.684074
Pxdc1	2.50E-04	0.315469	Tpi1	3.62E-04	0.632765
Dag1	2.51E-04	0.299513	Mgrn1	3.64E-04	0.28172
Ube2e3	2.54E-04	0.672849	Gm16286	3.65E-04	0.464397
Fam92a	2.55E-04	0.327437	Timm10	3.69E-04	0.348057
Smad1	2.56E-04	0.439894	Fahd2a	3.70E-04	0.332336

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Zc3hav1	3.74E-04	0.330201	Ppp1r15a	4.76E-04	0.56185
Exoc5	3.75E-04	0.308406	Csad	4.82E-04	0.351141
Srsf2	3.79E-04	0.777376	Cbx7	4.85E-04	0.26049
Phlda3	3.85E-04	0.29433	Txndc5	4.86E-04	0.513339
Stt3a	3.86E-04	0.463347	Uqcrfs1	4.88E-04	0.578187
Malat1	3.88E-04	0.851653	Eif4g1	4.90E-04	0.441054
Uqcrh	3.88E-04	0.691627	Plscr3	4.90E-04	0.344535
Klf9	3.92E-04	0.409892	ltpr2	4.96E-04	0.389808
Arhgap42	3.93E-04	0.268077	Dnm1l	5.00E-04	0.278097
Hnrnpa3	3.93E-04	0.684697	Rnf10	5.07E-04	0.648047
Smim10l1	3.93E-04	0.443952	Stau2	5.11E-04	0.316577
Myo1e	3.94E-04	0.256247	Btbd9	5.13E-04	0.281008
Snrnp70	3.97E-04	0.428252	Lamp2	5.14E-04	0.557402
2200002D01Rik	4.01E-04	0.301399	Slc12a2	5.15E-04	1.04353
Usp53	4.02E-04	0.361945	Bag3	5.17E-04	0.551646
Ggnbp2	4.05E-04	0.457027	Sin3b	5.21E-04	0.550137
Rbp1	4.14E-04	0.421083	Lrch1	5.21E-04	0.310483
Wdr1	4.19E-04	0.597865	Lmbr1l	5.24E-04	0.355783
Rmnd5b	4.19E-04	0.341653	Cebpz	5.25E-04	0.400118
Slc25a21	4.20E-04	0.395841	Pim3	5.31E-04	0.426358
Pdia3	4.21E-04	0.484224	Eif4a1	5.34E-04	0.844008
Myl6	4.23E-04	0.593665	Pphln1	5.37E-04	0.309225
Hspb1	4.23E-04	1.081961	Srsf5	5.43E-04	0.650349
Nenf	4.23E-04	0.439654	Atp2b1	5.45E-04	0.835182
Hsp90ab1	4.30E-04	0.574598	Taldo1	5.49E-04	0.636407
Pnrc1	4.30E-04	0.583981	Ubtf	5.52E-04	0.347372
Zfp703	4.30E-04	1.046325	Aamp	5.57E-04	0.468393
Adam10	4.31E-04	0.329773	Arglu1	5.62E-04	0.417699
Cyth2	4.31E-04	0.436029	Tpp2	5.63E-04	0.397058
Ywhaz	4.34E-04	0.659089	Hypk	5.66E-04	0.465368
Anxa5	4.35E-04	0.436096	Mga	5.71E-04	0.37649
Nfe2l1	4.35E-04	0.475157	Agrn	5.77E-04	0.300751
Tmem30b	4.37E-04	0.388021	Klhl9	5.77E-04	0.265827
Ctsl	4.41E-04	1.099993	Trp53	5.83E-04	0.435193
Dmd	4.43E-04	0.335674	Atp6v1f	5.84E-04	0.574425
Ralb	4.44E-04	0.381251	Ezr	5.87E-04	0.651154
Ctnnbip1	4.48E-04	0.313108	Arhgap44	5.91E-04	0.26174
Zfand3	4.56E-04	0.316686	Stx11	5.93E-04	0.320746
Rel1	4.59E-04	0.55065	Ctsb	5.97E-04	0.425679
RbmX	4.63E-04	0.30029	Ppp1r15b	5.99E-04	0.380618

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Ift43	6.21E-04	0.257085	Denr	8.32E-04	0.558958
Med13l	6.21E-04	0.391181	Elp5	8.55E-04	0.422579
Tmbim6	6.24E-04	0.572221	Pard3	8.59E-04	0.265152
Arih2	6.24E-04	0.489697	Ptma	8.60E-04	0.518733
Inpp4a	6.33E-04	0.2509	Dusp5	8.64E-04	0.856974
Mesdc1	6.34E-04	0.327572	Msl1	8.66E-04	0.340157
Pafah1b1	6.35E-04	0.618967	Pgam1	8.78E-04	0.647368
Trim24	6.46E-04	0.379441	Aldh2	8.79E-04	0.656496
Fam60a	6.51E-04	0.267334	Efh2	8.80E-04	1.11391
Canx	6.58E-04	0.582841	Eif1a	8.81E-04	0.834705
Rnf19a	6.62E-04	0.307886	Eps8	8.90E-04	0.384071
Dcun1d1	6.73E-04	0.49107	Ptgfrn	8.93E-04	0.250376
Jun	6.74E-04	0.564378	Arf6	8.95E-04	0.641787
H2-Q4	6.82E-04	0.57614	Esyt2	9.00E-04	0.259048
Ccnl2	6.85E-04	0.527976	Sec11a	9.14E-04	0.583427
Etf1	6.88E-04	0.649614	Tgoln1	9.30E-04	0.529663
Smg1	6.90E-04	0.271032	Srek1	9.36E-04	0.265816
Zfx	6.91E-04	0.315893	Azin1	9.41E-04	0.441999
Usp16	6.95E-04	0.320958	Vapa	9.44E-04	0.575441
Meis2	6.99E-04	0.980134	Tceb2	9.46E-04	0.537199
Fbxl3	7.02E-04	0.378099	Ube2b	9.47E-04	0.720119
Orc4	7.02E-04	0.275891	Sowahc	9.56E-04	0.322364
Dhx15	7.05E-04	0.517089	Bcas2	9.59E-04	0.462475
Kat6a	7.07E-04	0.26954	Katnbl1	9.76E-04	0.255893
Cdk6	7.25E-04	0.355315	Wac	9.83E-04	0.462345
Kansl3	7.37E-04	0.409753	Ndufa5	9.88E-04	0.504517
Actr2	7.42E-04	0.485841	Hnrnpc	9.93E-04	0.49031
Bcl3	7.48E-04	0.338648	Ppp1cb	9.95E-04	0.519906
Adam17	7.49E-04	0.275865	Zfp91	1.02E-03	0.359946
Ssfa2	7.59E-04	0.316141	Mfsd6	1.02E-03	0.328994
Cul1	7.70E-04	0.385067	Tmem258	1.03E-03	0.393292
Vps26a	7.77E-04	0.378614	Aff4	1.03E-03	0.488039
Pls3	7.79E-04	0.32346	Atp5j2	1.03E-03	0.557672
Mdk	7.91E-04	0.426121	Ppic	1.03E-03	0.430331
Nme1	7.95E-04	0.471003	D15Ert621e	1.04E-03	0.327198
Rnh1	8.04E-04	0.600492	Slc44a1	1.05E-03	0.446499
Dazap1	8.15E-04	0.438315	Nmt2	1.06E-03	0.33111
Idh3a	8.16E-04	0.568829	Zc3h7b	1.06E-03	0.444833
Anapc13	8.29E-04	0.529267	Nucb1	1.07E-03	0.348766
Med13	8.32E-04	0.301522	Drap1	1.08E-03	0.501582

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Ppfibp1	1.09E-03	0.382249	Eef2	1.40E-03	0.593402
Pim1	1.10E-03	0.588997	Klk1	1.40E-03	3.050862
Chic2	1.10E-03	0.615529	Fbrs	1.40E-03	0.255095
Pkm	1.10E-03	0.441077	Pdcd11	1.40E-03	0.347559
Gstm1	1.11E-03	0.415761	2310036O22Rik	1.41E-03	0.521967
Acsl5	1.11E-03	0.315542	Ptbp3	1.43E-03	0.60048
Zwint	1.11E-03	0.50984	Psma3	1.43E-03	0.58029
Htt	1.12E-03	0.273619	Tcf7l2	1.43E-03	0.3
Pfdn1	1.12E-03	0.469378	Susd6	1.43E-03	0.481174
Cnbp	1.12E-03	0.521228	Akr1a1	1.43E-03	0.478855
Btg2	1.13E-03	1.021571	Aamdc	1.44E-03	0.385452
Atxn7l3b	1.13E-03	0.545103	Lrp6	1.44E-03	0.352322
Hnrnp1l	1.15E-03	0.467701	Josd1	1.46E-03	0.282275
Fam132a	1.16E-03	0.421528	Tmem184a	1.47E-03	0.287408
Efcab14	1.16E-03	0.342534	Cish	1.48E-03	0.64205
Hnrnp1m	1.19E-03	0.532553	Actn1	1.48E-03	0.535589
Mrpl23	1.20E-03	0.449971	Ctdsp2	1.48E-03	0.333653
Ppp4r2	1.22E-03	0.495873	Ppp2cb	1.48E-03	0.727982
Cdk2ap1	1.22E-03	0.523571	Ndel1	1.48E-03	0.502954
Ube4b	1.22E-03	0.308932	Actb	1.50E-03	0.464884
Arg1	1.22E-03	0.766444	Bcl10	1.51E-03	0.403008
Pn1sr	1.23E-03	0.569039	Atp5e	1.51E-03	0.415552
Hmgb3	1.24E-03	0.337458	Csrp2	1.53E-03	0.413546
Ilf3	1.26E-03	0.287372	Zrsr2	1.56E-03	0.305259
Tjp2	1.26E-03	0.538429	Rnps1	1.56E-03	0.498874
Nktr	1.28E-03	0.712837	Krt23	1.57E-03	0.928435
Cnn3	1.28E-03	0.51054	Strn3	1.58E-03	0.42721
Armcx3	1.29E-03	0.387591	Tmem63b	1.59E-03	0.408035
Ergic3	1.30E-03	0.466458	Rheb	1.60E-03	0.600343
Kdm7a	1.31E-03	0.391254	Ptpn11	1.61E-03	0.392661
Igfbp5	1.31E-03	0.270021	Srsf6	1.61E-03	0.531251
Prpf40a	1.32E-03	0.370776	Pgm2	1.61E-03	0.399613
Cyb5r3	1.33E-03	0.44383	Nr1h2	1.62E-03	0.522252
Ahr	1.34E-03	0.340474	Wsb1	1.62E-03	0.450985
Polr2m	1.34E-03	0.482875	Atg12	1.65E-03	0.291238
Camk2n1	1.35E-03	0.390075	Pfkf	1.66E-03	0.357568
Frrs1	1.35E-03	0.259055	Tmem259	1.66E-03	0.344169
Capn1	1.35E-03	0.308696	Ube2d3	1.67E-03	0.549624
Cy5c	1.38E-03	0.486202	Comt	1.68E-03	0.467494
Cited2	1.39E-03	0.808673	Ddx6	1.68E-03	0.446105

