

## 1 **Supplementary Materials and Methods**

### 2 **Human subjects**

3 All human tissues were obtained with approval by the Scripps Human Subjects Committee.  
4 Intact knee joints were procured by tissue banks and processed within 48 hours  
5 postmortem. The donors with no history of joint disease or trauma were included, and all  
6 cartilage and meniscus surfaces were intact upon macroscopic inspection. OA-affected  
7 cartilage was harvested from tissues removed during knee replacement surgery of OA  
8 patients.

### 10 **Mice**

11 All animal studies were performed with approval by the Scripps Institutional Animal Care  
12 and Use Committee. *Klf2<sup>lox/lox</sup>* mice were generated as described previously<sup>1</sup>, and those in  
13 the C57BL/6J background were generously provided by Prof. Eric Sebzda at Wayne State  
14 University. *Aggrecan-Cre<sup>ERT2</sup>* knock-in mice<sup>2</sup> in the C57BL6/J background (JAX stock  
15 #019148) were obtained from the Jackson Laboratory (Bar Harbor, ME). Tamoxifen  
16 (Sigma-Aldrich, St Louis, MO) was injected intraperitoneally at a dose of 0.15 mg/g body  
17 weight to mice for five consecutive days. Genotyping was performed by PCR using tail  
18 DNA. Littermate *Klf2<sup>lox/lox</sup>* mice were used as controls of *Aggrecan-Cre<sup>ERT2</sup>;Klf2<sup>lox/lox</sup>*  
19 mice. All mice used in the experiments were males on the C57BL/6J background strain, and  
20 littermate mice were randomly assigned to the groups. Sample sizes in each experiment  
21 were decided based on previous experience. There were no mice excluded from the  
22 analysis.

23

24 **Processing of human tissues and primary cell culture**

25 For human OA chondrocyte isolation, cartilage was harvested from tissues removed during  
26 knee replacement surgery of OA patients. For isolation of cells from normal human knees,  
27 cartilage, meniscus and synovium were harvested from intact knee joints obtained from  
28 tissue banks. Harvested tissues were digested with 2 mg/ml of type 2 collagenase overnight  
29 at 37°C. Isolated cells were maintained in DMEM with 10% (v/v) calf serum (CS)  
30 supplemented with 1% (v/v) penicillin-streptomycin-glutamine (PSG).

31

32 **Cell culture**

33 TC28a2 cells were purchased from Sigma-Aldrich. TC28a2 cells and human primary cells  
34 were cultured in DMEM with 10% (v/v) CS supplemented with 1% (v/v) PSG. BMSCs  
35 were purchased from Lonza (Walkersville, MD), and were cultured in MSCGM human  
36 Mesenchymal Stem Cell Growth BulletKit Medium (Lonza). In pellet culture of BMSCs,  
37 hMSC Chondrogenic Differentiation BulletKit™ Medium (Lonza) was used.

38 Human IL-1 $\beta$  (PeproTech, Rocky Hill, NJ) and TGF- $\beta$ 3 (PeproTech) were used to  
39 treat cells. To inhibit or activate the targeted signaling molecules, 15  $\mu$ M of GGTI-298  
40 (Cayman, Ann Arbor, MI), 20  $\mu$ M of H89 (Abcam, Cambridge, UK), 20  $\mu$ M of U0126  
41 (Abcam), 4  $\mu$ M of 666-15 (R&D Systems, Minneapolis, MN), and 30  $\mu$ M of forskolin  
42 (Cayman) were used. Stocks of the compounds were diluted in dimethyl sulfoxide.

43

44

45 **Adenovirus treatment of cells**

46 Adeno5-CMV-EGFP (Ad-EGFP) and Adeno5-CMV-KLF4 (Ad-KLF4) were produced and  
47 titrated by the Functional Genomics and Viral Vectors Shared Resources at Sanford  
48 Burnham Prebys Medical Discovery Institute (SBP Functional Genomics core; La Jolla,  
49 CA). Adeno5-CMV-KLF2 (Ad-KLF2; #ADV-213187; Vector Biolabs, Philadelphia, PA)  
50 was reamplified and titrated by the SBP Functional Genomics core. TC28a2 cells and  
51 human primary cells were treated with 200 multiplicities of infection (MOIs) of adenovirus.  
52 BMSCs were treated with 100 MOIs of adenovirus.

53

54 **Transfection of expression vectors into cells**

55 The following expression plasmids were used: empty vector (#PCMV6XL5; OriGene,  
56 Rockville, MD), KLF2 (#SC127849; OriGene), KLF4 (#SC123501; OriGene), KLF5  
57 (#SC319166; OriGene), KLF9 (#RC210147; OriGene), KLF10 (#RC2105650; OriGene),  
58 KLF11 (#SC117874; OriGene), KLF15 (#SC122796; OriGene) and HA-KLF4 (#34593;  
59 Addgene, Watertown, MA). TC28a2 cells were transfected with the plasmids using  
60 Lipofectamine 3000 transfection reagent (Thermo Fisher Scientific, Waltham, MA), per  
61 manufacturer's protocol.

62

63 **siRNA knockdown of *KLF2* and *KLF4***

64 siRNAs for KLF2 (#s20271; Thermo Fisher Scientific), KLF4 (#s17795; Thermo Fisher  
65 Scientific) and the negative control (#4390843; Thermo Fisher Scientific) were used for  
66 knockdown experiments. Human normal chondrocytes were transfected with siRNA using

67 Lipofectamine RNAiMAX transfection reagent (Thermo Fisher Scientific), following  
68 manufacturer's protocol.

69

### 70 **RNA isolation and reverse transcription quantitative PCR (RT-qPCR)**

71 Mouse knee cartilage tissues for mRNA analysis were collected microscopically, as  
72 previously described.<sup>3</sup> Total RNA was isolated with Direct-zol RNA MicroPrep kit (Zymo  
73 Research, Irvine, CA), and was reverse transcribed using PrimeScript RT Reagent kit  
74 (TaKaRa Bio, Otsu, Japan). RT-qPCR was performed on a LightCycler 480 instrument  
75 (Roche, Basel, Switzerland) using TaqMan probes (Thermo Fisher Scientific) listed in  
76 supplementary table 20. While Hs00358836\_m1 was used to detect human *KLF4* in human  
77 samples, Hs00358837\_g1 was used to specifically detect human *KLF4* in mouse samples  
78 based on our preliminary experiments. mRNA levels were normalized with *GAPDH* in  
79 human samples and with *Gapdh* in mouse samples.

80

### 81 **DMM surgery**

82 The mouse surgical OA model was induced by DMM surgery.<sup>4</sup> In brief, the surgical  
83 approach to the knee was the medial parapatellar. The fat pad was dissected, and the medial  
84 meniscus (MM) and the medial meniscotibial ligament (MMTL) were identified. The  
85 MMTL was transected, and the MM was confirmed to be freely displaceable. The operators  
86 were blinded to genotypes and treatment groups. Knees were harvested at 4 or 8 weeks  
87 after surgery for IHC of KLF4 and KLF2, and at 8 weeks postoperatively for histological  
88 scoring.

89

90 **Injection of AAV into mouse knee joints**

91 AAV2/5-CAG-NLS-EGFP (AAV-EGFP) and AAV2/5-CAG-HA-KLF4 (AAV-KLF4) were  
92 produced and titrated by the SBP Functional Genomics core. Under microscopic  
93 observation,  $5 \times 10^9$  vg of AAV diluted in 10  $\mu$ L of PBS was injected into mouse knee  
94 joints per injection. Those who performed injections were aware of the group allocation.

95

96 **Von Frey test**

97 To evaluate mechanical allodynia in mice, von Frey filaments with 5 different target forces  
98 (#1: 0.04 g, #2: 0.16 g, #3: 0.4 g, #4: 1 g and #5: 2 g; Touch Test Sensory Evaluators; North  
99 Coast Medical, Morgan Hill, CA) were used for mechanical stimulation to the plantar  
100 surface of the hind paw, as previously described.<sup>5,6</sup> Numbers of paw withdrawals from 5  
101 stimulations per filament per mouse were counted. Mice were tested in randomized order at  
102 each time point.

103

104 **Histological analyses**

105 Human cartilage tissues from the medial femoral condyle and mouse knee joint tissues  
106 were fixed in Z-fix (Anatech, San Diego, CA) for 2 days and decalcified in TBD-2 (Thermo  
107 Fisher Scientific) for 1 week in human samples and for 2 days in mouse samples. The  
108 samples were embedded in paraffin and were sectioned in 4  $\mu$ m thickness. Safranin-O and  
109 fast green staining was performed according to the standard protocols.

110

Histological scoring of OA for the medial femoral condyle and tibial plateau was

111 performed using the summed OARSI scores (score, 0–48).<sup>7</sup> Meniscus histopathological  
112 scores were graded by Kwok’s meniscus scoring system (score 0–50).<sup>8</sup> Synovial changes  
113 were evaluated using Krenn’s synovitis scoring system (score, 0–9).<sup>9</sup> Bone scores (score,  
114 0–8)<sup>3</sup> were used to assess subchondral bone changes and ectopic ossification. All scorings  
115 were performed blindly.

116

### 117 **IHC**

118 Sections were deparaffinized, washed and blocked with horse serum for 1 hour at room  
119 temperature. They were incubated with primary antibodies shown in supplementary table  
120 21 overnight at 4°C. Rabbit IgG (Vector Laboratories, Burlingame, CA) was used as  
121 negative controls. Then, for IHC of HA tag and GFP, the sections were washed and  
122 incubated with Donkey anti-Rabbit IgG (H+L) Highly Cross-Adsorbed Secondary  
123 Antibody, Alexa Fluor 647 (1:200; Thermo Fisher Scientific) for 1 hour at room  
124 temperature, followed by nuclear staining with Hoechst 33342 (Thermo Fisher Scientific).

125 For IHC of KLF4, immune complexes were detected using ImmPRESS AP Horse  
126 Anti-Rabbit IgG Polymer Detection kit (Vector Laboratories). Vector Red Substrate kit  
127 (Vector Laboratories) was used for alkaline phosphatase development, counterstained with  
128 hematoxylin. For IHC of KLF2, ImmPRESS HRP Horse Anti-Rabbit IgG Polymer  
129 Detection kit (Vector Laboratories) was used for immune detection, and the peroxidase  
130 reaction was developed using DAB Substrate kit (Vector Laboratories), counterstained with  
131 methyl green.

132 For quantification of positive cells in IHC of mouse samples, articular cartilage

133 and subchondral bone in the medial tibial plateau were analyzed, while medial femoral  
134 cartilage was applied for comparison between weight-bearing and non-weight-bearing  
135 regions. The femoral condyle between the anterior and posterior margins of the meniscus  
136 was considered to be weight-bearing regions, while non-weight-bearing regions were  
137 defined as the posterior condyle not covered with the meniscus. In comparison of cartilage  
138 tissues from 6- and 24-month-old mice, and mice after DMM surgery, calculation of  
139 positive cell rates was obtained from fields in the medial tibial plateau. For human cartilage  
140 tissues, areas within 700  $\mu\text{m}$  from the articular surface were included in the analysis.

141

#### 142 **Utilization of an RNA-seq dataset from normal and OA human knee cartilage tissues**

143 Our previous dataset for RNA-seq analysis of normal and OA human knee cartilage tissues  
144 was utilized (GEO accession number: GSE114007).<sup>10</sup> Normal human knee cartilage tissues  
145 were from 13 males and 5 females (age 18–61, mean  $37\pm 3$ ) without history of joint disease  
146 or trauma. OA-affected cartilage was harvested from tissues removed during knee  
147 replacement surgery from 8 males and 12 females (age 51–82, mean  $66\pm 2$ ). Genes with  
148  $\log_2(\text{CPM}) > 3$  in one or more samples were included in the analysis.<sup>10</sup> An FDR was  
149 calculated based on the moderated t-statistic using the Benjamini-Hochberg method.<sup>11</sup>

150

#### 151 **Utilization of a DNA microarray dataset for zone-specific gene expression patterns in** 152 **human knee cartilage tissues**

153 Our previous dataset for DNA microarray analysis for zone-specific gene expression  
154 patterns in human knee cartilage tissues was utilized (GEO accession number:

155 GSE39797).<sup>12</sup> Donors were 3 males and 1 female (age 23–46, mean 34±6) without history  
156 of joint disease or trauma. Data were normalized using a robust multichip average method  
157 (RMA Express, version 1.0; <http://rmaexpress.bmbolstad.com>).

158

### 159 **DRUG-seq analysis**

160 TC28a2 cells were transfected with Ad-EGFP or Ad-KLF4. For samples with IL-1 $\beta$   
161 stimulation, cells were treated with 10 ng/ml of IL-1 $\beta$  for 6 hours before RNA collection,  
162 and RNA was collected 48 hours after adenoviral transfection. DRUG-seq libraries were  
163 constructed using High Throughput RNAseq Prep kit (Twist Bioscience, San Francisco,  
164 CA), and were sequenced by paired-end sequencing on a NextSeq2000 instrument  
165 (Illumina, San Diego, CA) at estimated 5 million reads per sample.

166         The sequence information was initially processed with in-house custom scripts  
167 using BBTools (<https://sourceforge.net/projects/bbmap/>) to obtain demultiplexed reads for  
168 each sample based on the inline barcodes. The 5'-end 10-base barcodes and 3'-end 12-base  
169 UMI information from read1 fastq were first incorporated into read2 fastq as part of  
170 sequence ID using UMI-tools.<sup>13</sup> The read2 sequences were analyzed using the nf-core  
171 RNA-seq pipeline version 1.4.2.<sup>14</sup> They were trimmed for adapters using TrimGalore!  
172 version 0.6.4 ([https://www.bioinformatics.babraham.ac.uk/projects/trim\\_galore/](https://www.bioinformatics.babraham.ac.uk/projects/trim_galore/)) and  
173 aligned to the human genome reference sequence (GRCh38) using STAR version 2.6.1d.<sup>15</sup>  
174 Gene-level assignment was then performed using featureCounts version 1.6.4.<sup>16</sup> The gene  
175 expression matrix with raw gene counts was used for differential gene expression analysis  
176 using the R/Bioconductor DESeq2 package version 1.20.0.<sup>17</sup>



177 The resulting P-values were adjusted using the Benjamini-Hochberg's approach<sup>11</sup>  
178 for controlling the FDRs. Genes with an FDR of <0.05 and a  $|\log_2(\text{FC})| > 1$  were considered  
179 significantly differentially expressed. DAVID Bioinformatics Resources 6.8  
180 (<https://david.ncifcrf.gov/>)<sup>18</sup> was used for KEGG pathway analysis.<sup>19</sup> Pathways satisfying  
181 an FDR <0.05 was considered significant. The raw data were deposited in the Gene  
182 Expression Omnibus ([www.ncbi.nlm.nih.gov/geo/](http://www.ncbi.nlm.nih.gov/geo/)) under accession no. GSE183956.

183

#### 184 **ChIP-seq analysis**

185 TC28a2 cells transfected with an HA-KLF4 vector or an empty vector were used for ChIP-  
186 seq analysis. ChIP was performed generally as previously described<sup>20-22</sup>, with some  
187 modifications. In brief,  $2 \times 10^7$  cells were cross-linked with 1% formaldehyde, and the  
188 crosslinking was quenched by glycine. After lysis of cells, chromatin was fragmented by  
189 sonication (Covaris S220; Covaris Inc., Woburn, MA). Dynabeads (M-280 sheep anti-  
190 rabbit IgG; Thermo Fisher Scientific), bound with anti-HA tag antibody (25  $\mu\text{L}$  per  $10^7$   
191 cells; clone C29F4; Cell Signaling Technology, Danvers, MA) or rabbit IgG (Cell Signaling  
192 Technology), were incubated with the fragmented DNA lysate overnight at 4°C. After  
193 washing beads with RIPA buffer, DNA was eluted with elution buffer for 15 min at 65°C,  
194 and the eluate was incubated overnight at 65°C for reverse crosslinking. DNA was purified  
195 using a MinElute PCR Purification kit (Qiagen, Hilden, Germany). All buffers were  
196 supplemented with cOmplete EDTA-free protease inhibitor cocktail (Roche). ChIP-seq and  
197 input libraries were constructed with a ThruPLEX DNA-seq kit (Takara Bio) according to  
198 the manufacturer's instructions and purified using AMPure XP beads. Library quality was

199 validated using an Agilent 2100 Bioanalyzer (Agilent), and approximately 85–165 million  
200 100-bp reads were obtained by single-end sequencing with NovaSeq2000 (Illumina). Two  
201 independent replicates were analyzed for the ChIP-seq samples. The raw data were  
202 deposited in the Gene Expression Omnibus ([www.ncbi.nlm.nih.gov/geo/](http://www.ncbi.nlm.nih.gov/geo/)) under accession  
203 no. GSE183956.

204         The nf-core/chipseq pipeline (version 1.2.2; <https://github.com/nf-core/chipseq>)  
205 written in the Nextflow domain specific language was used to perform the primary  
206 analysis<sup>14</sup>, and all data were processed relative to the human genome reference sequence  
207 (GRCh38). Burrows-Wheeler Aligner version 0.7.17 ([https://sourceforge.net/projects/bio-  
208 bwa/files/](https://sourceforge.net/projects/bio-bwa/files/)) was utilized to align the sequence reads to the reference genome.<sup>23</sup> Peak calling  
209 was performed by MACS version 2.2.7.1 (<https://pypi.org/project/MACS2/>) with a cutoff  
210 of FDR <0.01.<sup>24</sup> Peak intersection between replicates was executed with BEDTools version  
211 2.26.0.<sup>25</sup> Genomic Regions Enrichment of Annotations Tool version 4.0.4  
212 (<http://great.stanford.edu/public/html/>) was used for peak distribution in genome and gene  
213 ontology analysis.<sup>26</sup> Each peak category was run against a whole genome background with  
214 assembly GRCh38. Putative gene regulatory domains utilized for region annotation were  
215 defined as minimum 5 kilobase (kb) upstream and 1 kb downstream of the transcriptional  
216 start site, and extended up to 1,000 kb to the nearest gene's minimal regulatory domain.  
217 Homer version 4.11 (<http://homer.ucsd.edu/homer/>) was used to find enriched motifs in the  
218 obtained ChIP-seq peaks and to recover the motif locations.<sup>27</sup> The Integrative Genomics  
219 Viewer version 2.10.3 (<https://software.broadinstitute.org/software/igv/home>) was used to  
220 visualize aligned reads.<sup>28</sup> Annotations for enhancers were based on previously reported

221 studies.<sup>29-32</sup>

222

### 223 **Statistical analysis**

224 All quantitative data are expressed as means  $\pm$  SE (standard error). Results were analyzed  
225 using GraphPad Prism version 9.3.1 (GraphPad Software, San Diego, CA). In statistical  
226 analyses of RT-qPCR data, log<sub>2</sub> transformed values were used to assume normal  
227 distribution. In linear regression model analyses, heteroscedasticity and normal distribution  
228 of the residuals were checked using residual plots, homoscedasticity plots and Q-Q plots,  
229 respectively. Results of omnibus tests for multiple comparisons are shown in supplementary  
230 table 2, and other statistical tests used are all described in each figure legend. P-values  
231 below 0.05 were considered significant.

232

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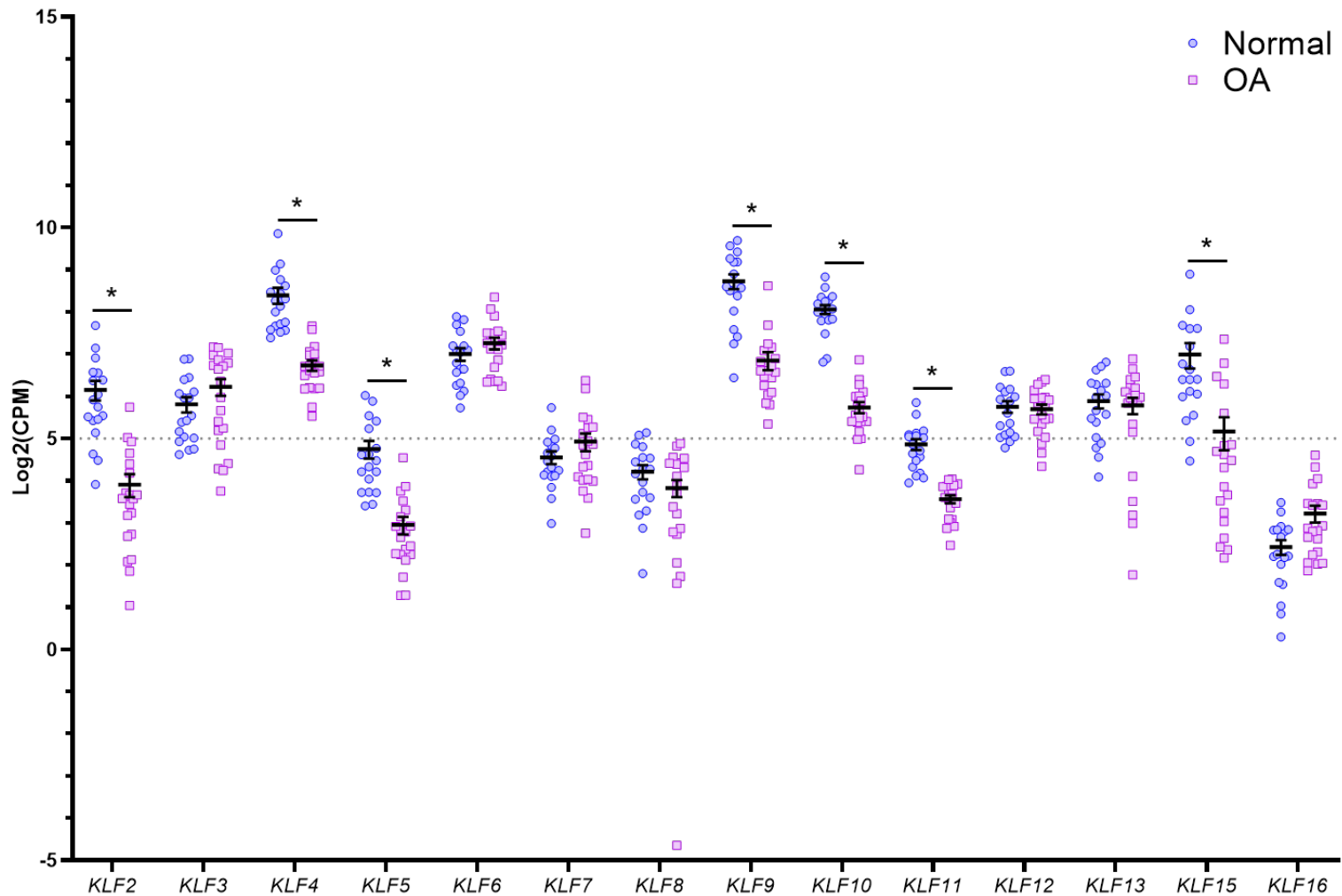
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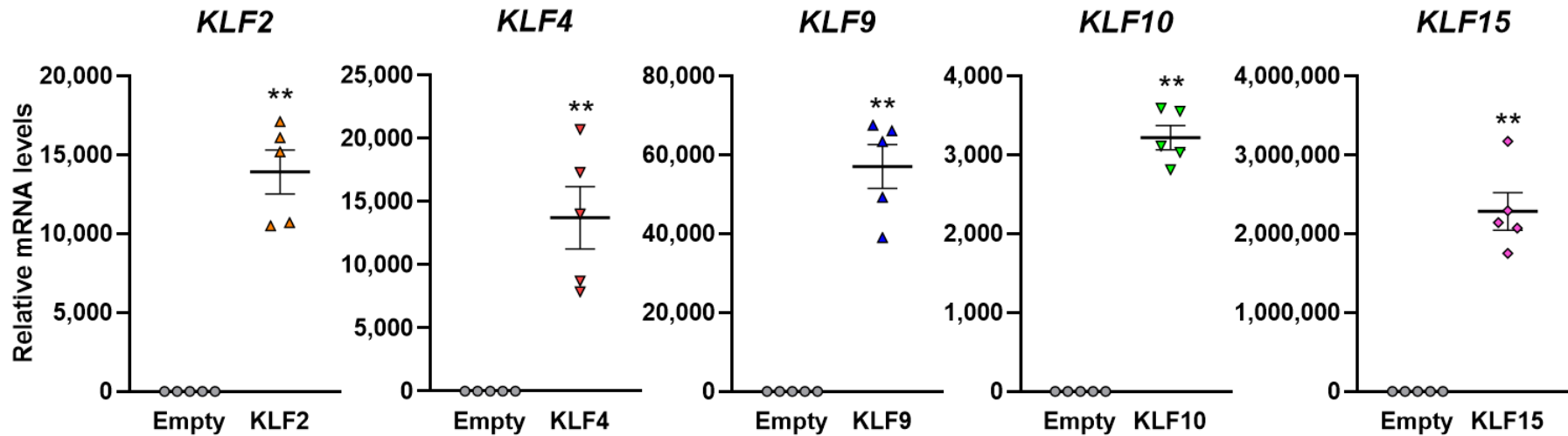
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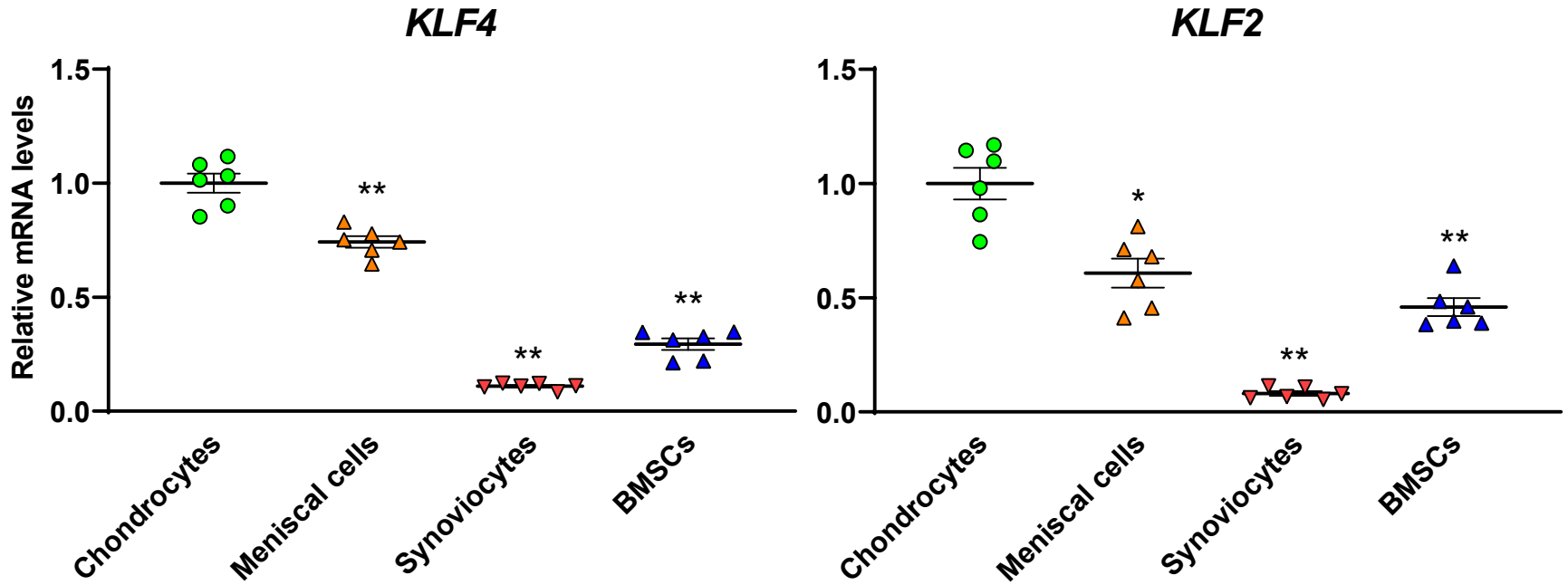


**Supplementary figure 1. RNA-seq analysis of KLF family genes in normal and OA human knee cartilage tissues.** Normal human knee cartilage tissues were from 13 males and 5 females (age 18–61, mean  $37 \pm 3$ ) without history of joint disease or trauma. OA-affected cartilage was harvested from tissues removed during knee replacement surgery from 8 males and 12 females (age 51–82, mean  $66 \pm 2$ ). Log2(counts per million reads mapped [CPM]) are expressed as means  $\pm$  SE. A grey dotted line indicates  $\log_2(\text{CPM})=5$ . \*FDR<0.05.

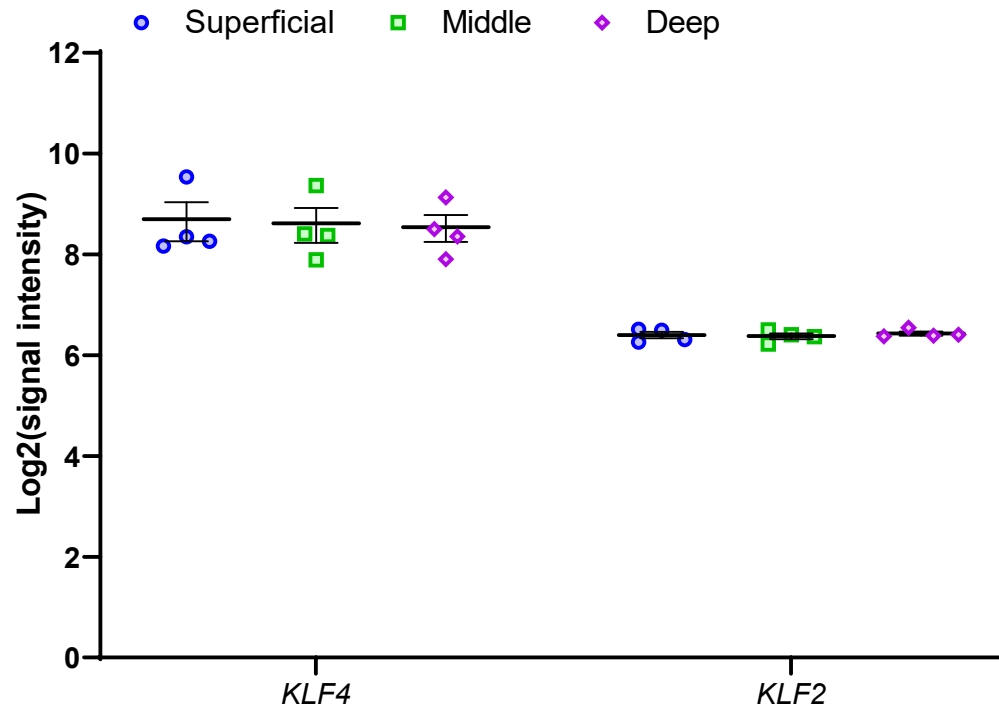


**Supplementary figure 2. Transfection of KLF expression vectors in TC28a2 cells.** Cells were transfected with an empty vector, or expression vectors for either KLF2, KLF4, KLF9, KLF10 or KLF15, and RNA was collected 48 hours after transfection. mRNA levels are expressed as means  $\pm$  SE, relative to empty vector (n=5 from five independent experiments). \*P<0.05, \*\*P<0.01 versus empty vector, paired t-test.

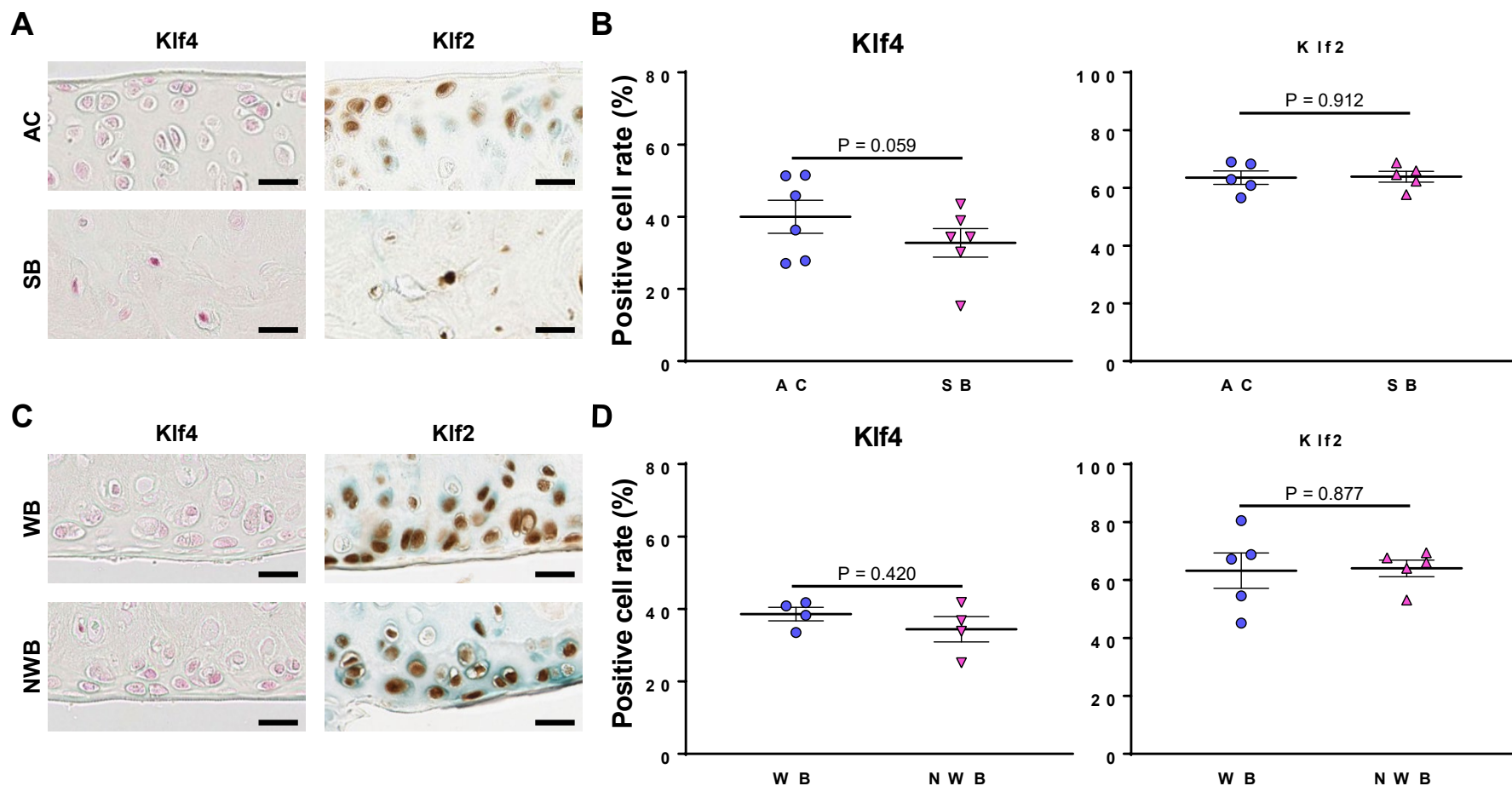




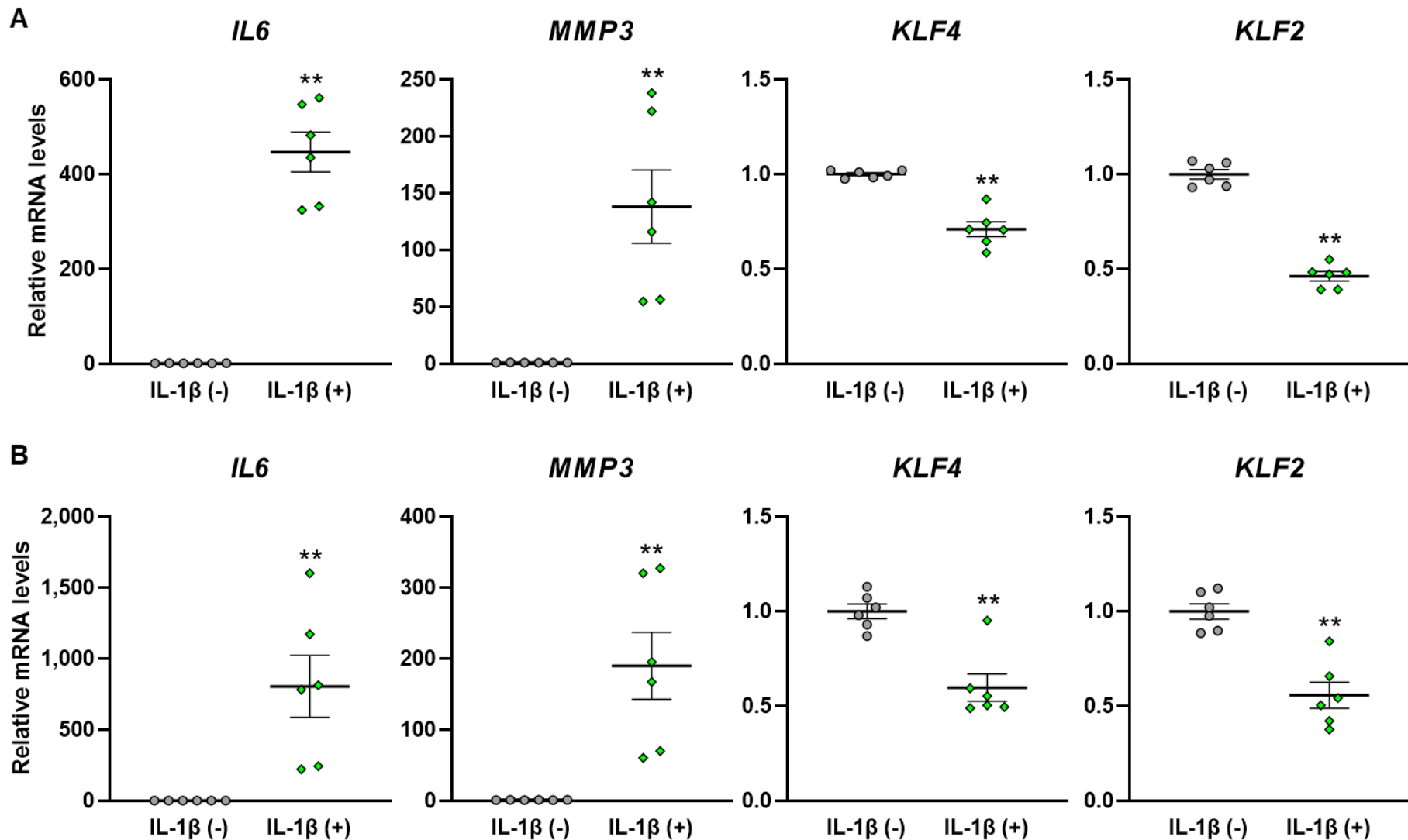
**Supplementary figure 3. Expression of *KLF4* and *KLF2* in each cell type of human primary cells.** mRNA levels are expressed as means  $\pm$  SE, relative to chondrocytes (n=6 for each cell type). \*P<0.05, \*\*P<0.01 versus chondrocytes, Dunnett's T3 test. Results of Welch's ANOVA test are shown in supplementary table 2.