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Usp9x	1.69E-03	0.402407	Fam104a	2.06E-03	0.481803
Pdgfa	1.69E-03	0.620589	Gnl3	2.07E-03	0.571302
Kcmf1	1.70E-03	0.450315	D17Wsu92e	2.08E-03	0.454812
Prpf6	1.70E-03	0.282652	Myo10	2.08E-03	0.262524
Gns	1.72E-03	0.417657	Gabarapl2	2.09E-03	0.385421
Selenbp1	1.73E-03	0.25266	Acadm	2.09E-03	0.465665
Psme4	1.74E-03	0.285627	Irf6	2.10E-03	0.660111
Ndufa7	1.78E-03	0.421843	Rbm25	2.10E-03	0.446738
Arhgap21	1.78E-03	0.347039	Cfdp1	2.11E-03	0.492301
Srsf4	1.78E-03	0.287289	Stard10	2.11E-03	0.391764
Appbp2	1.79E-03	0.367645	lpmk	2.11E-03	0.367751
Atp5h	1.79E-03	0.537963	Gadd45b	2.15E-03	0.251368
Gnaq	1.80E-03	0.340534	Ndst1	2.20E-03	0.353042
Fam102a	1.80E-03	0.498009	Mapkap1	2.20E-03	0.304094
Ptpn1	1.80E-03	0.387244	Cdk12	2.20E-03	0.398578
Immt	1.81E-03	0.357814	Kmt2a	2.20E-03	0.344534
Prrc2a	1.82E-03	0.408324	Nrbf2	2.21E-03	0.39372
Rrs1	1.83E-03	0.272885	Laptm4a	2.21E-03	0.266607
Dnajc5	1.84E-03	0.424824	Ltbr	2.22E-03	0.34767
Smad2	1.85E-03	0.323497	Nrip1	2.24E-03	0.410513
Gapdh	1.86E-03	0.508322	Zswim6	2.25E-03	0.263307
Erf	1.86E-03	0.297643	Dynll2	2.26E-03	0.704063
Fgfr1	1.87E-03	0.365462	Cox7a2	2.27E-03	0.555579
Foxj3	1.89E-03	0.292283	Slc39a3	2.27E-03	0.381662
Ier3	1.90E-03	0.820444	Igf1r	2.28E-03	0.423805
Dcxr	1.93E-03	0.390222	Sf3b1	2.28E-03	0.439301
Chchd2	1.95E-03	0.520841	Cab39	2.29E-03	0.375418
Epn1	1.96E-03	0.393365	Add1	2.29E-03	0.351978
Arf1	1.97E-03	0.655892	Kpnb1	2.31E-03	0.32423
Ppp1r12c	1.97E-03	0.294852	Sltm	2.32E-03	0.252957
Tspyl1	1.97E-03	0.348274	Iqgap2	2.34E-03	0.462001
Rnf7	1.99E-03	0.530599	Sppl2a	2.34E-03	0.352745
Arl1	2.00E-03	0.391306	Ap2b1	2.38E-03	0.321203
Crebbp	2.01E-03	0.412854	Calu	2.39E-03	0.385405
Gnb1	2.01E-03	0.539548	Rp9	2.42E-03	0.36196
Epc2	2.03E-03	0.26903	Ccser2	2.42E-03	0.345712
Srrm1	2.03E-03	0.43051	Ano6	2.43E-03	0.379093
Gpx8	2.04E-03	0.276453	Clcn4	2.45E-03	0.383912
H2-Q6	2.04E-03	0.417495	Proser2	2.46E-03	0.418953
Sorl1	2.06E-03	0.579909	Wapl	2.46E-03	0.298388

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Ttc14	2.47E-03	0.392897	Ndufa13	3.13E-03	0.549974
Luc7l3	2.48E-03	0.506276	Tmem57	3.14E-03	0.252881
Trp53inp2	2.48E-03	0.448622	Bzw1	3.16E-03	0.362869
Psma2	2.50E-03	0.378313	Fam134a	3.16E-03	0.37692
Slc25a51	2.50E-03	0.473007	Ythdf1	3.18E-03	0.251922
Aspscr1	2.51E-03	0.351213	Aftph	3.20E-03	0.362009
Golga4	2.54E-03	0.299181	Rap1gds1	3.27E-03	0.332241
Lsm14b	2.54E-03	0.323063	Ndufa2	3.27E-03	0.468785
Mapk1ip1l	2.55E-03	0.385374	Mme	3.30E-03	0.362088
Gadd45a	2.55E-03	0.746482	Csnk1d	3.32E-03	0.391339
Aes	2.55E-03	0.469677	Rplp1	3.34E-03	0.513418
Agpat5	2.57E-03	0.255697	Efr3a	3.35E-03	0.443795
Rfwd2	2.57E-03	0.344131	Sdccag3	3.38E-03	0.351309
Skil	2.59E-03	0.488684	Vrk3	3.41E-03	0.346071
Kpna4	2.60E-03	0.28423	Dek	3.48E-03	0.33579
Larp1	2.61E-03	0.409846	Tmed5	3.49E-03	0.390761
Uqcrb	2.62E-03	0.591345	Klhdc2	3.54E-03	0.3484
Ybx3	2.62E-03	0.453262	Sidt2	3.58E-03	0.255839
Lsm12	2.63E-03	0.272392	Arl6ip5	3.62E-03	0.426384
Vcp	2.65E-03	0.365808	Hmox2	3.63E-03	0.327522
Lpgat1	2.66E-03	0.453111	Mkln1	3.65E-03	0.624924
Tmem242	2.70E-03	0.349096	Cdk4	3.70E-03	0.489497
Shfm1	2.70E-03	0.484567	Lsm14a	3.71E-03	0.372405
Fam177a	2.72E-03	0.529986	Rhot2	3.71E-03	0.283452
Atp5c1	2.72E-03	0.32884	Chkb	3.72E-03	0.352619
Avl9	2.76E-03	0.363357	Fam120a	3.76E-03	0.442948
Usp19	2.80E-03	0.40177	Ube2z	3.80E-03	0.353708
Chmp2b	2.83E-03	0.432727	Akt1	3.82E-03	0.348908
Ndufa1	2.84E-03	0.386077	Atp5f1	3.84E-03	0.487742
Yes1	2.85E-03	0.325672	Tnip2	3.85E-03	0.399007
Diaph1	2.89E-03	0.39292	Wbp4	3.86E-03	0.397175
Usp22	2.93E-03	0.298585	Ppp2r2a	3.89E-03	0.380478
Ndufc1	2.97E-03	0.354422	Cdv3	3.89E-03	0.477307
Gnas	2.99E-03	0.372585	Zranb1	3.91E-03	0.457233
Eif1	3.00E-03	0.516999	Smpdl3b	3.97E-03	0.30273
Eif2s2	3.02E-03	0.55294	Ubald1	4.01E-03	0.533016
Papola	3.05E-03	0.539273	Luzp1	4.01E-03	0.511006
Smad4	3.09E-03	0.357644	Rhoa	4.02E-03	0.457711
Srxn1	3.09E-03	0.266046	Sec14l1	4.11E-03	0.370387
Fkbp9	3.10E-03	0.328753	Polr1d	4.12E-03	0.376638

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Tpd52	4.16E-03	0.390088	Hnrnpa0	4.82E-03	0.39494
Agtrap	4.16E-03	0.304523	Ankrd40	4.84E-03	0.264655
Txndc17	4.17E-03	0.452238	Rhob	4.86E-03	0.413648
Abhd14b	4.20E-03	0.391575	Tra2a	4.87E-03	0.480956
Rrp1	4.26E-03	0.423794	Zfp664	4.88E-03	0.314496
R3hdm4	4.27E-03	0.308978	Urm1	4.89E-03	0.35877
Oaz2	4.28E-03	0.530515	Gpi1	4.91E-03	0.32738
Fus	4.28E-03	0.579286	Ccnt1	4.92E-03	0.443469
Hsp90aa1	4.29E-03	0.522037	Palmd	4.92E-03	0.638664
Ccni	4.30E-03	0.330232	Hmgn3	4.92E-03	0.283349
Minos1	4.32E-03	0.498161	Cracr2b	4.93E-03	0.519802
Dtx3l	4.38E-03	0.263421	Mpp5	4.95E-03	0.255559
Csf1	4.39E-03	0.506239	Prkx	4.95E-03	0.311127
Tspan7	4.39E-03	0.304979	2810474O19Rik	4.99E-03	0.504319
Myo1c	4.42E-03	0.441622	Noc2l	5.00E-03	0.26332
Fxyd2	4.43E-03	1.56182	Tra2b	5.04E-03	0.547808
Ier5	4.44E-03	0.506816	Ogfr	5.07E-03	0.428963
Uap1	4.48E-03	0.254313	Eif3j1	5.08E-03	0.708943
Vdac2	4.48E-03	0.586474	Anapc5	5.10E-03	0.352524
Ythdc1	4.52E-03	0.410848	Msi2	5.12E-03	0.343612
Tmem230	4.54E-03	0.387273	Agfg1	5.13E-03	0.299038
Cggbp1	4.59E-03	0.452931	Cnot7	5.14E-03	0.293214
Mrpl52	4.59E-03	0.363483	Ankrd17	5.14E-03	0.350011
Arf5	4.59E-03	0.370375	Siah2	5.14E-03	0.355433
Rab2a	4.60E-03	0.543287	Add3	5.17E-03	0.286852
Tor1aip1	4.60E-03	0.418256	Wdr43	5.20E-03	0.381824
Dhps	4.63E-03	0.306723	Abt1	5.33E-03	0.295961
Ddx47	4.64E-03	0.373458	Rab1a	5.36E-03	0.477966
Pdk4	4.65E-03	0.68307	Slc15a2	5.36E-03	0.335329
Igf2r	4.67E-03	0.432652	Ddx27	5.36E-03	0.350903
Pds5a	4.67E-03	0.396813	Stag1	5.37E-03	0.284818
Arpp19	4.69E-03	0.471703	Pcmt1	5.37E-03	0.392791
H1f0	4.70E-03	0.565078	Lrp10	5.41E-03	0.352234
Ran	4.73E-03	0.341405	Lamtor3	5.43E-03	0.303537
S100a13	4.74E-03	0.344295	Slc41a2	5.45E-03	0.452689
Srsf7	4.76E-03	0.367961	Fnbp1l	5.49E-03	0.328825
Hnrnpa1	4.78E-03	0.683714	Tbl1x	5.50E-03	0.29906
Hacd2	4.80E-03	0.405559	Prdx5	5.56E-03	0.57719
Ndufb9	4.80E-03	0.389937	Plekhf2	5.57E-03	0.264824
Cbx1	4.81E-03	0.426359	Ktn1	5.58E-03	0.441492

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Ldha	5.59E-03	0.491706	Nufip2	6.65E-03	0.336347
Kbtbd2	5.63E-03	0.279051	Pon2	6.65E-03	0.271736
Slc25a36	5.64E-03	0.260949	Gar1	6.66E-03	0.36919
Atp6ap2	5.68E-03	0.41905	Las1l	6.67E-03	0.397847
Btf3	5.70E-03	0.512524	Tm9sf3	6.72E-03	0.547738
Ak6	5.73E-03	0.252367	Rassf1	6.82E-03	0.322952
Reps1	5.83E-03	0.298569	Rela	6.83E-03	0.538586
Rbbp6	5.85E-03	0.450514	Pebp1	6.85E-03	0.430309
Sod1	5.89E-03	0.575674	Cox7b	6.87E-03	0.597452
Arrdc4	5.91E-03	0.641431	Lsm8	6.96E-03	0.554647
Phf10	5.91E-03	0.31312	H2-D1	7.01E-03	0.281406
Etfa	6.01E-03	0.372171	lah1	7.05E-03	0.395459
Ubr3	6.02E-03	0.278384	Larp1b	7.09E-03	0.376203
Qrich1	6.05E-03	0.339731	Shoc2	7.13E-03	0.313756
Rab7	6.07E-03	0.39328	Lasp1	7.17E-03	0.369628
Csnk2a1	6.11E-03	0.334185	Nipa2	7.17E-03	0.502917
Nfia	6.15E-03	0.406618	B2m	7.23E-03	0.331342
Glyr1	6.17E-03	0.425022	Parva	7.25E-03	0.306911
Colgalt1	6.17E-03	0.36825	Sod2	7.27E-03	0.454228
Tmem120a	6.20E-03	0.335152	Mllt10	7.33E-03	0.339547
Fbl	6.21E-03	0.262941	Hsd17b12	7.35E-03	0.429087
Scand1	6.23E-03	0.303135	Pbxip1	7.44E-03	0.351814
1810011010Rik	6.26E-03	0.70368	Atp2c1	7.45E-03	0.406002
Pde4d	6.28E-03	0.365705	Serinc3	7.52E-03	0.420836
Swi5	6.30E-03	0.454231	Eif1b	7.52E-03	0.330263
Psm10	6.35E-03	0.324375	Cyc1	7.55E-03	0.634069
Helz	6.36E-03	0.297307	Luc7l2	7.58E-03	0.523346
Klf3	6.37E-03	0.31122	Ndufc2	7.65E-03	0.389594
Atp5o	6.42E-03	0.545078	Tmem131	7.79E-03	0.3181
Cct5	6.45E-03	0.342536	Eef1a1	7.80E-03	0.492795
Calr	6.48E-03	0.338253	Rragd	7.84E-03	0.369584
Btg3	6.51E-03	0.30356	Pak2	7.86E-03	0.432981
Mllt4	6.54E-03	0.383412	Sphk1	7.90E-03	0.427696
Gng5	6.54E-03	0.541803	Fiz1	7.93E-03	0.344385
Adipor1	6.55E-03	0.286609	Senp6	7.98E-03	0.287517
Tmcc1	6.55E-03	0.370211	Dync1li2	7.99E-03	0.25415
Pex6	6.55E-03	0.260328	Slc35e4	8.01E-03	0.266991
Zmiz1	6.57E-03	0.323833	Cd81	8.04E-03	0.292853
Strap	6.58E-03	0.414294	Ide	8.07E-03	0.36671
Arpc1b	6.60E-03	0.401643	Dld	8.07E-03	0.28213

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Fos	8.11E-03	1.399075	Cct2	9.12E-03	0.310185
Rbm27	8.14E-03	0.408656	Acadsb	9.21E-03	0.409237
Psmb4	8.16E-03	0.378835	Hnrnpk	9.35E-03	0.395301
Pdcd6	8.24E-03	0.304929	Anxa6	9.46E-03	0.521036
St5	8.27E-03	0.300122	Ilf2	9.48E-03	0.460524
Baz1a	8.29E-03	0.430283	Gstt1	9.50E-03	0.552334
0610011F06Rik	8.33E-03	0.368061	Tomm40	9.56E-03	0.305028
Dync1h1	8.35E-03	0.310095	Rbm7	9.63E-03	0.256863
Senp2	8.38E-03	0.298104	Ibtk	9.70E-03	0.28396
Ppig	8.39E-03	0.504802	P2rx4	9.76E-03	0.301304
Pin1	8.40E-03	0.260724	Gm12840	9.87E-03	0.634677
Pdlim3	8.44E-03	0.279159	Rbm6	9.93E-03	0.404372
Psma5	8.45E-03	0.375611	Nop10	9.94E-03	0.308945
Fryl	8.48E-03	0.309712	Eif4h	9.99E-03	0.36087
Nrbp2	8.48E-03	0.350415			
Cox14	8.52E-03	0.272905			
H3f3b	8.53E-03	0.35299			
Ythdf3	8.55E-03	0.292256			
Litaf	8.56E-03	0.472473			
Rbm8a	8.56E-03	0.404128			
Ssr1	8.57E-03	0.529355			
Ppp1r2	8.59E-03	0.349391			
Prpf38b	8.62E-03	0.377858			
Gnai3	8.63E-03	0.343625			
Pea15a	8.63E-03	0.284119			
Gtf2h5	8.64E-03	0.351526			
Ddx42	8.65E-03	0.301017			
Lsm2	8.71E-03	0.313379			
Arih1	8.72E-03	0.380405			
Wdr77	8.77E-03	0.360506			
Mpp6	8.78E-03	0.313941			
Cuedc2	8.82E-03	0.25534			
Thrap3	8.95E-03	0.293809			
Sars	8.98E-03	0.289547			
Aff1	9.03E-03	0.292519			
Pdpf	9.03E-03	0.518992			
Irf2bp2	9.08E-03	0.673252			
Pla2g7	9.10E-03	0.596569			
Cbfb	9.11E-03	0.312324			

Cluster 8

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Pcp4	1.11E-76	2.419596	Fblim1	2.16E-33	0.731628
Cnn1	7.20E-72	2.53539	Palld	2.57E-33	1.35699
Dlk2	2.04E-67	1.329729	Ctgf	2.66E-33	1.599973
Serpinb5	4.87E-67	1.658876	Trnp1	8.79E-33	0.546913
Trim29	6.45E-62	1.170752	Ntrk3	1.12E-32	1.044929
Cck	3.44E-60	3.198625	Ptprz1	3.76E-31	0.648171
Chil1	3.66E-59	1.865292	Jph2	3.76E-31	0.451862
Fhod3	3.32E-57	1.021281	Osr1	4.32E-31	0.879489
Col17a1	1.58E-50	1.06004	Gas1	6.29E-31	1.755054
Krt5	2.41E-50	1.881205	Tpm2	1.99E-30	3.425224
Nrg2	1.64E-49	0.750994	Krt14	2.64E-30	3.908732
Ngf	1.70E-46	2.397276	Nav2	2.67E-30	0.843467
Ism1	2.53E-46	1.004076	Plekhb1	3.91E-30	1.434557
Pgf	5.80E-46	0.841448	Angptl4	4.24E-30	1.360101
Csn3	7.08E-46	3.442587	Sema5a	1.08E-29	0.737856
Trp63	2.71E-45	0.742996	Tfap2c	1.11E-29	0.530275
Krt17	1.36E-44	3.828841	Mia	1.62E-29	2.364544
Igfbp2	2.26E-43	3.471302	Schip1.1	1.97E-29	0.641992
Lmod1	3.95E-43	0.86562	Krt7	7.62E-29	1.995123
Myh11	6.10E-42	1.714382	Sfrp1	8.62E-29	1.063026
Moxd1	3.57E-40	0.958238	Pvrl1	1.15E-28	1.355914
Cdh3	7.10E-40	0.956181	Tmem132a	3.29E-28	0.75112
Myl9	5.76E-39	2.430106	Pmp22	3.47E-28	1.60401
Col4a5	2.24E-38	0.583308	Sparcl1	4.55E-28	2.03987
Gjb3	3.00E-38	0.768396	Rbp1	9.37E-28	1.801803
Nkd1	3.47E-38	0.67303	Nbl1	1.66E-27	1.010551
Acta2	3.68E-38	4.009187	Gpc6	2.03E-27	0.664091
Lcn2	4.57E-38	2.447258	Mylk	4.01E-27	2.075349
Ii17b	2.35E-37	1.112376	Tspan2	4.51E-27	0.660058
Smtn	5.58E-37	1.3808	Pgm5	4.97E-27	0.656233
Tagln	7.30E-37	3.327706	Igfbp5	5.55E-27	3.595922
Mdfi	1.99E-35	0.960797	Zfp185	7.18E-27	0.513248
Slco2a1	3.03E-35	1.234799	Gjb4	8.10E-27	0.721303
Kitl	1.44E-34	1.326054	1700023F06Rik	8.10E-27	0.432432
Lgals7	3.78E-34	3.487098	Ngfr	1.01E-26	0.51052
Sult5a1	5.28E-34	1.153417	Enpp1	4.64E-26	0.672765
Ackr3	6.69E-34	1.678136	Dll1	6.98E-26	0.622365
Egfl6	1.35E-33	0.571698	Matn2	8.38E-26	0.658159
Sostdc1	1.53E-33	0.72504	Cpe	1.43E-25	1.405358

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Cav1	1.73E-25	1.060129	Gas6	5.49E-19	2.372084
Nebl	2.06E-25	1.067452	Dsp	7.48E-19	1.211565
Steap4	2.36E-25	1.992913	Npr1	1.08E-18	0.507417
Fosl1	4.04E-25	1.184947	Ptprd	1.23E-18	0.457883
Rbms3	9.92E-25	1.183009	Sfn	1.37E-18	2.214231
Micall1	1.17E-24	0.686949	Col12a1	1.43E-18	0.450344
Nrg1	1.31E-24	1.09668	Synpo	1.51E-18	0.621286
Ptprs	1.81E-24	0.895107	Gja1	3.97E-18	1.185879
Emid1	2.10E-24	0.903393	Tm4sf1	5.52E-18	2.117158
Pak6	2.88E-24	0.325962	Shroom3	7.89E-18	0.674725
Padi1	3.30E-24	0.379709	Tead1	1.04E-17	0.76789
Fmod	3.38E-24	0.835683	Sdc1	1.13E-17	0.766782
Tns1	5.94E-24	1.752426	Rgs6	1.90E-17	0.407408
Sdk2	1.61E-23	0.545942	Shisa4	1.93E-17	0.838717
Tinagl1	1.63E-23	2.105144	Hspg2	2.49E-17	0.583721
Snai2	1.99E-23	0.371612	Hgf	2.53E-17	0.313853
Lamc2	2.39E-23	0.89059	Rai2	2.53E-17	0.271359
Hr	3.04E-23	0.430846	Nfatc2	2.61E-17	1.14685
Pdgfc	5.52E-23	0.618573	Krt19	2.85E-17	0.627224
Sphk1	6.72E-23	1.307945	Car13	3.21E-17	0.963758
Pdlim4	7.70E-23	1.778228	Fmn12	3.39E-17	0.556094
Plscr2	1.24E-22	0.815334	Cx3cl1	3.59E-17	1.38261
Nrtn	1.87E-22	1.669184	Tmem51	3.73E-17	1.091147
Tnnt1	2.81E-22	0.734885	Fgf7	5.54E-17	0.878651
Zc2hc1a	5.18E-22	0.848252	Creb5	7.31E-17	1.194775
Ank	1.72E-21	1.147815	Tmem53	7.67E-17	0.341107
Lhfp	1.97E-21	1.236405	Ptpn14	1.22E-16	0.565108
Lamb3	6.37E-21	1.448256	Adgrl2	1.55E-16	0.821069
Pltp	9.28E-21	1.191237	Epha2	1.59E-16	0.718211
Capn6	1.39E-20	0.356116	Pxdc1	2.98E-16	1.272871
Phlda3	1.46E-20	0.929289	Il17rc	3.41E-16	0.539909
Rbpms	1.93E-20	1.495082	Tgfbr3	4.54E-16	0.990672
Htra1	2.36E-20	1.296531	Prss23	5.14E-16	1.315707
Krt15	2.72E-20	1.180108	Arc	1.05E-15	0.864483
Vtcn1	3.40E-20	0.348467	Gm1673	1.12E-15	0.533943
Fermt1	3.80E-20	0.352731	Tnfrsf12a	1.47E-15	2.134984
Axl	5.77E-20	1.28965	Plcb4	1.70E-15	1.554512
Jag2	5.95E-20	0.274832	Ptges	2.04E-15	0.431126
Tgm2	1.22E-19	1.031967	5730559C18Rik	2.20E-15	0.543984
Ndrp2	1.50E-19	0.704607	Rnase4	2.62E-15	1.089665