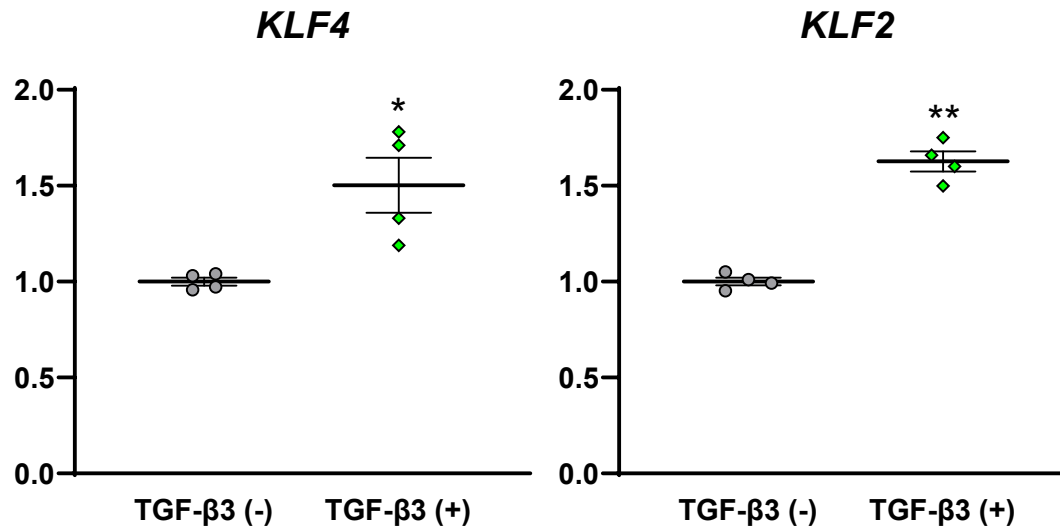
**Supplementary figure 4. DNA microarray analysis of *KLF4* and *KLF2* in each zone of human knee cartilage.** Normal human knee cartilage tissues were from 3 males and 1 female (age 23 to 46, mean  $34 \pm 6$ ) without history of joint disease or trauma. Normalized signal intensities in log<sub>2</sub> scale are expressed as means  $\pm$  SE.



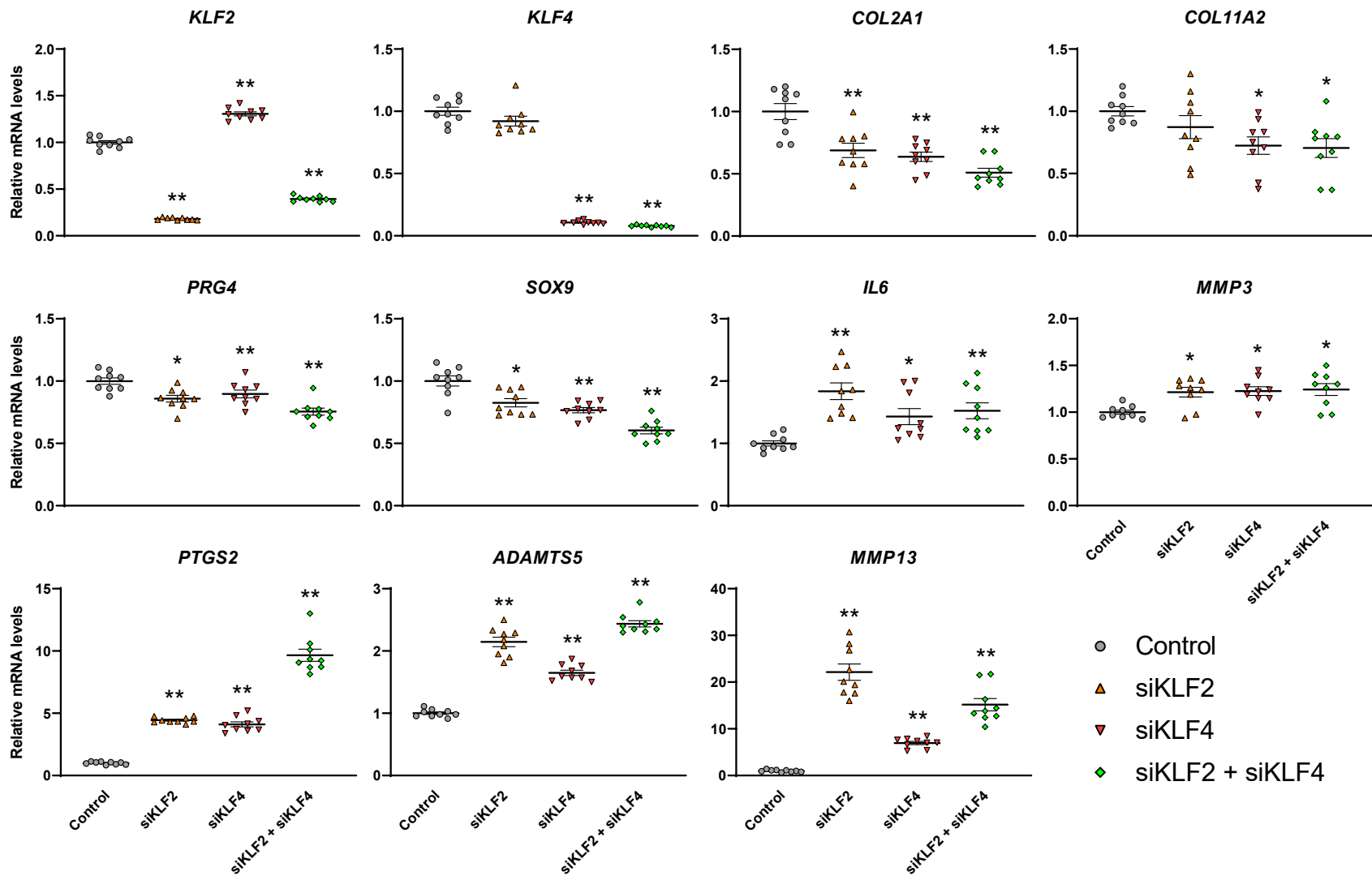
**Supplementary figure 5. IHC analyses of KLF4 and KLF2 in mouse knee joints.** IHC for Klf4 and Klf2 was performed in 6-month-old mouse knee joints. (A and B) Articular cartilage (AC) and subchondral bone (SB) in the medial tibial plateau were compared (n=5–6 per condition). (C and D) Weight-bearing (WB) and non-weight-bearing (NWB) regions of medial femoral cartilage were compared (n=4–5 per condition). \*P<0.05, paired t-test. All quantitative data are expressed as means  $\pm$  SE. Scale bars, 20  $\mu$ m.



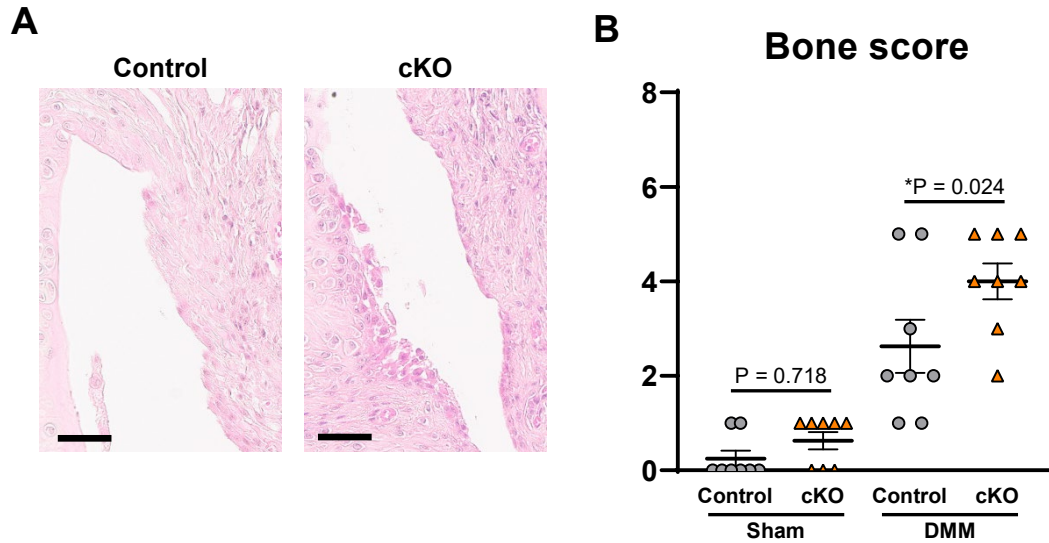
**Supplementary figure 6. Expression changes of *KLF4* and *KLF2* in human normal chondrocytes with treatment of IL-1 $\beta$ .** Cells were treated with 20 ng/ml of IL-1 $\beta$ , and RNA was collected 24 hours (A) and 48 hours (B) after initiation of treatment. mRNA levels are expressed as means  $\pm$  SE, relative to IL-1 $\beta$  (-) (n=6). \*P<0.05, \*\*P<0.01 versus IL-1 $\beta$  (-), paired t-test.



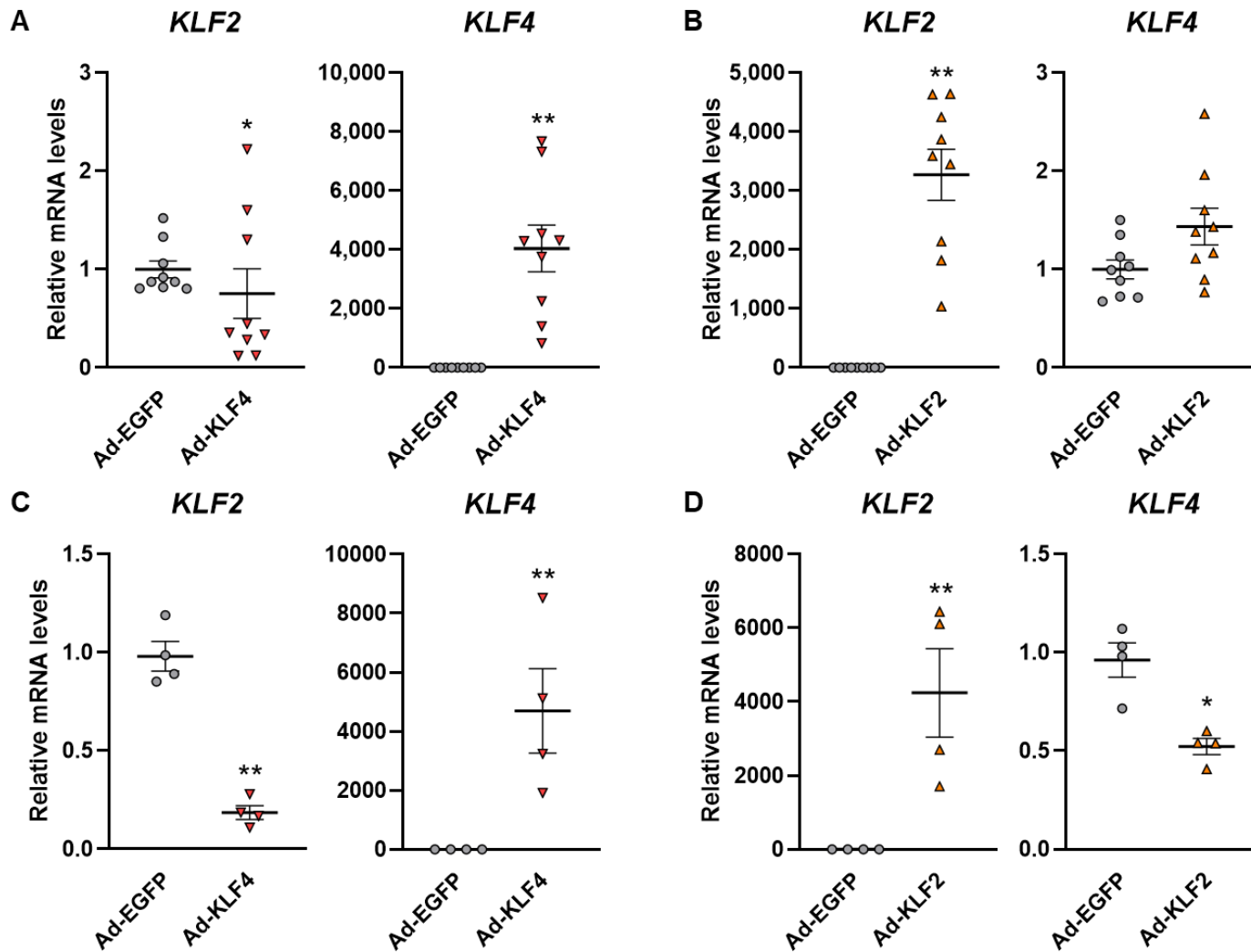
**Supplementary figure 7. Expression changes of *KLF4* and *KLF2* in human OA chondrocytes with treatment of TGF-β3.** Cells were treated with 20 ng/ml of TGF-β3, and RNA was collected 48 hours after initiation of treatment. mRNA levels are expressed as means  $\pm$  SE, relative to TGF-β3 (-) (n=4). \*P<0.05, \*\*P<0.01 versus TGF-β3 (-), paired t-test.



**Supplementary figure 8. siRNA knockdown of KLF2 and KLF4 in human normal chondrocytes.** Cells were transfected with siRNAs, and RNA was collected 48 hours after transfection. mRNA levels are expressed as means  $\pm$  SE, relative to control (n=9). \*P<0.05, \*\*P<0.01 versus control, Dunnett's test. Results of one-way mixed-effects ANOVA test are shown in supplementary table 2.

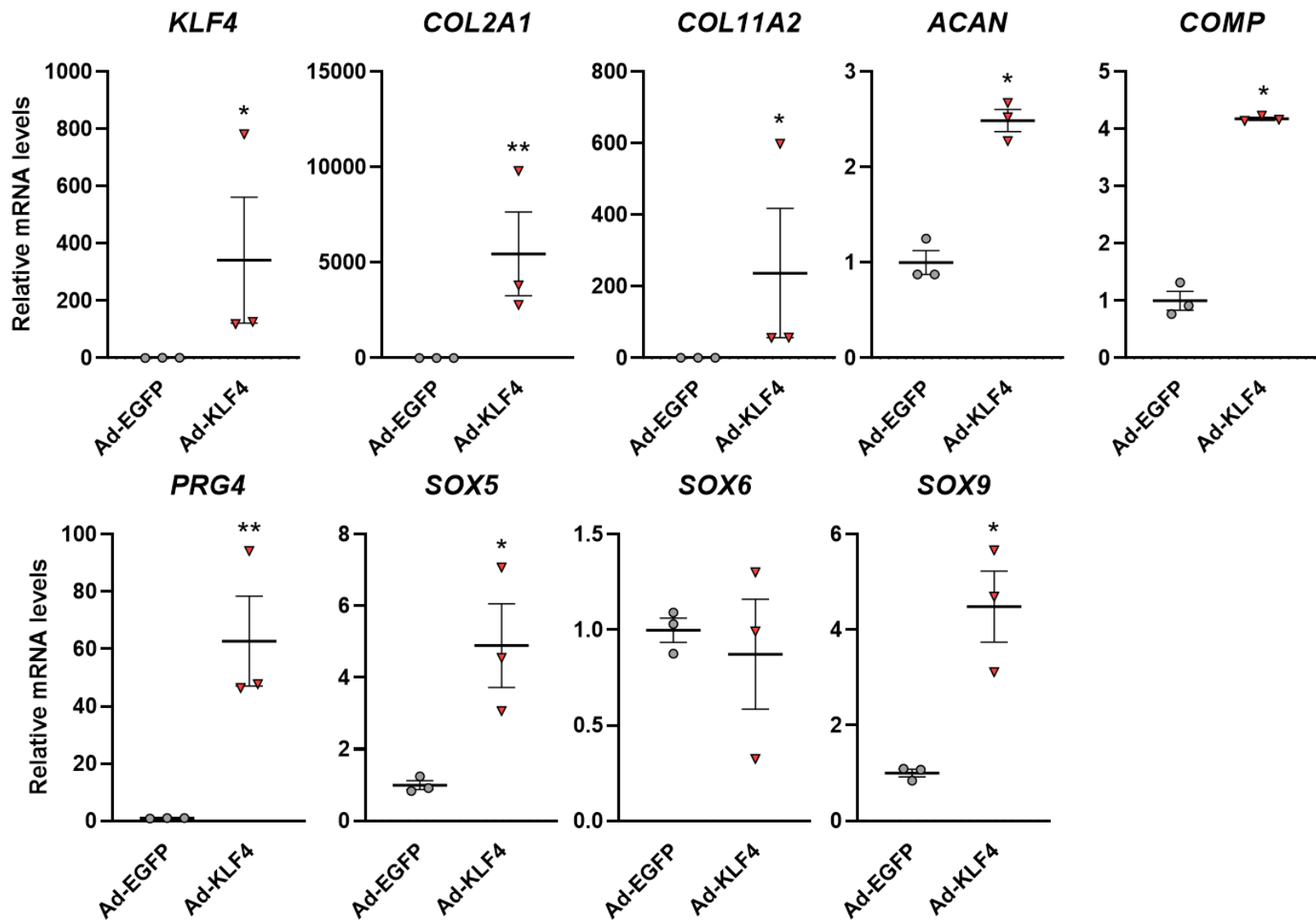


**Supplementary figure 9. Histological evaluation of knee samples from cKO and littermate control mice.** (A) Representative hematoxylin and eosin staining images of the synovium from knee joints of control and cKO mice with DMM surgery. Scale bars, 50  $\mu$ m. (B) Bone scores. \*P<0.05, Sidak's multiple comparison test. All quantitative data are expressed as means  $\pm$  SE, and results of two-way ANOVA test are shown in supplementary table 2.

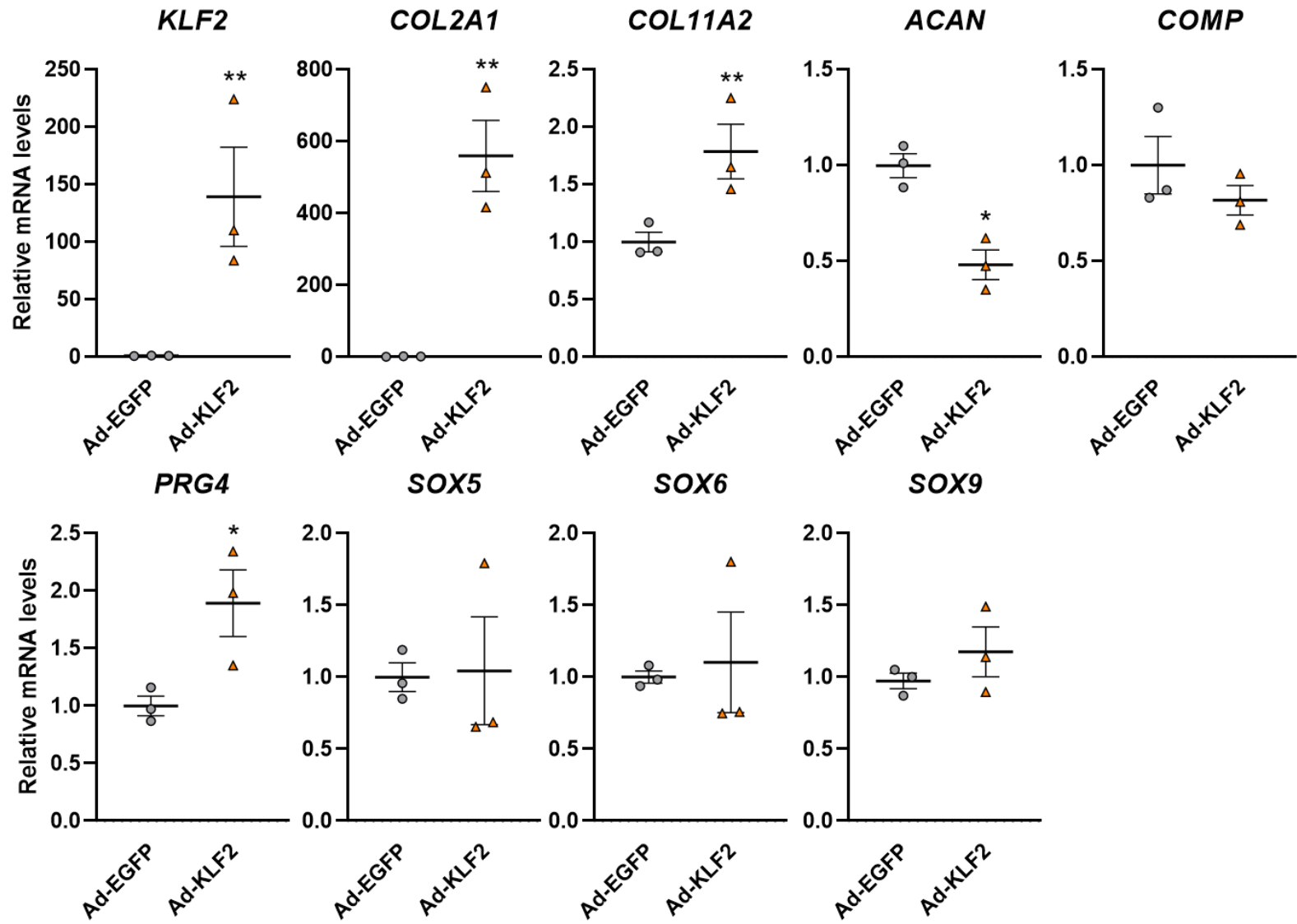


**Supplementary figure 10. Ad-KLF4 and Ad-KLF2 treatment of human OA chondrocytes and meniscal cells.** (A and B) Human OA chondrocytes were transfected with adenovirus (Ad-KLF4 or Ad-EGFP for (A), and Ad-KLF2 or Ad-EGFP for (B)), and RNA was collected 48 hours after transfection (n=9). (C and D) Human meniscal cells were transfected with adenovirus (Ad-KLF4 or Ad-EGFP for (C), and Ad-KLF2 or Ad-EGFP for (D)), and RNA was collected 48 hours after transfection (n=4). mRNA levels are expressed as means  $\pm$  SE, relative to Ad-EGFP. \*P<0.05, \*\*P<0.01 versus Ad-EGFP, paired t-test.

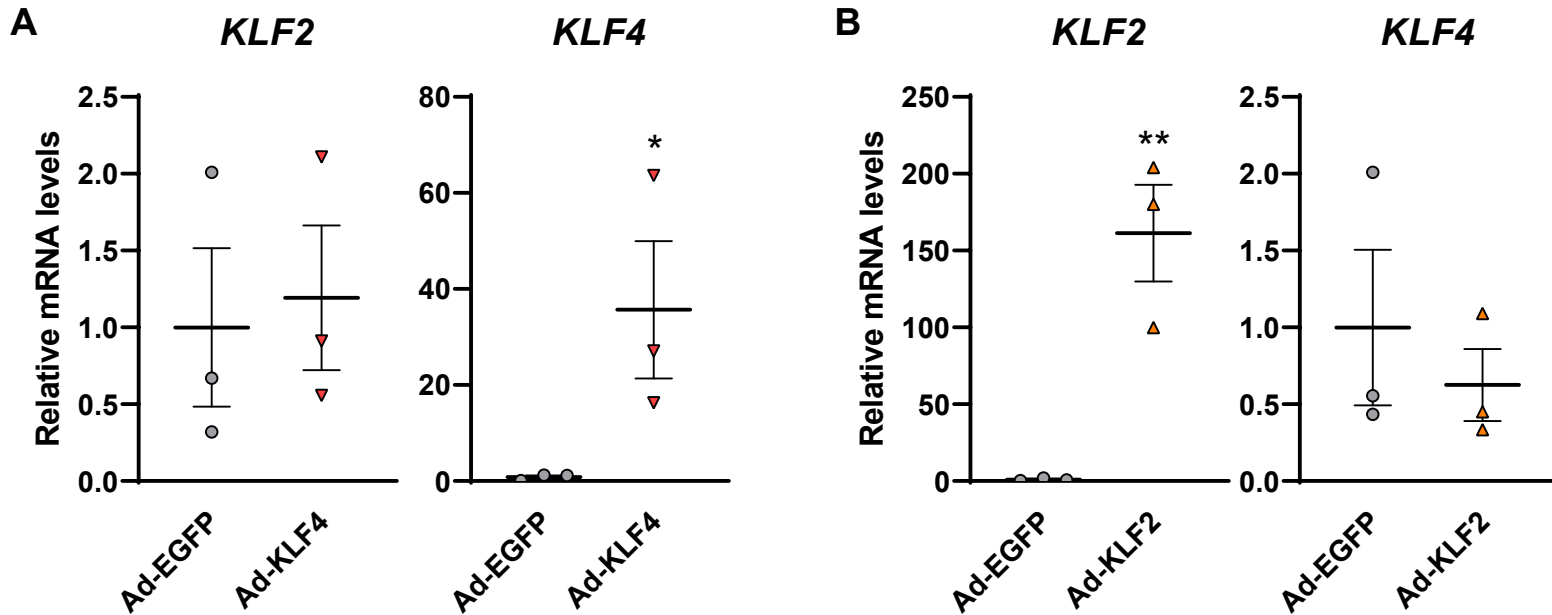




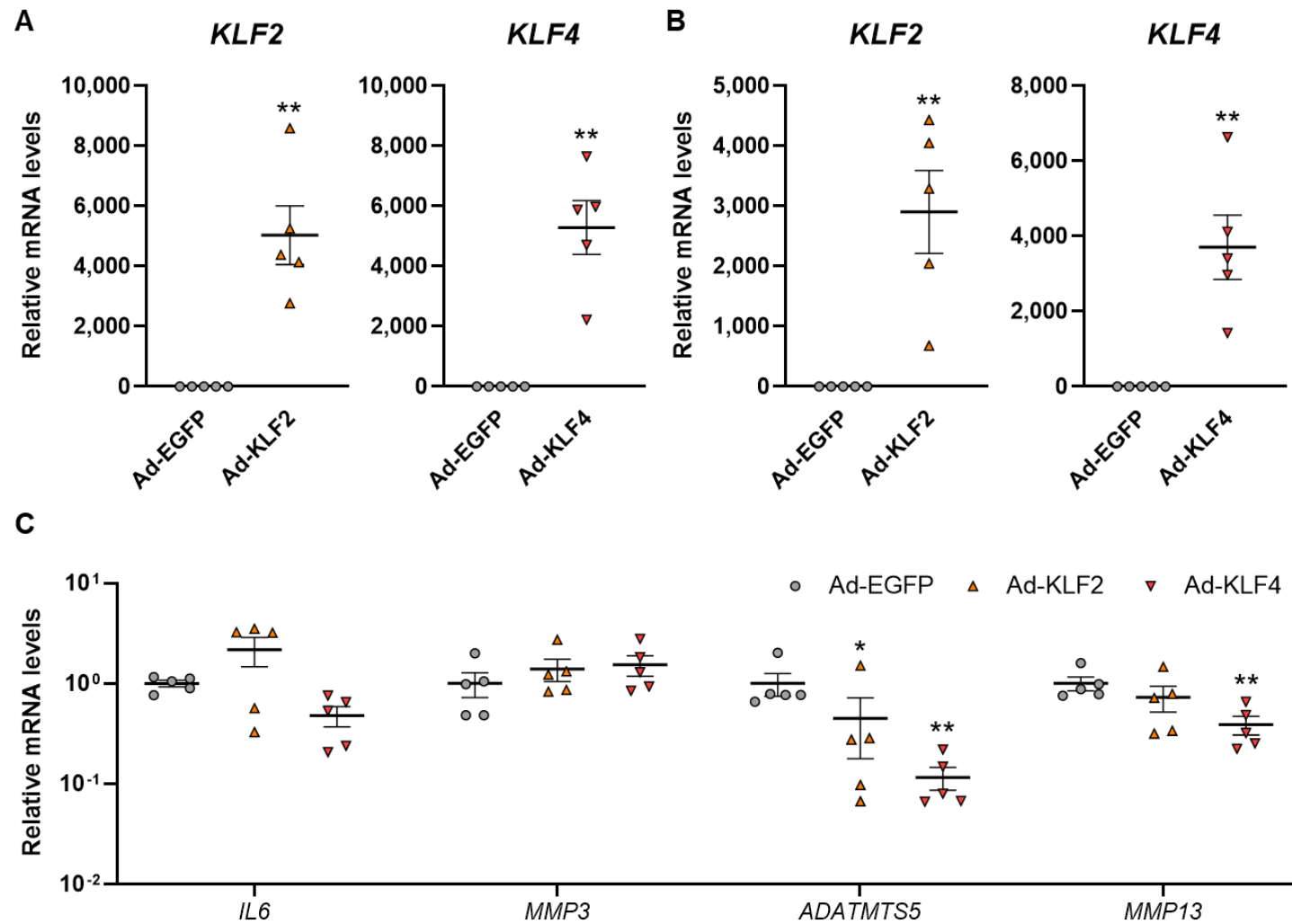
**Supplementary figure 11. Regulation of chondrogenic genes by KLF4 in BMSCs during monolayer culture.** Cells were transfected with Ad-KLF4 or Ad-EGFP, and RNA was collected 48 hours after transfection. mRNA levels are expressed as means  $\pm$  SE., relative to Ad-EGFP (n=3). \*P<0.05, \*\*P<0.01 versus Ad-EGFP, paired t-test.



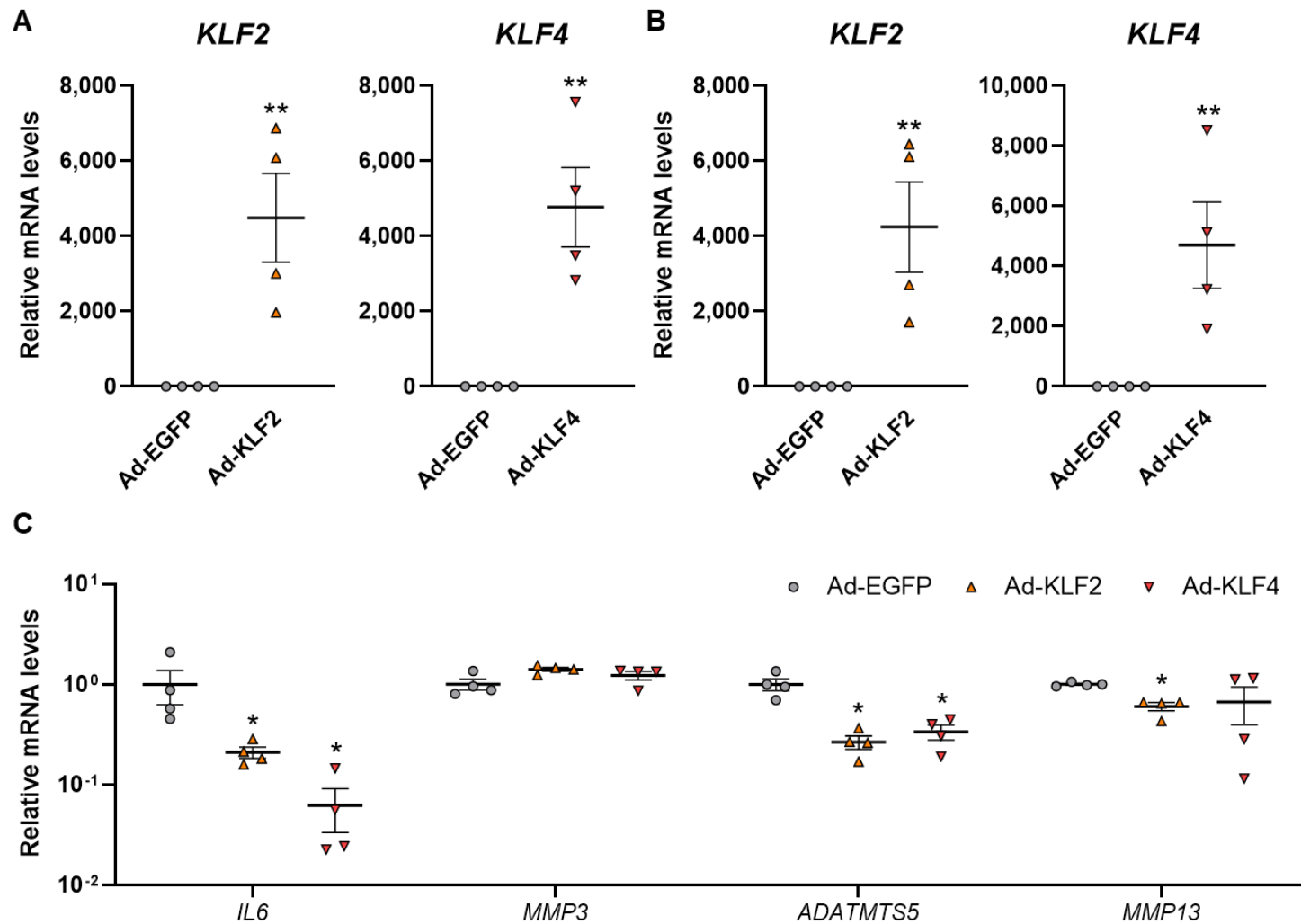
**Supplementary figure 12. Regulation of chondrogenic genes by KLF2 in BMSCs during monolayer culture.** Cells were transfected with Ad-KLF2 or Ad-EGFP, and RNA was collected 48 hours after transfection. mRNA levels are expressed as means  $\pm$  SE, relative to Ad-EGFP (n=3). \*P<0.05, \*\*P<0.01 versus Ad-EGFP, paired t-test.