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Amotl1	3.08E-15	1.415634	Cd200	3.86E-13	1.012976
Bgn	3.29E-15	1.013311	Kremen1	4.15E-13	0.630381
Eva1c	3.64E-15	0.310538	Tshz2	4.46E-13	1.008996
Plxnb1	3.95E-15	0.316007	Hspb1	4.82E-13	2.375571
Mgll	4.15E-15	1.284288	Tsc22d1	5.31E-13	2.78032
Flna	4.20E-15	1.659256	lft43	6.52E-13	0.860271
Eogt	7.84E-15	0.556875	lgsf3	6.57E-13	0.967784
Pdgfb	8.01E-15	0.807764	Dusp7	7.49E-13	0.666608
Tnik	8.95E-15	0.568617	Plec	7.97E-13	0.681238
Cdcp1	9.67E-15	0.955732	Afap1	9.58E-13	0.551752
Pdgfa	1.22E-14	1.350549	Ctps	1.01E-12	0.964801
Col16a1	1.41E-14	0.519053	Sgk1	1.37E-12	1.71673
Ctnnal1	1.71E-14	0.423847	Adamts1	1.46E-12	1.747834
Sparc	2.81E-14	1.664735	Rnf24	1.77E-12	0.403561
Fbn1	3.56E-14	0.387461	lft81	1.92E-12	0.594336
Arhgef12	3.86E-14	0.609987	Slc7a2	2.27E-12	0.286965
Plscr1	3.87E-14	1.459997	Dcn	2.48E-12	0.657963
Itga6	4.15E-14	1.137367	Ltbp4	2.86E-12	0.881781
Dab2	6.13E-14	0.793513	Dmd	4.02E-12	0.623778
Svil	6.92E-14	0.486762	Gsto1	4.39E-12	1.119927
Arid5b	7.22E-14	1.811142	Adgrg1	5.13E-12	0.860376
Mfge8	7.57E-14	0.756733	Vav3	5.65E-12	0.483174
Cdc42ep3	8.05E-14	1.117841	Rock2	5.86E-12	0.704945
Cp	8.18E-14	1.123627	Fgfr1	6.40E-12	0.960852
L3hypdh	8.93E-14	0.468461	Pard3	6.62E-12	0.632304
Cav2	9.14E-14	0.711314	Tubb6	6.74E-12	0.905138
Fam102b	1.02E-13	0.833056	Atp13a3	8.25E-12	0.978501
Iffo2	1.14E-13	0.650529	Pdpn	8.49E-12	0.99275
Gnai1	1.16E-13	0.382113	Itga3	1.06E-11	0.852686
Trip6	1.22E-13	0.622838	Pdlim7	1.58E-11	1.002863
Tpm1	1.44E-13	2.392826	Dag1	1.63E-11	0.719705
Tanc1	1.49E-13	0.778984	Ehd2	1.65E-11	0.51905
App	1.66E-13	1.774495	Itgb4	1.93E-11	0.589369
Sobp	2.02E-13	0.383912	Skiv2l2	1.94E-11	0.464847
Zfp503	2.11E-13	0.438173	Lpgat1	2.01E-11	0.735446
Serpinh1	2.12E-13	1.346407	Aplp2	2.14E-11	1.164927
Ang	2.38E-13	0.482853	Socs5	2.14E-11	0.393872
Lpp	3.41E-13	0.920949	Thbs1	2.27E-11	2.273806
Fbln2	3.55E-13	0.629112	Ralgds	2.41E-11	1.484116
Tgfb3	3.74E-13	0.567517	Shtn1	2.50E-11	0.475129

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Selm	3.13E-11	1.02301	Klf5	3.31E-10	0.856459
Pls3	3.23E-11	0.556153	Stox2	3.46E-10	0.594444
Adk	3.33E-11	0.831159	Cryab	3.67E-10	1.028931
D3Ertd254e	3.64E-11	0.359132	Csrp1	3.83E-10	2.270065
Vcl	4.04E-11	0.606171	Cd59a	4.13E-10	0.509169
Rab20	4.18E-11	1.064332	Myc	4.28E-10	0.74926
Serpine1	4.25E-11	1.146166	Hacd1	4.31E-10	0.519091
Dusp6	4.59E-11	1.672842	Dmpk	4.34E-10	0.35494
Nedd4	4.61E-11	1.370637	Itgav	4.36E-10	0.861419
Adgrl1	4.64E-11	0.318018	Plpp3	4.36E-10	0.844402
Ctnn	4.75E-11	0.572828	Sntb2	4.43E-10	0.783732
Mgst1	5.10E-11	1.251465	Sdc4	4.56E-10	2.268467
1190002N15Rik	5.74E-11	0.366732	Casp4	5.02E-10	1.139698
Golim4	5.77E-11	0.573708	Osgin1	5.10E-10	0.480807
Nxn	5.86E-11	0.738021	Lamb1	5.34E-10	0.387129
Shb	6.68E-11	0.461901	Kif13a	6.12E-10	0.342884
Midn	6.97E-11	0.83871	Zbtb21	6.19E-10	0.565509
Pde4b	8.76E-11	1.751895	Ckb	6.92E-10	1.16134
Anxa2	8.89E-11	1.720837	Antxr1	7.22E-10	0.442168
Rasa3	9.13E-11	0.643042	Col4a1	7.70E-10	1.119701
S100a6	9.32E-11	2.208581	Tln1	8.19E-10	0.849009
Sik1	9.50E-11	0.588732	Osmr	8.51E-10	0.70557
Cald1	9.75E-11	1.648078	Klf9	9.22E-10	0.978088
Dsc3	1.01E-10	0.362835	Mocs2	9.96E-10	0.663549
Meis2	1.02E-10	1.235799	Dst	9.97E-10	0.795155
Ctbp2	1.09E-10	0.635957	Fhl2	1.03E-09	0.454907
Bcam	1.30E-10	0.662574	Cep170b	1.09E-09	0.418592
Noct	1.34E-10	0.734261	Smarca4	1.12E-09	0.654014
Twf1	1.71E-10	0.682028	Klf4	1.15E-09	1.304283
Nbeal1	1.72E-10	0.596603	Arl13b	1.19E-09	0.596248
Rhoc	1.76E-10	1.249985	Fxyd3	1.25E-09	1.707011
Ctnna1	1.95E-10	0.936031	Clstn1	1.25E-09	0.92784
Efemp2	1.98E-10	0.710066	Pawr	1.28E-09	0.341569
Epas1	2.29E-10	0.799572	Ppp1r12a	1.30E-09	0.981902
Prelp	2.35E-10	0.687792	Cltb	1.33E-09	0.987467
Fam214b	2.43E-10	0.351316	Gprasp1	1.79E-09	0.50905
Nes	2.50E-10	0.711361	Perp	1.82E-09	1.878169
Tfap2b	2.72E-10	0.583763	Vwa1	1.83E-09	0.739027
Cd151	2.78E-10	1.116548	Tmem158	1.96E-09	0.420899
Actn4	2.84E-10	1.030129	Dbi	2.00E-09	2.313388

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Cnn3	2.01E-09	1.067715	Ccdc137	7.61E-09	0.321329
Plce1	2.13E-09	0.345838	Nacc2	7.67E-09	0.457284
Ptrf	2.38E-09	0.755914	Mt1	9.16E-09	2.760521
Dstn	2.40E-09	2.282603	Map4k3	9.23E-09	0.516707
Cyr61	2.42E-09	1.363994	Kctd10	9.68E-09	0.553935
Fermt2	2.85E-09	0.867341	Nenf	1.04E-08	1.153535
Ndufa11	2.93E-09	1.299824	Tmem47	1.11E-08	0.308326
Hs3st1	2.97E-09	0.564452	Rab11fip5	1.22E-08	0.259573
S100a10	3.04E-09	2.060123	Ptprg	1.28E-08	0.30268
Epcam	3.13E-09	1.504257	Atf3	1.44E-08	1.940713
Runx1	3.18E-09	0.952406	S100a16	1.46E-08	1.134134
Vcam1	3.37E-09	1.548253	Dusp5	1.46E-08	1.171208
Rhou	3.43E-09	0.816748	Mdk	1.62E-08	0.573947
Timp2	3.43E-09	0.981459	Tpm4	1.74E-08	1.03741
Cep164	3.48E-09	0.398792	Urah	1.80E-08	1.024837
Frmd4a	3.55E-09	0.46882	Capns1	1.85E-08	1.303399
Atp2a2	3.60E-09	1.294022	Egr1	1.86E-08	1.197023
Stx7	3.65E-09	0.801811	Ripk1	1.95E-08	0.698868
Srpk2	3.65E-09	0.774044	Atp1a1	1.97E-08	1.265209
Apoe	3.69E-09	2.12622	Id4	2.10E-08	0.423493
Cdh1	3.81E-09	0.757622	Asph	2.10E-08	0.771299
Atp6v1a	3.89E-09	0.869373	Zak	2.16E-08	0.434547
Tnks2	3.95E-09	0.675048	Clip2	2.20E-08	0.338159
1810013L24Rik	4.01E-09	0.480917	Lgalsl	2.30E-08	0.399087
Ifitm3	4.30E-09	1.663769	Cxadr	2.40E-08	0.814277
Gnaq	4.38E-09	0.700161	Dync1li2	2.40E-08	0.444141
Gsk3b	4.39E-09	0.684172	Icam1	2.44E-08	0.82873
Rpia	4.45E-09	0.581899	Pqlc1	2.45E-08	0.948985
Lmna	4.75E-09	2.193325	Oat	2.49E-08	1.195354
Slc29a1	4.76E-09	0.910074	Wwtr1	2.60E-08	0.388284
Xdh	4.79E-09	0.632807	Spop	2.68E-08	0.929199
Ctsl	4.96E-09	2.517831	Vasn	2.80E-08	0.613634
Myl6	5.00E-09	1.681757	Prkcdbp	2.87E-08	0.447424
Nfib	5.05E-09	0.971933	Zbtb20	2.95E-08	1.091334
Myo6	5.07E-09	0.354367	Cd9	3.02E-08	1.539908
2310022B05Rik	5.61E-09	0.430534	Specc1	3.15E-08	0.505638
Mt2	5.65E-09	2.56344	Lgals1	3.18E-08	1.563118
Rtn4	5.79E-09	1.100887	Fabp5	3.20E-08	0.89522
Rhob	6.74E-09	0.954355	Abi2	3.27E-08	0.39234
Col4a2	6.85E-09	0.857308	Vegfa	3.43E-08	0.37344