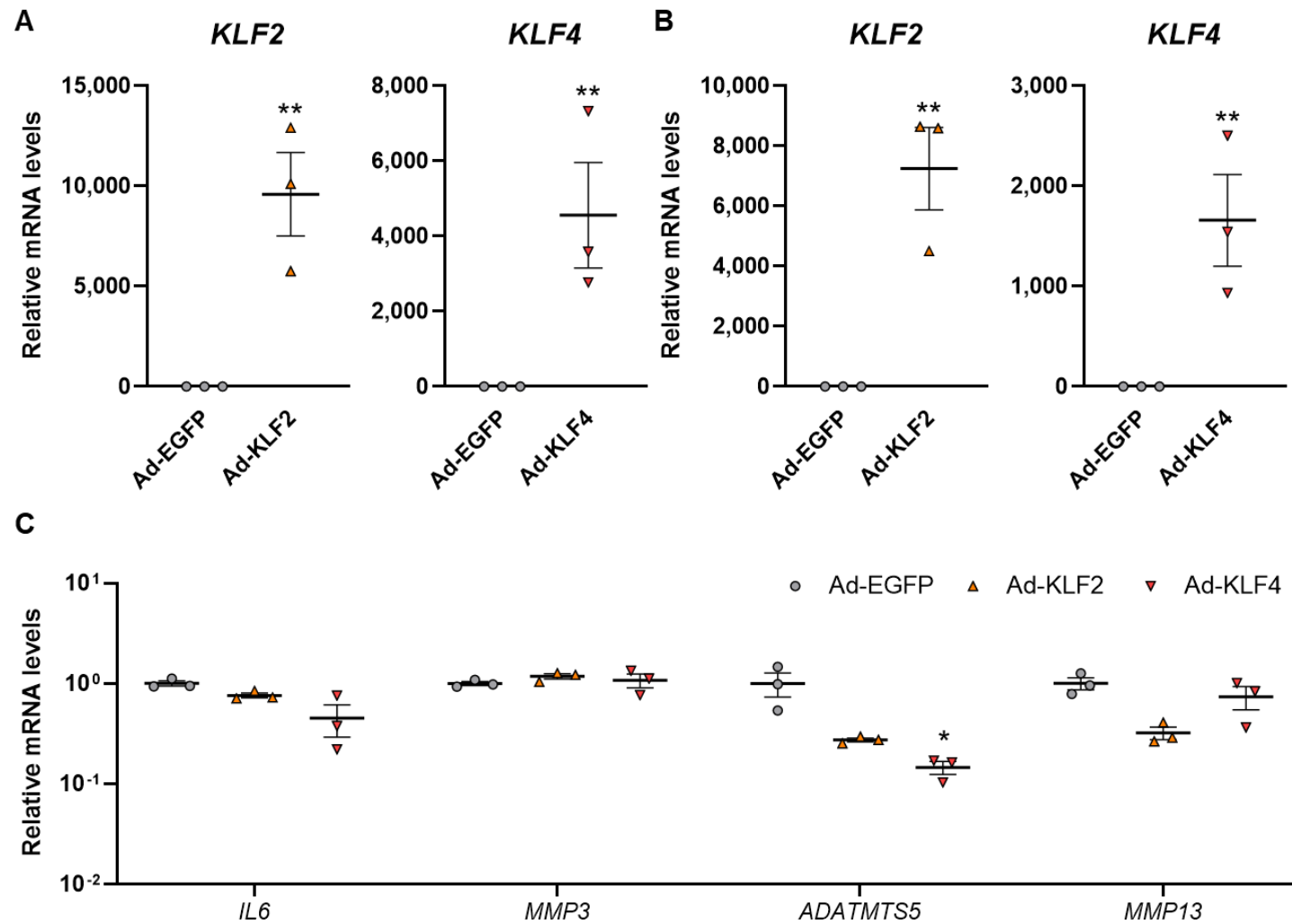
**Supplementary figure 13. Ad-KLF4 and Ad-KLF2 treatment of BMSC pellets.** (A and B) BMSCs were transfected with adenovirus (Ad-KLF4 or Ad-EGFP for (A), and Ad-KLF2 or Ad-EGFP for (B)), and were cultured in pellets. RNA was collected 2 weeks after pellet culture (n=3). mRNA levels are expressed as means  $\pm$  SE, relative to Ad-EGFP. \*P<0.05, \*\*P<0.01 versus Ad-EGFP, paired t-test.



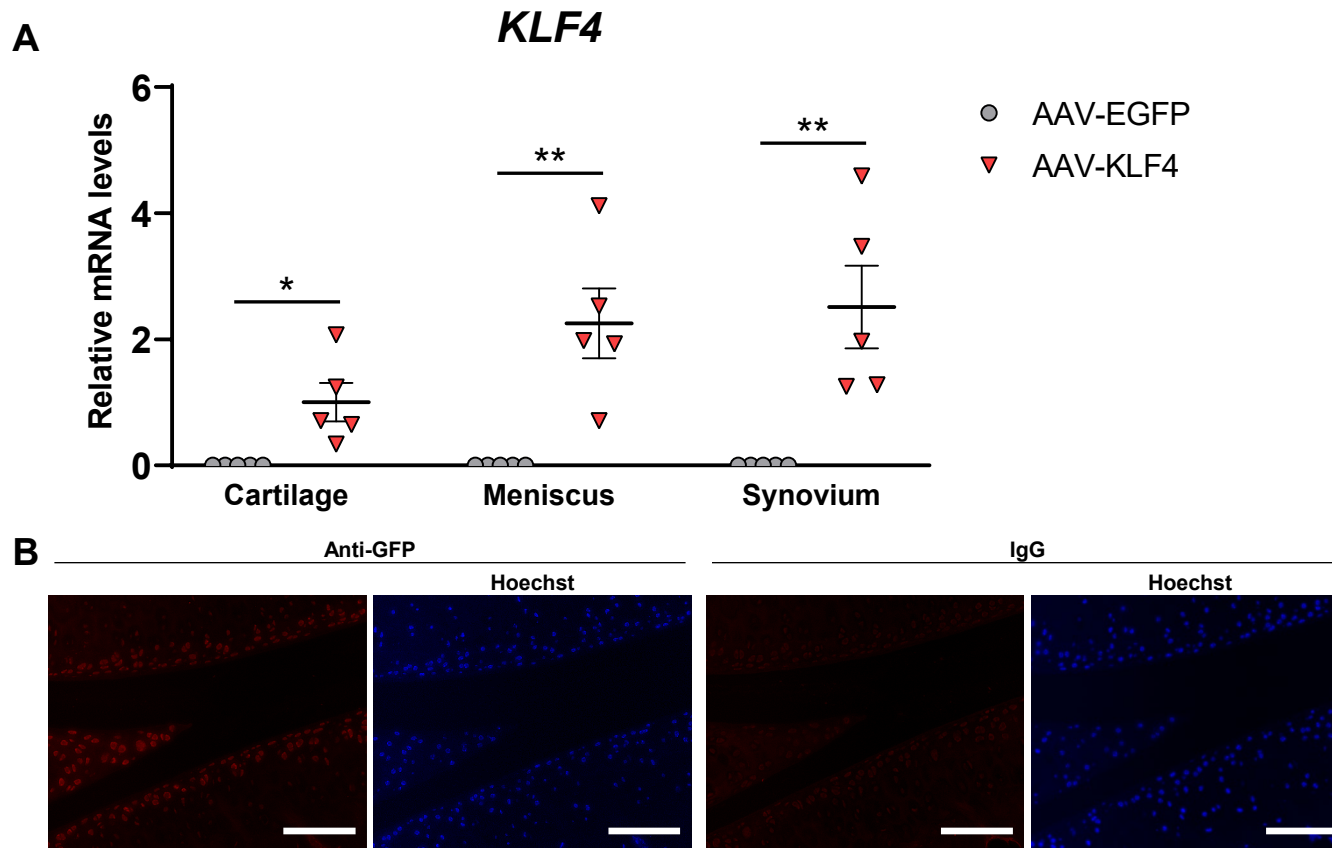
**Supplementary figure 14. Regulation of inflammatory and catabolic genes by KLF4 and KLF2 in human OA chondrocytes.** (A) Related to the experiments with IL-1 $\beta$  stimulation in figure 4A, expression levels of *KLF2* and *KLF4* are shown (n=5). (B and C) Cells were transfected with Ad-EGFP, Ad-KLF2 or Ad-KLF4, and RNA was collected 48 hours after adenoviral transfection without IL-1 $\beta$  stimulation (n=5). mRNA levels are expressed as means  $\pm$  SE, relative to Ad-EGFP. \*P<0.05, \*\*P<0.01 versus Ad-EGFP, paired t-test in (A and B), and Dunnett's test in (C). Results of one-way mixed-effects ANOVA test are shown in supplementary table 2.



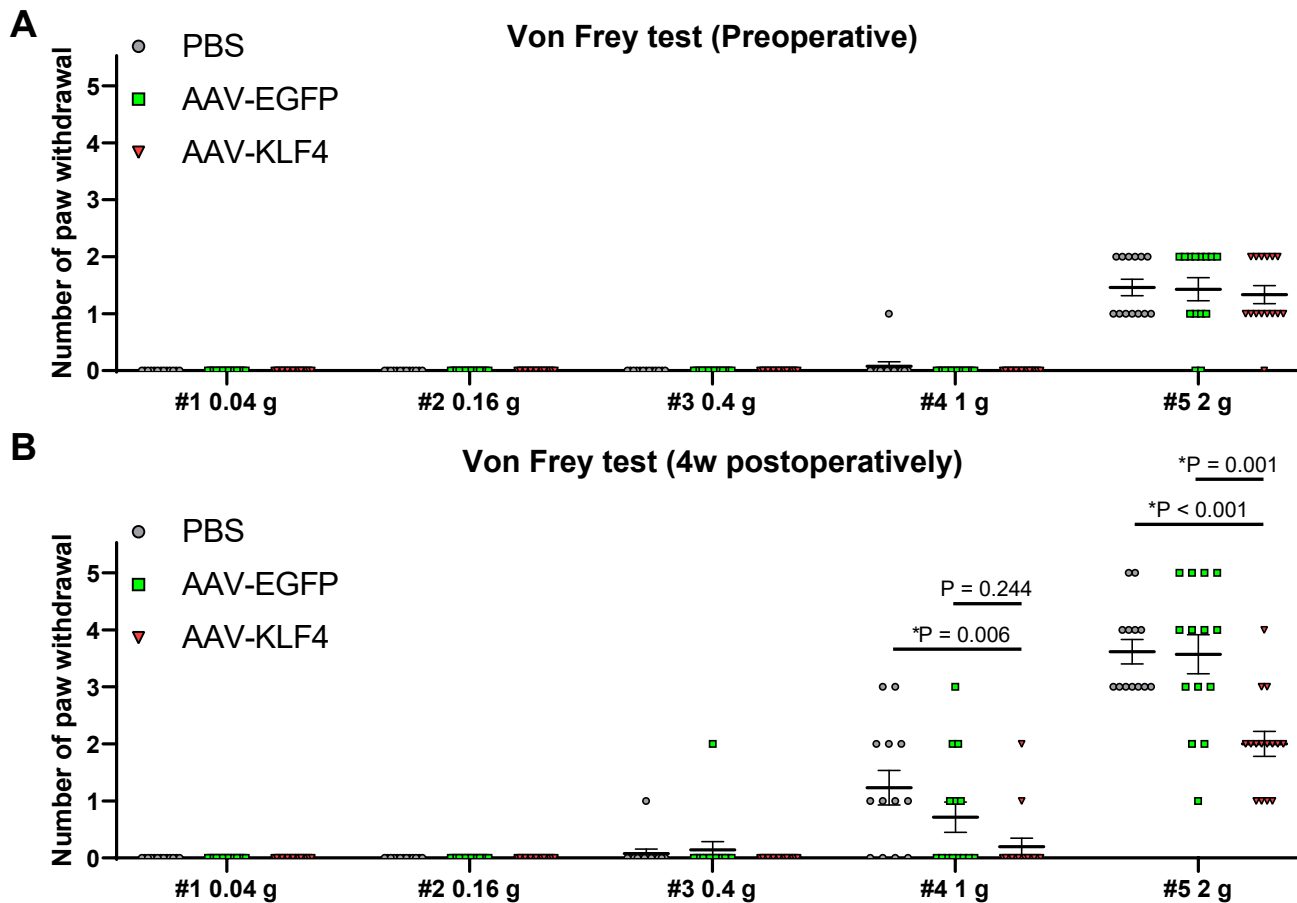
**Supplementary figure 15. Regulation of inflammatory and catabolic genes by KLF4 and KLF2 in human meniscal cells.** (A) Related to the experiments with IL-1 $\beta$  stimulation in figure 4B, expression levels of *KLF2* and *KLF4* are shown (n=4). (B and C) Cells were transfected with Ad-EGFP, Ad-KLF2 or Ad-KLF4, and RNA was collected 48 hours after adenoviral transfection without IL-1 $\beta$  stimulation. mRNA levels are expressed as means  $\pm$  SE, relative to Ad-EGFP (n=4). \*P<0.05, \*\*P<0.01 versus Ad-EGFP, paired t-test in (A and B), and Dunnett's test in (C). Results of one-way mixed-effects ANOVA test are shown in supplementary table 2.



**Supplementary figure 16. Regulation of inflammatory and catabolic genes by KLF4 and KLF2 in human synoviocytes.** (A) Related to the experiments with IL-1 $\beta$  stimulation in figure 4C, expression levels of *KLF2* and *KLF4* are shown (n=3). (B and C) Cells were transfected with Ad-EGFP, Ad-KLF2 or Ad-KLF4, and RNA was collected 48 hours after adenoviral transfection without IL-1 $\beta$  stimulation. mRNA levels are expressed as means  $\pm$  SE, relative to Ad-EGFP (n=3). \*P<0.05, \*\*P<0.01 versus Ad-EGFP, paired t-test in (A and B), and Dunnett's test in (C). Results of one-way mixed-effects ANOVA test are shown in supplementary table 2.

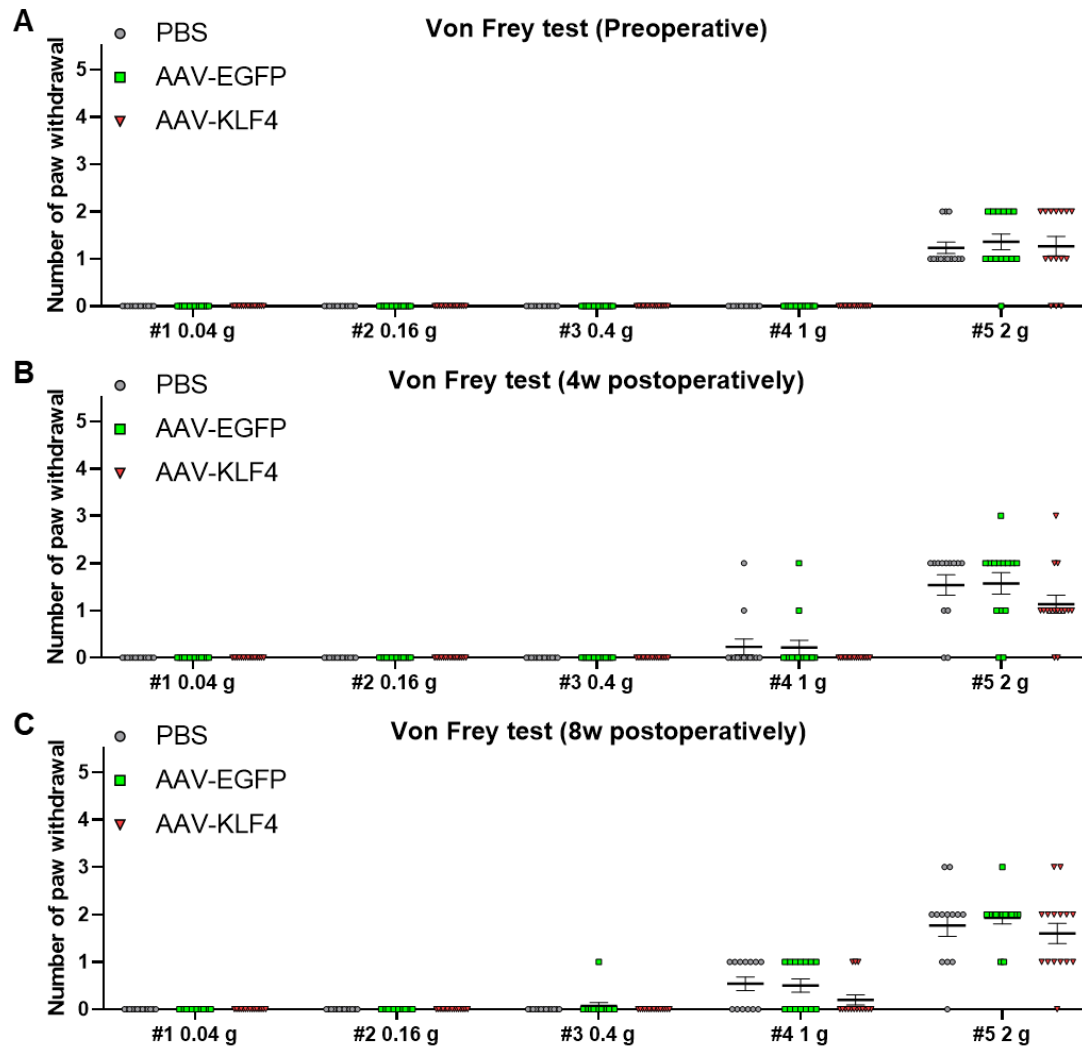


**Supplementary figure 17. Expression levels AAV-KLF4 and AAV-EGFP injection into mouse knee joints.** (A) RNA was collected from cartilage, meniscus and synovium from 12-week-old mouse knee joints one week after AAV-EGFP or -KLF4 injection (n=5 per group), and expression levels of human *KLF4* in each tissue were measured. mRNA levels are relative to AAV-KLF4 injected cartilage. \*adjusted  $P < 0.05$ , \*\*adjusted  $P < 0.01$ , unpaired Welch's t-test with Holm-Sidak's correction. (B) Immunofluorescence of GFP with nuclear staining by Hoechst 33342 in 12-week-old mouse knee joints one week after AAV-EGFP injection. Representative images from n=5 are shown. Scale bars, 100  $\mu\text{m}$ .

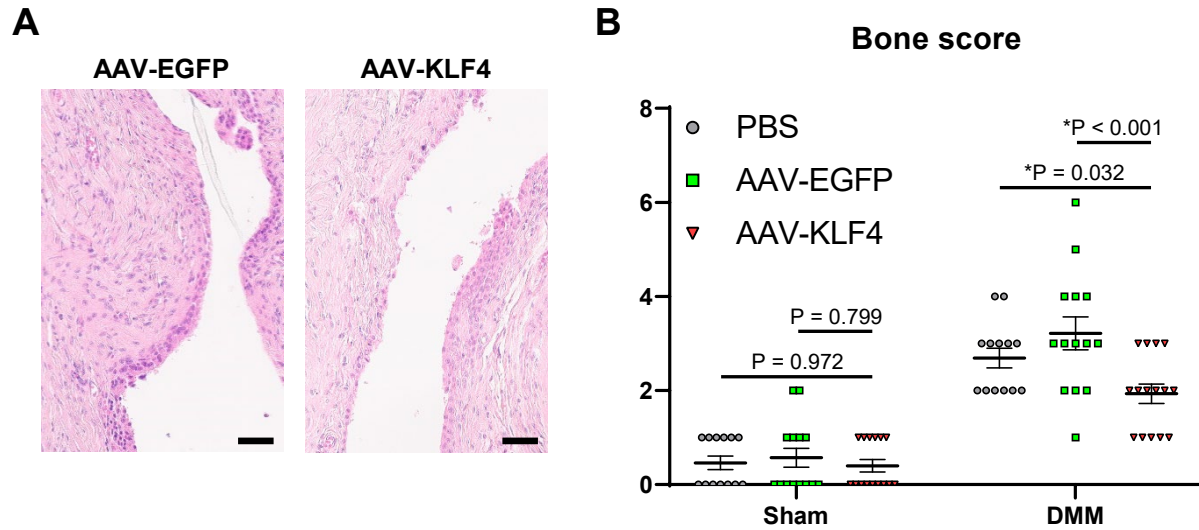


**Supplementary figure 18. Von Frey test in mice with DMM surgery after AAV injection.** (A and B) Related to the experiments in figure 5B, results of von Frey test preoperatively (A) and at 4 weeks postoperatively (B) in mice with DMM surgery are shown. Numbers of paw withdrawal from 5 stimuli per filament per mouse are expressed as means  $\pm$  SE. \*P<0.05 versus AAV-KLF4, Dunn's test. Results of Kruskal-Wallis test are shown in supplementary table 2.

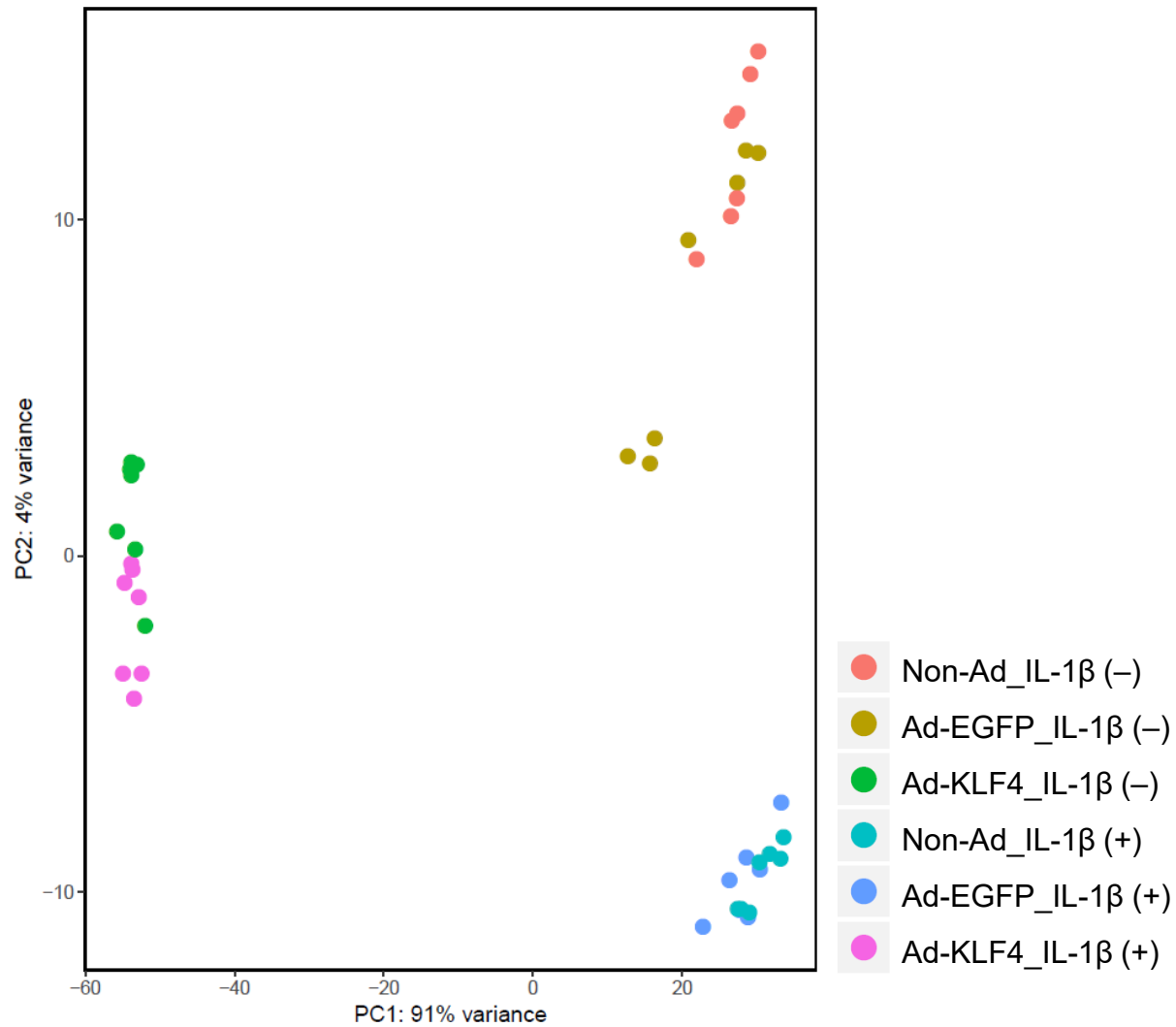




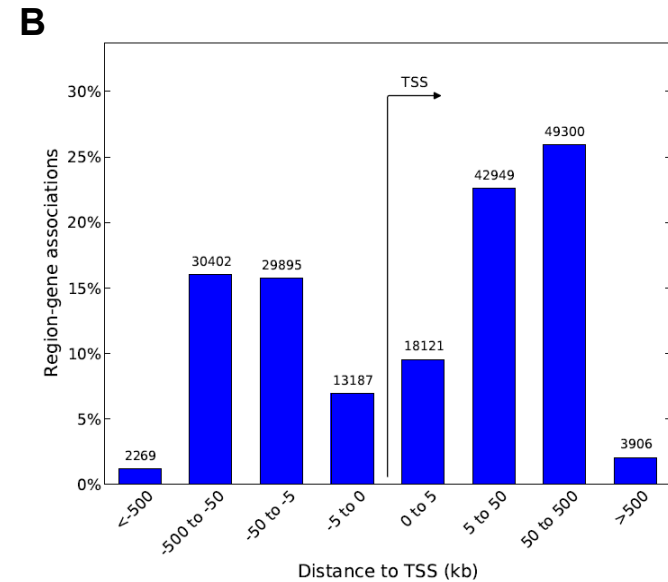
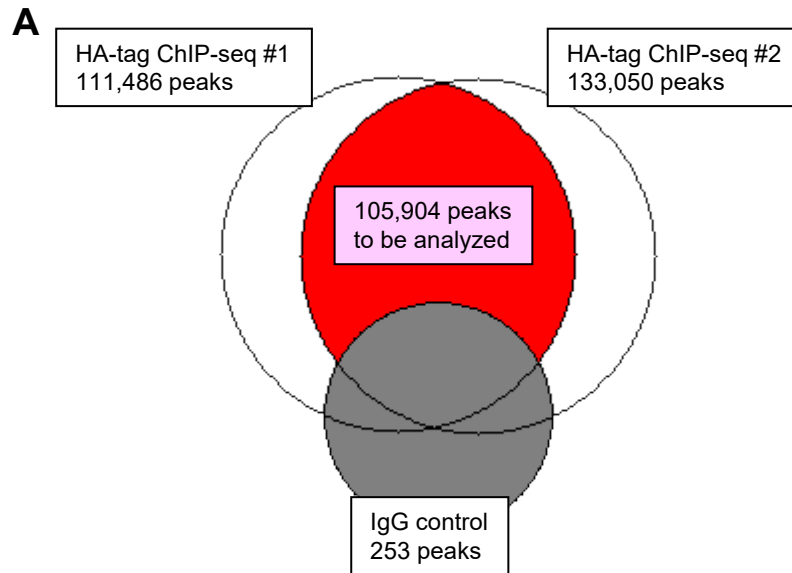
**Supplementary figure 19. Von Frey test in mice with sham surgery after AAV injection.** Related to the experiments in figure 5B, results of von Frey test preoperatively (A), at 4 weeks postoperatively (B), and at 8 weeks postoperatively (C) in mice with sham surgery are shown. Numbers of paw withdrawal from 5 stimuli per filament per mouse are expressed as means  $\pm$  SE. Results of Kruskal-Wallis test are shown in supplementary table 2.



**Supplementary figure 20. Histological evaluation of mice knee samples after AAV injection.** (A) Representative hematoxylin and eosin staining images of the synovium from AAV-EGFP- and AAV-KLF4-injected knee joints with DMM surgery. Scale bars, 50  $\mu$ m. (B) Bone scores.  $*P < 0.05$  versus AAV-KLF4, Dunnett's test. All quantitative data are expressed as means  $\pm$  SE, and results of two-way ANOVA test are shown in supplementary table 2.



**Supplementary figure 21. Principal component analysis for DRUG-seq data from Ad-KLF4-, Ad-EGFP- and non-transduced (Non-Ad) TC28a2 cells.** In samples with IL-1 $\beta$  stimulation, cells were treated with 10 ng/ml of IL-1 $\beta$  for 6 hours before RNA collection. PC1, the first principal component; PC2, the second principal component.

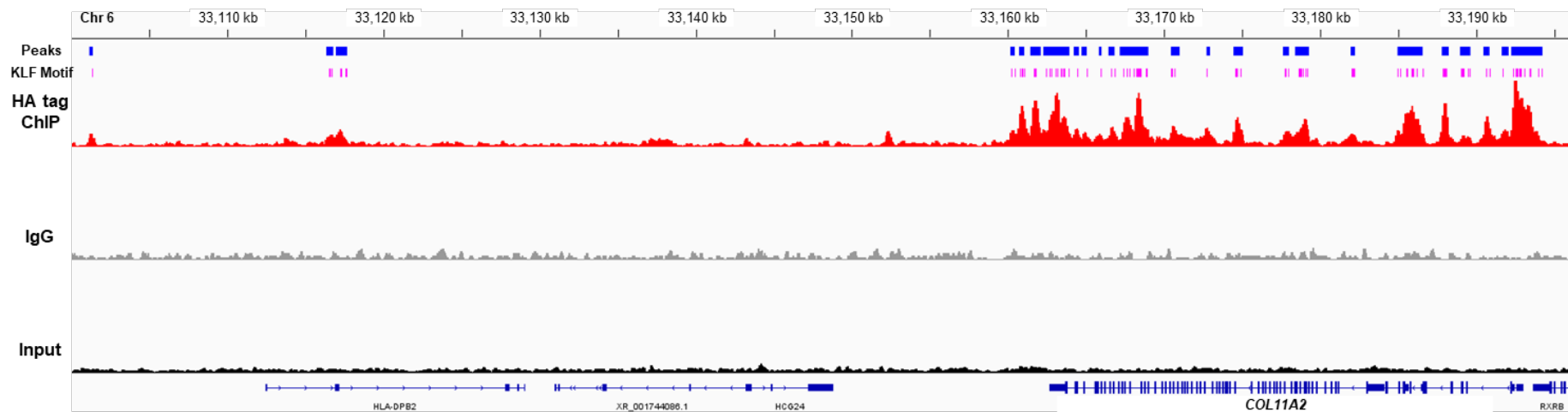


**Supplementary figure 22. Summary of ChIP-seq peaks.** (A) There were 111,486 and 133,050 peaks detected in the two independent replicates of ChIP-seq samples from HA-KLF4 transfected cells. The peaks were intersected between the replicates, and peaks common between ChIP-seq samples and an IgG control sample were excluded from further analyses. (B) Distribution of peaks relative to the transcriptional start sites (TSSs) is shown. The y-axis represents the percentage of peaks in each distance category; peak counts are indicated on each bar.

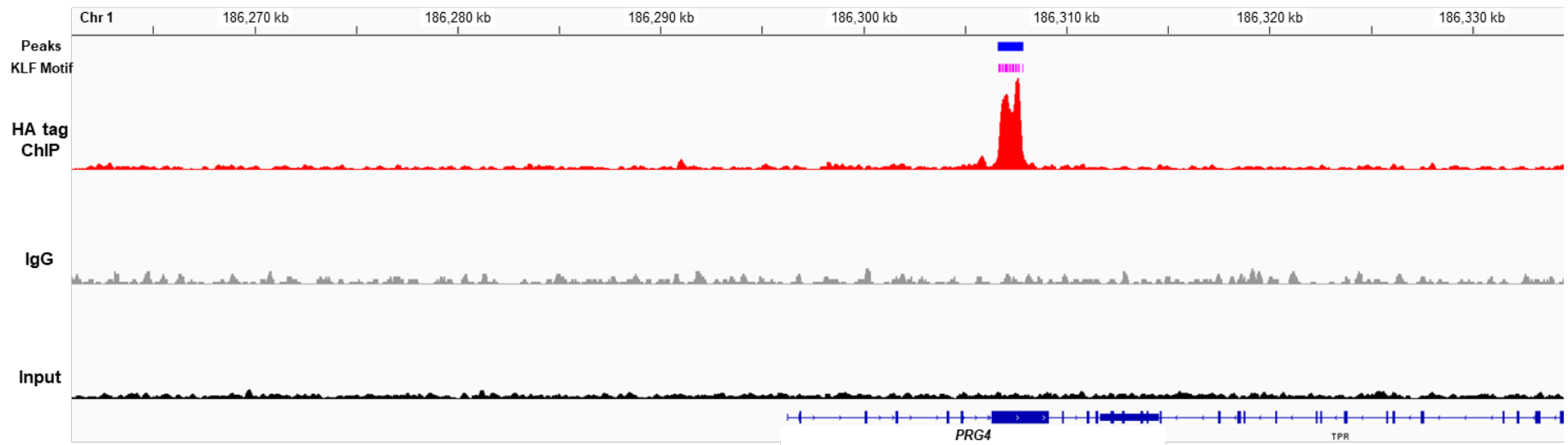
Rank	Motif	P-value	
1		1e-652	KLF
2		1e-134	FRA
3		1e-42	MAZ
4		1e-39	SP
5		1e-31	PABPN1
6		1e-29	ABI3
7		1e-27	THAP1
8		1e-26	ZNF
9		1e-23	CEBP
10		1e-22	TEAD
11		1e-22	ZSCAN
12		1e-21	MAD
13		1e-20	PHD
14		1e-20	SRSF
15		1e-19	TBX

Rank	Motif	P-value	
16		1e-19	HUR
17		1e-18	SPI
18		1e-18	ATF3
19		1e-17	ATF4
20		1e-16	RBM5
21		1e-16	SPL
22		1e-16	GATA
23		1e-15	MITF
24		1e-14	MZF1
25		1e-13	GFI1
26		1e-13	LIN
27		1e-13	HUR
28		1e-12	AZF
29		1e-12	MYB

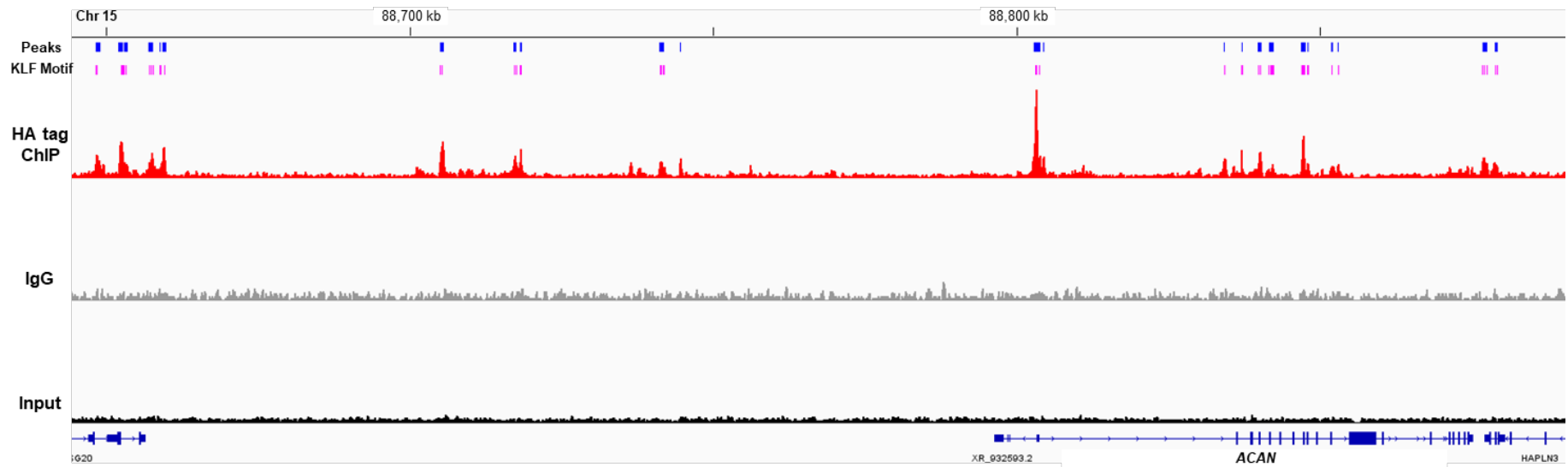
**Supplementary figure 23. Summary of motifs recovered from ChIP-seq peaks.** The motif logos display nucleotide frequencies (scaled relative to the information content) at each position.