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Ahnak	3.45E-08	1.029006	P3h2	1.27E-07	0.417957
Dynll1	3.59E-08	1.337481	Cebpb	1.27E-07	1.323786
Egr2	3.72E-08	0.469278	Cited2	1.28E-07	1.256395
Fosb	3.78E-08	1.315735	Parp3	1.30E-07	0.348656
Rexo2	3.91E-08	0.809085	Ptms	1.31E-07	1.245247
Pros1	3.96E-08	0.495351	Fndc4	1.32E-07	0.312826
Nfia	4.17E-08	1.139699	Erf	1.38E-07	0.411177
Fkbp4	4.18E-08	0.898125	Sh3bgrl	1.39E-07	0.951406
Vipr1	4.25E-08	0.300306	Hmgn1	1.46E-07	1.16631
Fgfr1	4.36E-08	0.48947	Csf1	1.48E-07	0.71496
Sox9	4.80E-08	0.623565	Trim13	1.49E-07	0.340975
Cdkn1a	4.86E-08	1.184519	B230219D22Rik	1.60E-07	0.677992
Pdcd6ip	5.08E-08	0.54243	Slc25a25	1.62E-07	0.833704
Cebpg	5.79E-08	0.690131	Clic4	1.62E-07	0.929471
Aldh2	5.94E-08	1.039874	Zyx	1.66E-07	0.828234
S100a11	6.20E-08	1.583184	Apobec3	1.67E-07	0.712608
Atpif1	6.54E-08	1.099698	Pgrmc1	1.67E-07	0.659866
Wls	6.64E-08	0.6258	Mast4	1.74E-07	0.912921
Galnt18	6.83E-08	0.320391	Casp12	1.76E-07	0.268347
Trf	6.93E-08	0.571405	Tcf7l1	1.76E-07	0.260652
Ccnd2	7.07E-08	1.160192	Gem	1.77E-07	1.029753
Il13ra1	7.43E-08	0.50853	Map1lc3a	1.88E-07	1.008428
Pdpk1	7.57E-08	0.508788	Nabp1	1.89E-07	0.617568
Rras	7.58E-08	0.477982	Cd63	1.92E-07	1.346879
Itpkc	7.87E-08	0.712841	1810037I17Rik	1.93E-07	1.068362
Mfhas1	8.19E-08	0.489221	Tlr2	1.94E-07	0.299589
Tulp4	8.38E-08	0.67149	Chd6	2.10E-07	0.425746
Arhgef5	8.59E-08	0.634534	Cldnd1	2.20E-07	0.779526
Spryd7	8.68E-08	0.390117	Azin1	2.27E-07	1.205971
4930523C07Rik	9.11E-08	1.314716	Sptan1	2.30E-07	0.508632
Znrf3	9.15E-08	0.370669	Laptm4a	2.32E-07	1.199717
Rsu1	9.17E-08	0.83943	S100a1	2.34E-07	0.775124
Hipk3	9.45E-08	0.550103	Gadd45b	2.41E-07	0.984623
Bag6	9.89E-08	0.634166	Ythdf3	2.44E-07	0.493578
Frmd6	1.08E-07	0.959994	Eps8l1	2.55E-07	0.373077
Tax1bp3	1.08E-07	0.765453	Tgfb1i1	2.69E-07	0.502445
Ccnl1	1.17E-07	0.905707	Myl12a	2.84E-07	1.086937
Trib1	1.19E-07	1.326225	Man1a2	2.88E-07	0.637026
Enpp5	1.20E-07	0.395542	Ddx5	2.92E-07	1.163805
Zfp36l1	1.22E-07	1.409655	Pja2	3.02E-07	0.514237

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Lrrc58	3.09E-07	0.629833	Atp1b3	8.64E-07	0.748151
Eps8l2	3.13E-07	0.415172	Bcr	8.73E-07	0.268938
Tmem41b	3.16E-07	0.587612	Gcnt2	8.95E-07	0.507243
Gstm1	3.18E-07	0.893024	Tpst1	9.01E-07	0.434927
Cmtm6	3.32E-07	0.549777	Sardh	9.01E-07	0.335027
1700025G04Rik	3.69E-07	0.544621	Ly6e	9.06E-07	0.920976
Postn	3.75E-07	0.654765	Cnp	9.10E-07	0.743466
Samd4	4.05E-07	0.330065	H3f3b	9.37E-07	1.444382
Pbx1	4.15E-07	0.888991	Hsd11b1	9.85E-07	0.330012
Pmepa1	4.33E-07	0.551259	Ubc	1.01E-06	1.347119
Rraga	4.36E-07	0.598681	Echdc2	1.05E-06	0.37426
Ldlr	4.38E-07	0.51348	Btg2	1.06E-06	1.172669
Hmgn3	4.39E-07	0.921602	Trim47	1.15E-06	0.459949
Timp3	4.46E-07	0.585005	Abl2	1.16E-06	0.340444
Klf6	4.54E-07	1.227636	Efr3a	1.19E-06	0.684098
Trp53bp2	4.63E-07	0.551765	Cpne8	1.19E-06	0.579633
Degs1	4.92E-07	0.897413	lfrd1	1.26E-06	1.112327
Rell1	4.93E-07	0.636058	lft57	1.29E-06	0.276608
Slc22a18	5.31E-07	0.278877	Ppp1r2	1.35E-06	0.7662
Ctsb	5.46E-07	0.906143	Mtdh	1.35E-06	0.755947
Nedd9	5.49E-07	0.758032	BC031181	1.36E-06	0.71849
Tusc3	5.52E-07	0.549014	Nptn	1.39E-06	0.743891
Pfkl	5.70E-07	0.472577	Arhgef16	1.45E-06	0.304639
Tppp3	5.75E-07	0.875547	Tmem70	1.46E-06	0.483236
Cfap43	6.05E-07	0.315369	Celsr2	1.49E-06	0.379933
Smoc2	6.23E-07	0.400205	Fam129a	1.49E-06	0.710873
Serpine2	6.49E-07	0.544863	Nfe2l2	1.53E-06	0.552593
Anxa6	6.50E-07	0.873519	Hars	1.55E-06	0.485052
Kank2	6.61E-07	0.306911	Calm2	1.64E-06	1.023429
Cdkn1c	6.84E-07	0.318474	Camsap2	1.80E-06	0.309185
Irf6	6.87E-07	0.448892	Fem1b	1.84E-06	0.484681
Arrdc4	6.92E-07	0.63686	Fah	1.84E-06	0.416604
Jup	6.99E-07	0.75372	Eif1a	1.89E-06	0.875631
C2cd4b	7.27E-07	0.503865	Clock	1.93E-06	0.345038
Eil1	7.38E-07	0.394213	Lmo4	1.95E-06	0.754461
Net1	7.80E-07	0.640425	Nipa2	2.02E-06	0.471196
Ngfrap1	7.85E-07	0.723143	Morf4l1	2.26E-06	0.933869
Atat1	7.93E-07	0.302825	Marcksl1	2.29E-06	0.944361
Pacsin2	8.43E-07	0.533117	Sepw1	2.35E-06	0.913698
Gpx4	8.50E-07	0.947977	Cfl2	2.35E-06	0.726222

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Purb	2.36E-06	0.713318	Slmap	5.38E-06	0.50738
Dpysl3	2.46E-06	0.437057	Lgals9	5.42E-06	0.33575
Sat1	2.55E-06	1.063503	Lama5	5.56E-06	0.307955
N4bp3	2.67E-06	0.303823	Kif1c	5.77E-06	0.471272
Tmem176b	2.68E-06	0.603626	Agrn	5.89E-06	0.360534
Hnrnp1	2.80E-06	0.598455	Tns2	5.92E-06	0.284085
Phkb	2.82E-06	0.423365	Cyb5r3	6.40E-06	0.680199
Psmc5	2.83E-06	0.543498	Dimt1	6.53E-06	0.328758
Ephx1	3.05E-06	0.525026	Gas2l1	6.93E-06	0.348587
Baiap2	3.09E-06	0.745586	Vps37a	7.14E-06	0.41068
Camkk2	3.22E-06	0.53498	Mgp	7.42E-06	0.805292
Rassf1	3.32E-06	1.059759	Has2	7.43E-06	0.267676
Ephb4	3.34E-06	0.282082	Csrnp1	7.45E-06	0.87356
Slc38a2	3.50E-06	0.659048	Rheb	7.62E-06	0.682302
Spin1	3.53E-06	0.606165	Zfp36l2	7.76E-06	0.953947
Sorl1	3.55E-06	0.54601	Socs3	7.93E-06	0.780295
Eif3b	3.58E-06	0.651152	Slc25a4	8.18E-06	1.060644
Ttc28	3.61E-06	0.49429	Ruvbl2	8.20E-06	0.469008
Gstm7	3.70E-06	0.369872	Gabarapl1	8.53E-06	0.677296
Ddx3x	3.78E-06	0.99867	Rhoj	8.56E-06	0.562772
Tnfrsf1a	3.79E-06	0.828787	Rbbp4	8.60E-06	0.661853
Fryl	3.88E-06	0.613977	Irgm1	8.65E-06	0.668734
Trim35	4.03E-06	0.327563	Gpd2	8.76E-06	0.449473
Cib2	4.10E-06	0.494753	Pdcl3	8.84E-06	0.645135
Eif5	4.10E-06	0.98436	Hprt	8.86E-06	0.659416
Smarca2	4.32E-06	0.825558	Rnd3	9.10E-06	0.379456
Rab34	4.33E-06	0.372716	Aes	9.12E-06	0.75848
Tuba1a	4.45E-06	0.707245	Fus	9.16E-06	0.876974
Ets2	4.45E-06	0.781963	Dusp1	9.25E-06	0.560019
Nfkbia	4.54E-06	0.977454	Hspa9	9.36E-06	0.571233
Pkd2	4.61E-06	0.31987	Errfi1	9.39E-06	0.870179
Ptges3	4.79E-06	0.639207	Tnfsf12	9.43E-06	0.485525
Clk4	4.92E-06	0.521514	Nrbp2	9.47E-06	0.685227
Csde1	5.00E-06	0.609851	Igfbp6	9.92E-06	0.40598
Map3k8	5.07E-06	0.803165	Hcfc1r1	1.02E-05	0.690848
Parva	5.08E-06	0.474455	Eif6	1.02E-05	0.725715
Hnrnp1	5.31E-06	0.609167	Ifitm2	1.02E-05	1.060701
Map2k5	5.31E-06	0.374527	Trappc10	1.06E-05	0.306961
Cyth2	5.35E-06	0.581335	Ywhaz	1.06E-05	0.795211
Tuba1c	5.37E-06	1.118899	Eif1	1.08E-05	0.791924