**Supplementary figure 24. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *COL11A2* gene.** Blue bars indicate peak regions that were putative regulatory domains of *COL11A2* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.

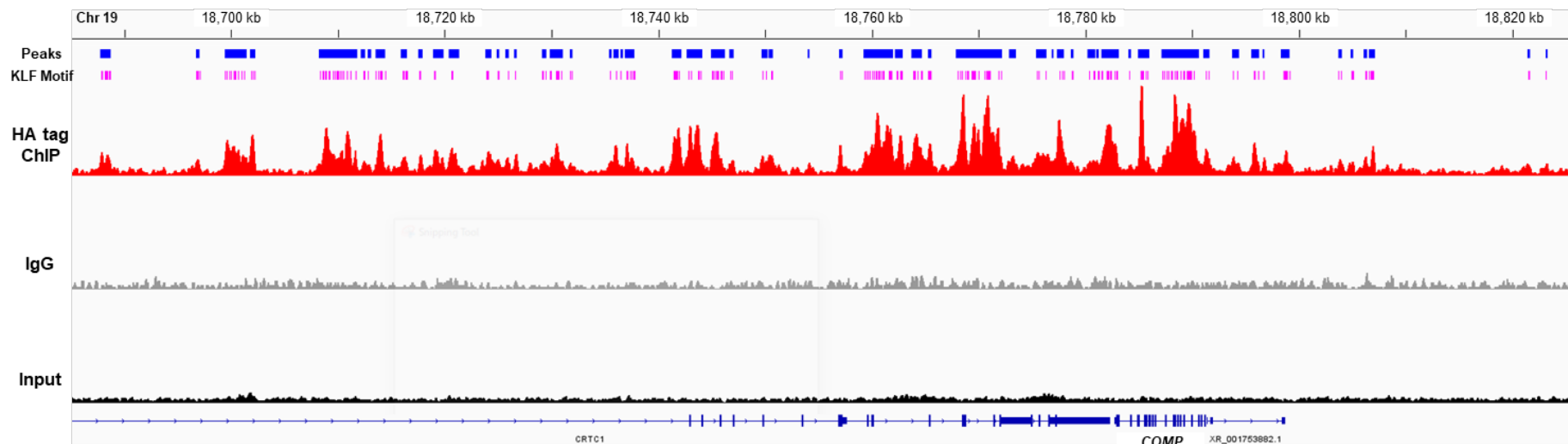


**Supplementary figure 25. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *PRG4* gene.** A blue bar indicates a peak region that was a putative regulatory domain of *PRG4* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.

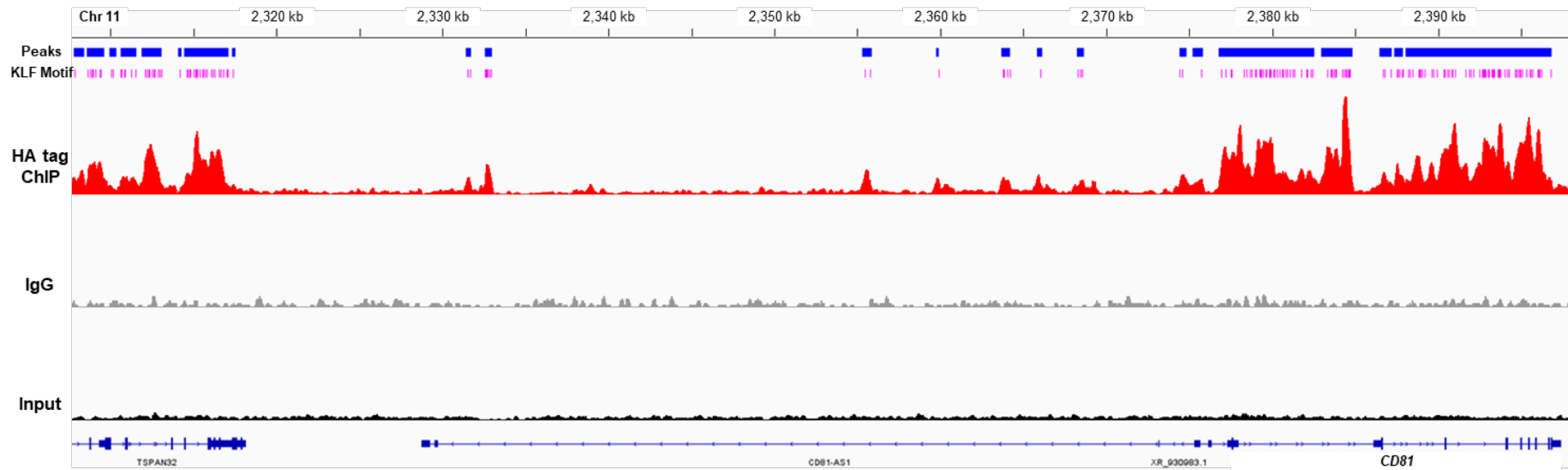


**Supplementary figure 26. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *ACAN* gene.** Blue bars indicate peak regions that were putative regulatory domains of *ACAN* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.

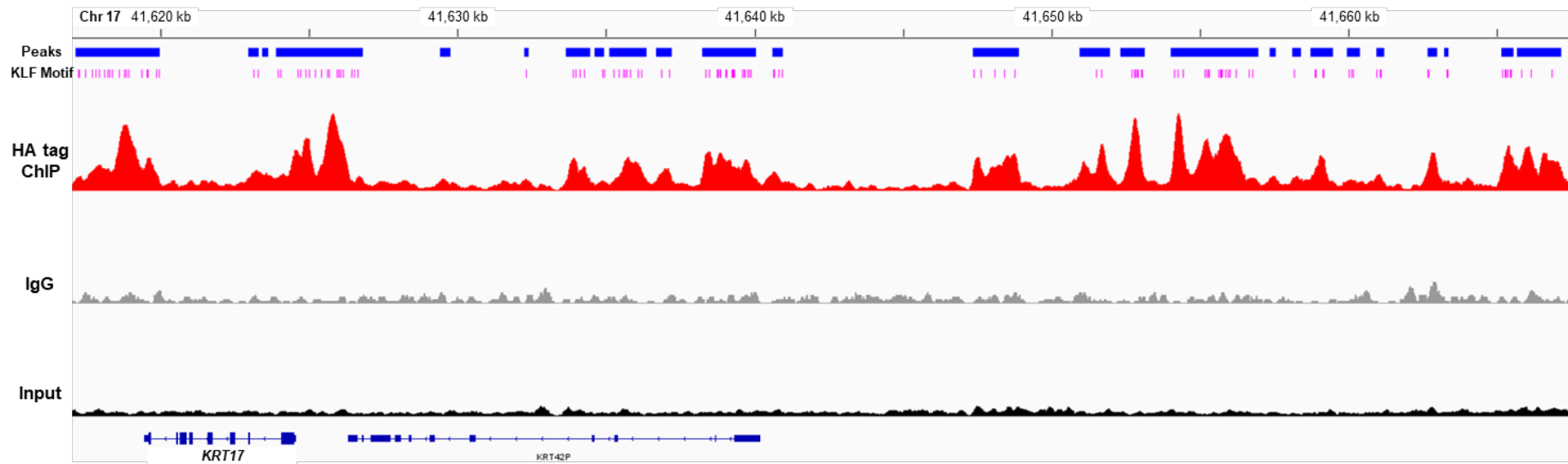




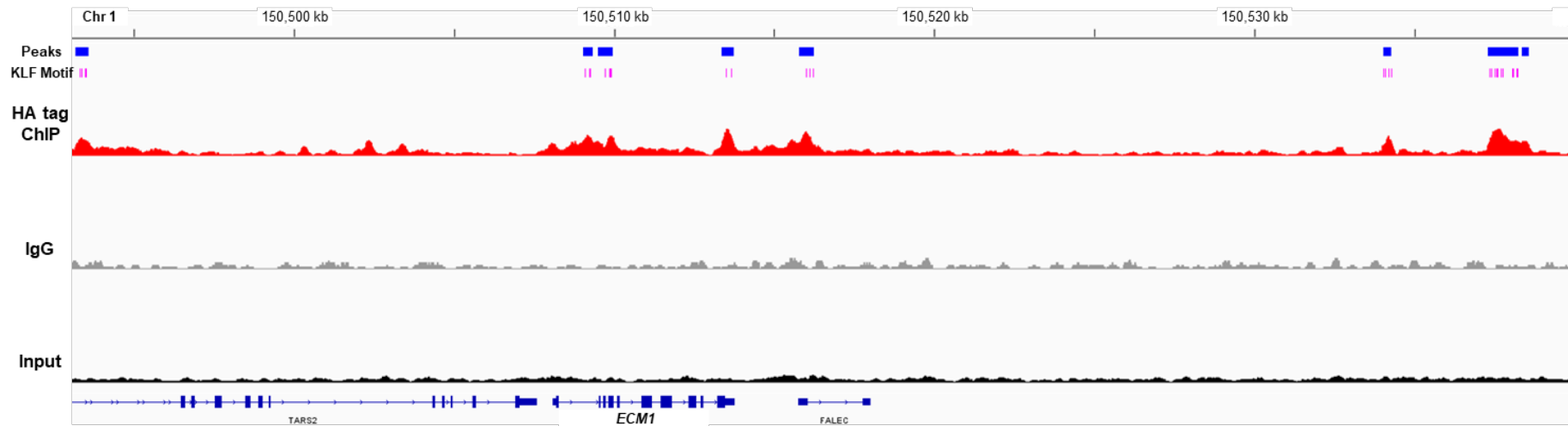
**Supplementary figure 27. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *COMP* gene.** Blue bars indicate peak regions that were putative regulatory domains of *COMP* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.



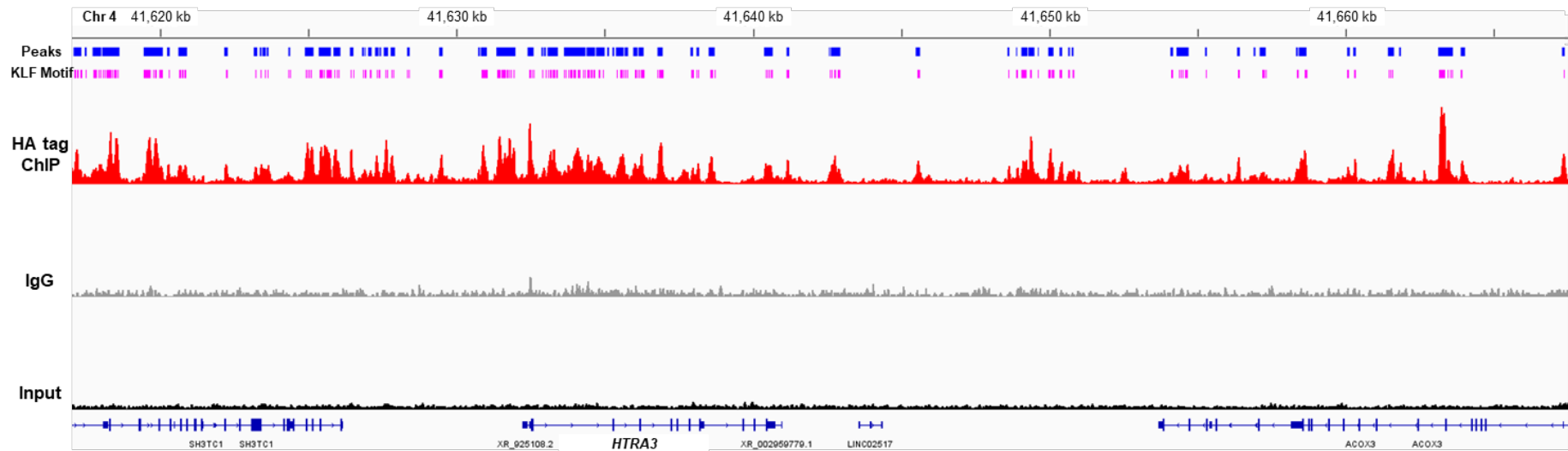
**Supplementary figure 28. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *CD81* gene.** Blue bars indicate peak regions that were putative regulatory domains of *CD81* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.



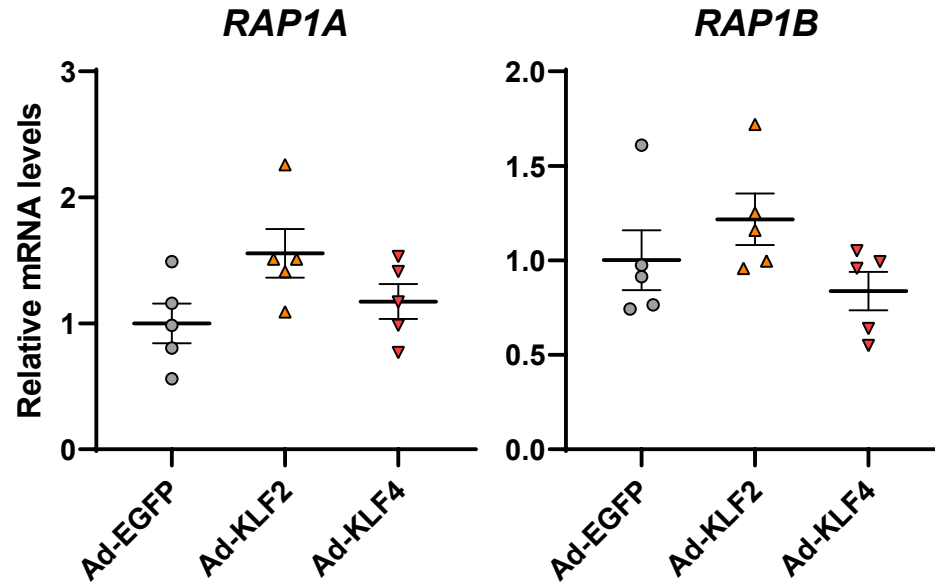
**Supplementary figure 29. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *KRT17* gene.** Blue bars indicate peak regions that were putative regulatory domains of *KRT17* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.



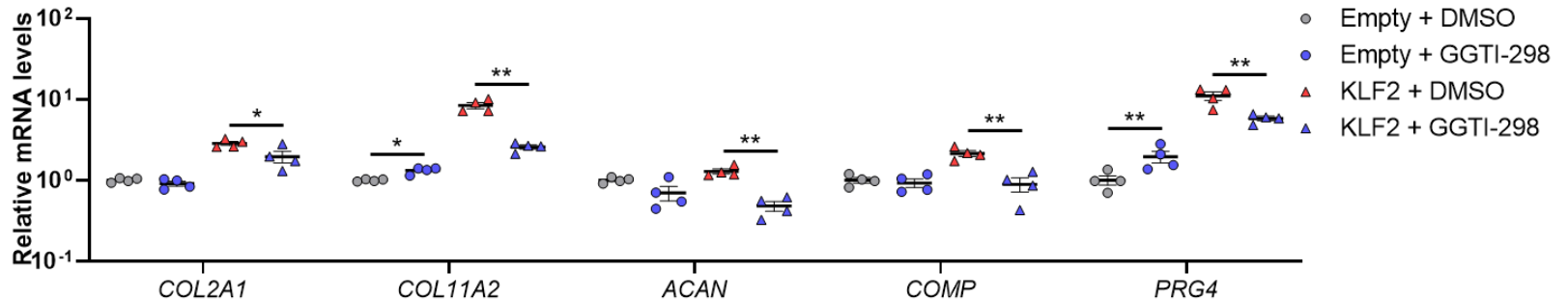
**Supplementary figure 30. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *ECM1* gene.** Blue bars indicate peak regions that were putative regulatory domains of *ECM1* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.



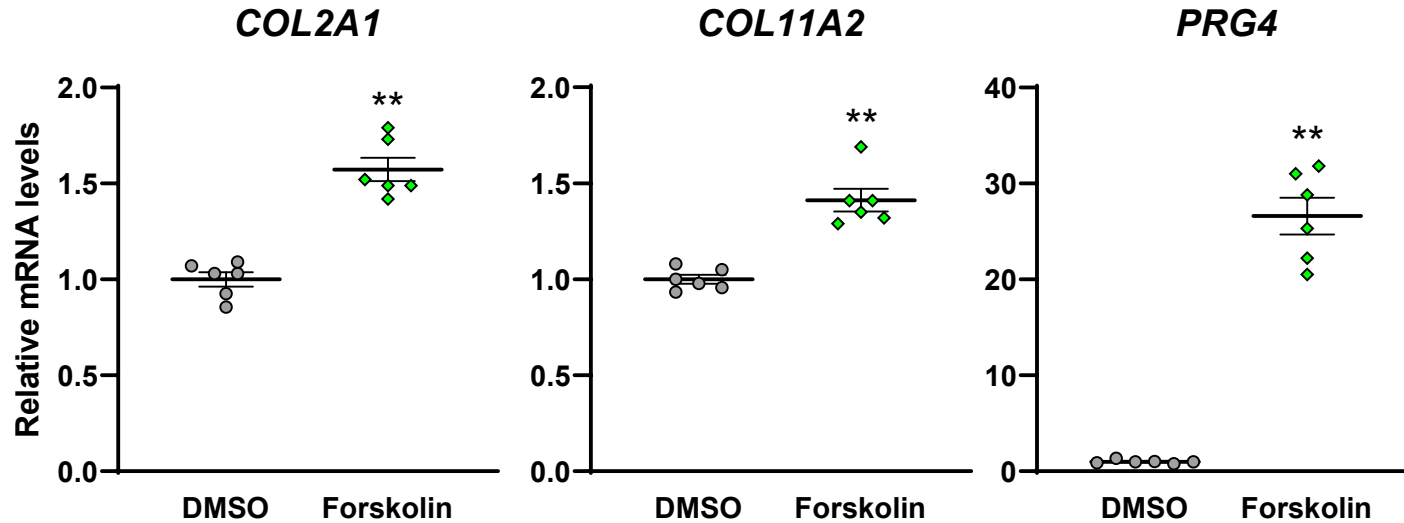
**Supplementary figure 31. Visualization of aligned reads for HA tag ChIP-seq, IgG and input samples around the *HTRA3* gene.** Blue bars indicate peak regions that were putative regulatory domains of *HTRA3* and common between the replicates of ChIP samples. Pink bars show the predicted sites of the recovered KLF motif which were located within the peak regions.



**Supplementary figure 32. Expression levels of *RAP1A* and *RAP1B* in KLF2- and KLF4-transduced human OA chondrocytes.** Cells were transfected with Ad-EGFP, Ad-KLF2 or Ad-KLF4, and RNA was collected 48 hours after transfection (n=5). mRNA levels are expressed as means  $\pm$  SE, relative to Ad-EGFP. Results of one-way mixed-effects ANOVA test are shown in supplementary table 2.

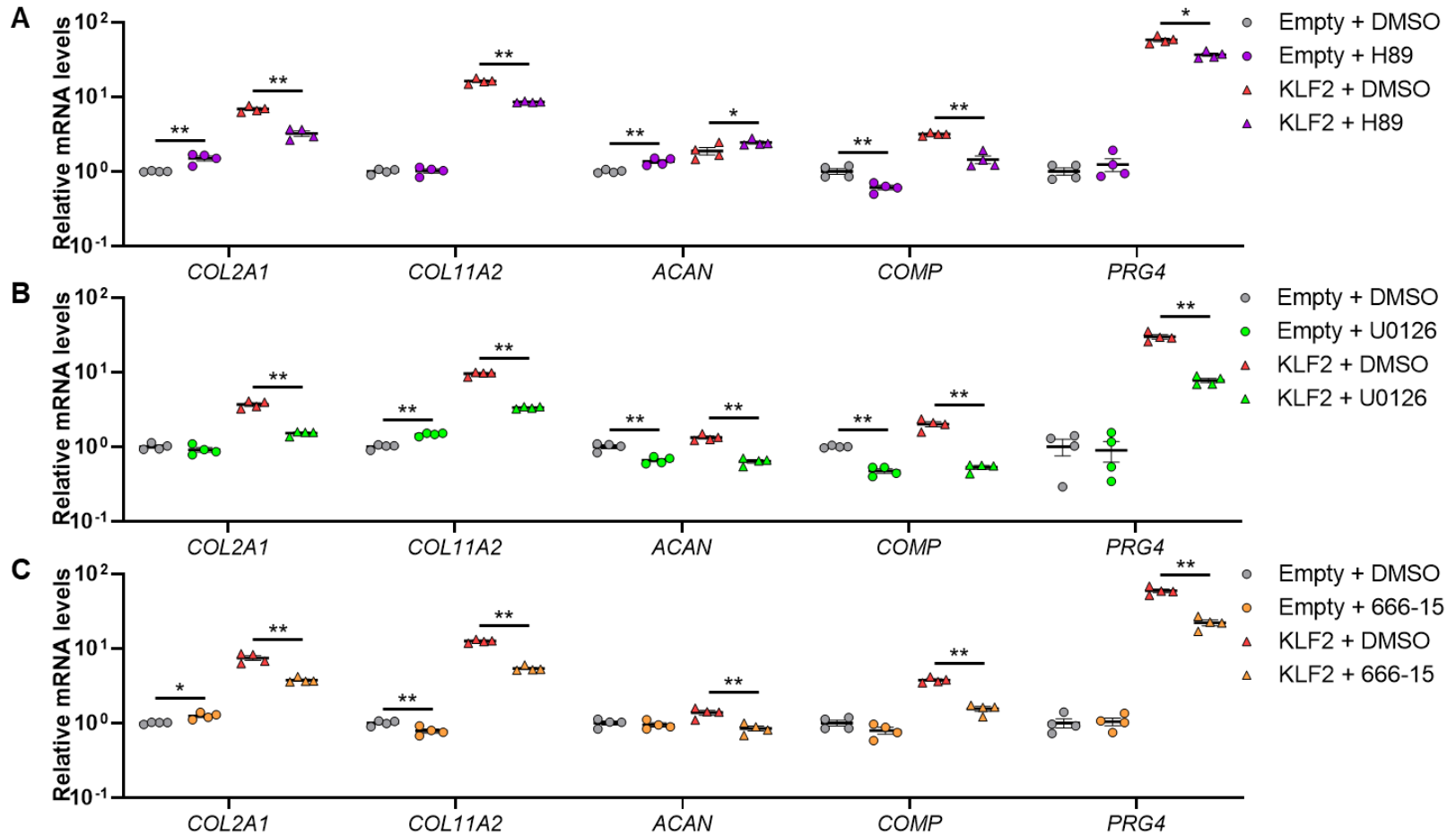


**Supplementary figure 33. KLF2 regulation of chondrogenic genes through RAP1 signaling pathway.** Related to the experiments in figure 8A, TC28a2 cells were transfected with an expression vector encoding KLF2 or an empty vector. Then, cells were treated with GGTI-298 or DMSO. RNA was collected 48 hours after transfection (n=4 from four independent experiments). mRNA levels are expressed as means  $\pm$  SE, relative to empty vector-transfected samples with DMSO as controls. \*P<0.05, \*\*P<0.01, Sidak's multiple comparison test. Results of two-way mixed-effects ANOVA test are shown in supplementary table 2.

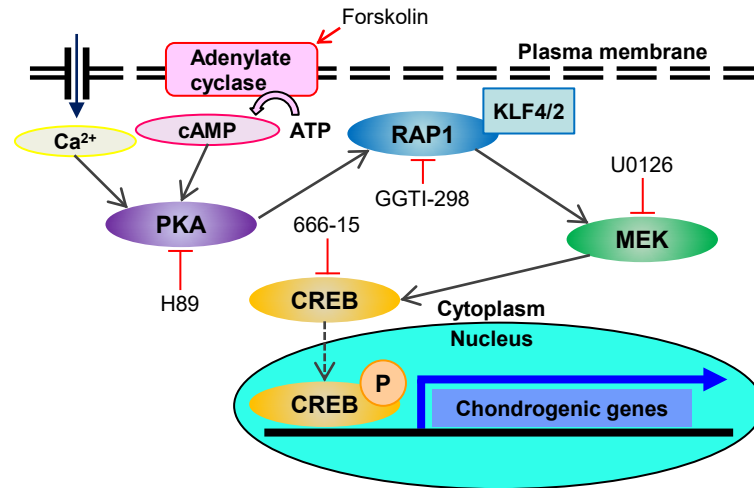


**Supplementary figure 34. Expression levels of cartilage ECM genes in forskolin-treated TC28a2 cells.** Cells were treated with forskolin, and RNA was collected 48 hours after initiation of treatment. mRNA levels are expressed as means  $\pm$  SE, relative to DMSO (n=6 from six independent experiments). \*P<0.05, \*\*P<0.01 versus DMSO, paired t-test.





**Supplementary figure 35. KLF2 regulation of chondrogenic genes through RAP1-related signaling axis.** Related to the experiments in figure 8B–8D, TC28a2 cells were transfected with an expression vector encoding KLF2 or an empty vector. Then, cells were treated with H89 (A), U0126 (B) or 666-15 (C), or DMSO. RNA was collected 48 hours after transfection (n=4 from four independent experiments). mRNA levels are expressed as means  $\pm$  SE, relative to empty vector-transfected samples with DMSO as controls. \*P<0.05, \*\*P<0.01, Sidak's multiple comparison test. Results of two-way mixed-effects ANOVA test are shown in supplementary table 2.



**Supplementary figure 36. A putative model of KLF4 and KLF2 regulation through the PKA (protein kinase A)-RAP1-MEK (mitogen-activated protein kinase kinase)-CREB (cyclic AMP [cAMP] response element-binding protein) signaling axis.**

**Supplementary table 1. Expression of KLF family genes in normal and OA human knee cartilage tissues.**

Gene	Log2(CPM)		FDR
	Normal	OA	
<i>KLF2</i>	6.15	3.90	7.17E-07*
<i>KLF3</i>	5.81	6.22	4.24E-01
<i>KLF4</i>	8.39	6.73	2.85E-07*
<i>KLF5</i>	4.75	2.95	1.12E-06*
<i>KLF6</i>	7.00	7.26	1.37E-01
<i>KLF7</i>	4.55	4.92	4.04E-01
<i>KLF8</i>	4.21	3.83	2.40E-01
<i>KLF9</i>	8.73	6.85	3.23E-06*
<i>KLF10</i>	8.06	5.74	1.59E-11*
<i>KLF11</i>	4.86	3.56	1.10E-07*
<i>KLF12</i>	5.75	5.69	8.98E-01
<i>KLF13</i>	5.89	5.78	6.60E-01
<i>KLF15</i>	6.99	5.16	1.15E-04*
<i>KLF16</i>	2.42	3.22	1.09E-01

*CPM* counts per million reads mapped, *OA* osteoarthritis, *FDR* false discovery rate, \* <0.05

**Supplementary table 2. Results of omnibus tests for multiple comparisons in each figure.**

Figure		Test		P-value
Figure 1A	<i>COL2A1</i>	One-way mixed-effects ANOVA		< 0.001
	<i>COL11A2</i>	One-way mixed-effects ANOVA		< 0.001
	<i>PRG4</i>	One-way mixed-effects ANOVA		< 0.001
Figure 1E	<i>Klf4</i>	Welch's ANOVA		< 0.001
	<i>Klf2</i>	Welch's ANOVA		< 0.001
Figure 2D	OARSI score	Two-way ANOVA	Surgery	< 0.001
			Genotype	0.007
			Interaction	0.027
Figure 2E	Meniscus score	Two-way ANOVA	Surgery	< 0.001
			Genotype	0.001
			Interaction	0.586
Figure 2F	Synovitis score	Two-way ANOVA	Surgery	< 0.001
			Genotype	0.011
			Interaction	0.011
Figure 4A	<i>IL6</i>	One-way mixed-effects ANOVA		< 0.001
	<i>MMP3</i>	One-way mixed-effects ANOVA		< 0.001
	<i>NOS2</i>	One-way mixed-effects ANOVA		< 0.001
	<i>PTGS2</i>	One-way mixed-effects ANOVA		0.015
	<i>ADAMTS5</i>	One-way mixed-effects ANOVA		0.002
	<i>MMP13</i>	One-way mixed-effects ANOVA		< 0.001
Figure 4B	<i>IL6</i>	One-way mixed-effects ANOVA		0.002
	<i>MMP3</i>	One-way mixed-effects ANOVA		0.001
	<i>NOS2</i>	One-way mixed-effects ANOVA		0.059
	<i>PTGS2</i>	One-way mixed-effects ANOVA		< 0.001
	<i>ADAMTS5</i>	One-way mixed-effects ANOVA		< 0.001
	<i>MMP13</i>	One-way mixed-effects ANOVA		0.009
Figure 4C	<i>IL6</i>	One-way mixed-effects ANOVA		0.004
	<i>MMP3</i>	One-way mixed-effects ANOVA		0.003
	<i>PTGS2</i>	One-way mixed-effects ANOVA		< 0.001
	<i>ADAMTS5</i>	One-way mixed-effects ANOVA		0.009
	<i>MMP13</i>	One-way mixed-effects ANOVA		0.008
Figure 5C	#2 0.16 g	Kruskal-Wallis		0.102
	#3 0.4 g	Kruskal-Wallis		0.005
	#4 1 g	Kruskal-Wallis		< 0.001
	#5 2 g	Kruskal-Wallis		< 0.001
Figure 5E	OARSI score	Two-way ANOVA	Surgery	< 0.001
			Treatment	0.005
			Interaction	0.001

Figure 5F	Meniscus score	Two-way ANOVA	Surgery	< 0.001
			Treatment	< 0.001
			Interaction	< 0.001
Figure 5G	Synovitis score	Two-way ANOVA	Surgery	< 0.001
			Treatment	0.008
			Interaction	0.017
Figure 8A	COL2A1	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.002
		Two-way mixed-effects ANOVA	Interaction	< 0.001
	COL11A2	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	< 0.001
	ACAN	Two-way mixed-effects ANOVA	Vector	0.250
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	0.012
	COMP	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	< 0.001
	PRG4	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.068
		Two-way mixed-effects ANOVA	Interaction	< 0.001
Figure 8B	COL2A1	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.002
		Two-way mixed-effects ANOVA	Interaction	< 0.001
	COL11A2	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	< 0.001
	ACAN	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.014
		Two-way mixed-effects ANOVA	Interaction	0.054
	COMP	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	0.005
	PRG4	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.006
		Two-way mixed-effects ANOVA	Interaction	< 0.001
Figure 8C	COL2A1	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	< 0.001
		Two-way mixed-effects ANOVA	Vector	< 0.001

	COL11A2	Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
		Two-way mixed-effects ANOVA	Interaction	< 0.001	
	ACAN	Two-way mixed-effects ANOVA	Vector	0.490	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
	COMP	Two-way mixed-effects ANOVA	Interaction	< 0.001	
		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
	PRG4	Two-way mixed-effects ANOVA	Interaction	< 0.001	
		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.011	
	Figure 8D	COL2A1	Two-way mixed-effects ANOVA	Interaction	0.912
			Two-way mixed-effects ANOVA	Vector	< 0.001
Two-way mixed-effects ANOVA			Inhibitor treatment	< 0.001	
COL11A2		Two-way mixed-effects ANOVA	Interaction	< 0.001	
		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
ACAN		Two-way mixed-effects ANOVA	Interaction	0.002	
		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
COMP		Two-way mixed-effects ANOVA	Interaction	0.004	
		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
PRG4		Two-way mixed-effects ANOVA	Interaction	< 0.001	
		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.015	
Supplementary figure 3		KLF4	Welch's ANOVA	Interaction	0.009
		KLF2	Welch's ANOVA	Vector	< 0.001
Supplementary figure 8		KLF2	One-way mixed-effects ANOVA	Interaction	< 0.001
	KLF4	One-way mixed-effects ANOVA	Interaction	< 0.001	
	COL2A1	One-way mixed-effects ANOVA	Interaction	< 0.001	
	COL11A2	One-way mixed-effects ANOVA	Interaction	0.008	
	PRG4	One-way mixed-effects ANOVA	Interaction	< 0.001	
	SOX9	One-way mixed-effects ANOVA	Interaction	< 0.001	
	IL6	One-way mixed-effects ANOVA	Interaction	< 0.001	
	MMP3	One-way mixed-effects ANOVA	Interaction	0.018	
	PTGS2	One-way mixed-effects ANOVA	Interaction	< 0.001	
	ADAMTS5	One-way mixed-effects ANOVA	Interaction	< 0.001	
	MMP13	One-way mixed-effects ANOVA	Interaction	< 0.001	
	Supplementary figure 9B			Surgery	< 0.001

	Bone score	Two-way ANOVA	Genotype	0.022
			Interaction	0.177
Supplementary figure 14C	<i>IL6</i>	One-way mixed-effects ANOVA		0.092
	<i>MMP3</i>	One-way mixed-effects ANOVA		0.267
	<i>ADAMTS5</i>	One-way mixed-effects ANOVA		0.007
	<i>MMP13</i>	One-way mixed-effects ANOVA		0.018
Supplementary figure 15C	<i>IL6</i>	One-way mixed-effects ANOVA		0.004
	<i>MMP3</i>	One-way mixed-effects ANOVA		0.040
	<i>ADAMTS5</i>	One-way mixed-effects ANOVA		0.005
	<i>MMP13</i>	One-way mixed-effects ANOVA		0.288
Supplementary figure 16C	<i>IL6</i>	One-way mixed-effects ANOVA		0.133
	<i>MMP3</i>	One-way mixed-effects ANOVA		0.344
	<i>ADAMTS5</i>	One-way mixed-effects ANOVA		0.016
	<i>MMP13</i>	One-way mixed-effects ANOVA		0.068
Supplementary figure 18A	#4 1 g	Kruskal-Wallis		0.328
	#5 2 g	Kruskal-Wallis		0.812
Supplementary figure 18B	#3 0.4 g	Kruskal-Wallis		0.566
	#4 1 g	Kruskal-Wallis		0.012
	#5 2 g	Kruskal-Wallis		< 0.001
Supplementary figure 19A	#5 2 g	Kruskal-Wallis		0.794
Supplementary figure 19B	#4 1 g	Kruskal-Wallis		0.301
	#5 2 g	Kruskal-Wallis		0.125
Supplementary figure 19C	#3 0.4 g	Kruskal-Wallis		0.368
	#4 1 g	Kruskal-Wallis		0.135
	#5 2 g	Kruskal-Wallis		0.436
Supplementary figure 20B	Bone score	Two-way ANOVA	Surgery	< 0.001
			Treatment	0.005
			Interaction	0.038
Supplementary figure 32	<i>RAP1A</i>	One-way mixed-effects ANOVA		0.102
	<i>RAP1B</i>	One-way mixed-effects ANOVA		0.056
Supplementary figure 33	<i>COL2A1</i>	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.016
		Two-way mixed-effects ANOVA	Interaction	0.097
	<i>COL11A2</i>	Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	< 0.001
	<i>ACAN</i>	Two-way mixed-effects ANOVA	Vector	0.732
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	0.039
		Two-way mixed-effects ANOVA	Vector	0.071