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Btg3	1.08E-05	0.534158	Sertad1	2.33E-05	0.585966
Crispld2	1.09E-05	0.49824	Prkar1a	2.34E-05	0.744619
Nat6	1.09E-05	0.422462	Wdr13	2.46E-05	0.325724
Krt8	1.11E-05	1.104223	Naa15	2.50E-05	0.423896
Grwd1	1.12E-05	0.308146	Eif4g1	2.52E-05	0.712447
Maged2	1.18E-05	0.357217	Tgfbr2	2.53E-05	0.442925
Oaz2	1.18E-05	0.537975	Tsen34	2.54E-05	0.522592
Jag1	1.21E-05	0.449789	Chka	2.63E-05	0.51462
Malat1	1.23E-05	0.964852	Hnrnpab	2.71E-05	0.526674
Ccser2	1.25E-05	0.751465	Capzb	2.76E-05	0.749583
Tubb2a	1.26E-05	0.678325	Kctd1	2.77E-05	0.436695
Eif4a2	1.28E-05	0.734678	Ripk4	2.77E-05	0.303264
Emp2	1.30E-05	0.816325	Nop58	2.86E-05	0.727328
Gadd45a	1.34E-05	0.647759	Plxdc2	2.89E-05	0.644648
Prdx5	1.35E-05	0.723982	Tars	2.92E-05	0.382412
Tceb2	1.35E-05	0.785514	Capn2	2.93E-05	0.390501
Sertad2	1.38E-05	0.48082	Prdx1	2.97E-05	0.799405
G3bp2	1.42E-05	0.472411	Ptov1	3.00E-05	0.627133
Usp53	1.42E-05	0.289448	Amotl2	3.01E-05	0.412195
Lamp1	1.42E-05	0.739788	Pigp	3.03E-05	0.618757
Map2	1.43E-05	0.323896	Tspan3	3.12E-05	0.532209
Jmy	1.47E-05	0.287838	Fth1	3.18E-05	0.709502
Tsc22d2	1.47E-05	0.75039	Vapa	3.19E-05	0.578598
Slc5a3	1.51E-05	0.427372	Rnf121	3.20E-05	0.313224
Ilk	1.56E-05	0.534274	Tjp2	3.23E-05	0.311986
Ccl7	1.72E-05	0.653334	Erc1	3.32E-05	0.274341
Mrps6	1.75E-05	0.531872	Ppp1r12c	3.33E-05	0.439115
Mif	1.80E-05	0.668817	Hsp90aa1	3.39E-05	0.878311
Sema3c	1.90E-05	0.272017	Rab18	3.44E-05	0.718344
Snhg18	1.91E-05	0.620071	Gfm1	3.44E-05	0.29465
Abtb2	1.96E-05	0.297525	Rchy1	3.45E-05	0.609985
Rnf122	1.97E-05	0.339594	Adm	3.53E-05	0.672126
Jund	2.00E-05	0.779924	Swi5	3.62E-05	0.495451
Fst	2.01E-05	0.796951	N6amt1	3.62E-05	0.311066
Mprp	2.03E-05	0.497256	Evi5	3.73E-05	0.302578
Mrpl27	2.05E-05	0.603379	Ncor2	3.73E-05	0.432168
Lix1l	2.07E-05	0.269305	Pprc1	3.77E-05	0.265872
Gspt1	2.13E-05	0.493164	Zfand5	3.78E-05	0.616041
Cstb	2.15E-05	1.064817	Naf1	3.87E-05	0.363592
Pdzd8	2.23E-05	0.326334	Bsg	3.91E-05	0.733607

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Aldoa	3.92E-05	0.787479	Fyttd1	7.01E-05	0.426555
Ski	3.95E-05	0.531319	Mafk	7.37E-05	0.433992
Smarca5	3.95E-05	0.713297	Top1	7.54E-05	0.568113
Nfic	3.96E-05	0.551623	Clcn4	7.57E-05	0.448865
Cebpa	4.02E-05	0.642982	Vamp5	7.64E-05	0.293988
Abi3bp	4.05E-05	0.368767	Idh3a	7.87E-05	0.439852
Igf1r	4.11E-05	0.619942	2310036O22Rik	7.89E-05	0.595425
Gm2a	4.17E-05	0.372984	Pink1	7.99E-05	0.611634
Nfix	4.30E-05	0.699585	Ap1g1	8.07E-05	0.278584
Rab6a	4.32E-05	0.807846	Mapk6	8.23E-05	0.317499
Gnas	4.32E-05	0.706234	Gapvd1	8.27E-05	0.355282
Fnta	4.38E-05	0.445324	Ppp1cb	8.32E-05	0.895554
Il34	4.47E-05	0.435902	Trim8	8.38E-05	0.79851
Inpp5a	4.49E-05	0.275117	Gapdh	8.47E-05	0.644478
Ndufa1	4.51E-05	0.60958	Dnaja1	8.52E-05	0.798977
Coq10b	4.67E-05	0.722797	Wdr1	8.56E-05	0.720446
Tceb1	4.70E-05	0.666636	Gbp7	8.60E-05	0.626269
U2af1	4.84E-05	0.505267	Pam	8.75E-05	0.785485
Actb	4.90E-05	1.04195	Ktn1	8.77E-05	0.5402
Cd164	4.95E-05	0.835211	Trim44	8.78E-05	0.334454
Mapkapk2	4.95E-05	0.54751	Dyrk1a	8.87E-05	0.333054
Itm2b	5.00E-05	0.610991	Slc43a3	8.88E-05	0.328099
1110008P14Rik	5.03E-05	0.561931	Maff	8.93E-05	0.755874
Taf13	5.05E-05	0.572228	Camta1	8.95E-05	0.388132
Josd2	5.17E-05	0.531525	Bicd2	9.13E-05	0.295149
Tmbim1	5.25E-05	0.529283	Ier3	9.16E-05	0.555806
Usp25	5.33E-05	0.337621	Usp50	9.18E-05	0.556566
Lima1	5.59E-05	0.690352	Herc2	9.34E-05	0.285027
Sh3d19	5.69E-05	0.368985	Eif1ax	9.63E-05	0.584996
Kcnq1ot1	5.81E-05	0.428133	Nap1l4	9.69E-05	0.4311
Hnrnpu	5.85E-05	0.531365	Atg101	1.05E-04	0.389989
Tagln2	5.90E-05	0.721762	Eprs	1.05E-04	0.701851
Por	6.33E-05	0.401241	Crybg3	1.06E-04	0.431728
BC005537	6.35E-05	0.514027	Crim1	1.06E-04	0.26025
Gnai2	6.40E-05	0.628228	Cd24a	1.06E-04	1.124858
Hif1a	6.49E-05	0.480361	Rab1a	1.08E-04	0.545844
Dido1	6.75E-05	0.307344	Znrf1	1.09E-04	0.44742
Chmp4b	6.90E-05	0.556556	Jun	1.09E-04	1.267714
Mfn1	6.93E-05	0.335609	Cox6c	1.09E-04	0.67343
Snx9	6.97E-05	0.357881	Vmac	1.11E-04	0.316756

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Acsl3	1.12E-04	0.393916	Ndufb9	1.73E-04	0.525797
Hk2	1.14E-04	0.595358	Fdft1	1.74E-04	0.405453
Selk	1.15E-04	0.634901	Pgpep1	1.75E-04	0.483927
Pnrc1	1.16E-04	0.67285	Rassf4	1.75E-04	0.260416
Psmc7	1.16E-04	0.544747	Hsd17b10	1.77E-04	0.745305
Hsp90ab1	1.18E-04	0.711476	Minos1	1.80E-04	0.527836
Usp33	1.18E-04	0.330654	Actg1	1.80E-04	0.638447
Ulk2	1.19E-04	0.310846	Smad1	1.81E-04	0.452444
Atf6b	1.19E-04	0.371388	Tfe3	1.83E-04	0.308875
Tor1aip1	1.28E-04	0.587665	Tapbp	1.84E-04	0.54942
Gda	1.28E-04	0.321123	Ext2	1.86E-04	0.483334
Tmem245	1.30E-04	0.306019	Rbms1	1.86E-04	0.596077
Ero1l	1.32E-04	0.649368	Mapk1ip1l	1.89E-04	0.34077
Fndc3b	1.32E-04	0.319261	Pebp1	1.90E-04	0.593327
Ppm1g	1.34E-04	0.462368	Ube2d3	1.92E-04	0.807719
Ano1	1.35E-04	0.510856	Spint2	1.96E-04	0.626306
Bach1	1.39E-04	0.390882	St3gal4	1.99E-04	0.402811
Slc3a2	1.40E-04	0.792454	Csnk1a1	2.00E-04	0.780555
Serinc3	1.41E-04	0.394465	Rrp1	2.00E-04	0.61666
Fam120a	1.41E-04	0.564594	Cherp	2.02E-04	0.283598
Ugp2	1.42E-04	0.401831	Frmd4b	2.03E-04	0.495698
Psap	1.42E-04	0.399963	Lamp2	2.04E-04	0.608904
Mpzl2	1.43E-04	0.330856	Polr2l	2.08E-04	0.731346
Wwp2	1.43E-04	0.305417	Fam101b	2.10E-04	0.251132
Cobll1	1.43E-04	0.387898	Cyb561	2.12E-04	0.662701
Rap2b	1.44E-04	0.433629	Serpib6a	2.17E-04	0.396906
Rcn2	1.44E-04	0.634262	Cul3	2.22E-04	0.431265
Eid1	1.45E-04	0.443146	Ppp2r2a	2.22E-04	0.501873
Mdh2	1.49E-04	0.72936	Mllt4	2.24E-04	0.360303
Tiam1	1.50E-04	0.422721	Pkp4	2.25E-04	0.461121
Hnrnpk	1.59E-04	0.737002	Srf	2.27E-04	0.280657
Itm2c	1.59E-04	0.890454	Csad	2.32E-04	0.444169
Tpp1	1.60E-04	0.326414	Calm1	2.33E-04	0.470018
Ank3	1.60E-04	0.258922	Cast	2.39E-04	0.317417
Fos	1.61E-04	1.542915	Akap9	2.43E-04	0.416696
Eif4a1	1.62E-04	0.823085	Ctnnb1	2.44E-04	0.744742
2010111I01Rik	1.66E-04	0.700247	Zfp644	2.47E-04	0.497924
Tm9sf3	1.67E-04	0.551033	Bcl7c	2.47E-04	0.444632
Snap47	1.67E-04	0.457373	Tdg	2.49E-04	0.301956
Fgfr2	1.71E-04	0.454811	Gnb1	2.51E-04	0.651909

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Ier5	2.51E-04	0.538926	Pdlim3	3.83E-04	0.339243
Opa3	2.57E-04	0.355177	Lzts2	3.84E-04	0.53524
Ptbp1	2.59E-04	0.580842	Nfkb1	3.93E-04	0.640874
Slc25a1	2.60E-04	0.457762	Nol11	3.93E-04	0.256898
Tmbim6	2.60E-04	0.465101	Abcd3	3.94E-04	0.377339
Spr	2.62E-04	0.333281	Stat3	4.05E-04	0.689905
Serbp1	2.66E-04	0.562498	Ndufa4	4.09E-04	0.542833
Rabep1	2.70E-04	0.326208	Iscu	4.11E-04	0.496691
Col18a1	2.70E-04	0.359888	Gls	4.11E-04	0.494724
Sfr1	2.85E-04	0.7027	Arhgap5	4.16E-04	0.411848
Son	2.85E-04	0.658563	Nf1	4.18E-04	0.331658
Bcl10	2.86E-04	0.512539	Syncrip	4.18E-04	0.489554
Rpn1	2.87E-04	0.397628	Pxn	4.23E-04	0.575688
Srrm2	2.89E-04	0.653833	Snrpb	4.24E-04	0.514678
Srsf5	2.98E-04	0.626967	Spry2	4.25E-04	0.741761
Polr2f	2.99E-04	0.663142	Tes	4.25E-04	0.481454
Mlxip	3.05E-04	0.320407	Fam134b	4.28E-04	0.657444
Bnip2	3.05E-04	0.547396	Usp5	4.29E-04	0.344805
Hsbp1	3.07E-04	0.733319	Kif5b	4.29E-04	0.571053
D10Wsu102e	3.11E-04	0.318035	Rhbdf1	4.41E-04	0.366453
Lims1	3.13E-04	0.51881	Ywhaq	4.43E-04	0.516634
Ifi47	3.14E-04	0.251439	Uap1	4.48E-04	0.704054
Ogdh	3.15E-04	0.729098	Chchd6	4.63E-04	0.309131
Sox4	3.21E-04	1.172635	Lonp2	4.64E-04	0.280042
Arf6	3.23E-04	0.566423	Anxa5	4.80E-04	0.777478
Ndufa5	3.26E-04	0.53634	Al837181	4.80E-04	0.304956
Ccdc124	3.29E-04	0.40703	Ppp2cb	4.83E-04	0.3971
Eif4g2	3.39E-04	0.61292	Stk39	4.88E-04	0.486543
Inadl	3.46E-04	0.407093	Vps35	4.88E-04	0.507136
Numb	3.46E-04	0.384189	Nek7	4.90E-04	0.401411
Hspa5	3.47E-04	0.82832	Yap1	4.90E-04	0.663337
Kdm6b	3.51E-04	0.832623	Cnn2	4.99E-04	0.419125
Akr1a1	3.51E-04	0.451287	2810474O19Rik	5.09E-04	0.597239
Mzt2	3.54E-04	0.3198	Tmem65	5.12E-04	0.636128
Capza2	3.59E-04	0.376975	Phip	5.17E-04	0.35498
Odc1	3.62E-04	0.521009	Smim14	5.18E-04	0.38652
Mafg	3.66E-04	0.526138	Pax9	5.19E-04	0.617436
Klhl21	3.70E-04	0.403576	Klf10	5.20E-04	0.404728
Nudt9	3.70E-04	0.469143	Gdi1	5.34E-04	0.311495
Tiparp	3.72E-04	0.639108	Mesdc2	5.40E-04	0.289177