	<i>COMP</i>	Two-way mixed-effects ANOVA	Inhibitor treatment	0.009	
		Two-way mixed-effects ANOVA	Interaction	0.020	
	<i>PRG4</i>	Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.832	
		Two-way mixed-effects ANOVA	Interaction	< 0.001	
Supplementary figure 35A	<i>COL2A1</i>	Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.013	
		Two-way mixed-effects ANOVA	Interaction	< 0.001	
	<i>COL11A2</i>	Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
		Two-way mixed-effects ANOVA	Interaction	< 0.001	
	<i>ACAN</i>	Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.001	
		Two-way mixed-effects ANOVA	Interaction	0.837	
	<i>COMP</i>	Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
		Two-way mixed-effects ANOVA	Interaction	0.049	
	<i>PRG4</i>	Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.236	
		Two-way mixed-effects ANOVA	Interaction	0.016	
	Supplementary figure 35B	<i>COL2A1</i>	Two-way mixed-effects ANOVA	Vector	< 0.001
			Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
			Two-way mixed-effects ANOVA	Interaction	< 0.001
<i>COL11A2</i>		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
		Two-way mixed-effects ANOVA	Interaction	< 0.001	
<i>ACAN</i>		Two-way mixed-effects ANOVA	Vector	0.113	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
		Two-way mixed-effects ANOVA	Interaction	0.005	
<i>COMP</i>		Two-way mixed-effects ANOVA	Vector	0.003	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	
		Two-way mixed-effects ANOVA	Interaction	< 0.001	
<i>PRG4</i>		Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.003	
		Two-way mixed-effects ANOVA	Interaction	0.007	
Supplementary figure 35C		<i>COL2A1</i>	Two-way mixed-effects ANOVA	Vector	< 0.001
			Two-way mixed-effects ANOVA	Inhibitor treatment	0.002
			Two-way mixed-effects ANOVA	Interaction	< 0.001
	<i>COL11A2</i>	Two-way mixed-effects ANOVA	Vector	< 0.001	
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001	



		Two-way mixed-effects ANOVA	Interaction	< 0.001
<i>ACAN</i>		Two-way mixed-effects ANOVA	Vector	0.319
		Two-way mixed-effects ANOVA	Inhibitor treatment	0.001
		Two-way mixed-effects ANOVA	Interaction	0.002
<i>COMP</i>		Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	0.003
<i>PRG4</i>		Two-way mixed-effects ANOVA	Vector	< 0.001
		Two-way mixed-effects ANOVA	Inhibitor treatment	< 0.001
		Two-way mixed-effects ANOVA	Interaction	< 0.001

**Supplementary table 3. Significant URGs with versus without IL-1 $\beta$  stimulation in non-transduced samples.**

Gene ID	Gene name	Log2 FC	P value	FDR
ENSG00000124875	CXCL6	7.39E+00	2.01E-130	3.20E-126
ENSG00000112096	SOD2	4.50E+00	1.55E-106	1.24E-102
ENSG00000128342	LIF	3.77E+00	1.17E-98	6.23E-95
ENSG00000163739	CXCL1	9.33E+00	1.71E-84	6.80E-81
ENSG00000105835	NAMPT	2.18E+00	3.20E-84	1.02E-80
ENSG00000169429	CXCL8	9.82E+00	7.96E-79	2.11E-75
ENSG00000104635	SLC39A14	2.56E+00	5.10E-78	1.16E-74
ENSG00000145901	TNIP1	2.19E+00	5.87E-78	1.17E-74
ENSG00000124145	SDC4	2.32E+00	1.13E-73	2.00E-70
ENSG00000163661	PTX3	3.70E+00	6.86E-73	1.09E-69
ENSG00000108691	CCL2	4.48E+00	1.44E-71	2.09E-68
ENSG00000144802	NFKBIZ	3.12E+00	1.03E-70	1.37E-67
ENSG00000184254	ALDH1A3	2.14E+00	3.29E-69	4.03E-66
ENSG00000122641	INHBA	3.00E+00	7.91E-68	8.99E-65
ENSG00000145555	MYO10	1.89E+00	2.17E-65	2.30E-62
ENSG00000081041	CXCL2	5.75E+00	3.26E-64	3.24E-61
ENSG00000137745	MMP13	3.53E+00	8.33E-60	7.80E-57
ENSG00000108179	PPIF	1.83E+00	5.81E-59	5.14E-56
ENSG00000100906	NFKBIA	1.94E+00	7.82E-56	6.55E-53
ENSG00000090339	ICAM1	2.95E+00	1.41E-55	1.12E-52
ENSG00000163734	CXCL3	7.82E+00	7.84E-54	5.94E-51
ENSG00000162692	VCAM1	2.03E+00	6.19E-53	4.48E-50
ENSG00000136244	IL6	6.64E+00	7.23E-53	5.00E-50
ENSG00000114251	WNT5A	1.76E+00	2.61E-52	1.73E-49
ENSG00000185215	TNFAIP2	2.13E+00	3.46E-52	2.20E-49
ENSG00000118257	NRP2	3.37E+00	2.89E-51	1.77E-48
ENSG00000163874	ZC3H12A	2.96E+00	3.40E-49	2.00E-46
ENSG00000133657	ATP13A3	1.57E+00	9.15E-49	5.20E-46
ENSG00000095752	IL11	3.30E+00	1.86E-48	1.02E-45
ENSG00000108342	CSF3	1.14E+01	4.18E-48	2.22E-45
ENSG00000072274	TFRC	1.22E+00	1.37E-46	7.01E-44
ENSG00000128641	MYO1B	1.78E+00	2.36E-45	1.14E-42
ENSG00000128606	LRRC17	1.96E+00	5.38E-45	2.52E-42
ENSG00000073756	PTGS2	5.00E+00	1.53E-44	6.96E-42
ENSG00000173391	OLR1	5.94E+00	1.21E-43	5.34E-41
ENSG00000138685	FGF2	1.79E+00	6.07E-43	2.61E-40
ENSG00000147454	SLC25A37	1.76E+00	2.20E-41	9.21E-39
ENSG00000134070	IRAK2	2.75E+00	2.12E-40	8.64E-38
ENSG00000146457	WTAP	1.33E+00	3.14E-40	1.25E-37
ENSG00000105810	CDK6	1.91E+00	4.70E-40	1.82E-37
ENSG00000117228	GBP1	1.68E+00	2.64E-38	1.00E-35
ENSG00000028277	POU2F2	3.24E+00	9.63E-38	3.56E-35
ENSG00000157168	NRG1	2.34E+00	4.93E-37	1.78E-34

ENSG00000118503	TNFAIP3	2.94E+00	1.15E-36	4.06E-34
ENSG00000123610	TNFAIP6	2.89E+00	2.82E-36	9.77E-34
ENSG00000115758	ODC1	1.11E+00	4.35E-36	1.47E-33
ENSG00000197632	SERPINB2	9.33E+00	6.26E-35	2.03E-32
ENSG00000049249	TNFRSF9	3.12E+00	1.59E-34	5.06E-32
ENSG00000106366	SERPINE1	2.52E+00	1.67E-34	5.22E-32
ENSG00000056558	TRAF1	3.71E+00	5.55E-34	1.70E-31
ENSG00000134954	ETS1	1.55E+00	7.60E-34	2.28E-31
ENSG00000026508	CD44	2.61E+00	2.80E-33	8.26E-31
ENSG00000176597	B3GNT5	1.80E+00	3.41E-32	9.87E-30
ENSG00000133816	MICAL2	1.69E+00	4.29E-32	1.22E-29
ENSG00000170017	ALCAM	1.87E+00	5.99E-32	1.67E-29
ENSG00000034152	MAP2K3	1.16E+00	2.32E-31	6.38E-29
ENSG00000172156	CCL11	4.31E+00	4.75E-31	1.28E-28
ENSG00000113070	HBEGF	1.86E+00	5.68E-31	1.51E-28
ENSG00000109320	NFKB1	1.77E+00	2.63E-30	6.87E-28
ENSG00000077150	NFKB2	1.51E+00	5.21E-30	1.34E-27
ENSG00000070961	ATP2B1	1.10E+00	1.41E-29	3.51E-27
ENSG00000135919	SERPINE2	1.39E+00	2.40E-29	5.88E-27
ENSG00000125538	IL1B	7.03E+00	6.21E-29	1.48E-26
ENSG00000105974	CAV1	2.16E+00	9.16E-29	2.14E-26
ENSG00000114270	COL7A1	1.10E+00	3.17E-28	7.32E-26
ENSG00000057019	DCBLD2	1.06E+00	3.45E-27	7.72E-25
ENSG00000124102	PI3	8.41E+00	1.22E-26	2.66E-24
ENSG00000100234	TIMP3	1.80E+00	6.22E-26	1.34E-23
ENSG00000165732	DDX21	1.10E+00	5.04E-25	1.07E-22
ENSG00000105855	ITGB8	2.68E+00	1.42E-24	2.97E-22
ENSG00000101384	JAG1	1.20E+00	2.96E-24	6.13E-22
ENSG00000104419	NDRG1	1.59E+00	3.23E-24	6.59E-22
ENSG00000100739	BDKRB1	3.25E+00	3.50E-24	7.05E-22
ENSG00000116717	GADD45A	1.35E+00	3.65E-24	7.26E-22
ENSG00000164400	CSF2	6.56E+00	3.85E-24	7.57E-22
ENSG00000137331	IER3	2.46E+00	4.58E-24	8.89E-22
ENSG00000182752	PAPPA	2.75E+00	2.96E-22	5.61E-20
ENSG00000068366	ACSL4	1.05E+00	3.84E-22	7.20E-20
ENSG00000168398	BDKRB2	2.09E+00	5.00E-22	9.25E-20
ENSG00000102755	FLT1	2.01E+00	5.33E-22	9.75E-20
ENSG00000122591	FAM126A	1.24E+00	6.51E-22	1.18E-19
ENSG00000136048	DRAM1	1.20E+00	1.93E-21	3.46E-19
ENSG00000159200	RCAN1	1.71E+00	2.60E-21	4.59E-19
ENSG00000146648	EGFR	1.68E+00	7.42E-21	1.27E-18
ENSG00000196878	LAMB3	2.16E+00	8.85E-21	1.50E-18
ENSG00000132334	PTPRE	1.60E+00	3.14E-20	5.26E-18
ENSG00000130066	SAT1	1.93E+00	6.29E-20	1.04E-17
ENSG00000171763	SPATA5L1	1.68E+00	8.78E-20	1.44E-17

ENSG00000177311	ZBTB38	1.02E+00	5.51E-19	8.86E-17
ENSG00000137449	CPEB2	2.83E+00	9.57E-19	1.52E-16
ENSG00000115009	CCL20	7.38E+00	3.17E-18	5.00E-16
ENSG00000185022	MAFF	1.81E+00	3.27E-18	5.10E-16
ENSG00000168389	MFSD2A	1.38E+00	6.81E-18	1.04E-15
ENSG00000131435	PDLIM4	1.43E+00	1.01E-17	1.52E-15
ENSG00000225614	ZNF469	1.69E+00	4.12E-17	6.13E-15
ENSG00000167034	NKX3-1	1.59E+00	6.11E-17	8.93E-15
ENSG00000038382	TRIO	1.08E+00	6.38E-17	9.23E-15
ENSG00000092969	TGFB2	1.21E+00	9.04E-17	1.28E-14
ENSG00000137267	TUBB2A	1.21E+00	1.50E-16	2.10E-14
ENSG00000174136	RGMB	1.89E+00	1.58E-16	2.19E-14
ENSG00000177606	JUN	1.25E+00	2.71E-16	3.68E-14
ENSG00000104856	RELB	1.47E+00	2.73E-16	3.69E-14
ENSG00000166592	RRAD	1.37E+00	4.57E-16	5.91E-14
ENSG00000115594	IL1R1	1.50E+00	6.02E-16	7.67E-14
ENSG00000125730	C3	2.36E+00	6.50E-16	8.21E-14
ENSG00000128422	KRT17	1.76E+00	9.19E-16	1.15E-13
ENSG00000075426	FOSL2	1.21E+00	1.25E-15	1.55E-13
ENSG00000159399	HK2	2.04E+00	1.40E-15	1.71E-13
ENSG00000125266	EFNB2	1.51E+00	1.73E-15	2.09E-13
ENSG00000023445	BIRC3	2.51E+00	1.79E-15	2.12E-13
ENSG00000118515	SGK1	1.06E+00	1.87E-15	2.21E-13
ENSG00000125148	MT2A	2.47E+00	1.91E-15	2.24E-13
ENSG00000175592	FOSL1	1.63E+00	1.97E-15	2.29E-13
ENSG00000249992	TMEM158	1.99E+00	2.19E-15	2.52E-13
ENSG00000234883	MIR155HG	4.20E+00	3.89E-15	4.43E-13
ENSG00000157557	ETS2	1.65E+00	4.20E-15	4.74E-13
ENSG00000110330	BIRC2	1.28E+00	5.83E-15	6.53E-13
ENSG00000120149	MSX2	1.69E+00	7.41E-15	8.25E-13
ENSG00000039560	RAI14	1.03E+00	9.23E-15	1.02E-12
ENSG00000163347	CLDN1	4.06E+00	2.08E-14	2.26E-12
ENSG00000131459	GFPT2	1.18E+00	2.61E-14	2.80E-12
ENSG00000087510	TFAP2C	1.63E+00	4.80E-14	5.05E-12
ENSG00000143603	KCNN3	1.92E+00	4.82E-14	5.05E-12
ENSG00000107249	GLIS3	1.73E+00	5.80E-14	5.99E-12
ENSG00000041982	TNC	1.86E+00	8.93E-14	9.05E-12
ENSG00000107338	SHB	1.06E+00	1.01E-13	1.01E-11
ENSG00000150630	VEGFC	1.54E+00	1.34E-13	1.31E-11
ENSG00000125430	HS3ST3B1	2.65E+00	1.60E-13	1.53E-11
ENSG00000157654	PALM2-AKAP2	1.00E+00	1.59E-13	1.53E-11
ENSG00000156273	BACH1	1.00E+00	1.70E-13	1.62E-11
ENSG00000131979	GCH1	1.47E+00	4.36E-13	3.99E-11
ENSG00000166920	C15orf48	7.17E+00	6.77E-13	6.02E-11
ENSG00000085117	CD82	1.28E+00	8.34E-13	7.30E-11

ENSG00000115963	RND3	1.47E+00	1.11E-12	9.56E-11
ENSG00000163297	ANTXR2	1.67E+00	1.51E-12	1.29E-10
ENSG00000115363	EVA1A	2.77E+00	2.32E-12	1.97E-10
ENSG00000169594	BNC1	2.17E+00	3.31E-12	2.76E-10
ENSG00000108688	CCL7	4.16E+00	7.08E-12	5.72E-10
ENSG00000144749	LRIG1	1.06E+00	8.46E-12	6.80E-10
ENSG00000074416	MGLL	2.06E+00	8.97E-12	7.14E-10
ENSG00000173530	TNFRSF10D	1.20E+00	1.16E-11	9.06E-10
ENSG00000164251	F2RL1	2.17E+00	1.36E-11	1.06E-09
ENSG00000128567	PODXL	1.24E+00	1.85E-11	1.42E-09
ENSG00000103888	CEMIP	1.67E+00	1.87E-11	1.43E-09
ENSG00000104368	PLAT	1.26E+00	2.61E-11	1.96E-09
ENSG00000178860	MSC	1.34E+00	2.64E-11	1.97E-09
ENSG00000181649	PHLDA2	1.36E+00	3.23E-11	2.39E-09
ENSG00000182985	CADM1	1.14E+00	3.60E-11	2.65E-09
ENSG00000115756	HPCAL1	1.05E+00	4.29E-11	3.13E-09
ENSG00000197208	SLC22A4	2.06E+00	4.94E-11	3.59E-09
ENSG00000160326	SLC2A6	1.21E+00	5.44E-11	3.94E-09
ENSG00000163814	CDCP1	1.28E+00	6.10E-11	4.39E-09
ENSG00000115919	KYNU	3.90E+00	7.83E-11	5.56E-09
ENSG00000171724	VAT1L	1.49E+00	8.42E-11	5.93E-09
ENSG00000148848	ADAM12	1.06E+00	8.93E-11	6.23E-09
ENSG00000052749	RRP12	1.05E+00	1.03E-10	7.07E-09
ENSG00000171608	PIK3CD	1.97E+00	1.02E-10	7.07E-09
ENSG00000181634	TNFSF15	3.12E+00	1.03E-10	7.07E-09
ENSG00000020577	SAMD4A	1.38E+00	1.04E-10	7.11E-09
ENSG00000031081	ARHGAP31	1.54E+00	1.14E-10	7.70E-09
ENSG00000168685	IL7R	1.72E+00	1.56E-10	1.03E-08
ENSG00000197635	DPP4	1.75E+00	2.03E-10	1.31E-08
ENSG00000138623	SEMA7A	1.61E+00	2.16E-10	1.39E-08
ENSG00000166401	SERPINB8	2.22E+00	3.36E-10	2.13E-08
ENSG00000108700	CCL8	6.40E+00	4.16E-10	2.60E-08
ENSG00000162407	PLPP3	5.15E+00	4.33E-10	2.69E-08
ENSG00000166250	CLMP	1.03E+00	4.87E-10	2.99E-08
ENSG00000204131	NHSL2	2.81E+00	7.25E-10	4.29E-08
ENSG00000162645	GBP2	1.76E+00	7.30E-10	4.30E-08
ENSG00000165029	ABCA1	1.18E+00	7.88E-10	4.63E-08
ENSG00000159167	STC1	1.90E+00	8.53E-10	4.97E-08
ENSG00000123908	AGO2	1.01E+00	1.27E-09	7.23E-08
ENSG00000140379	BCL2A1	6.43E+00	1.29E-09	7.30E-08
ENSG00000008517	IL32	1.68E+00	1.34E-09	7.56E-08
ENSG00000154734	ADAMTS1	1.71E+00	1.49E-09	8.29E-08
ENSG00000149968	MMP3	5.01E+00	1.84E-09	9.99E-08
ENSG00000049192	ADAMTS6	1.37E+00	1.91E-09	1.03E-07
ENSG00000270069	MIR222HG	1.59E+00	2.28E-09	1.21E-07

ENSG00000157827	FMNL2	1.01E+00	2.68E-09	1.40E-07
ENSG00000173918	C1QTNF1	1.60E+00	2.98E-09	1.54E-07
ENSG00000232949	AC002480.2	5.27E+00	3.26E-09	1.68E-07
ENSG00000100985	MMP9	1.65E+00	3.49E-09	1.79E-07
ENSG00000116016	EPAS1	1.02E+00	4.15E-09	2.10E-07
ENSG00000146592	CREB5	2.18E+00	4.26E-09	2.14E-07
ENSG00000162552	WNT4	3.28E+00	4.27E-09	2.14E-07
ENSG00000155846	PPARGC1B	1.74E+00	4.65E-09	2.31E-07
ENSG00000187479	C11orf96	2.17E+00	5.37E-09	2.65E-07
ENSG00000145779	TNFAIP8	1.62E+00	5.56E-09	2.71E-07
ENSG00000122862	SRGN	1.45E+00	7.97E-09	3.79E-07
ENSG00000143067	ZNF697	1.23E+00	8.97E-09	4.21E-07
ENSG00000117597	UTP25	1.08E+00	1.19E-08	5.49E-07
ENSG00000139278	GLIPR1	1.48E+00	1.34E-08	6.07E-07
ENSG00000184545	DUSP8	1.17E+00	1.49E-08	6.73E-07
ENSG00000003402	CFLAR	1.00E+00	1.96E-08	8.71E-07
ENSG00000134259	NGF	2.41E+00	2.22E-08	9.60E-07
ENSG00000145819	ARHGAP26	1.14E+00	2.33E-08	1.00E-06
ENSG00000164171	ITGA2	1.44E+00	2.34E-08	1.01E-06
ENSG00000139289	PHLDA1	1.78E+00	2.38E-08	1.02E-06
ENSG00000011422	PLAUR	1.45E+00	2.40E-08	1.02E-06
ENSG00000179041	RRS1	1.18E+00	2.49E-08	1.06E-06
ENSG00000148926	ADM	1.27E+00	3.21E-08	1.33E-06
ENSG00000138835	RGS3	1.57E+00	3.87E-08	1.59E-06
ENSG00000164761	TNFRSF11B	1.90E+00	4.12E-08	1.68E-06
ENSG00000163638	ADAMTS9	5.55E+00	4.21E-08	1.71E-06
ENSG00000236453	AC003092.1	3.03E+00	4.97E-08	1.97E-06
ENSG00000182957	SPATA13	1.64E+00	5.71E-08	2.24E-06
ENSG00000107443	CCNJ	1.15E+00	6.50E-08	2.51E-06
ENSG00000113645	WWC1	1.39E+00	7.71E-08	2.92E-06
ENSG00000188064	WNT7B	2.11E+00	8.04E-08	3.02E-06
ENSG00000104951	IL4I1	2.71E+00	8.29E-08	3.10E-06
ENSG00000196581	AJAP1	4.73E+00	8.56E-08	3.17E-06
ENSG00000176907	TCIM	4.63E+00	8.59E-08	3.17E-06
ENSG00000065320	NTN1	1.08E+00	1.17E-07	4.20E-06
ENSG00000149948	HMGA2	1.88E+00	1.21E-07	4.32E-06
ENSG00000148841	ITPRIP	1.08E+00	1.34E-07	4.72E-06
ENSG00000117114	ADGRL2	2.29E+00	1.49E-07	5.22E-06
ENSG00000066583	ISOC1	1.18E+00	1.68E-07	5.83E-06
ENSG00000184441	AP001062.1	1.89E+00	1.72E-07	5.93E-06
ENSG00000121440	PDZRN3	1.26E+00	1.85E-07	6.32E-06
ENSG00000153823	PID1	1.96E+00	1.86E-07	6.33E-06
ENSG00000254087	LYN	1.19E+00	2.04E-07	6.91E-06
ENSG00000087494	PTHLH	2.59E+00	2.79E-07	9.15E-06
ENSG00000149289	ZC3H12C	1.38E+00	3.01E-07	9.79E-06

ENSG00000251194	AL133330.1	2.72E+00	4.52E-07	1.41E-05
ENSG00000144218	AFF3	3.10E+00	5.32E-07	1.62E-05
ENSG00000261327	AC134312.5	1.49E+00	1.07E-06	3.12E-05
ENSG00000010818	HIVEP2	1.02E+00	1.85E-06	5.04E-05
ENSG00000186340	THBS2	1.01E+00	2.20E-06	5.88E-05
ENSG00000019549	SNAI2	1.51E+00	2.42E-06	6.40E-05
ENSG00000271503	CCL5	4.08E+00	2.43E-06	6.41E-05
ENSG00000168917	SLC35G2	1.14E+00	2.53E-06	6.65E-05
ENSG00000148346	LCN2	3.88E+00	2.64E-06	6.87E-05
ENSG00000198121	LPAR1	1.29E+00	2.91E-06	7.53E-05
ENSG00000128274	A4GALT	1.05E+00	2.99E-06	7.71E-05
ENSG00000164619	BMPER	2.60E+00	4.46E-06	1.11E-04
ENSG00000124813	RUNX2	1.21E+00	5.18E-06	1.27E-04
ENSG00000133805	AMPD3	1.65E+00	5.26E-06	1.28E-04
ENSG00000139211	AMIGO2	1.20E+00	5.51E-06	1.33E-04
ENSG00000164164	OTUD4	1.09E+00	7.76E-06	1.80E-04
ENSG00000015475	BID	1.38E+00	9.14E-06	2.09E-04
ENSG00000123095	BHLHE41	1.06E+00	1.02E-05	2.28E-04
ENSG00000197646	PDCD1LG2	1.69E+00	1.02E-05	2.28E-04
ENSG00000102802	MEDAG	1.72E+00	1.05E-05	2.33E-04
ENSG00000163435	ELF3	2.18E+00	1.09E-05	2.40E-04
ENSG00000272168	CASC15	1.95E+00	1.15E-05	2.52E-04
ENSG00000162490	DRAXIN	1.33E+00	1.66E-05	3.46E-04
ENSG00000077238	IL4R	1.01E+00	1.69E-05	3.49E-04
ENSG00000272841	AL139393.3	1.13E+00	1.82E-05	3.74E-04
ENSG00000171451	DSEL	1.31E+00	1.87E-05	3.84E-04
ENSG00000232759	AC002480.1	1.89E+00	2.06E-05	4.16E-04
ENSG00000167191	GPRC5B	1.02E+00	2.20E-05	4.41E-04
ENSG00000173077	DEC1	2.49E+00	2.27E-05	4.52E-04
ENSG00000067798	NAV3	1.06E+00	2.64E-05	5.18E-04
ENSG00000237515	SHISA9	2.83E+00	2.66E-05	5.20E-04
ENSG00000102096	PIM2	1.15E+00	2.68E-05	5.24E-04
ENSG00000266709	AC005224.3	1.82E+00	2.97E-05	5.72E-04
ENSG00000152503	TRIM36	1.82E+00	3.03E-05	5.81E-04
ENSG00000162595	DIRAS3	2.29E+00	3.58E-05	6.74E-04
ENSG00000082397	EPB41L3	2.52E+00	3.63E-05	6.80E-04
ENSG00000135318	NT5E	1.39E+00	4.17E-05	7.66E-04
ENSG00000013619	MAMLD1	1.42E+00	4.39E-05	8.01E-04
ENSG00000248323	LUCAT1	2.36E+00	4.46E-05	8.10E-04
ENSG00000154133	ROBO4	2.17E+00	4.47E-05	8.11E-04
ENSG00000105971	CAV2	1.11E+00	4.88E-05	8.72E-04
ENSG00000102554	KLF5	1.98E+00	5.63E-05	9.87E-04
ENSG00000105825	TFPI2	1.43E+00	5.80E-05	1.01E-03
ENSG00000164181	ELOVL7	1.26E+00	6.09E-05	1.05E-03
ENSG00000169896	ITGAM	3.32E+00	6.09E-05	1.05E-03

ENSG00000265808	SEC22B	1.10E+00	6.17E-05	1.06E-03
ENSG00000171522	PTGER4	1.32E+00	6.30E-05	1.08E-03
ENSG00000144583	MARCH4	2.07E+00	6.95E-05	1.17E-03
ENSG00000099992	TBC1D10A	1.02E+00	7.02E-05	1.18E-03
ENSG00000198846	TOX	3.21E+00	7.56E-05	1.26E-03
ENSG00000129194	SOX15	3.58E+00	7.59E-05	1.26E-03
ENSG00000250519	AP002784.1	1.32E+00	8.47E-05	1.38E-03
ENSG00000272269	AL138724.1	1.33E+00	9.23E-05	1.48E-03
ENSG00000197442	MAP3K5	1.10E+00	9.50E-05	1.51E-03
ENSG00000163376	KBTBD8	1.92E+00	1.10E-04	1.70E-03
ENSG00000227507	LTB	4.22E+00	1.39E-04	2.06E-03
ENSG00000253522	MIR3142HG	5.08E+00	1.46E-04	2.15E-03
ENSG00000183287	CCBE1	1.42E+00	1.54E-04	2.24E-03
ENSG00000165685	TMEM52B	2.98E+00	1.57E-04	2.27E-03
ENSG00000123689	G0S2	2.84E+00	1.75E-04	2.47E-03
ENSG00000258102	MAP1LC3B2	2.41E+00	1.96E-04	2.71E-03
ENSG00000105088	OLFM2	1.94E+00	2.07E-04	2.83E-03
ENSG00000172738	TMEM217	1.50E+00	2.07E-04	2.83E-03
ENSG00000110042	DTX4	2.31E+00	2.19E-04	2.97E-03
ENSG00000143507	DUSP10	1.05E+00	2.21E-04	2.98E-03
ENSG00000206538	VGLL3	1.41E+00	2.45E-04	3.26E-03
ENSG00000148459	PDSS1	1.06E+00	2.61E-04	3.44E-03
ENSG00000075223	SEMA3C	1.02E+00	2.75E-04	3.59E-03
ENSG00000184012	TMPRSS2	3.27E+00	2.78E-04	3.61E-03
ENSG00000235885	LINC01828	3.15E+00	2.86E-04	3.70E-03
ENSG00000198729	PPP1R14C	1.47E+00	3.05E-04	3.90E-03
ENSG00000141994	DUS3L	1.03E+00	3.27E-04	4.14E-03
ENSG00000233058	LINC00884	2.07E+00	3.64E-04	4.52E-03
ENSG00000174600	CMKLR1	2.47E+00	4.04E-04	4.91E-03
ENSG00000179431	FJX1	1.38E+00	4.26E-04	5.12E-03
ENSG00000107968	MAP3K8	1.91E+00	4.33E-04	5.19E-03
ENSG00000126561	STAT5A	1.26E+00	4.47E-04	5.31E-03
ENSG00000137033	IL33	3.77E+00	6.05E-04	6.86E-03
ENSG00000158125	XDH	3.49E+00	6.10E-04	6.90E-03
ENSG00000120899	PTK2B	1.20E+00	6.14E-04	6.94E-03
ENSG00000275131	AC241952.1	2.77E+00	6.81E-04	7.59E-03
ENSG00000170989	S1PR1	3.55E+00	7.45E-04	8.17E-03
ENSG00000242829	RPS26P21	1.88E+00	7.59E-04	8.28E-03
ENSG00000226380	AC016831.1	1.27E+00	7.64E-04	8.34E-03
ENSG00000153162	BMP6	3.16E+00	8.30E-04	8.91E-03
ENSG00000101230	ISM1	3.30E+00	8.40E-04	8.99E-03
ENSG00000184374	COLEC10	1.27E+00	8.40E-04	8.99E-03
ENSG00000189056	RELN	4.27E+00	8.46E-04	9.02E-03
ENSG00000261040	WFDC21P	1.34E+00	8.45E-04	9.02E-03
ENSG00000154736	ADAMTS5	1.40E+00	8.50E-04	9.03E-03



ENSG00000162892	IL24	4.18E+00	8.55E-04	9.08E-03
ENSG00000135842	NIBAN1	1.53E+00	8.64E-04	9.15E-03
ENSG00000100003	SEC14L2	1.17E+00	8.70E-04	9.21E-03
ENSG00000104369	JPH1	1.70E+00	9.19E-04	9.58E-03
ENSG00000165617	DACT1	1.12E+00	9.79E-04	1.01E-02
ENSG00000169715	MT1E	1.04E+00	9.99E-04	1.02E-02
ENSG00000185483	ROR1	1.07E+00	1.06E-03	1.07E-02
ENSG00000112175	BMP5	1.18E+00	1.07E-03	1.07E-02
ENSG00000223485	LINC01615	1.36E+00	1.15E-03	1.14E-02
ENSG00000277117	FP565260.3	3.13E+00	1.21E-03	1.20E-02
ENSG00000085982	USP40	1.61E+00	1.27E-03	1.24E-02
ENSG00000188112	C6orf132	1.16E+00	1.30E-03	1.27E-02
ENSG00000157570	TSPAN18	1.21E+00	1.33E-03	1.29E-02
ENSG00000169067	ACTBL2	1.33E+00	1.41E-03	1.34E-02
ENSG00000137501	SYTL2	1.11E+00	1.45E-03	1.38E-02
ENSG00000168961	LGALS9	1.86E+00	1.74E-03	1.59E-02
ENSG00000247626	MARS2	1.23E+00	1.82E-03	1.64E-02
ENSG00000197467	COL13A1	2.11E+00	1.90E-03	1.70E-02
ENSG00000197249	SERPINA1	3.37E+00	1.92E-03	1.71E-02
ENSG00000100628	ASB2	4.14E+00	1.94E-03	1.72E-02
ENSG00000164949	GEM	1.16E+00	2.20E-03	1.92E-02
ENSG00000106078	COBL	3.53E+00	2.21E-03	1.92E-02
ENSG00000116711	PLA2G4A	1.45E+00	2.25E-03	1.95E-02
ENSG00000157111	TMEM171	2.15E+00	2.34E-03	2.00E-02
ENSG00000060558	GNA15	2.94E+00	2.44E-03	2.07E-02
ENSG00000145911	N4BP3	3.37E+00	2.47E-03	2.10E-02
ENSG00000148082	SHC3	1.27E+00	2.49E-03	2.11E-02
ENSG00000279692	AC110285.6	1.18E+00	2.52E-03	2.12E-02
ENSG00000160223	ICOSLG	2.06E+00	2.58E-03	2.16E-02
ENSG00000160712	IL6R	1.18E+00	2.69E-03	2.23E-02
ENSG00000270210	AC104695.3	3.97E+00	2.89E-03	2.36E-02
ENSG00000183044	ABAT	1.13E+00	3.16E-03	2.53E-02
ENSG00000057149	SERPINB3	3.34E+00	3.17E-03	2.53E-02
ENSG00000125726	CD70	1.01E+00	3.27E-03	2.60E-02
ENSG00000145040	UCN2	1.03E+00	3.41E-03	2.69E-02
ENSG00000179133	C10orf67	2.17E+00	3.50E-03	2.74E-02
ENSG00000226084	AC113935.1	1.23E+00	3.52E-03	2.75E-02
ENSG00000167772	ANGPTL4	1.02E+00	3.92E-03	2.98E-02
ENSG00000134802	SLC43A3	1.19E+00	3.92E-03	2.98E-02
ENSG00000105246	EBI3	1.01E+00	4.19E-03	3.12E-02
ENSG00000170485	NPAS2	1.16E+00	4.20E-03	3.13E-02
ENSG00000172137	CALB2	2.72E+00	4.34E-03	3.20E-02
ENSG00000173432	SAA1	2.62E+00	4.58E-03	3.35E-02
ENSG00000234678	ELF3-AS1	3.16E+00	4.60E-03	3.36E-02
ENSG00000002079	MYH16	2.93E+00	4.99E-03	3.59E-02

ENSG00000180152	XIAPP3	3.45E+00	4.99E-03	3.59E-02
ENSG00000171889	MIR31HG	1.15E+00	5.05E-03	3.63E-02
ENSG00000177283	FZD8	1.18E+00	5.15E-03	3.69E-02
ENSG00000199024	MIR103A2	1.95E+00	5.48E-03	3.86E-02
ENSG00000172458	IL17D	1.85E+00	5.70E-03	3.98E-02
ENSG00000163810	TGM4	2.93E+00	6.12E-03	4.21E-02
ENSG00000134363	FST	1.21E+00	6.23E-03	4.26E-02
ENSG00000170075	GPR37L1	2.88E+00	6.27E-03	4.28E-02
ENSG00000287382	AC110611.2	3.15E+00	6.38E-03	4.34E-02
ENSG00000173210	ABLIM3	1.21E+00	6.51E-03	4.42E-02
ENSG00000280143	AP000892.4	3.25E+00	7.06E-03	4.68E-02
ENSG00000168824	NSG1	1.60E+00	7.15E-03	4.73E-02
ENSG00000229563	LINC01204	2.28E+00	7.26E-03	4.78E-02
ENSG00000260862	AC099506.1	2.06E+00	7.28E-03	4.79E-02
ENSG00000105499	PLA2G4C	1.09E+00	7.41E-03	4.85E-02
ENSG00000230647	AC022816.1	2.58E+00	7.66E-03	4.96E-02

**Supplementary table 4. Significant DRGs with versus without IL1- $\beta$  stimulation in non-transduced samples.**

Gene ID	Gene name	Log2 FC	P value	FDR
ENSG00000187634	SAMD11	-3.04E+00	1.38E-29	3.49E-27
ENSG00000162496	DHRS3	-2.36E+00	4.05E-29	9.76E-27
ENSG00000129422	MTUS1	-1.94E+00	5.53E-21	9.67E-19
ENSG00000185551	NR2F2	-1.07E+00	5.04E-19	8.19E-17
ENSG00000069011	PITX1	-1.09E+00	1.68E-15	2.04E-13
ENSG00000148120	AOPEP	-1.24E+00	1.79E-13	1.70E-11
ENSG00000198794	SCAMP5	-1.35E+00	3.10E-13	2.90E-11
ENSG00000173442	EHBP1L1	-1.46E+00	5.00E-13	4.55E-11
ENSG00000172819	RARG	-1.68E+00	5.86E-13	5.24E-11
ENSG00000122592	HOXA7	-1.60E+00	7.06E-13	6.24E-11
ENSG00000250510	GPR162	-2.27E+00	7.12E-13	6.26E-11
ENSG00000188338	SLC38A3	-1.61E+00	9.22E-13	8.02E-11
ENSG00000105516	DBP	-2.29E+00	2.75E-12	2.31E-10
ENSG00000100889	PCK2	-1.20E+00	3.01E-12	2.52E-10
ENSG00000138496	PARP9	-1.50E+00	8.77E-12	7.02E-10
ENSG00000163565	IFI16	-1.14E+00	1.00E-11	7.95E-10
ENSG00000169242	EFNA1	-1.32E+00	1.15E-11	9.06E-10
ENSG00000100439	ABHD4	-1.36E+00	1.96E-11	1.49E-09
ENSG00000185630	PBX1	-1.67E+00	2.03E-11	1.54E-09
ENSG00000108370	RGS9	-3.65E+00	3.09E-11	2.30E-09
ENSG00000023892	DEF6	-2.17E+00	3.94E-11	2.89E-09
ENSG00000197757	HOXC6	-1.42E+00	6.84E-11	4.88E-09
ENSG00000163683	SMIM14	-1.34E+00	1.08E-10	7.33E-09
ENSG00000196535	MYO18A	-1.28E+00	1.13E-10	7.64E-09
ENSG00000176046	NUPR1	-1.55E+00	1.21E-10	8.11E-09
ENSG00000177732	SOX12	-1.02E+00	1.69E-10	1.11E-08
ENSG00000166548	TK2	-1.28E+00	2.83E-10	1.81E-08
ENSG00000169783	LINGO1	-2.31E+00	3.29E-10	2.09E-08
ENSG00000175182	FAM131A	-1.52E+00	3.44E-10	2.17E-08
ENSG00000112655	PTK7	-1.05E+00	3.63E-10	2.28E-08
ENSG00000068137	PLEKHH3	-1.49E+00	5.22E-10	3.19E-08
ENSG00000117280	RAB29	-1.01E+00	5.53E-10	3.36E-08
ENSG00000113721	PDGFRB	-1.15E+00	5.79E-10	3.50E-08
ENSG00000167680	SEMA6B	-1.22E+00	8.13E-10	4.76E-08
ENSG00000175938	ORAI3	-1.97E+00	9.32E-10	5.39E-08
ENSG00000132563	REEP2	-1.85E+00	1.22E-09	6.97E-08
ENSG00000125378	BMP4	-1.91E+00	1.39E-09	7.81E-08
ENSG00000182606	TRAK1	-1.22E+00	1.72E-09	9.39E-08
ENSG00000105559	PLEKHA4	-1.33E+00	2.26E-09	1.21E-07
ENSG00000162733	DDR2	-1.08E+00	2.28E-09	1.21E-07
ENSG00000141480	ARRB2	-1.14E+00	2.31E-09	1.22E-07
ENSG00000185909	KLHDC8B	-1.12E+00	2.46E-09	1.30E-07
ENSG00000173917	HOXB2	-1.11E+00	3.59E-09	1.83E-07

ENSG00000021355	SERPINB1	-1.34E+00	4.28E-09	2.14E-07
ENSG00000137171	KLC4	-1.30E+00	4.40E-09	2.19E-07
ENSG00000164237	CMBL	-1.34E+00	5.47E-09	2.69E-07
ENSG00000108509	CAMTA2	-1.17E+00	5.52E-09	2.71E-07
ENSG00000180340	FZD2	-1.32E+00	5.79E-09	2.81E-07
ENSG00000103485	QPRT	-1.24E+00	8.81E-09	4.15E-07
ENSG00000173706	HEG1	-1.06E+00	1.19E-08	5.51E-07
ENSG00000115596	WNT6	-1.88E+00	1.26E-08	5.80E-07
ENSG00000140044	JDP2	-1.80E+00	1.51E-08	6.81E-07
ENSG00000133466	C1QTNF6	-1.19E+00	1.67E-08	7.45E-07
ENSG00000074370	ATP2A3	-1.94E+00	1.86E-08	8.29E-07
ENSG00000167107	ACSF2	-1.16E+00	1.86E-08	8.29E-07
ENSG00000265972	TXNIP	-2.01E+00	1.99E-08	8.78E-07
ENSG00000141524	TMC6	-1.54E+00	2.79E-08	1.18E-06
ENSG00000165424	ZCCHC24	-1.06E+00	2.83E-08	1.19E-06
ENSG00000095321	CRAT	-1.33E+00	2.90E-08	1.21E-06
ENSG00000090661	CERS4	-1.70E+00	2.94E-08	1.23E-06
ENSG00000115325	DOK1	-1.50E+00	3.53E-08	1.45E-06
ENSG00000065361	ERBB3	-2.83E+00	3.98E-08	1.63E-06
ENSG00000157514	TSC22D3	-1.78E+00	4.15E-08	1.69E-06
ENSG00000162062	TEDC2	-1.03E+00	4.53E-08	1.82E-06
ENSG00000160447	PKN3	-1.98E+00	4.59E-08	1.84E-06
ENSG00000109654	TRIM2	-1.45E+00	4.93E-08	1.96E-06
ENSG00000160325	CACFD1	-1.58E+00	4.99E-08	1.98E-06
ENSG00000157978	LDLRAP1	-1.05E+00	5.86E-08	2.29E-06
ENSG00000226137	BAIAP2-DT	-1.76E+00	7.17E-08	2.74E-06
ENSG00000223802	CERS1	-1.12E+00	7.70E-08	2.92E-06
ENSG00000178685	PARP10	-1.42E+00	8.82E-08	3.23E-06
ENSG00000088367	EPB41L1	-1.08E+00	1.16E-07	4.19E-06
ENSG00000064195	DLX3	-1.75E+00	1.20E-07	4.28E-06
ENSG00000168913	ENHO	-1.70E+00	1.31E-07	4.65E-06
ENSG00000233913	RPL10P9	-1.33E+00	1.66E-07	5.78E-06
ENSG00000010295	IFFO1	-1.11E+00	1.69E-07	5.85E-06
ENSG00000166963	MAP1A	-1.71E+00	1.72E-07	5.93E-06
ENSG00000197183	NOL4L	-1.04E+00	1.72E-07	5.93E-06
ENSG00000001461	NIPAL3	-1.27E+00	1.73E-07	5.94E-06
ENSG00000015532	XYLT2	-1.13E+00	1.73E-07	5.94E-06
ENSG00000269609	RPARP-AS1	-1.56E+00	2.31E-07	7.72E-06
ENSG00000005882	PDK2	-1.15E+00	2.34E-07	7.79E-06
ENSG00000268621	IGFL2-AS1	-3.62E+00	2.52E-07	8.33E-06
ENSG00000182272	B4GALNT4	-1.04E+00	2.78E-07	9.11E-06
ENSG00000010361	FUZ	-1.60E+00	2.83E-07	9.22E-06
ENSG00000064300	NGFR	-1.35E+00	3.30E-07	1.07E-05
ENSG00000158555	GDPD5	-1.27E+00	3.37E-07	1.08E-05
ENSG00000175264	CHST1	-2.29E+00	3.54E-07	1.13E-05

ENSG00000161888	SPC24	-1.10E+00	3.92E-07	1.25E-05
ENSG00000160703	NLRX1	-1.54E+00	4.22E-07	1.33E-05
ENSG00000172731	LRRC20	-2.05E+00	4.33E-07	1.36E-05
ENSG00000072195	SPEG	-1.58E+00	4.35E-07	1.36E-05
ENSG00000100065	CARD10	-1.02E+00	4.50E-07	1.41E-05
ENSG00000133056	PIK3C2B	-1.89E+00	4.86E-07	1.50E-05
ENSG00000143590	EFNA3	-1.55E+00	4.95E-07	1.53E-05
ENSG00000082497	SERTAD4	-2.29E+00	7.66E-07	2.29E-05
ENSG00000124313	IQSEC2	-1.47E+00	8.49E-07	2.52E-05
ENSG00000132024	CC2D1A	-1.00E+00	9.26E-07	2.73E-05
ENSG00000111981	ULBP1	-1.28E+00	1.01E-06	2.96E-05
ENSG00000029534	ANK1	-1.62E+00	1.10E-06	3.19E-05
ENSG00000010310	GIPR	-4.23E+00	1.11E-06	3.19E-05
ENSG00000115718	PROC	-4.81E+00	1.13E-06	3.24E-05
ENSG00000168528	SERINC2	-1.23E+00	1.13E-06	3.24E-05
ENSG00000090238	YPEL3	-1.44E+00	1.24E-06	3.52E-05
ENSG00000165113	GKAP1	-1.33E+00	1.24E-06	3.52E-05
ENSG00000181790	ADGRB1	-1.36E+00	1.24E-06	3.52E-05
ENSG00000131196	NFATC1	-1.26E+00	1.36E-06	3.79E-05
ENSG00000147130	ZMYM3	-1.02E+00	1.48E-06	4.12E-05
ENSG00000168792	ABHD15	-1.18E+00	1.63E-06	4.48E-05
ENSG00000226742	HSBP1L1	-2.14E+00	1.80E-06	4.91E-05
ENSG00000182580	EPHB3	-1.47E+00	1.84E-06	5.01E-05
ENSG00000174446	SNAPC5	-1.28E+00	1.90E-06	5.16E-05
ENSG00000198468	FLVCR1-DT	-1.27E+00	1.96E-06	5.30E-05
ENSG00000178821	TMEM52	-2.27E+00	2.14E-06	5.74E-05
ENSG00000185561	TLCD2	-1.27E+00	2.30E-06	6.11E-05
ENSG00000149573	MPZL2	-4.00E+00	2.34E-06	6.20E-05
ENSG00000104081	BMF	-1.77E+00	2.55E-06	6.71E-05
ENSG00000158106	RHPN1	-1.63E+00	3.08E-06	7.93E-05
ENSG00000138735	PDE5A	-2.05E+00	3.28E-06	8.41E-05
ENSG00000147138	GPR174	-2.34E+01	3.70E-06	9.40E-05
ENSG00000131018	SYNE1	-1.14E+00	3.96E-06	1.00E-04
ENSG00000163694	RBM47	-1.19E+00	4.01E-06	1.01E-04
ENSG00000081923	ATP8B1	-1.33E+00	4.16E-06	1.05E-04
ENSG00000144857	BOC	-1.65E+00	4.28E-06	1.07E-04
ENSG00000205517	RGL3	-1.77E+00	4.30E-06	1.07E-04
ENSG00000073331	ALPK1	-2.05E+00	4.53E-06	1.12E-04
ENSG00000165716	DIPK1B	-1.24E+00	4.61E-06	1.14E-04
ENSG00000090971	NAT14	-1.12E+00	5.12E-06	1.25E-04
ENSG00000090006	LTBP4	-1.27E+00	5.29E-06	1.29E-04
ENSG00000099864	PALM	-1.46E+00	5.34E-06	1.30E-04
ENSG00000111913	RIPOR2	-2.65E+00	5.79E-06	1.39E-04
ENSG00000130775	THEMIS2	-1.43E+00	5.86E-06	1.40E-04
ENSG00000110237	ARHGEF17	-1.46E+00	5.97E-06	1.43E-04

ENSG00000123815	COQ8B	-1.31E+00	6.17E-06	1.47E-04
ENSG00000167771	RCOR2	-2.17E+00	6.52E-06	1.54E-04
ENSG00000137463	MGARP	-1.61E+00	6.94E-06	1.63E-04
ENSG00000127220	ABHD8	-1.36E+00	7.08E-06	1.66E-04
ENSG00000162738	VANGL2	-1.16E+00	7.71E-06	1.79E-04
ENSG00000158246	TENT5B	-1.30E+00	7.91E-06	1.82E-04
ENSG00000181404	WASHC1	-1.28E+00	7.90E-06	1.82E-04
ENSG00000256982	AC135782.1	-3.90E+00	8.07E-06	1.85E-04
ENSG00000139219	COL2A1	-3.55E+00	8.62E-06	1.98E-04
ENSG00000185745	IFIT1	-2.09E+00	9.73E-06	2.19E-04
ENSG00000126603	GLIS2	-1.18E+00	9.87E-06	2.22E-04
ENSG00000249042	AC008771.1	-1.30E+00	9.90E-06	2.22E-04
ENSG00000139269	INHBE	-2.71E+00	1.05E-05	2.33E-04
ENSG00000135929	CYP27A1	-1.10E+00	1.06E-05	2.34E-04
ENSG00000102886	GDPD3	-2.24E+00	1.10E-05	2.41E-04
ENSG00000184117	NIPSNAP1	-1.02E+00	1.14E-05	2.49E-04
ENSG00000177679	SRRM3	-1.74E+00	1.17E-05	2.55E-04
ENSG00000146411	SLC2A12	-4.63E+00	1.21E-05	2.62E-04
ENSG00000121851	POLR3GL	-1.34E+00	1.23E-05	2.65E-04
ENSG00000167861	HID1	-4.04E+00	1.34E-05	2.86E-04
ENSG00000167536	DHRS13	-1.65E+00	1.36E-05	2.90E-04
ENSG00000176244	ACBD7	-1.27E+00	1.38E-05	2.94E-04
ENSG00000196132	MYT1	-4.20E+00	1.44E-05	3.05E-04
ENSG00000170271	FAXDC2	-2.45E+00	1.65E-05	3.45E-04
ENSG00000180818	HOXC10	-1.07E+00	1.72E-05	3.55E-04
ENSG00000157657	ZNF618	-1.02E+00	1.78E-05	3.67E-04
ENSG00000236618	PITPNA-AS1	-1.23E+00	1.82E-05	3.75E-04
ENSG00000247675	LRP4-AS1	-2.81E+00	1.88E-05	3.85E-04
ENSG00000062822	POLD1	-1.47E+00	1.89E-05	3.86E-04
ENSG00000140853	NLRC5	-1.12E+00	1.90E-05	3.88E-04
ENSG00000104413	ESRP1	-3.98E+00	1.97E-05	4.01E-04
ENSG00000115525	ST3GAL5	-1.38E+00	1.98E-05	4.02E-04
ENSG00000154102	C16orf74	-2.40E+00	1.99E-05	4.04E-04
ENSG00000171119	NRTN	-1.14E+00	2.03E-05	4.11E-04
ENSG00000111077	TNS2	-1.23E+00	2.15E-05	4.31E-04
ENSG00000170899	GSTA4	-2.22E+00	2.18E-05	4.38E-04
ENSG00000128268	MGAT3	-1.34E+00	2.19E-05	4.39E-04
ENSG00000013016	EHD3	-1.69E+00	2.50E-05	4.94E-04
ENSG00000092051	JPH4	-3.83E+00	2.60E-05	5.11E-04
ENSG00000107821	KAZALD1	-1.63E+00	2.71E-05	5.29E-04
ENSG00000143891	GALM	-1.12E+00	2.78E-05	5.40E-04
ENSG00000167600	CYP2S1	-1.04E+00	2.81E-05	5.45E-04
ENSG00000283498	MIR1244-2	-1.60E+00	2.83E-05	5.47E-04
ENSG00000047230	CTPS2	-1.08E+00	3.01E-05	5.77E-04
ENSG00000124641	MED20	-1.21E+00	3.07E-05	5.88E-04

ENSG00000166823	MESP1	-1.86E+00	3.23E-05	6.14E-04
ENSG00000159871	LYPD5	-2.39E+00	3.26E-05	6.18E-04
ENSG00000121281	ADCY7	-1.64E+00	3.60E-05	6.76E-04
ENSG00000104892	KLC3	-1.13E+00	3.72E-05	6.95E-04
ENSG00000172346	CSDC2	-1.78E+00	3.77E-05	7.01E-04
ENSG00000088280	ASAP3	-1.67E+00	3.93E-05	7.25E-04
ENSG00000259768	AC004943.2	-1.80E+00	4.00E-05	7.37E-04
ENSG00000132846	ZBED3	-1.56E+00	4.33E-05	7.93E-04
ENSG00000183671	GPR1	-3.61E+00	4.42E-05	8.05E-04
ENSG00000076826	CAMSAP3	-1.89E+00	4.44E-05	8.07E-04
ENSG00000275342	PRAG1	-1.06E+00	4.51E-05	8.17E-04
ENSG00000115297	TLX2	-2.34E+00	4.76E-05	8.52E-04
ENSG00000117305	HMGCL	-1.10E+00	4.94E-05	8.82E-04
ENSG00000162599	NFIA	-1.16E+00	4.98E-05	8.88E-04
ENSG00000177868	SVBP	-1.03E+00	5.23E-05	9.28E-04
ENSG00000130475	FCHO1	-3.05E+00	5.49E-05	9.68E-04
ENSG00000176909	MAMSTR	-1.31E+00	5.58E-05	9.80E-04
ENSG00000177570	SAMD12	-2.50E+00	5.65E-05	9.88E-04
ENSG00000130517	PGPEP1	-1.25E+00	5.68E-05	9.90E-04
ENSG00000142082	SIRT3	-1.45E+00	5.74E-05	9.99E-04
ENSG00000167157	PRRX2	-1.09E+00	5.86E-05	1.01E-03
ENSG00000179292	TMEM151A	-1.76E+00	6.06E-05	1.04E-03
ENSG00000176428	VPS37D	-1.67E+00	6.25E-05	1.07E-03
ENSG00000213347	MXD3	-1.09E+00	6.46E-05	1.10E-03
ENSG00000074964	ARHGEF10L	-1.16E+00	6.62E-05	1.12E-03
ENSG00000040341	STAU2	-1.02E+00	6.81E-05	1.15E-03
ENSG00000106789	CORO2A	-1.28E+00	7.34E-05	1.23E-03
ENSG00000180902	D2HGDH	-1.06E+00	7.44E-05	1.24E-03
ENSG00000148225	WDR31	-2.23E+00	7.55E-05	1.26E-03
ENSG00000072163	LIMS2	-1.36E+00	7.77E-05	1.28E-03
ENSG00000204084	INPP5B	-1.26E+00	8.47E-05	1.38E-03
ENSG00000104967	NOVA2	-3.78E+00	8.80E-05	1.42E-03
ENSG00000105514	RAB3D	-1.61E+00	8.85E-05	1.43E-03
ENSG00000169499	PLEKHA2	-1.16E+00	9.14E-05	1.47E-03
ENSG00000171227	TMEM37	-4.39E+00	9.16E-05	1.47E-03
ENSG00000197943	PLCG2	-1.70E+00	9.24E-05	1.48E-03
ENSG00000135119	RNFT2	-1.03E+00	9.58E-05	1.52E-03
ENSG00000085871	MGST2	-1.31E+00	9.94E-05	1.58E-03
ENSG00000171992	SYNPO	-1.35E+00	9.95E-05	1.58E-03
ENSG00000184986	TMEM121	-1.25E+00	1.00E-04	1.58E-03
ENSG00000187730	GABRD	-2.04E+00	1.03E-04	1.61E-03
ENSG00000116990	MYCL	-2.53E+00	1.06E-04	1.66E-03
ENSG00000073350	LLGL2	-1.25E+00	1.08E-04	1.68E-03
ENSG00000122756	CNTFR	-1.71E+00	1.11E-04	1.72E-03
ENSG00000108984	MAP2K6	-2.61E+00	1.11E-04	1.72E-03

ENSG00000160271	RALGDS	-1.10E+00	1.11E-04	1.72E-03
ENSG00000025434	NR1H3	-1.38E+00	1.16E-04	1.78E-03
ENSG00000163449	TMEM169	-4.06E+00	1.30E-04	1.95E-03
ENSG00000159184	HOXB13	-1.58E+00	1.31E-04	1.96E-03
ENSG00000056998	GYG2	-2.41E+00	1.35E-04	2.01E-03
ENSG00000146828	SLC12A9	-1.02E+00	1.35E-04	2.01E-03
ENSG00000108309	RUNDC3A	-3.39E+00	1.37E-04	2.03E-03
ENSG00000203883	SOX18	-2.12E+00	1.40E-04	2.07E-03
ENSG00000184058	TBX1	-1.10E+00	1.45E-04	2.14E-03
ENSG00000179772	FOXS1	-2.44E+00	1.50E-04	2.19E-03
ENSG00000115468	EFHD1	-1.02E+00	1.53E-04	2.23E-03
ENSG00000143375	CGN	-1.48E+00	1.55E-04	2.25E-03
ENSG00000065357	DGKA	-1.05E+00	1.56E-04	2.25E-03
ENSG00000154889	MPPE1	-1.11E+00	1.57E-04	2.27E-03
ENSG00000225783	MIAT	-2.04E+00	1.61E-04	2.32E-03
ENSG00000109686	SH3D19	-1.01E+00	1.67E-04	2.38E-03
ENSG00000103024	NME3	-1.18E+00	1.68E-04	2.40E-03
ENSG00000198435	NRARP	-1.01E+00	1.69E-04	2.41E-03
ENSG00000100307	CBX7	-1.79E+00	1.70E-04	2.41E-03
ENSG00000132000	PODNL1	-1.23E+00	1.71E-04	2.43E-03
ENSG00000235823	OLMALINC	-1.07E+00	1.72E-04	2.44E-03
ENSG00000130720	FIBCD1	-1.86E+00	1.73E-04	2.45E-03
ENSG00000147251	DOCK11	-1.07E+00	1.79E-04	2.52E-03
ENSG00000234965	SHISA8	-1.34E+00	1.84E-04	2.58E-03
ENSG00000076864	RAP1GAP	-1.66E+00	1.87E-04	2.61E-03
ENSG00000169129	AFAP1L2	-1.38E+00	1.87E-04	2.62E-03
ENSG00000164056	SPRY1	-1.84E+00	1.88E-04	2.63E-03
ENSG00000185361	TNFAIP8L1	-1.28E+00	1.89E-04	2.64E-03
ENSG00000159224	GIP	-3.61E+00	1.91E-04	2.66E-03
ENSG00000211584	SLC48A1	-1.40E+00	1.97E-04	2.73E-03
ENSG00000154930	ACSS1	-1.25E+00	2.01E-04	2.77E-03
ENSG00000101695	RNF125	-3.50E+00	2.04E-04	2.80E-03
ENSG00000163485	ADORA1	-2.16E+00	2.06E-04	2.83E-03
ENSG00000118960	HS1BP3	-1.36E+00	2.14E-04	2.92E-03
ENSG00000166821	PEX11A	-1.24E+00	2.19E-04	2.96E-03
ENSG00000128965	CHAC1	-1.23E+00	2.19E-04	2.97E-03
ENSG00000185432	METTL7A	-2.14E+00	2.34E-04	3.14E-03
ENSG00000257698	GIHCG	-1.09E+00	2.40E-04	3.21E-03
ENSG00000205978	NYNRIN	-2.51E+00	2.58E-04	3.42E-03
ENSG00000137834	SMAD6	-1.68E+00	2.62E-04	3.45E-03
ENSG00000186889	TMEM17	-1.61E+00	2.72E-04	3.56E-03
ENSG00000179284	DAND5	-3.69E+00	2.76E-04	3.59E-03
ENSG00000106004	HOXA5	-1.22E+00	2.80E-04	3.63E-03
ENSG00000198189	HSD17B11	-1.12E+00	2.80E-04	3.64E-03
ENSG00000119408	NEK6	-1.01E+00	2.93E-04	3.78E-03



ENSG00000009950	MLXIPL	-4.19E+00	2.96E-04	3.81E-03
ENSG00000100918	REC8	-2.28E+00	2.97E-04	3.82E-03
ENSG00000117016	RIMS3	-2.24E+00	3.00E-04	3.84E-03
ENSG00000184785	SMIM10	-1.82E+00	3.00E-04	3.85E-03
ENSG00000264148	AC138207.3	-3.58E+00	3.02E-04	3.87E-03
ENSG00000104903	LYL1	-2.25E+00	3.38E-04	4.25E-03
ENSG00000052850	ALX4	-1.50E+00	3.39E-04	4.26E-03
ENSG00000253552	HOXA-AS2	-1.60E+00	3.41E-04	4.28E-03
ENSG00000138172	CALHM2	-1.39E+00	3.56E-04	4.45E-03
ENSG00000079385	CEACAM1	-2.34E+00	3.59E-04	4.47E-03
ENSG00000170412	GPRC5C	-1.07E+00	3.68E-04	4.55E-03
ENSG00000111271	ACAD10	-1.21E+00	3.71E-04	4.59E-03
ENSG00000166839	ANKDD1A	-1.13E+00	3.97E-04	4.83E-03
ENSG00000198624	CCDC69	-1.72E+00	4.02E-04	4.89E-03
ENSG00000186897	C1QL4	-1.39E+00	4.06E-04	4.93E-03
ENSG00000137700	SLC37A4	-1.22E+00	4.21E-04	5.08E-03
ENSG00000161082	CELF5	-2.63E+00	4.22E-04	5.08E-03
ENSG00000116983	HPCAL4	-1.82E+00	4.35E-04	5.21E-03
ENSG00000120068	HOXB8	-3.18E+00	4.38E-04	5.23E-03
ENSG00000165959	CLMN	-1.32E+00	4.40E-04	5.24E-03
ENSG00000135622	SEMA4F	-1.21E+00	4.49E-04	5.33E-03
ENSG00000196502	SULT1A1	-1.46E+00	4.51E-04	5.34E-03
ENSG00000143554	SLC27A3	-1.64E+00	4.57E-04	5.41E-03
ENSG00000160796	NBEAL2	-1.34E+00	4.62E-04	5.45E-03
ENSG00000165757	JCAD	-1.13E+00	4.63E-04	5.45E-03
ENSG00000174640	SLCO2A1	-1.05E+00	4.64E-04	5.47E-03
ENSG00000130052	STARD8	-1.49E+00	4.71E-04	5.54E-03
ENSG00000119782	FKBP1B	-1.56E+00	4.78E-04	5.61E-03
ENSG00000164330	EBF1	-1.37E+00	4.78E-04	5.62E-03
ENSG00000062282	DGAT2	-1.06E+00	4.85E-04	5.67E-03
ENSG00000148219	ASTN2	-1.65E+00	4.90E-04	5.73E-03
ENSG00000130270	ATP8B3	-1.45E+00	4.94E-04	5.76E-03
ENSG00000174516	PELI3	-1.23E+00	5.04E-04	5.86E-03
ENSG00000204128	C2orf72	-1.33E+00	5.04E-04	5.86E-03
ENSG00000171695	LKAAEAR1	-2.03E+00	5.06E-04	5.87E-03
ENSG00000101222	SPEF1	-1.53E+00	5.19E-04	6.00E-03
ENSG00000268041	ERFL	-1.88E+00	5.24E-04	6.04E-03
ENSG00000105289	TJP3	-3.40E+00	5.31E-04	6.11E-03
ENSG00000239887	C1orf226	-2.26E+00	5.56E-04	6.37E-03
ENSG00000066735	KIF26A	-1.09E+00	5.81E-04	6.63E-03
ENSG00000147689	FAM83A	-2.79E+00	5.89E-04	6.70E-03
ENSG00000169750	RAC3	-1.04E+00	5.97E-04	6.79E-03
ENSG00000166813	KIF7	-1.33E+00	6.33E-04	7.13E-03
ENSG00000104888	SLC17A7	-1.15E+00	6.40E-04	7.20E-03
ENSG00000163958	ZDHHC19	-2.23E+00	6.49E-04	7.28E-03

ENSG00000125746	EML2	-2.10E+00	6.56E-04	7.36E-03
ENSG00000120696	KBTBD7	-1.11E+00	6.64E-04	7.43E-03
ENSG00000164088	PPM1M	-1.30E+00	6.75E-04	7.53E-03
ENSG00000283632	EXOC3L2	-3.33E+00	6.95E-04	7.73E-03
ENSG00000144908	ALDH1L1	-1.96E+00	7.06E-04	7.83E-03
ENSG00000188493	C19orf54	-1.22E+00	7.21E-04	7.96E-03
ENSG00000108813	DLX4	-1.75E+00	7.25E-04	7.99E-03
ENSG00000249669	CARMN	-1.03E+00	7.51E-04	8.22E-03
ENSG00000105875	WDR91	-1.05E+00	7.65E-04	8.34E-03
ENSG00000063180	CA11	-1.04E+00	7.85E-04	8.52E-03
ENSG00000117266	CDK18	-1.43E+00	8.05E-04	8.71E-03
ENSG00000157601	MX1	-2.50E+00	8.07E-04	8.71E-03
ENSG00000287356	AL590822.3	-1.71E+00	8.07E-04	8.71E-03
ENSG00000161277	THAP8	-1.37E+00	8.48E-04	9.03E-03
ENSG00000148842	CNNM2	-1.00E+00	8.55E-04	9.08E-03
ENSG00000232412	AL121601.1	-3.70E+00	8.90E-04	9.36E-03
ENSG00000152527	PLEKHH2	-1.76E+00	8.97E-04	9.42E-03
ENSG00000177674	AGTRAP	-1.09E+00	9.13E-04	9.54E-03
ENSG00000258616	LINC02303	-3.47E+00	9.24E-04	9.61E-03
ENSG00000250786	SNHG18	-1.22E+00	9.32E-04	9.68E-03
ENSG00000245849	RAD51-AS1	-1.50E+00	9.98E-04	1.02E-02
ENSG00000272288	AL451165.2	-1.89E+00	1.01E-03	1.03E-02
ENSG00000124507	PACSIN1	-3.86E+00	1.02E-03	1.04E-02
ENSG00000178935	ZNF552	-1.55E+00	1.02E-03	1.04E-02
ENSG00000101098	RIMS4	-3.57E+00	1.04E-03	1.05E-02
ENSG00000164124	TMEM144	-1.60E+00	1.07E-03	1.08E-02
ENSG00000183196	CHST6	-1.12E+00	1.10E-03	1.11E-02
ENSG00000102984	ZNF821	-1.09E+00	1.13E-03	1.13E-02
ENSG00000177465	ACOT4	-1.78E+00	1.15E-03	1.14E-02
ENSG00000168517	HEXIM2	-1.08E+00	1.15E-03	1.15E-02
ENSG00000007516	BAIAP3	-1.56E+00	1.18E-03	1.17E-02
ENSG00000003249	DBNDD1	-1.37E+00	1.21E-03	1.20E-02
ENSG00000100246	DNAL4	-1.03E+00	1.23E-03	1.21E-02
ENSG00000120093	HOXB3	-1.01E+00	1.23E-03	1.21E-02
ENSG00000164620	RELL2	-1.00E+00	1.23E-03	1.21E-02
ENSG00000198933	TBKBP1	-1.37E+00	1.23E-03	1.21E-02
ENSG00000228451	SDAD1P1	-1.27E+00	1.23E-03	1.21E-02
ENSG00000128596	CCDC136	-1.37E+00	1.24E-03	1.22E-02
ENSG00000203739	AL645568.1	-1.68E+00	1.26E-03	1.23E-02
ENSG00000185920	PTCH1	-1.55E+00	1.27E-03	1.24E-02
ENSG00000105642	KCNN1	-1.96E+00	1.32E-03	1.28E-02
ENSG00000153208	MERTK	-1.93E+00	1.32E-03	1.28E-02
ENSG00000128011	LRFN1	-1.46E+00	1.35E-03	1.30E-02
ENSG00000286156	AC026273.1	-1.29E+00	1.38E-03	1.33E-02
ENSG00000189195	BTBD8	-1.42E+00	1.44E-03	1.37E-02

ENSG00000006468	ETV1	-3.74E+00	1.45E-03	1.37E-02
ENSG00000169220	RGS14	-1.29E+00	1.46E-03	1.39E-02
ENSG00000185187	SIGIRR	-1.02E+00	1.46E-03	1.39E-02
ENSG00000197180	AC244090.1	-1.62E+00	1.47E-03	1.39E-02
ENSG00000135709	KIAA0513	-1.15E+00	1.49E-03	1.41E-02
ENSG00000168916	ZNF608	-1.13E+00	1.50E-03	1.42E-02
ENSG00000143409	MINDY1	-2.12E+00	1.52E-03	1.43E-02
ENSG00000175793	SFN	-2.91E+00	1.63E-03	1.51E-02
ENSG00000163704	PRRT3	-1.31E+00	1.65E-03	1.53E-02
ENSG00000267221	C17orf113	-2.84E+00	1.66E-03	1.53E-02
ENSG00000105146	AURKC	-1.87E+00	1.68E-03	1.55E-02
ENSG00000235954	TTC28-AS1	-1.09E+00	1.69E-03	1.55E-02
ENSG00000234719	NPIPB2	-2.57E+00	1.71E-03	1.57E-02
ENSG00000054392	HHAT	-1.13E+00	1.73E-03	1.58E-02
ENSG00000180739	S1PR5	-1.01E+00	1.73E-03	1.58E-02
ENSG00000221955	SLC12A8	-1.47E+00	1.74E-03	1.59E-02
ENSG00000197766	CFD	-2.07E+00	1.75E-03	1.60E-02
ENSG00000171160	MORN4	-1.01E+00	1.77E-03	1.62E-02
ENSG00000205363	INSYN1	-1.69E+00	1.78E-03	1.62E-02
ENSG00000007968	E2F2	-1.18E+00	1.80E-03	1.64E-02
ENSG00000175084	DES	-2.53E+00	1.80E-03	1.64E-02
ENSG00000239213	NCK1-DT	-1.39E+00	1.80E-03	1.64E-02
ENSG00000074317	SNCB	-1.57E+00	1.81E-03	1.64E-02
ENSG00000105664	COMP	-2.10E+00	1.81E-03	1.64E-02
ENSG00000105613	MAST1	-1.56E+00	1.87E-03	1.68E-02
ENSG00000138606	SHF	-1.06E+00	1.89E-03	1.69E-02
ENSG00000159733	ZFYVE28	-2.59E+00	1.91E-03	1.70E-02
ENSG00000106948	AKNA	-1.16E+00	1.92E-03	1.71E-02
ENSG00000226471	Z93930.2	-3.14E+00	1.93E-03	1.72E-02
ENSG00000171747	LGALS4	-2.84E+00	1.96E-03	1.73E-02
ENSG00000131037	EPS8L1	-1.14E+00	1.96E-03	1.74E-02
ENSG00000095539	SEMA4G	-1.00E+00	1.97E-03	1.74E-02
ENSG00000174804	FZD4	-1.57E+00	2.07E-03	1.82E-02
ENSG00000124615	MOCS1	-1.07E+00	2.12E-03	1.85E-02
ENSG00000119227	PIGZ	-2.26E+00	2.13E-03	1.86E-02
ENSG00000104490	NCALD	-2.12E+00	2.17E-03	1.89E-02
ENSG00000267390	AC036176.1	-2.33E+00	2.21E-03	1.92E-02
ENSG00000006606	CCL26	-2.10E+00	2.24E-03	1.94E-02
ENSG00000188624	IGFL3	-3.99E+00	2.30E-03	1.98E-02
ENSG00000226445	BX322234.1	-1.23E+00	2.32E-03	1.99E-02
ENSG00000287263	AC008875.3	-1.34E+00	2.34E-03	2.00E-02
ENSG00000280734	LINC01232	-1.71E+00	2.40E-03	2.05E-02
ENSG00000243244	STON1	-1.52E+00	2.44E-03	2.07E-02
ENSG00000233493	TMEM238	-2.16E+00	2.44E-03	2.07E-02
ENSG00000162040	HS3ST6	-2.65E+00	2.46E-03	2.09E-02