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Kidins220	5.43E-04	0.256427	Tmem256	6.89E-04	0.560052
Nufip2	5.53E-04	0.322958	Bhlhe40	7.04E-04	0.458628
Eef1d	5.54E-04	0.579134	Kazn	7.06E-04	0.300693
Ikbip	5.54E-04	0.291736	Ndfip2	7.09E-04	0.634978
Rnf10	5.58E-04	0.54129	Tmco1	7.14E-04	0.516552
Smc1a	5.59E-04	0.552775	St3gal5	7.21E-04	0.26042
Pafah1b1	5.61E-04	0.514916	Junb	7.26E-04	0.701051
Rcn1	5.69E-04	0.605514	Qrich1	7.36E-04	0.338973
Med22	5.69E-04	0.331748	Ppia	7.36E-04	0.529796
Snhg12	5.74E-04	0.434949	Eif2s3x	7.37E-04	0.287358
Ywhah	5.74E-04	0.697763	Gsk3a	7.38E-04	0.407837
Psmc12	5.76E-04	0.354758	Fat1	7.49E-04	0.259511
Nfe2l1	5.82E-04	0.414485	Eif4g3	7.50E-04	0.374436
Pcm1	5.91E-04	0.310553	Hdac1	7.54E-04	0.479998
Crtc3	5.94E-04	0.515976	Unc45a	7.54E-04	0.412916
Arpc1a	5.98E-04	0.506581	Dip2b	7.64E-04	0.350522
Set	5.99E-04	0.507616	Tpd52	7.67E-04	0.626963
Gna11	5.99E-04	0.329861	Rhot1	7.75E-04	0.291913
Timm8b	6.05E-04	0.627787	Zfp652	7.77E-04	0.343015
Mbnl2	6.12E-04	0.433402	Cbx6	7.77E-04	0.3426
Akirin1	6.13E-04	0.300861	Stau1	7.79E-04	0.320328
Tpp2	6.15E-04	0.341195	Shc1	7.92E-04	0.336871
Zfc3h1	6.28E-04	0.498914	Ankrd13c	7.93E-04	0.357467
Atp5b	6.36E-04	0.410791	Apbb2	7.95E-04	0.281647
Psma3	6.36E-04	0.473576	Ifi27	7.96E-04	0.516469
Map7d1	6.40E-04	0.482678	Uqcrb	8.05E-04	0.42706
Tprgl	6.42E-04	0.686748	Atf4	8.08E-04	0.765204
Gss	6.53E-04	0.355782	Arl5b	8.31E-04	0.466971
Srsf2	6.56E-04	0.676667	Nisch	8.36E-04	0.581393
Nhp2l1	6.58E-04	0.581154	Rbm39	8.36E-04	0.587599
Yaf2	6.58E-04	0.392291	4833439L19Rik	8.46E-04	0.514047
Ptgfrn	6.66E-04	0.365973	Ppan	8.53E-04	0.339684
Srsf6	6.70E-04	0.531956	Zmpste24	8.65E-04	0.336563
Dynlt3	6.71E-04	0.555042	Strn3	8.72E-04	0.496714
Wdr26	6.78E-04	0.469412	Hdgf	8.90E-04	0.49475
Wsb1	6.78E-04	0.545802	Ehf	8.99E-04	0.647573
Rab5b	6.84E-04	0.294283	Ost4	9.02E-04	0.598821
Ctsd	6.85E-04	0.51629	Itgb1	9.11E-04	0.642274
Hadha	6.85E-04	0.345042	Mef2a	9.16E-04	0.394646
Emc10	6.88E-04	0.425501	Plekha1	9.20E-04	0.365174

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Cpne3	9.47E-04	0.357114	Chchd2	1.31E-03	0.486636
Sec62	9.55E-04	0.579651	Arf4	1.31E-03	0.447703
Tet3	9.59E-04	0.282576	Prnp	1.32E-03	0.261647
Enc1	9.59E-04	0.257351	Usp34	1.32E-03	0.31217
Gstt1	9.59E-04	0.352068	Nfat5	1.32E-03	0.61734
Fam220a	9.62E-04	0.485551	Pstk	1.35E-03	0.365687
Yae1d1	9.68E-04	0.40505	Hexim1	1.36E-03	0.259087
Dnajb2	9.71E-04	0.344966	Tgif2	1.38E-03	0.414965
Tmem109	9.72E-04	0.519631	Rcn3	1.38E-03	0.293789
Pfn1	9.78E-04	0.479935	Sik2	1.40E-03	0.392918
Tmed10	9.78E-04	0.6288	Tspan4	1.41E-03	0.398816
Sirt2	9.88E-04	0.352918	Cfl1	1.41E-03	0.538284
Pkm	9.92E-04	0.411429	Hk1	1.43E-03	0.27847
Lamc1	1.02E-03	0.30876	Nras	1.43E-03	0.521359
Smim7	1.03E-03	0.565255	Calr	1.43E-03	0.443294
Map2k3	1.04E-03	0.833032	Nipal2	1.45E-03	0.461129
Rab14	1.04E-03	0.527698	Mpzl1	1.47E-03	0.577671
Sde2	1.06E-03	0.488693	Coa5	1.48E-03	0.389019
Hdgrfp3	1.06E-03	0.250321	Hdac2	1.49E-03	0.361395
Xpr1	1.07E-03	0.292396	Ube2r2	1.52E-03	0.439815
Tceal8	1.08E-03	0.528432	Hmox1	1.55E-03	0.692744
Foxc1	1.09E-03	0.659753	Hnrnpa2b1	1.57E-03	0.551118
P4hb	1.10E-03	0.378509	Tmem57	1.59E-03	0.396108
Msrb1	1.10E-03	0.684033	Ppa2	1.61E-03	0.343129
Fubp3	1.11E-03	0.315349	Neat1	1.62E-03	0.878548
Osgin2	1.15E-03	0.473158	Itpkb	1.63E-03	0.641775
Clic1	1.15E-03	0.45859	Gng5	1.64E-03	0.382406
Ppp3ca	1.16E-03	0.658041	D17Wsu92e	1.68E-03	0.530801
Numa1	1.16E-03	0.325269	Hnrnpf	1.71E-03	0.399831
Il6st	1.18E-03	0.446263	Ubb	1.74E-03	0.533288
Epha5	1.19E-03	0.351324	Cox6a1	1.75E-03	0.46376
Nudc	1.19E-03	0.666228	Comt	1.76E-03	0.440086
Gpx8	1.21E-03	0.486615	Ldha	1.83E-03	0.554468
Hdac4	1.22E-03	0.358251	Psmc2	1.84E-03	0.469562
Ppp1r15a	1.25E-03	0.675538	Ociad1	1.84E-03	0.591889
Map1lc3b	1.26E-03	0.567677	Impa1	1.87E-03	0.368837
Krt23	1.26E-03	0.619285	Klc3	1.88E-03	0.442089
Derl1	1.27E-03	0.404432	Ypel5	1.88E-03	0.366221
Psmd5	1.28E-03	0.301219	Gm26532	1.88E-03	0.502777
Ttc19	1.29E-03	0.400467	Tra2a	1.89E-03	0.450672

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Cnot7	1.91E-03	0.443959	Dnajb9	2.60E-03	0.713258
Ccdc107	1.92E-03	0.515161	Arl1	2.61E-03	0.645255
Dynll2	1.92E-03	0.463767	Ube2v2	2.61E-03	0.423095
Ube2e2	1.93E-03	0.385172	Aldh3a2	2.63E-03	0.316297
Tmem63a	1.97E-03	0.306583	Usmg5	2.66E-03	0.537339
Exosc8	1.98E-03	0.374235	Tbl1x	2.72E-03	0.378235
Lsm14b	2.01E-03	0.290195	Ddx17	2.74E-03	0.468972
Ccni	2.03E-03	0.512759	Socs2	2.75E-03	0.507609
Hrsp12	2.04E-03	0.38133	Elk4	2.79E-03	0.345598
Pitx1	2.07E-03	0.332727	Mphosph8	2.81E-03	0.27586
Eif5a	2.09E-03	0.459533	Polr2c	2.82E-03	0.405779
Canx	2.12E-03	0.566068	Btbd1	2.87E-03	0.353071
Rab7	2.17E-03	0.431906	Wdr43	2.87E-03	0.414645
Camk2n1	2.19E-03	0.312614	Tbc1d10a	2.99E-03	0.305832
Eci2	2.22E-03	0.277145	Nudt4	3.01E-03	0.515562
Ctsf	2.27E-03	0.309651	Gpx1	3.03E-03	0.604422
Papss1	2.28E-03	0.314942	Oser1	3.06E-03	0.427906
Slc39a1	2.29E-03	0.879294	Dctn4	3.09E-03	0.276592
Copg1	2.30E-03	0.427931	Map7	3.10E-03	0.258079
Impad1	2.30E-03	0.360647	Rsrp1	3.13E-03	0.533719
Oaz1	2.32E-03	0.447009	Fh1	3.13E-03	0.313402
Atf7	2.33E-03	0.272166	Rbbp7	3.17E-03	0.545732
I7Rn6	2.34E-03	0.275	Lrpap1	3.19E-03	0.477109
Ier2	2.35E-03	0.390166	Shfm1	3.21E-03	0.410881
Mrfap1	2.35E-03	0.594452	Zfp36	3.23E-03	0.582769
Rab5a	2.35E-03	0.412274	Plp2	3.23E-03	0.37638
Impact	2.36E-03	0.288196	Appl1	3.23E-03	0.291335
Zswim6	2.37E-03	0.385601	Rnf13	3.23E-03	0.430968
Twsg1	2.38E-03	0.34647	Mrpl4	3.24E-03	0.410917
Tra2b	2.38E-03	0.436706	Paip1	3.25E-03	0.338756
Ddr1	2.39E-03	0.765851	Dnajc1	3.26E-03	0.513063
Nrp2	2.39E-03	0.276834	Psma4	3.30E-03	0.403393
Pi4k2a	2.41E-03	0.3087	Psmc3	3.30E-03	0.328366
Ptma	2.44E-03	0.465896	Utp11l	3.48E-03	0.308023
Tmem87b	2.45E-03	0.261905	Ndufs8	3.49E-03	0.381733
Vgll4	2.47E-03	0.29806	Fkbp1a	3.51E-03	0.309471
Polr1d	2.54E-03	0.483064	Mme	3.52E-03	0.358236
Psmc6	2.55E-03	0.297988	Prpf38b	3.53E-03	0.457614
Camk1	2.55E-03	0.430615	Sptlc2	3.54E-03	0.279384
Mum1	2.59E-03	0.364717	Usp22	3.54E-03	0.270387