ENSG00000116254	CHD5	-2.24E+00	2.48E-03	2.10E-02
ENSG00000196951	SCOC-AS1	-1.48E+00	2.48E-03	2.10E-02
ENSG00000185065	AC000068.1	-2.21E+00	2.52E-03	2.13E-02
ENSG00000196605	ZNF846	-1.70E+00	2.54E-03	2.14E-02
ENSG00000168490	PHYHIP	-1.56E+00	2.55E-03	2.14E-02
ENSG00000237595	LINC01275	-3.31E+00	2.61E-03	2.18E-02
ENSG00000180448	ARHGAP45	-1.82E+00	2.67E-03	2.22E-02
ENSG00000257337	AC068888.1	-3.68E+00	2.69E-03	2.23E-02
ENSG00000005961	ITGA2B	-1.25E+00	2.69E-03	2.23E-02
ENSG00000144712	CAND2	-2.68E+00	2.73E-03	2.25E-02
ENSG00000089692	LAG3	-1.40E+00	2.77E-03	2.28E-02
ENSG00000281128	PTENP1-AS	-1.37E+00	2.81E-03	2.31E-02
ENSG00000267280	TBX2-AS1	-1.55E+00	2.84E-03	2.32E-02
ENSG00000106689	LHX2	-1.02E+00	2.86E-03	2.34E-02
ENSG00000126106	TMEM53	-1.21E+00	2.87E-03	2.35E-02
ENSG00000269246	AC011445.2	-2.35E+00	2.89E-03	2.36E-02
ENSG00000105538	RASIP1	-2.77E+00	2.92E-03	2.37E-02
ENSG00000135736	CCDC102A	-1.05E+00	2.92E-03	2.37E-02
ENSG00000182175	RGMA	-2.88E+00	2.94E-03	2.38E-02
ENSG00000103528	SYT17	-2.88E+00	2.99E-03	2.42E-02
ENSG00000166473	PKD1L2	-2.90E+00	3.03E-03	2.44E-02
ENSG00000110076	NRXN2	-1.54E+00	3.10E-03	2.49E-02
ENSG00000266010	GATA6-AS1	-2.08E+00	3.14E-03	2.52E-02
ENSG00000064687	ABCA7	-1.06E+00	3.17E-03	2.53E-02
ENSG00000175567	UCP2	-1.28E+00	3.17E-03	2.53E-02
ENSG00000213023	SYT3	-2.19E+00	3.20E-03	2.55E-02
ENSG00000102935	ZNF423	-1.14E+00	3.26E-03	2.59E-02
ENSG00000214796	AC098934.1	-1.41E+00	3.29E-03	2.62E-02
ENSG00000204282	TNRC6C-AS1	-3.04E+00	3.32E-03	2.63E-02
ENSG00000066248	NGEF	-1.40E+00	3.34E-03	2.65E-02
ENSG00000269388	AC018755.3	-2.20E+00	3.34E-03	2.65E-02
ENSG00000247081	BAALC-AS1	-1.89E+00	3.35E-03	2.65E-02
ENSG00000213930	GALT	-1.02E+00	3.38E-03	2.67E-02
ENSG00000270049	AC009061.2	-1.53E+00	3.39E-03	2.68E-02
ENSG00000169418	NPR1	-3.44E+00	3.43E-03	2.70E-02
ENSG00000224940	PRRT4	-1.94E+00	3.44E-03	2.71E-02
ENSG00000171817	ZNF540	-2.40E+00	3.45E-03	2.71E-02
ENSG00000006534	ALDH3B1	-1.12E+00	3.46E-03	2.72E-02
ENSG00000233521	LINC01638	-1.34E+00	3.46E-03	2.72E-02
ENSG00000288093	AL592295.5	-2.08E+00	3.48E-03	2.73E-02
ENSG00000278376	AP004609.3	-2.19E+00	3.49E-03	2.74E-02
ENSG00000268119	AC010615.2	-2.02E+00	3.55E-03	2.76E-02
ENSG00000248508	SRP14-AS1	-1.66E+00	3.55E-03	2.77E-02
ENSG00000160097	FNDC5	-1.54E+00	3.63E-03	2.81E-02
ENSG00000188385	JAKMIP3	-2.39E+00	3.66E-03	2.82E-02

ENSG00000170296	GABARAP	-1.53E+00	3.67E-03	2.83E-02
ENSG00000135519	KCNH3	-1.59E+00	3.69E-03	2.84E-02
ENSG00000188176	SMTNL2	-3.00E+00	3.71E-03	2.86E-02
ENSG00000004777	ARHGAP33	-1.21E+00	3.73E-03	2.87E-02
ENSG00000228126	FALEC	-1.96E+00	3.75E-03	2.88E-02
ENSG00000140968	IRF8	-2.52E+00	3.76E-03	2.89E-02
ENSG00000196391	ZNF774	-1.82E+00	3.77E-03	2.89E-02
ENSG00000068831	RASGRP2	-2.09E+00	3.78E-03	2.90E-02
ENSG00000242732	RTL5	-1.93E+00	3.80E-03	2.91E-02
ENSG00000260086	AC007611.1	-3.27E+00	3.83E-03	2.93E-02
ENSG00000204498	NFKBIL1	-1.09E+00	3.85E-03	2.94E-02
ENSG00000186862	PDZD7	-2.42E+00	3.88E-03	2.96E-02
ENSG00000100228	RAB36	-1.00E+00	3.89E-03	2.96E-02
ENSG00000196917	HCAR1	-2.55E+00	3.90E-03	2.97E-02
ENSG00000196517	SLC6A9	-1.01E+00	3.98E-03	3.01E-02
ENSG00000099617	EFNA2	-1.02E+00	4.01E-03	3.03E-02
ENSG00000269416	LINC01224	-2.02E+00	4.01E-03	3.03E-02
ENSG00000204685	STARD7-AS1	-1.38E+00	4.03E-03	3.04E-02
ENSG00000105655	ISYNA1	-1.05E+00	4.10E-03	3.08E-02
ENSG00000243926	TIPARP-AS1	-2.86E+00	4.10E-03	3.08E-02
ENSG00000153157	SYCP2L	-1.33E+00	4.11E-03	3.08E-02
ENSG00000187867	PALM3	-1.45E+00	4.13E-03	3.09E-02
ENSG00000074047	GLI2	-1.16E+00	4.16E-03	3.11E-02
ENSG00000162881	OXER1	-2.33E+00	4.19E-03	3.12E-02
ENSG00000105251	SHD	-2.90E+00	4.31E-03	3.19E-02
ENSG00000245571	FAM111A-DT	-1.86E+00	4.34E-03	3.21E-02
ENSG00000153896	ZNF599	-1.07E+00	4.35E-03	3.21E-02
ENSG00000117643	MAN1C1	-1.49E+00	4.35E-03	3.21E-02
ENSG00000244459	AC147067.1	-3.28E+00	4.47E-03	3.29E-02
ENSG00000228109	MELTF-AS1	-1.10E+00	4.52E-03	3.32E-02
ENSG00000230513	THAP7-AS1	-2.26E+00	4.56E-03	3.34E-02
ENSG00000245275	SAP30L-AS1	-2.37E+00	4.57E-03	3.34E-02
ENSG00000185669	SNAI3	-3.31E+00	4.57E-03	3.34E-02
ENSG00000179477	ALOX12B	-2.52E+00	4.63E-03	3.38E-02
ENSG00000260442	ATP2A1-AS1	-1.04E+00	4.63E-03	3.38E-02
ENSG00000155849	ELMO1	-2.86E+00	4.78E-03	3.47E-02
ENSG00000135299	ANKRD6	-1.22E+00	4.79E-03	3.48E-02
ENSG00000228701	TNKS2-AS1	-2.39E+00	4.84E-03	3.51E-02
ENSG00000225511	LINC00475	-2.43E+00	4.90E-03	3.55E-02
ENSG00000143178	TBX19	-3.43E+00	5.10E-03	3.66E-02
ENSG00000106633	GCK	-2.02E+00	5.12E-03	3.67E-02
ENSG00000159214	CCDC24	-1.53E+00	5.17E-03	3.70E-02
ENSG00000187699	C2orf88	-2.14E+00	5.20E-03	3.72E-02
ENSG00000255624	AC073585.1	-2.31E+00	5.21E-03	3.72E-02
ENSG00000133246	PRAM1	-3.53E+00	5.21E-03	3.73E-02

ENSG00000155816	FMN2	-3.05E+00	5.26E-03	3.76E-02
ENSG00000126016	AMOT	-1.86E+00	5.29E-03	3.78E-02
ENSG00000119922	IFIT2	-1.16E+00	5.29E-03	3.78E-02
ENSG00000125895	TMEM74B	-1.51E+00	5.32E-03	3.79E-02
ENSG00000228801	AC064807.1	-1.25E+00	5.34E-03	3.80E-02
ENSG00000122986	HVCN1	-3.56E+00	5.34E-03	3.80E-02
ENSG00000231711	LINC00899	-1.63E+00	5.36E-03	3.81E-02
ENSG00000215883	CYB5RL	-1.31E+00	5.45E-03	3.85E-02
ENSG00000143355	LHX9	-3.25E+00	5.49E-03	3.87E-02
ENSG00000170293	CMTM8	-1.18E+00	5.51E-03	3.88E-02
ENSG00000188092	GPR89B	-1.04E+00	5.63E-03	3.94E-02
ENSG00000106852	LHX6	-1.77E+00	5.70E-03	3.98E-02
ENSG00000130304	SLC27A1	-1.15E+00	5.72E-03	4.00E-02
ENSG00000079215	SLC1A3	-1.83E+00	5.74E-03	4.01E-02
ENSG00000137959	IFI44L	-1.60E+00	5.79E-03	4.03E-02
ENSG00000197776	KLHDC1	-3.63E+00	5.79E-03	4.03E-02
ENSG00000173762	CD7	-2.61E+00	5.87E-03	4.08E-02
ENSG00000139174	PRICKLE1	-1.53E+00	5.88E-03	4.08E-02
ENSG00000255100	AP003119.2	-2.64E+00	5.98E-03	4.14E-02
ENSG00000154079	SDHAF4	-1.15E+00	6.01E-03	4.16E-02
ENSG00000178623	GPR35	-2.50E+00	6.05E-03	4.18E-02
ENSG00000182853	VMO1	-2.39E+00	6.11E-03	4.21E-02
ENSG00000140481	CCDC33	-1.81E+00	6.16E-03	4.23E-02
ENSG00000166405	RIC3	-3.62E+00	6.17E-03	4.24E-02
ENSG00000163794	UCN	-2.74E+00	6.21E-03	4.26E-02
ENSG00000095370	SH2D3C	-2.84E+00	6.23E-03	4.26E-02
ENSG00000185862	EVI2B	-3.68E+00	6.33E-03	4.32E-02
ENSG00000130294	KIF1A	-2.60E+00	6.34E-03	4.33E-02
ENSG00000167676	PLIN4	-1.99E+00	6.38E-03	4.34E-02
ENSG00000132517	SLC52A1	-2.56E+00	6.44E-03	4.38E-02
ENSG00000243225	AC007686.1	-1.39E+00	6.75E-03	4.54E-02
ENSG00000162849	KIF26B	-1.83E+00	6.76E-03	4.54E-02
ENSG00000181240	SLC25A41	-3.32E+00	6.82E-03	4.56E-02
ENSG00000014914	MTMR11	-1.18E+00	6.83E-03	4.57E-02
ENSG00000130433	CACNG6	-2.14E+00	6.88E-03	4.60E-02
ENSG00000214456	PLIN5	-3.55E+00	6.91E-03	4.61E-02
ENSG00000250654	AC023794.4	-1.56E+00	7.04E-03	4.68E-02
ENSG00000167799	NUDT8	-1.12E+00	7.10E-03	4.70E-02
ENSG00000117245	KIF17	-3.23E+00	7.18E-03	4.74E-02
ENSG00000162878	PKDCC	-1.27E+00	7.31E-03	4.80E-02
ENSG00000181444	ZNF467	-3.42E+00	7.32E-03	4.81E-02
ENSG00000248593	DSTNP2	-1.12E+00	7.41E-03	4.85E-02
ENSG00000076555	ACACB	-1.57E+00	7.50E-03	4.89E-02
ENSG00000242498	ARPIN	-1.04E+00	7.55E-03	4.91E-02
ENSG00000272172	AC138696.2	-2.75E+00	7.57E-03	4.92E-02

ENSG00000204789	ZNF204P	-1.56E+00	7.58E-03	4.93E-02
ENSG00000122735	DNAI1	-3.56E+00	7.60E-03	4.93E-02
ENSG00000099954	CECR2	-1.54E+00	7.62E-03	4.94E-02
ENSG00000158164	TMSB15A	-1.33E+00	7.68E-03	4.97E-02

**Supplementary table 5. Significant URGs with versus without IL-1 $\beta$  stimulation in Ad-EGFP transduced samples.**

Gene ID	Gene name	Log2(FC)	P value	FDR
ENSG00000124875	CXCL6	5.42E+00	6.55E-99	9.62E-95
ENSG00000128342	LIF	3.09E+00	2.18E-66	1.60E-62
ENSG00000163739	CXCL1	8.00E+00	7.41E-58	3.63E-54
ENSG00000163734	CXCL3	5.80E+00	2.87E-57	1.05E-53
ENSG00000081041	CXCL2	5.35E+00	6.99E-55	2.05E-51
ENSG00000122641	INHBA	2.68E+00	9.34E-53	2.29E-49
ENSG00000163661	PTX3	3.23E+00	1.05E-51	2.19E-48
ENSG00000169429	CXCL8	7.76E+00	5.85E-51	1.07E-47
ENSG00000108342	CSF3	1.02E+01	3.58E-47	5.85E-44
ENSG00000105835	NAMPT	1.63E+00	9.22E-45	1.35E-41
ENSG00000108179	PPIF	1.60E+00	1.76E-43	2.35E-40
ENSG00000145555	MYO10	1.58E+00	2.69E-42	3.29E-39
ENSG00000073756	PTGS2	5.33E+00	3.28E-42	3.70E-39
ENSG00000112096	SOD2	2.95E+00	3.53E-42	3.70E-39
ENSG00000124102	PI3	6.03E+00	4.71E-41	4.61E-38
ENSG00000163874	ZC3H12A	2.84E+00	1.52E-38	1.39E-35
ENSG00000137745	MMP13	2.90E+00	2.08E-37	1.70E-34
ENSG00000145901	TNIP1	1.58E+00	8.28E-36	6.40E-33
ENSG00000138685	FGF2	1.79E+00	2.22E-35	1.63E-32
ENSG00000185215	TNFAIP2	1.87E+00	3.54E-35	2.48E-32
ENSG00000104635	SLC39A14	1.75E+00	4.52E-33	3.02E-30
ENSG00000133657	ATP13A3	1.33E+00	6.96E-33	4.44E-30
ENSG00000144802	NFKBIZ	2.27E+00	3.35E-32	2.05E-29
ENSG00000072274	TFRC	1.05E+00	7.20E-32	4.23E-29
ENSG00000124145	SDC4	1.45E+00	4.55E-29	2.57E-26
ENSG00000136244	IL6	4.66E+00	1.30E-27	7.09E-25
ENSG00000197632	SERPINB2	5.95E+00	2.15E-27	1.13E-24
ENSG00000173391	OLR1	4.48E+00	7.38E-27	3.74E-24
ENSG00000090339	ICAM1	2.10E+00	2.17E-26	1.06E-23
ENSG00000147454	SLC25A37	1.43E+00	1.13E-25	5.34E-23
ENSG00000095752	IL11	2.35E+00	1.19E-25	5.48E-23
ENSG00000113070	HBEGF	1.73E+00	1.49E-25	6.64E-23
ENSG00000115009	CCL20	6.51E+00	1.63E-24	7.03E-22
ENSG00000184254	ALDH1A3	1.37E+00	3.33E-24	1.40E-21
ENSG00000118257	NRP2	2.39E+00	2.27E-23	9.24E-21
ENSG00000034152	MAP2K3	1.16E+00	1.21E-22	4.80E-20
ENSG00000165732	DDX21	1.05E+00	2.82E-22	1.09E-19
ENSG00000159200	RCAN1	1.86E+00	1.60E-21	6.03E-19
ENSG00000114251	WNT5A	1.14E+00	5.49E-21	1.97E-18
ENSG00000137331	IER3	2.23E+00	9.05E-20	3.09E-17
ENSG00000135919	SERPINE2	1.19E+00	2.13E-19	7.12E-17
ENSG00000185022	MAFF	2.00E+00	7.58E-19	2.48E-16
ENSG00000137801	THBS1	1.26E+00	8.09E-19	2.58E-16



ENSG00000125538	IL1B	5.22E+00	1.36E-18	4.25E-16
ENSG00000172156	CCL11	2.92E+00	2.82E-18	8.62E-16
ENSG00000101384	JAG1	1.07E+00	3.21E-18	9.43E-16
ENSG00000162692	VCAM1	1.21E+00	4.11E-18	1.19E-15
ENSG00000164400	CSF2	6.76E+00	4.90E-18	1.38E-15
ENSG00000108691	CCL2	2.17E+00	5.52E-18	1.53E-15
ENSG00000026508	CD44	1.87E+00	2.01E-17	5.26E-15
ENSG00000115756	HPCAL1	1.60E+00	2.46E-17	6.34E-15
ENSG00000182197	EXT1	1.03E+00	4.38E-17	1.11E-14
ENSG00000134070	IRAK2	1.84E+00	8.50E-17	2.12E-14
ENSG00000104419	NDRG1	1.35E+00	1.59E-16	3.88E-14
ENSG00000157168	NRG1	1.53E+00	1.75E-16	4.22E-14
ENSG00000117228	GBP1	1.10E+00	2.63E-16	6.24E-14
ENSG00000056558	TRAF1	2.52E+00	9.10E-16	2.09E-13
ENSG00000134954	ETS1	1.17E+00	1.29E-15	2.90E-13
ENSG00000173918	C1QTNF1	2.49E+00	1.30E-15	2.90E-13
ENSG00000255112	CHMP1B	1.08E+00	7.00E-15	1.51E-12
ENSG00000176597	B3GNT5	1.24E+00	7.61E-15	1.62E-12
ENSG00000182752	PAPPA	2.21E+00	9.10E-15	1.91E-12
ENSG00000125148	MT2A	2.38E+00	1.87E-14	3.82E-12
ENSG00000133816	MICAL2	1.17E+00	4.27E-14	8.48E-12
ENSG00000118515	SGK1	1.07E+00	5.12E-14	1.00E-11
ENSG00000125430	HS3ST3B1	3.00E+00	6.83E-14	1.32E-11
ENSG00000105855	ITGB8	2.26E+00	8.22E-14	1.55E-11
ENSG00000028277	POU2F2	1.92E+00	1.02E-13	1.87E-11
ENSG00000154127	UBASH3B	1.06E+00	2.19E-13	3.84E-11
ENSG00000164465	DCBLD1	1.07E+00	4.88E-13	8.25E-11
ENSG00000249992	TMEM158	1.82E+00	5.00E-13	8.35E-11
ENSG00000150630	VEGFC	1.57E+00	7.13E-13	1.15E-10
ENSG00000092969	TGFB2	1.09E+00	8.64E-13	1.36E-10
ENSG00000196878	LAMB3	1.80E+00	9.04E-13	1.41E-10
ENSG00000100985	MMP9	2.25E+00	9.91E-13	1.52E-10
ENSG00000170017	ALCAM	1.17E+00	1.09E-12	1.64E-10
ENSG00000105974	CAV1	1.40E+00	2.69E-12	3.87E-10
ENSG00000174136	RGMB	1.76E+00	2.73E-12	3.89E-10
ENSG00000133639	BTG1	1.07E+00	3.47E-12	4.86E-10
ENSG00000132334	PTPRE	1.24E+00	7.37E-12	1.01E-09
ENSG00000144749	LRIG1	1.13E+00	8.59E-12	1.15E-09
ENSG00000131459	GFPT2	1.12E+00	9.46E-12	1.24E-09
ENSG00000177606	JUN	1.11E+00	1.15E-11	1.50E-09
ENSG00000075426	FOSL2	1.09E+00	1.62E-11	2.01E-09
ENSG00000106366	SERPINE1	1.39E+00	1.63E-11	2.01E-09
ENSG00000167034	NKX3-1	1.35E+00	1.80E-11	2.18E-09
ENSG00000110330	BIRC2	1.15E+00	2.22E-11	2.68E-09
ENSG00000164171	ITGA2	1.83E+00	2.67E-11	3.13E-09

ENSG00000117525	F3	1.32E+00	3.01E-11	3.51E-09
ENSG00000102755	FLT1	1.54E+00	1.15E-10	1.22E-08
ENSG00000128564	VGF	2.06E+00	1.32E-10	1.39E-08
ENSG00000118503	TNFAIP3	1.49E+00	1.57E-10	1.65E-08
ENSG00000163814	CDCP1	1.26E+00	1.60E-10	1.67E-08
ENSG00000197208	SLC22A4	2.02E+00	2.11E-10	2.16E-08
ENSG00000146648	EGFR	1.25E+00	3.39E-10	3.38E-08
ENSG00000020577	SAMD4A	1.48E+00	5.08E-10	5.01E-08
ENSG00000115594	IL1R1	1.21E+00	5.25E-10	5.15E-08
ENSG00000052749	RRP12	1.07E+00	5.33E-10	5.18E-08
ENSG00000148841	ITPRIP	1.30E+00	6.30E-10	6.09E-08
ENSG00000175592	FOSL1	1.29E+00	8.67E-10	8.27E-08
ENSG00000169594	BNC1	2.07E+00	1.07E-09	1.01E-07
ENSG00000102802	MEDAG	2.79E+00	1.16E-09	1.07E-07
ENSG00000049192	ADAMTS6	1.50E+00	1.46E-09	1.33E-07
ENSG00000170961	HAS2	1.89E+00	1.67E-09	1.51E-07
ENSG00000049249	TNFRSF9	1.53E+00	1.69E-09	1.52E-07
ENSG00000100234	TIMP3	1.04E+00	1.79E-09	1.60E-07
ENSG00000067798	NAV3	1.53E+00	4.36E-09	3.77E-07
ENSG00000184545	DUSP8	1.45E+00	4.34E-09	3.77E-07
ENSG00000177283	FZD8	2.65E+00	4.46E-09	3.83E-07
ENSG00000133101	CCNA1	2.02E+00	4.63E-09	3.93E-07
ENSG00000128422	KRT17	1.31E+00	7.78E-09	6.38E-07
ENSG00000128567	PODXL	1.14E+00	8.55E-09	6.98E-07
ENSG00000181649	PHLDA2	1.20E+00	1.07E-08	8.48E-07
ENSG00000077238	IL4R	1.37E+00	1.24E-08	9.57E-07
ENSG00000125266	EFNB2	1.08E+00	1.48E-08	1.14E-06
ENSG00000107249	GLIS3	1.36E+00	1.95E-08	1.45E-06
ENSG00000103888	CEMIP	1.41E+00	2.04E-08	1.49E-06
ENSG00000111252	SH2B3	1.17E+00	2.04E-08	1.49E-06
ENSG00000100739	BDKRB1	1.91E+00	2.19E-08	1.59E-06
ENSG00000003402	CFLAR	1.05E+00	2.32E-08	1.67E-06
ENSG00000074416	MGLL	1.79E+00	2.49E-08	1.79E-06
ENSG00000085117	CD82	1.02E+00	2.99E-08	2.09E-06
ENSG00000164251	F2RL1	1.83E+00	3.21E-08	2.23E-06
ENSG00000041982	TNC	1.39E+00	3.44E-08	2.37E-06
ENSG00000008513	ST3GAL1	1.07E+00	4.28E-08	2.91E-06
ENSG00000139318	DUSP6	1.40E+00	4.41E-08	2.97E-06
ENSG00000157557	ETS2	1.19E+00	4.45E-08	2.99E-06
ENSG00000225614	ZNF469	1.18E+00	4.98E-08	3.31E-06
ENSG00000023445	BIRC3	1.73E+00	5.11E-08	3.38E-06
ENSG00000031081	ARHGAP31	1.40E+00	5.18E-08	3.40E-06
ENSG00000162645	GBP2	1.66E+00	5.83E-08	3.76E-06
ENSG00000130066	SAT1	1.14E+00	1.06E-07	6.67E-06
ENSG00000160072	ATAD3B	1.08E+00	1.13E-07	7.12E-06

ENSG00000146592	CREB5	2.13E+00	2.06E-07	1.21E-05
ENSG00000159399	HK2	1.43E+00	2.06E-07	1.21E-05
ENSG00000010818	HIVEP2	1.16E+00	2.51E-07	1.43E-05
ENSG00000144655	CSRNP1	1.06E+00	2.57E-07	1.46E-05
ENSG00000168685	IL7R	1.40E+00	2.75E-07	1.55E-05
ENSG00000163347	CLDN1	2.29E+00	3.03E-07	1.68E-05
ENSG00000013619	MAMLD1	1.97E+00	3.48E-07	1.90E-05
ENSG00000123610	TNFAIP6	1.21E+00	3.73E-07	2.02E-05
ENSG00000187678	SPRY4	1.44E+00	4.96E-07	2.61E-05
ENSG00000115363	EVA1A	2.04E+00	7.28E-07	3.77E-05
ENSG00000163297	ANTXR2	1.21E+00	7.56E-07	3.90E-05
ENSG00000164619	BMPER	3.09E+00	8.36E-07	4.25E-05
ENSG00000159167	STC1	1.46E+00	1.03E-06	5.12E-05
ENSG00000138623	SEMA7A	1.22E+00	1.19E-06	5.81E-05
ENSG00000197635	DPP4	1.38E+00	1.83E-06	8.48E-05
ENSG00000120899	PTK2B	2.13E+00	2.62E-06	1.18E-04
ENSG00000137449	CPEB2	1.59E+00	3.02E-06	1.34E-04
ENSG00000069482	GAL	1.06E+00	3.07E-06	1.36E-04
ENSG00000066583	ISOC1	1.13E+00	3.30E-06	1.44E-04
ENSG00000139289	PHLDA1	1.51E+00	3.32E-06	1.45E-04
ENSG00000129932	DOHH	1.16E+00	3.43E-06	1.48E-04
ENSG00000134531	EMP1	1.25E+00	3.65E-06	1.56E-04
ENSG00000139211	AMIGO2	1.24E+00	4.52E-06	1.90E-04
ENSG00000186340	THBS2	1.11E+00	6.25E-06	2.47E-04
ENSG00000143816	WNT9A	2.89E+00	7.05E-06	2.74E-04
ENSG00000156463	SH3RF2	1.83E+00	7.26E-06	2.81E-04
ENSG00000133805	AMPD3	1.92E+00	8.45E-06	3.17E-04
ENSG00000151012	SLC7A11	1.07E+00	8.68E-06	3.23E-04
ENSG00000232949	AC002480.2	3.13E+00	9.60E-06	3.54E-04
ENSG00000171889	MIR31HG	1.98E+00	1.14E-05	4.07E-04
ENSG00000011422	PLAUR	1.15E+00	1.20E-05	4.25E-04
ENSG00000171724	VAT1L	1.06E+00	1.21E-05	4.26E-04
ENSG00000166923	GREM1	1.60E+00	1.21E-05	4.28E-04
ENSG00000087510	TFAP2C	1.01E+00	1.28E-05	4.47E-04
ENSG00000197646	PDCD1LG2	1.86E+00	1.31E-05	4.55E-04
ENSG00000114771	AADAC	1.51E+00	1.37E-05	4.69E-04
ENSG00000108688	CCL7	2.69E+00	1.45E-05	4.90E-04
ENSG00000162407	PLPP3	2.83E+00	1.72E-05	5.72E-04
ENSG00000164181	ELOVL7	1.55E+00	2.02E-05	6.50E-04
ENSG00000144583	MARCH4	2.19E+00	2.07E-05	6.61E-04
ENSG00000160712	IL6R	1.81E+00	2.29E-05	7.14E-04
ENSG00000171608	PIK3CD	1.38E+00	2.44E-05	7.44E-04
ENSG00000166920	C15orf48	3.49E+00	2.82E-05	8.47E-04
ENSG00000232759	AC002480.1	2.11E+00	3.02E-05	9.01E-04
ENSG00000106089	STX1A	1.44E+00	3.06E-05	9.13E-04

ENSG00000149289	ZC3H12C	1.18E+00	3.77E-05	1.07E-03
ENSG00000166833	NAV2	1.10E+00	3.90E-05	1.11E-03
ENSG00000125730	C3	1.27E+00	4.36E-05	1.22E-03
ENSG00000175820	CCDC168	1.56E+00	4.63E-05	1.28E-03
ENSG00000153823	PID1	1.57E+00	4.86E-05	1.32E-03
ENSG00000113645	WWC1	1.06E+00	5.35E-05	1.43E-03
ENSG00000122861	PLAU	1.21E+00	5.75E-05	1.53E-03
ENSG00000155846	PPARGC1B	1.29E+00	5.83E-05	1.54E-03
ENSG00000108700	CCL8	3.82E+00	5.99E-05	1.58E-03
ENSG00000140379	BCL2A1	3.88E+00	6.38E-05	1.66E-03
ENSG00000251194	AL133330.1	2.33E+00	6.54E-05	1.70E-03
ENSG00000187479	C11orf96	1.65E+00	6.84E-05	1.77E-03
ENSG00000270069	MIR222HG	1.07E+00	9.22E-05	2.26E-03
ENSG00000233608	TWIST2	1.05E+00	1.40E-04	3.10E-03
ENSG00000136167	LCP1	2.33E+00	1.45E-04	3.17E-03
ENSG00000149968	MMP3	3.06E+00	1.80E-04	3.76E-03
ENSG00000111186	WNT5B	1.43E+00	1.85E-04	3.85E-03
ENSG00000162892	IL24	4.50E+00	1.94E-04	4.01E-03
ENSG00000115919	KYNU	2.04E+00	2.01E-04	4.11E-03
ENSG00000163376	KBTBD8	1.78E+00	2.09E-04	4.23E-03
ENSG00000120129	DUSP1	1.11E+00	2.14E-04	4.29E-03
ENSG00000102554	KLF5	2.04E+00	2.21E-04	4.38E-03
ENSG00000176170	SPHK1	1.02E+00	2.34E-04	4.58E-03
ENSG00000235885	LINC01828	3.32E+00	2.39E-04	4.65E-03
ENSG00000166922	SCG5	2.67E+00	2.67E-04	5.11E-03
ENSG00000237515	SHISA9	2.18E+00	2.86E-04	5.38E-03
ENSG00000109220	CHIC2	1.05E+00	2.90E-04	5.42E-03
ENSG00000112541	PDE10A	1.07E+00	3.15E-04	5.82E-03
ENSG00000182957	SPATA13	1.18E+00	3.22E-04	5.91E-03
ENSG00000171488	LRRC8C	1.38E+00	3.22E-04	5.92E-03
ENSG00000076356	PLXNA2	1.21E+00	3.82E-04	6.75E-03
ENSG00000162494	LRRC38	2.89E+00	3.90E-04	6.82E-03
ENSG00000023171	GRAMD1B	1.60E+00	4.61E-04	7.88E-03
ENSG00000166401	SERPINB8	1.23E+00	5.15E-04	8.53E-03
ENSG00000153976	HS3ST3A1	1.48E+00	5.93E-04	9.51E-03
ENSG00000119888	EPCAM	2.59E+00	6.22E-04	9.89E-03
ENSG00000123689	G0S2	2.64E+00	6.29E-04	9.97E-03
ENSG00000276107	AC037198.1	1.58E+00	6.49E-04	1.02E-02
ENSG00000115844	DLX2	1.50E+00	6.56E-04	1.03E-02
ENSG00000164283	ESM1	3.80E+00	7.62E-04	1.16E-02
ENSG00000243225	AC007686.1	1.31E+00	7.81E-04	1.18E-02
ENSG00000253626	EIF5AL1	1.11E+00	8.29E-04	1.23E-02
ENSG00000167772	ANGPTL4	1.16E+00	8.46E-04	1.25E-02
ENSG00000198729	PPP1R14C	1.49E+00	8.47E-04	1.25E-02
ENSG00000206538	VGLL3	1.31E+00	8.59E-04	1.26E-02

ENSG00000149948	HMGA2	1.20E+00	9.00E-04	1.30E-02
ENSG00000134815	DHX34	1.09E+00	1.00E-03	1.42E-02
ENSG00000165105	RASEF	1.11E+00	1.05E-03	1.47E-02
ENSG00000196935	SRGAP1	1.06E+00	1.11E-03	1.53E-02
ENSG00000234883	MIR155HG	1.68E+00	1.19E-03	1.60E-02
ENSG00000135318	NT5E	1.08E+00	1.20E-03	1.61E-02
ENSG00000117114	ADGRL2	1.41E+00	1.21E-03	1.63E-02
ENSG00000134363	FST	1.10E+00	1.29E-03	1.69E-02
ENSG00000187583	PLEKHN1	1.52E+00	1.63E-03	2.01E-02
ENSG00000280287	AC131212.3	1.71E+00	1.72E-03	2.10E-02
ENSG00000249673	NOP14-AS1	1.24E+00	1.77E-03	2.14E-02
ENSG00000179242	CDH4	1.99E+00	1.78E-03	2.15E-02
ENSG00000132003	ZSWIM4	1.04E+00	1.93E-03	2.27E-02
ENSG00000134668	SPOCD1	1.21E+00	2.19E-03	2.49E-02
ENSG00000110427	KIAA1549L	1.19E+00	2.34E-03	2.60E-02
ENSG00000154928	EPHB1	3.18E+00	2.53E-03	2.77E-02
ENSG00000185634	SHC4	1.42E+00	2.55E-03	2.78E-02
ENSG00000115738	ID2	1.52E+00	2.60E-03	2.82E-02
ENSG00000154736	ADAMTS5	1.45E+00	2.75E-03	2.92E-02
ENSG00000180233	ZNRF2	1.07E+00	2.85E-03	3.00E-02
ENSG00000162894	FCMR	2.60E+00	2.89E-03	3.03E-02
ENSG00000188064	WNT7B	1.33E+00	3.18E-03	3.24E-02
ENSG00000183780	SLC35F3	2.59E+00	3.22E-03	3.28E-02
ENSG00000105825	TFPI2	1.05E+00	3.25E-03	3.30E-02
ENSG00000181751	C5orf30	1.13E+00	3.26E-03	3.30E-02
ENSG00000178726	THBD	1.01E+00	3.27E-03	3.30E-02
ENSG00000204767	INSYN2B	2.23E+00	3.26E-03	3.30E-02
ENSG00000163481	RNF25	1.25E+00	3.43E-03	3.42E-02
ENSG00000275464	FP565260.1	1.18E+00	3.50E-03	3.47E-02
ENSG00000120217	CD274	1.41E+00	3.64E-03	3.56E-02
ENSG00000138347	MYPN	2.37E+00	4.15E-03	3.92E-02
ENSG00000176907	TCIM	1.94E+00	4.27E-03	3.99E-02
ENSG00000143995	MEIS1	1.38E+00	4.31E-03	4.02E-02
ENSG00000162595	DIRAS3	1.64E+00	4.72E-03	4.28E-02
ENSG00000110031	LPXN	2.21E+00	4.79E-03	4.32E-02
ENSG00000197620	CXorf40A	1.24E+00	4.82E-03	4.36E-02
ENSG00000258441	LINC00641	1.30E+00	5.16E-03	4.56E-02
ENSG00000172738	TMEM217	1.21E+00	5.16E-03	4.56E-02
ENSG00000184012	TMPRSS2	2.27E+00	5.54E-03	4.78E-02
ENSG00000101230	ISM1	2.50E+00	5.56E-03	4.80E-02
ENSG00000163131	CTSS	1.00E+00	5.75E-03	4.91E-02
ENSG00000087494	PTHLH	1.34E+00	5.76E-03	4.91E-02
ENSG00000157445	CACNA2D3	2.18E+00	5.79E-03	4.93E-02
ENSG00000181634	TNFSF15	1.38E+00	5.85E-03	4.97E-02
ENSG00000171522	PTGER4	1.02E+00	5.88E-03	4.98E-02