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Rdx	3.62E-03	0.464885	Lamtor3	4.68E-03	0.433095
Fdx1	3.64E-03	0.527408	Dusp3	4.68E-03	0.440598
Usp14	3.69E-03	0.404576	Setd5	4.69E-03	0.27648
Map4	3.70E-03	0.413687	Samd4b	4.72E-03	0.399988
Tecr	3.71E-03	0.57214	Pdlim5	4.72E-03	0.338903
Psmb4	3.76E-03	0.484147	Psma7	4.72E-03	0.326725
Tnfaip1	3.77E-03	0.339029	Mid1ip1	4.73E-03	0.30091
Ywhab	3.78E-03	0.412564	Rbpj	4.74E-03	0.401337
Mlf2	3.80E-03	0.778458	Pbxip1	4.76E-03	0.419154
Fas	3.80E-03	0.47146	Zfr	4.78E-03	0.394555
Ifi35	3.82E-03	0.425226	Tsc22d4	4.80E-03	0.399326
Actn1	3.86E-03	0.399851	Frmpd1os	4.85E-03	0.339159
Glg1	3.91E-03	0.271614	Trnau1ap	4.92E-03	0.313566
Pfdn2	3.92E-03	0.375553	Uqcrq	4.93E-03	0.388712
Hspb8	3.93E-03	0.553828	Psma1	5.01E-03	0.273554
Diablo	3.95E-03	0.373037	Arid4b	5.04E-03	0.364344
Tbcb	3.96E-03	0.416763	Ssbp2	5.06E-03	0.312914
Srp72	4.08E-03	0.33921	Tax1bp1	5.09E-03	0.489624
Tuba1b	4.08E-03	0.398203	Rabac1	5.10E-03	0.398779
Rlim	4.09E-03	0.3549	Spg21	5.13E-03	0.389645
Rela	4.12E-03	0.489607	Aprt	5.15E-03	0.390515
Rbm47	4.15E-03	0.349972	Arnt	5.18E-03	0.26798
Raly	4.21E-03	0.529642	Cetn3	5.22E-03	0.397765
Barx2	4.21E-03	0.453948	Aldh7a1	5.23E-03	0.366097
Ufl1	4.26E-03	0.28847	Bmpr2	5.25E-03	0.258692
Hmgb1	4.29E-03	0.409707	Mrpl17	5.32E-03	0.469478
Car12	4.30E-03	0.286643	Ube2e1	5.34E-03	0.424902
Zfp131	4.31E-03	0.281612	Auts2	5.43E-03	0.507572
Hnrnp3	4.31E-03	0.386571	Ndufb2	5.43E-03	0.470279
Fli1	4.32E-03	0.303539	Bag3	5.46E-03	0.531048
Aff4	4.32E-03	0.582175	Ppp3cb	5.52E-03	0.304524
Rabgef1	4.37E-03	0.349583	Myh9	5.52E-03	0.397634
Itpr1	4.45E-03	0.320611	Cep57	5.52E-03	0.338667
Snx4	4.45E-03	0.291609	Dync1i2	5.53E-03	0.46765
Ifnar2	4.50E-03	0.459009	Elf2	5.53E-03	0.377302
Crip2	4.53E-03	0.483296	Sqstm1	5.63E-03	0.479893
Ankrd12	4.54E-03	0.276734	Smim10l1	5.63E-03	0.449089
Ubap2l	4.60E-03	0.320384	Uqcrc2	5.71E-03	0.349458
Sf3b1	4.61E-03	0.345633	Otud6b	5.74E-03	0.258086
Txnrd1	4.61E-03	0.294791	Abhd16a	5.80E-03	0.541678

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Vkorc1	5.80E-03	0.474267	Ergic3	7.66E-03	0.382088
Ppp2ca	5.81E-03	0.454109	Nop10	7.67E-03	0.295383
Lactb2	5.84E-03	0.260992	Vamp8	7.69E-03	0.592721
Efhd2	5.87E-03	0.406152	Hp1bp3	7.73E-03	0.331586
Glrx	5.87E-03	0.287745	Oxct1	7.77E-03	0.349622
Sdcbp	5.89E-03	0.571738	Enah	7.78E-03	0.636148
Clip1	6.05E-03	0.343722	Ddx6	7.78E-03	0.42594
Fam92a	6.07E-03	0.254861	Mat2a	7.84E-03	0.41729
Psmg4	6.13E-03	0.300962	Ppib	7.87E-03	0.255544
Hras	6.16E-03	0.340019	Mtfr1	7.89E-03	0.275613
G3bp1	6.21E-03	0.307568	Dek	7.90E-03	0.355849
Smg1	6.21E-03	0.353707	S100a13	8.07E-03	0.448458
Gtf2b	6.29E-03	0.26256	Cbx1	8.15E-03	0.327888
Bptf	6.36E-03	0.302757	Tob1	8.27E-03	0.438421
Npepps	6.41E-03	0.343506	Cltc	8.28E-03	0.55294
Ptprk	6.42E-03	0.285477	Rab21	8.37E-03	0.419256
Atp6v0b	6.43E-03	0.581864	Esyt2	8.38E-03	0.310513
Ewsr1	6.46E-03	0.47337	Iqgap1	8.45E-03	0.486743
Pea15a	6.50E-03	0.309605	Tmed2	8.49E-03	0.493177
Dph3	6.53E-03	0.459327	Smox	8.50E-03	0.275591
Dda1	6.57E-03	0.366425	Hs2st1	8.61E-03	0.291262
Zcrb1	6.73E-03	0.337742	Huwe1	8.65E-03	0.255481
Ldhb	6.85E-03	0.271493	Rtp4	8.69E-03	0.494957
Toporsos	6.89E-03	0.499572	Emc4	8.74E-03	0.368836
Qk	6.97E-03	0.517277	1110065P20Rik	8.76E-03	0.30843
Atp9a	7.02E-03	0.438063	Pttg1ip	8.85E-03	0.42988
Acyp1	7.16E-03	0.50942	Ostc	8.92E-03	0.313047
Adh5	7.16E-03	0.36641	Stx12	9.02E-03	0.328684
Anxa7	7.18E-03	0.496098	Romo1	9.31E-03	0.378105
Cdc73	7.25E-03	0.252457	Mga	9.34E-03	0.362629
H2-T23	7.28E-03	0.432773	Il10rb	9.39E-03	0.368216
Luzp1	7.42E-03	0.254343	Ndfip1	9.50E-03	0.385322
Ppm1b	7.43E-03	0.331579	Ube2n	9.51E-03	0.353994
Nfx1	7.45E-03	0.271672	Upf3b	9.65E-03	0.386996
Las1l	7.52E-03	0.252821	Gch1	9.66E-03	0.436072
Tmem183a	7.52E-03	0.34377	Ubr4	9.68E-03	0.28081
Dapl1	7.56E-03	0.399177	Armc1	9.68E-03	0.27976
Drap1	7.57E-03	0.308176	Yrdc	9.73E-03	0.365076
Pcmd1	7.62E-03	0.331984	Golph3	9.80E-03	0.472334
Birc3	7.64E-03	0.330461	Atrx	9.83E-03	0.264018

Gene Name	p-value	log₂FoldChange
Meis1	9.89E-03	0.291256
Sub1	9.90E-03	0.275019
Etf1	9.90E-03	0.355422
Chic2	9.97E-03	0.536628

Cluster 9

Gene Name	p-value	log ₂ FoldChange	Gene Name	p-value	log ₂ FoldChange
Cbr2	6.65E-25	0.276077	Pax9	1.23E-06	0.445836
Clmn	1.07E-24	0.266229	Spint2	3.54E-06	0.638601
Cxcl17	1.80E-21	0.697562	Azgp1	7.94E-06	0.322388
Pglyrp1	2.26E-19	1.558193	Cd24a	9.93E-06	0.564337
Gjb2	3.58E-17	0.561178	1810011O10Rik	1.48E-05	0.490424
Cyp2f2	7.34E-17	0.519772	Cryab	1.63E-05	0.714799
Ceacam1	8.60E-15	0.426604	Smim22	1.86E-05	0.260106
Edn1	2.02E-13	0.530644	Ier3	2.59E-05	0.343837
Palmd	1.64E-12	0.403256	Elf5	3.36E-05	0.366767
Foxq1	9.75E-12	0.332088	Map3k1	3.62E-05	0.428951
Arg1	2.33E-11	0.598792	Slc12a2	3.77E-05	0.412779
Krt8	4.04E-11	1.349869	Sil1	5.06E-05	0.254956
Cldn3	5.38E-11	0.640503	Anxa1	5.46E-05	0.318852
Wfdc18	1.10E-10	3.527273	BC037156	7.16E-05	1.444825
Epcam	1.25E-10	0.708696	Smarca2	8.98E-05	0.258669
Krt18	1.54E-10	1.351642	Atf3	9.60E-05	0.43579
Hspb8	2.60E-10	0.304559	Dhrs7	1.55E-04	0.36529
Phlda1	4.46E-10	1.20632	Rab3d	1.64E-04	0.263042
Ddr1	7.83E-10	0.295608	Syne4	1.70E-04	0.278437
Dcpp2	9.49E-10	4.449622	Lrrc26	1.96E-04	0.43431
Bglap3	1.04E-09	1.539436	Cracr2b	2.03E-04	0.409261
Pdk4	1.60E-09	0.70429	Rab4a	2.31E-04	0.276296
Krt23	2.26E-09	0.537955	Fos	2.31E-04	0.354551
Pla2g7	3.95E-09	0.429599	Cd9	2.93E-04	0.310229
Slc5a8	1.00E-08	0.255287	Neat1	3.23E-04	0.644808
Atp1b1	4.84E-08	0.720354	Rcn1	3.26E-04	0.303217
Enc1	6.86E-08	0.288017	Cited4	3.72E-04	0.364123
Lbp	7.28E-08	0.370265	Tmem176b	3.85E-04	0.251766
Dcpp3	1.14E-07	3.980858	Btg2	9.05E-04	0.391413
Barx2	1.40E-07	0.390783	Nucb2	9.75E-04	0.401645
Tmem176a	1.91E-07	0.565549	Folr1	1.04E-03	0.462258
Dcpp1	2.44E-07	3.558847	Taldo1	1.72E-03	0.297974
Etv1	2.69E-07	0.367707	Plet1	2.27E-03	0.278222
Gmcs	4.22E-07	0.288199	Fxyd3	2.79E-03	0.425557
Nupr1	5.11E-07	0.756362	Gm17056	3.37E-03	0.264665
Glul	1.00E-06	0.605025	Foxo3	3.45E-03	0.283783
Chka	1.02E-06	0.396596	Hist1h1c	8.49E-03	0.686322
Sox9	1.21E-06	0.255741			