**Supplementary table 6. Significant DRGs with versus without IL-1 $\beta$  stimulation in Ad-EGFP transduced samples.**

Gene ID	Gene name	Log2(FC)	P value	FDR
ENSG00000162496	DHRS3	-2.74E+00	1.22E-37	1.05E-34
ENSG00000148660	CAMK2G	-1.00E+00	6.69E-13	1.09E-10
ENSG00000074370	ATP2A3	-2.79E+00	1.58E-12	2.32E-10
ENSG00000180739	S1PR5	-2.35E+00	8.38E-12	1.13E-09
ENSG00000185909	KLHDC8B	-1.31E+00	1.61E-11	2.01E-09
ENSG00000129422	MTUS1	-1.50E+00	1.65E-11	2.02E-09
ENSG00000106789	CORO2A	-2.30E+00	2.62E-11	3.10E-09
ENSG00000166313	APBB1	-1.13E+00	4.28E-11	4.95E-09
ENSG00000250510	GPR162	-2.08E+00	5.58E-11	6.36E-09
ENSG00000179403	VWA1	-1.09E+00	7.46E-11	8.24E-09
ENSG00000187634	SAMD11	-1.90E+00	1.13E-10	1.22E-08
ENSG00000198794	SCAMP5	-1.17E+00	1.17E-09	1.07E-07
ENSG00000163565	IFI16	-1.05E+00	2.14E-09	1.90E-07
ENSG00000138496	PARP9	-1.42E+00	3.14E-09	2.77E-07
ENSG00000182010	RTKN2	-1.73E+00	4.08E-09	3.56E-07
ENSG00000090661	CERS4	-1.82E+00	5.55E-09	4.66E-07
ENSG00000176046	NUPR1	-1.43E+00	5.55E-09	4.66E-07
ENSG00000120756	PLS1	-1.60E+00	5.63E-09	4.70E-07
ENSG00000087842	PIR	-1.23E+00	6.60E-09	5.48E-07
ENSG00000111913	RIPOR2	-3.59E+00	9.77E-09	7.84E-07
ENSG00000105514	RAB3D	-2.48E+00	1.01E-08	7.98E-07
ENSG00000147130	ZMYM3	-1.30E+00	1.54E-08	1.17E-06
ENSG00000196535	MYO18A	-1.19E+00	3.76E-08	2.57E-06
ENSG00000184117	NIPSNAP1	-1.38E+00	4.37E-08	2.96E-06
ENSG00000240024	LINC00888	-1.41E+00	5.19E-08	3.40E-06
ENSG00000099940	SNAP29	-1.11E+00	5.59E-08	3.62E-06
ENSG00000131069	ACSS2	-1.08E+00	1.23E-07	7.61E-06
ENSG00000157978	LDLRAP1	-1.05E+00	1.50E-07	9.13E-06
ENSG00000188338	SLC38A3	-1.21E+00	1.65E-07	9.94E-06
ENSG00000221963	APOL6	-1.04E+00	2.15E-07	1.26E-05
ENSG00000104888	SLC17A7	-1.73E+00	2.30E-07	1.33E-05
ENSG00000135365	PHF21A	-1.02E+00	2.99E-07	1.67E-05
ENSG00000099284	H2AFY2	-1.09E+00	3.05E-07	1.69E-05
ENSG00000165716	DIPK1B	-1.39E+00	3.08E-07	1.70E-05
ENSG00000103485	QPRT	-1.12E+00	3.22E-07	1.77E-05
ENSG00000178821	TMEM52	-2.22E+00	3.44E-07	1.89E-05
ENSG00000143590	EFNA3	-1.38E+00	4.49E-07	2.38E-05
ENSG00000169129	AFAP1L2	-2.03E+00	4.73E-07	2.50E-05
ENSG00000122592	HOXA7	-1.23E+00	5.77E-07	3.00E-05
ENSG00000105559	PLEKHA4	-1.21E+00	6.26E-07	3.25E-05
ENSG00000076826	CAMSAP3	-2.57E+00	1.10E-06	5.44E-05
ENSG00000166963	MAP1A	-1.66E+00	1.18E-06	5.78E-05
ENSG00000065361	ERBB3	-2.25E+00	1.25E-06	6.05E-05

ENSG00000117266	CDK18	-2.20E+00	1.47E-06	6.98E-05
ENSG00000265972	TXNIP	-2.05E+00	1.58E-06	7.47E-05
ENSG00000167680	SEMA6B	-1.05E+00	1.73E-06	8.05E-05
ENSG00000088367	EPB41L1	-1.02E+00	1.86E-06	8.59E-05
ENSG00000182606	TRAK1	-1.02E+00	2.94E-06	1.31E-04
ENSG00000130475	FCHO1	-4.04E+00	3.05E-06	1.36E-04
ENSG00000185630	PBX1	-1.20E+00	3.10E-06	1.37E-04
ENSG00000088305	DNMT3B	-1.18E+00	3.25E-06	1.42E-04
ENSG00000165113	GKAP1	-1.39E+00	3.52E-06	1.51E-04
ENSG00000021355	SERPINB1	-1.05E+00	3.81E-06	1.62E-04
ENSG00000162076	FLYWCH2	-1.36E+00	3.91E-06	1.65E-04
ENSG00000175938	ORAI3	-1.75E+00	4.40E-06	1.85E-04
ENSG00000141750	STAC2	-1.55E+00	4.55E-06	1.90E-04
ENSG00000257178	AC103702.1	-4.18E+00	4.98E-06	2.07E-04
ENSG00000166352	C11orf74	-1.23E+00	5.12E-06	2.12E-04
ENSG00000105270	CLIP3	-1.13E+00	5.16E-06	2.12E-04
ENSG00000159184	HOXB13	-2.01E+00	5.20E-06	2.13E-04
ENSG00000185432	METTL7A	-2.75E+00	5.30E-06	2.16E-04
ENSG00000064195	DLX3	-1.25E+00	5.83E-06	2.35E-04
ENSG00000090238	YPEL3	-1.39E+00	6.03E-06	2.41E-04
ENSG00000154240	CEP112	-1.22E+00	6.41E-06	2.53E-04
ENSG00000188177	ZC3H6	-1.38E+00	7.57E-06	2.92E-04
ENSG00000012822	CALCOCO1	-1.19E+00	7.61E-06	2.92E-04
ENSG00000173868	PHOSPHO1	-2.69E+00	7.74E-06	2.95E-04
ENSG00000023892	DEF6	-1.50E+00	8.48E-06	3.18E-04
ENSG00000139725	RHOF	-1.12E+00	8.62E-06	3.21E-04
ENSG00000184584	TMEM173	-1.26E+00	8.71E-06	3.23E-04
ENSG00000073331	ALPK1	-2.30E+00	1.01E-05	3.70E-04
ENSG00000182580	EPHB3	-1.28E+00	1.02E-05	3.70E-04
ENSG00000171992	SYNPO	-1.67E+00	1.03E-05	3.72E-04
ENSG00000169783	LINGO1	-1.45E+00	1.05E-05	3.77E-04
ENSG00000163683	SMIM14	-1.03E+00	1.15E-05	4.08E-04
ENSG00000110921	MVK	-1.05E+00	1.26E-05	4.41E-04
ENSG00000160447	PKN3	-1.68E+00	1.31E-05	4.56E-04
ENSG00000226137	BAIAP2-DT	-1.50E+00	1.32E-05	4.56E-04
ENSG00000169499	PLEKHA2	-1.34E+00	1.45E-05	4.90E-04
ENSG00000105516	DBP	-1.64E+00	1.47E-05	4.95E-04
ENSG00000157470	FAM81A	-1.66E+00	1.51E-05	5.08E-04
ENSG00000196220	SRGAP3	-2.72E+00	1.66E-05	5.53E-04
ENSG00000110076	NRXN2	-2.18E+00	1.68E-05	5.58E-04
ENSG00000077092	RARB	-5.46E+00	1.76E-05	5.82E-04
ENSG00000185745	IFIT1	-2.12E+00	1.96E-05	6.36E-04
ENSG00000183196	CHST6	-1.61E+00	2.01E-05	6.47E-04
ENSG00000131018	SYNE1	-1.13E+00	2.03E-05	6.51E-04
ENSG00000140044	JDP2	-1.35E+00	2.11E-05	6.71E-04

ENSG00000158164	TMSB15A	-2.19E+00	2.17E-05	6.83E-04
ENSG00000250802	ZBED3-AS1	-3.30E+00	2.17E-05	6.83E-04
ENSG00000165821	SALL2	-1.62E+00	2.23E-05	6.99E-04
ENSG00000118640	VAMP8	-3.00E+00	2.28E-05	7.11E-04
ENSG00000143375	CGN	-1.68E+00	2.38E-05	7.35E-04
ENSG00000148426	PROSER2	-1.24E+00	2.40E-05	7.36E-04
ENSG00000205978	NYNRIN	-3.71E+00	2.74E-05	8.26E-04
ENSG00000110315	RNF141	-1.17E+00	2.76E-05	8.30E-04
ENSG00000181035	SLC25A42	-1.54E+00	2.89E-05	8.65E-04
ENSG00000099954	CECR2	-2.46E+00	3.39E-05	9.93E-04
ENSG00000172819	RARG	-1.01E+00	3.43E-05	1.00E-03
ENSG00000205356	TECPR1	-1.54E+00	3.44E-05	1.00E-03
ENSG00000119862	LGALSL	-1.30E+00	3.51E-05	1.01E-03
ENSG00000133056	PIK3C2B	-1.54E+00	3.73E-05	1.06E-03
ENSG00000119922	IFIT2	-1.94E+00	4.04E-05	1.15E-03
ENSG00000082458	DLG3	-1.00E+00	4.16E-05	1.17E-03
ENSG00000166575	TMEM135	-1.09E+00	4.36E-05	1.22E-03
ENSG00000128268	MGAT3	-1.33E+00	4.41E-05	1.23E-03
ENSG00000177674	AGTRAP	-1.37E+00	4.47E-05	1.24E-03
ENSG00000225783	MIAT	-2.55E+00	4.73E-05	1.29E-03
ENSG00000126603	GLIS2	-1.13E+00	5.06E-05	1.37E-03
ENSG00000095539	SEMA4G	-1.48E+00	7.00E-05	1.80E-03
ENSG00000245848	CEBPA	-2.08E+00	7.96E-05	2.01E-03
ENSG00000235823	OLMALINC	-1.15E+00	8.34E-05	2.08E-03
ENSG00000115525	ST3GAL5	-1.29E+00	8.45E-05	2.10E-03
ENSG00000158246	TENT5B	-1.17E+00	8.65E-05	2.15E-03
ENSG00000124496	TRERF1	-1.12E+00	8.77E-05	2.17E-03
ENSG00000139269	INHBE	-2.48E+00	8.97E-05	2.21E-03
ENSG00000142082	SIRT3	-1.45E+00	9.21E-05	2.26E-03
ENSG00000137959	IFI44L	-2.47E+00	9.28E-05	2.27E-03
ENSG00000121851	POLR3GL	-1.27E+00	9.57E-05	2.33E-03
ENSG00000164116	GUCY1A1	-1.89E+00	9.79E-05	2.37E-03
ENSG00000238113	LINC01410	-3.51E+00	1.02E-04	2.44E-03
ENSG00000132000	PODNL1	-1.41E+00	1.03E-04	2.46E-03
ENSG00000270673	YTHDF3-AS1	-2.76E+00	1.03E-04	2.46E-03
ENSG00000132846	ZBED3	-1.64E+00	1.04E-04	2.48E-03
ENSG00000186897	C1QL4	-1.60E+00	1.07E-04	2.53E-03
ENSG00000070371	CLTCL1	-1.69E+00	1.08E-04	2.55E-03
ENSG00000149922	TBX6	-4.97E+00	1.18E-04	2.72E-03
ENSG00000257596	SCAT2	-4.47E+00	1.20E-04	2.77E-03
ENSG00000175575	PAAF1	-1.10E+00	1.25E-04	2.87E-03
ENSG00000177984	LCN15	-3.74E+00	1.26E-04	2.87E-03
ENSG00000160325	CACFD1	-1.10E+00	1.38E-04	3.06E-03
ENSG00000123080	CDKN2C	-1.02E+00	1.41E-04	3.11E-03
ENSG00000139178	C1RL	-1.67E+00	1.45E-04	3.17E-03



ENSG00000167157	PRRX2	-1.13E+00	1.46E-04	3.18E-03
ENSG00000183765	CHEK2	-1.10E+00	1.50E-04	3.26E-03
ENSG00000180902	D2HGDH	-1.08E+00	1.57E-04	3.37E-03
ENSG00000235961	PNMA6A	-2.21E+00	1.71E-04	3.62E-03
ENSG00000052850	ALX4	-1.77E+00	1.73E-04	3.66E-03
ENSG00000257698	GIHCG	-1.17E+00	1.75E-04	3.70E-03
ENSG00000163283	ALPP	-3.22E+00	1.76E-04	3.71E-03
ENSG00000164330	EBF1	-1.54E+00	1.98E-04	4.09E-03
ENSG00000132321	IQCA1	-1.17E+00	2.03E-04	4.13E-03
ENSG00000117602	RCAN3	-1.48E+00	2.18E-04	4.35E-03
ENSG00000138111	MFSD13A	-1.92E+00	2.23E-04	4.42E-03
ENSG00000125703	ATG4C	-1.22E+00	2.24E-04	4.42E-03
ENSG00000177570	SAMD12	-3.15E+00	2.39E-04	4.65E-03
ENSG00000110844	PRPF40B	-1.14E+00	2.43E-04	4.72E-03
ENSG00000168913	ENHO	-1.16E+00	2.44E-04	4.73E-03
ENSG00000138036	DYNC2LI1	-1.01E+00	2.54E-04	4.90E-03
ENSG00000135452	TSPAN31	-1.45E+00	2.62E-04	5.03E-03
ENSG00000139428	MMAB	-1.05E+00	2.84E-04	5.35E-03
ENSG00000273253	AL022328.4	-2.21E+00	2.86E-04	5.38E-03
ENSG00000180425	C11orf71	-2.09E+00	2.87E-04	5.38E-03
ENSG00000137198	GMPR	-2.03E+00	2.89E-04	5.42E-03
ENSG00000167733	HSD11B1L	-1.43E+00	3.02E-04	5.63E-03
ENSG00000181790	ADGRB1	-1.07E+00	3.09E-04	5.74E-03
ENSG00000157514	TSC22D3	-1.20E+00	3.18E-04	5.86E-03
ENSG00000281128	PTENP1-AS	-1.68E+00	3.25E-04	5.95E-03
ENSG00000178038	ALS2CL	-2.64E+00	3.25E-04	5.95E-03
ENSG00000115596	WNT6	-1.34E+00	3.36E-04	6.09E-03
ENSG00000142327	RNPEPL1	-1.12E+00	3.42E-04	6.19E-03
ENSG00000125895	TMEM74B	-2.13E+00	3.44E-04	6.20E-03
ENSG00000074964	ARHGEF10L	-1.12E+00	3.52E-04	6.32E-03
ENSG00000095066	HOOK2	-1.05E+00	3.70E-04	6.57E-03
ENSG00000170373	CST1	-4.00E+00	3.72E-04	6.61E-03
ENSG00000161896	IP6K3	-2.29E+00	4.48E-04	7.70E-03
ENSG00000115459	ELMOD3	-1.11E+00	4.55E-04	7.79E-03
ENSG00000130529	TRPM4	-1.06E+00	4.64E-04	7.91E-03
ENSG00000185187	SIGIRR	-1.17E+00	4.69E-04	7.98E-03
ENSG00000072195	SPEG	-1.14E+00	4.78E-04	8.09E-03
ENSG00000139531	SUOX	-1.33E+00	5.02E-04	8.39E-03
ENSG00000026950	BTN3A1	-1.05E+00	5.04E-04	8.41E-03
ENSG00000099864	PALM	-1.22E+00	5.04E-04	8.41E-03
ENSG00000119943	PYROXD2	-3.14E+00	5.10E-04	8.48E-03
ENSG00000135119	RNFT2	-1.08E+00	5.10E-04	8.48E-03
ENSG00000198246	SLC29A3	-1.32E+00	5.09E-04	8.48E-03
ENSG00000161328	LRRC56	-2.49E+00	5.19E-04	8.59E-03
ENSG00000137700	SLC37A4	-1.37E+00	5.20E-04	8.59E-03

ENSG00000228630	HOTAIR	-1.53E+00	5.27E-04	8.67E-03
ENSG00000103021	CCDC113	-2.19E+00	5.34E-04	8.77E-03
ENSG00000119408	NEK6	-1.02E+00	5.40E-04	8.84E-03
ENSG00000164683	HEY1	-1.20E+00	5.64E-04	9.13E-03
ENSG00000158106	RHPN1	-1.47E+00	6.12E-04	9.78E-03
ENSG00000112367	FIG4	-1.44E+00	6.31E-04	1.00E-02
ENSG00000010310	GIPR	-2.98E+00	6.42E-04	1.01E-02
ENSG00000262185	AC005736.1	-3.02E+00	6.72E-04	1.05E-02
ENSG00000196557	CACNA1H	-2.02E+00	6.75E-04	1.06E-02
ENSG00000106004	HOXA5	-1.41E+00	6.89E-04	1.07E-02
ENSG00000116990	MYCL	-1.71E+00	7.23E-04	1.11E-02
ENSG00000184986	TMEM121	-1.14E+00	7.30E-04	1.12E-02
ENSG00000131797	CLUHP3	-1.83E+00	7.62E-04	1.16E-02
ENSG00000178404	CEP295NL	-3.67E+00	7.64E-04	1.16E-02
ENSG00000125652	ALKBH7	-1.01E+00	7.75E-04	1.17E-02
ENSG00000236859	NIFK-AS1	-1.30E+00	8.01E-04	1.20E-02
ENSG00000137463	MGARP	-1.22E+00	8.05E-04	1.20E-02
ENSG00000075340	ADD2	-4.06E+00	8.06E-04	1.20E-02
ENSG00000176386	CDC26	-3.05E+00	8.11E-04	1.21E-02
ENSG00000144306	SCRN3	-1.05E+00	8.21E-04	1.22E-02
ENSG00000248487	ABHD14A	-1.08E+00	8.75E-04	1.28E-02
ENSG00000239039	SNORD13	-3.51E+00	8.84E-04	1.29E-02
ENSG00000115266	APC2	-1.85E+00	8.87E-04	1.29E-02
ENSG00000198189	HSD17B11	-1.05E+00	8.89E-04	1.29E-02
ENSG00000167771	RCOR2	-1.45E+00	9.14E-04	1.32E-02
ENSG00000169220	RGS14	-1.41E+00	9.19E-04	1.32E-02
ENSG00000203778	FAM229B	-1.25E+00	9.31E-04	1.34E-02
ENSG00000127220	ABHD8	-1.12E+00	9.59E-04	1.37E-02
ENSG00000130005	GAMT	-1.02E+00	9.58E-04	1.37E-02
ENSG00000160801	PTH1R	-3.28E+00	1.02E-03	1.44E-02
ENSG00000108370	RGS9	-1.59E+00	1.04E-03	1.46E-02
ENSG00000108387	SEPTIN4	-1.14E+00	1.06E-03	1.48E-02
ENSG00000241935	HOGA1	-3.56E+00	1.07E-03	1.48E-02
ENSG00000166839	ANKDD1A	-1.11E+00	1.08E-03	1.49E-02
ENSG00000110628	SLC22A18	-1.09E+00	1.08E-03	1.50E-02
ENSG00000167536	DHRS13	-1.12E+00	1.11E-03	1.52E-02
ENSG00000196132	MYT1	-2.92E+00	1.11E-03	1.53E-02
ENSG00000060642	PIGV	-1.46E+00	1.16E-03	1.58E-02
ENSG00000129159	KCNC1	-3.22E+00	1.17E-03	1.59E-02
ENSG00000089723	OTUB2	-2.78E+00	1.18E-03	1.60E-02
ENSG00000062282	DGAT2	-1.08E+00	1.18E-03	1.60E-02
ENSG00000177409	SAMD9L	-1.78E+00	1.21E-03	1.62E-02
ENSG00000215788	TNFRSF25	-1.60E+00	1.22E-03	1.64E-02
ENSG00000138613	APH1B	-1.29E+00	1.22E-03	1.64E-02
ENSG00000198496	NBR2	-1.10E+00	1.22E-03	1.64E-02

ENSG00000224616	RTCA-AS1	-1.93E+00	1.23E-03	1.64E-02
ENSG00000006606	CCL26	-2.20E+00	1.24E-03	1.65E-02
ENSG00000180448	ARHGAP45	-1.75E+00	1.25E-03	1.66E-02
ENSG00000148219	ASTN2	-1.57E+00	1.28E-03	1.69E-02
ENSG00000009950	MLXIPL	-3.74E+00	1.29E-03	1.69E-02
ENSG00000108176	DNAJC12	-1.42E+00	1.29E-03	1.69E-02
ENSG00000129757	CDKN1C	-1.08E+00	1.29E-03	1.69E-02
ENSG00000212232	SNORD17	-2.93E+00	1.29E-03	1.69E-02
ENSG00000162976	SLC66A3	-1.88E+00	1.33E-03	1.73E-02
ENSG00000078114	NEBL	-2.65E+00	1.36E-03	1.77E-02
ENSG00000204060	FOXO6	-2.34E+00	1.38E-03	1.79E-02
ENSG00000196976	LAGE3	-1.03E+00	1.40E-03	1.80E-02
ENSG00000214595	EML6	-2.52E+00	1.40E-03	1.80E-02
ENSG00000189120	SP6	-1.19E+00	1.41E-03	1.82E-02
ENSG00000163702	IL17RC	-1.14E+00	1.43E-03	1.83E-02
ENSG00000085871	MGST2	-1.11E+00	1.45E-03	1.85E-02
ENSG00000181513	ACBD4	-1.81E+00	1.48E-03	1.88E-02
ENSG00000114541	FRMD4B	-1.64E+00	1.49E-03	1.89E-02
ENSG00000150764	DIXDC1	-1.00E+00	1.53E-03	1.93E-02
ENSG00000164124	TMEM144	-1.69E+00	1.54E-03	1.93E-02
ENSG00000258017	AC011603.2	-4.02E+00	1.56E-03	1.95E-02
ENSG00000105997	HOXA3	-1.35E+00	1.59E-03	1.98E-02
ENSG00000128694	OSGEPL1	-1.01E+00	1.60E-03	1.98E-02
ENSG00000180769	WDFY3-AS2	-1.76E+00	1.60E-03	1.98E-02
ENSG00000176399	DMRTA1	-1.63E+00	1.61E-03	1.99E-02
ENSG00000280670	CCDC163	-2.31E+00	1.63E-03	2.01E-02
ENSG00000164125	GASK1B	-1.03E+00	1.70E-03	2.09E-02
ENSG00000128165	ADM2	-1.89E+00	1.72E-03	2.10E-02
ENSG00000172731	LRRC20	-1.41E+00	1.74E-03	2.12E-02
ENSG00000124920	MYRF	-1.13E+00	1.75E-03	2.12E-02
ENSG00000136689	IL1RN	-5.86E+00	1.75E-03	2.12E-02
ENSG00000105664	COMP	-2.32E+00	1.77E-03	2.13E-02
ENSG00000177459	ERICH5	-1.50E+00	1.78E-03	2.15E-02
ENSG00000273297	AC009275.1	-1.57E+00	1.81E-03	2.17E-02
ENSG00000241990	PRR34-AS1	-1.07E+00	1.87E-03	2.22E-02
ENSG00000182472	CAPN12	-3.25E+00	1.88E-03	2.23E-02
ENSG00000120093	HOXB3	-1.01E+00	1.88E-03	2.23E-02
ENSG00000187091	PLCD1	-1.01E+00	1.95E-03	2.30E-02
ENSG00000130208	APOC1	-1.31E+00	1.96E-03	2.30E-02
ENSG00000235706	DICER1-AS1	-1.94E+00	1.96E-03	2.30E-02
ENSG00000129295	LRRC6	-1.91E+00	1.98E-03	2.32E-02
ENSG00000092051	JPH4	-2.92E+00	2.04E-03	2.36E-02
ENSG00000214106	PAXIP1-AS2	-1.20E+00	2.05E-03	2.38E-02
ENSG00000167103	PIP5KL1	-1.96E+00	2.06E-03	2.38E-02
ENSG00000179111	HES7	-1.99E+00	2.07E-03	2.39E-02

ENSG00000197380	DACT3	-1.07E+00	2.08E-03	2.39E-02
ENSG00000011143	MKS1	-1.05E+00	2.09E-03	2.40E-02
ENSG00000148842	CNNM2	-1.01E+00	2.10E-03	2.41E-02
ENSG00000223478	AL441992.1	-1.18E+00	2.12E-03	2.43E-02
ENSG00000269293	ZSCAN16-AS1	-1.02E+00	2.14E-03	2.45E-02
ENSG00000159307	SCUBE1	-3.26E+00	2.15E-03	2.45E-02
ENSG00000135439	AGAP2	-3.41E+00	2.15E-03	2.46E-02
ENSG00000171345	KRT19	-4.57E+00	2.20E-03	2.49E-02
ENSG00000007516	BAIAP3	-1.32E+00	2.25E-03	2.52E-02
ENSG00000100027	YPEL1	-2.07E+00	2.35E-03	2.61E-02
ENSG00000226781	TBCAP1	-4.82E+00	2.35E-03	2.61E-02
ENSG00000185269	NOTUM	-4.12E+00	2.38E-03	2.63E-02
ENSG00000130656	HBZ	-2.83E+00	2.44E-03	2.69E-02
ENSG00000281189	GHET1	-4.28E+00	2.44E-03	2.69E-02
ENSG00000260001	TGFBR3L	-1.07E+00	2.45E-03	2.70E-02
ENSG00000228506	AL513550.1	-1.33E+00	2.46E-03	2.71E-02
ENSG00000155980	KIF5A	-3.52E+00	2.48E-03	2.72E-02
ENSG00000235954	TTC28-AS1	-1.17E+00	2.53E-03	2.77E-02
ENSG00000250320	AC113383.1	-1.15E+00	2.53E-03	2.77E-02
ENSG00000171045	TSNARE1	-1.59E+00	2.54E-03	2.78E-02
ENSG00000085741	WNT11	-1.22E+00	2.55E-03	2.78E-02
ENSG00000173805	HAP1	-1.49E+00	2.57E-03	2.79E-02
ENSG00000173258	ZNF483	-1.13E+00	2.58E-03	2.80E-02
ENSG00000178623	GPR35	-3.13E+00	2.60E-03	2.82E-02
ENSG00000135338	LCA5	-1.25E+00	2.63E-03	2.84E-02
ENSG00000128965	CHAC1	-1.08E+00	2.63E-03	2.84E-02
ENSG00000197558	SSPO	-3.01E+00	2.71E-03	2.89E-02
ENSG00000085552	IGSF9	-1.36E+00	2.72E-03	2.90E-02
ENSG00000167676	PLIN4	-2.63E+00	2.73E-03	2.90E-02
ENSG00000247081	BAALC-AS1	-1.62E+00	2.73E-03	2.90E-02
ENSG00000101203	COL20A1	-4.02E+00	2.77E-03	2.93E-02
ENSG00000270419	CAHM	-2.38E+00	2.83E-03	2.98E-02
ENSG00000106633	GCK	-2.45E+00	2.83E-03	2.98E-02
ENSG00000205544	TMEM256	-1.04E+00	2.84E-03	2.99E-02
ENSG00000250786	SNHG18	-1.16E+00	2.88E-03	3.02E-02
ENSG00000185133	INPP5J	-1.44E+00	2.89E-03	3.03E-02
ENSG00000206530	CFAP44	-1.06E+00	2.91E-03	3.04E-02
ENSG00000273619	AL121832.2	-1.25E+00	2.92E-03	3.04E-02
ENSG00000189298	ZKSCAN3	-1.29E+00	2.96E-03	3.08E-02
ENSG00000086300	SNX10	-1.58E+00	2.98E-03	3.09E-02
ENSG00000087250	MT3	-4.63E+00	2.98E-03	3.09E-02
ENSG00000160588	MPZL3	-1.20E+00	3.02E-03	3.12E-02
ENSG00000234327	AC012146.1	-1.56E+00	3.06E-03	3.15E-02
ENSG00000025434	NR1H3	-1.15E+00	3.13E-03	3.21E-02
ENSG00000250654	AC023794.4	-1.66E+00	3.18E-03	3.24E-02

ENSG00000100154	TTC28	-1.13E+00	3.23E-03	3.28E-02
ENSG00000253552	HOXA-AS2	-1.49E+00	3.23E-03	3.28E-02
ENSG00000226314	ZNF192P1	-2.13E+00	3.27E-03	3.30E-02
ENSG00000105877	DNAH11	-1.37E+00	3.34E-03	3.37E-02
ENSG00000174516	PELI3	-1.14E+00	3.37E-03	3.38E-02
ENSG00000173409	ARV1	-1.09E+00	3.40E-03	3.41E-02
ENSG00000184261	KCNK12	-3.12E+00	3.43E-03	3.42E-02
ENSG00000153363	LINC00467	-1.40E+00	3.45E-03	3.43E-02
ENSG00000132470	ITGB4	-1.78E+00	3.48E-03	3.45E-02
ENSG00000135124	P2RX4	-1.02E+00	3.50E-03	3.47E-02
ENSG00000148288	GBGT1	-1.23E+00	3.50E-03	3.47E-02
ENSG00000182575	NXPH3	-3.39E+00	3.54E-03	3.49E-02
ENSG00000187730	GABRD	-1.37E+00	3.72E-03	3.63E-02
ENSG00000247317	LY6E-DT	-3.11E+00	3.74E-03	3.64E-02
ENSG00000176383	B3GNT4	-2.52E+00	3.84E-03	3.71E-02
ENSG00000175264	CHST1	-1.17E+00	3.85E-03	3.71E-02
ENSG00000197779	ZNF81	-1.18E+00	3.86E-03	3.72E-02
ENSG00000286760	AL022069.3	-2.73E+00	3.96E-03	3.78E-02
ENSG00000099910	KLHL22	-1.82E+00	3.99E-03	3.80E-02
ENSG00000277459	AP001527.2	-2.80E+00	3.99E-03	3.80E-02
ENSG00000248712	CCDC153	-2.02E+00	4.08E-03	3.86E-02
ENSG00000172350	ABCG4	-3.04E+00	4.15E-03	3.92E-02
ENSG00000159733	ZFYVE28	-2.41E+00	4.16E-03	3.92E-02
ENSG00000163093	BBS5	-1.19E+00	4.23E-03	3.96E-02
ENSG00000168916	ZNF608	-1.08E+00	4.28E-03	4.00E-02
ENSG00000016391	CHDH	-3.28E+00	4.34E-03	4.04E-02
ENSG00000173156	RHOD	-1.57E+00	4.38E-03	4.07E-02
ENSG00000184916	JAG2	-1.40E+00	4.39E-03	4.07E-02
ENSG00000226287	TMEM191A	-1.66E+00	4.42E-03	4.09E-02
ENSG00000205930	C21orf62-AS1	-2.71E+00	4.59E-03	4.21E-02
ENSG00000168071	CCDC88B	-2.07E+00	4.65E-03	4.25E-02
ENSG00000229276	REV3L-IT1	-2.89E+00	4.65E-03	4.25E-02
ENSG00000273162	AL133215.2	-2.17E+00	4.68E-03	4.26E-02
ENSG00000132623	ANKEF1	-1.40E+00	4.68E-03	4.26E-02
ENSG00000272870	AC097534.2	-1.39E+00	4.69E-03	4.26E-02
ENSG00000261575	AC005829.1	-2.57E+00	4.69E-03	4.26E-02
ENSG00000122367	LDB3	-2.26E+00	4.72E-03	4.28E-02
ENSG00000165121	AL353743.1	-1.41E+00	4.75E-03	4.30E-02
ENSG00000167741	GGT6	-3.94E+00	4.75E-03	4.30E-02
ENSG00000003249	DBNDD1	-1.20E+00	4.83E-03	4.36E-02
ENSG00000108984	MAP2K6	-1.90E+00	4.89E-03	4.40E-02
ENSG00000176222	ZNF404	-1.05E+00	4.90E-03	4.41E-02
ENSG00000261652	C15orf65	-2.41E+00	4.92E-03	4.42E-02
ENSG00000135472	FAIM2	-1.67E+00	4.97E-03	4.44E-02
ENSG00000183486	MX2	-1.97E+00	5.01E-03	4.47E-02

ENSG00000183648	NDUFB1	-1.02E+00	5.06E-03	4.51E-02
ENSG00000167549	CORO6	-1.67E+00	5.10E-03	4.53E-02
ENSG00000150054	MPP7	-2.58E+00	5.12E-03	4.54E-02
ENSG00000058453	CROCC	-1.05E+00	5.17E-03	4.57E-02
ENSG00000258704	SRP54-AS1	-1.42E+00	5.28E-03	4.63E-02
ENSG00000197943	PLCG2	-1.19E+00	5.29E-03	4.64E-02
ENSG00000142459	EVI5L	-1.11E+00	5.36E-03	4.68E-02
ENSG00000163380	LMOD3	-4.95E+00	5.46E-03	4.74E-02
ENSG00000215910	C1orf167	-3.64E+00	5.51E-03	4.76E-02
ENSG00000162542	TMCO4	-1.21E+00	5.54E-03	4.78E-02
ENSG00000155016	CYP2U1	-1.37E+00	5.62E-03	4.83E-02
ENSG00000171631	P2RY6	-1.96E+00	5.65E-03	4.85E-02
ENSG00000182518	FAM104B	-1.02E+00	5.68E-03	4.87E-02
ENSG00000104833	TUBB4A	-1.90E+00	5.75E-03	4.91E-02
ENSG00000196296	ATP2A1	-1.77E+00	5.89E-03	4.98E-02
ENSG00000268621	IGFL2-AS1	-1.38E+00	5.90E-03	4.99E-02
ENSG00000060566	CREB3L3	-3.63E+00	5.91E-03	4.99E-02

**Supplementary table 7. Significant URGs in Ad-KLF4 versus Ad-EGFP transduced samples.**

Gene ID	Gene name	Log2(FC)	P value	FDR
ENSG00000110651	CD81	2.88E+00	0.00E+00	0.00E+00
ENSG00000128422	KRT17	8.87E+00	0.00E+00	0.00E+00
ENSG00000143369	ECM1	3.87E+00	0.00E+00	0.00E+00
ENSG00000170801	HTRA3	4.99E+00	0.00E+00	0.00E+00
ENSG00000143320	CRABP2	5.16E+00	2.56E-270	9.40E-267
ENSG00000101311	FERMT1	7.07E+00	2.56E-226	7.85E-223
ENSG00000167779	IGFBP6	6.62E+00	9.80E-205	2.57E-201
ENSG00000136826	KLF4	1.15E+01	1.76E-195	4.05E-192
ENSG00000197324	LRP10	2.30E+00	1.19E-188	2.43E-185
ENSG00000006016	CRLF1	5.50E+00	6.31E-176	1.16E-172
ENSG00000186832	KRT16	1.07E+01	2.02E-168	3.38E-165
ENSG00000064195	DLX3	5.54E+00	4.07E-167	6.24E-164
ENSG00000168824	NSG1	7.45E+00	1.24E-166	1.75E-163
ENSG00000102265	TIMP1	4.87E+00	1.76E-163	2.32E-160
ENSG00000171246	NPTX1	6.67E+00	1.53E-160	1.88E-157
ENSG00000181790	ADGRB1	5.85E+00	1.79E-158	2.05E-155
ENSG00000075618	FSCN1	3.77E+00	5.92E-158	6.39E-155
ENSG00000168487	BMP1	2.45E+00	9.80E-155	1.00E-151
ENSG00000172831	CES2	3.07E+00	7.11E-153	6.87E-150
ENSG00000063660	GPC1	3.00E+00	1.51E-151	1.38E-148
ENSG00000026297	RNASET2	4.67E+00	4.01E-142	3.35E-139
ENSG00000102996	MMP15	3.96E+00	1.44E-141	1.15E-138
ENSG00000140961	OSGIN1	5.12E+00	1.66E-139	1.22E-136
ENSG00000173801	JUP	4.44E+00	2.44E-137	1.72E-134
ENSG00000064300	NGFR	4.39E+00	4.44E-136	3.02E-133
ENSG00000177666	PNPLA2	3.62E+00	1.23E-134	7.79E-132
ENSG00000139725	RHOF	4.98E+00	2.39E-133	1.46E-130
ENSG00000206172	HBA1	1.08E+01	9.14E-132	5.41E-129
ENSG00000058668	ATP2B4	3.60E+00	2.53E-130	1.45E-127
ENSG00000124102	PI3	1.08E+01	1.66E-129	9.23E-127
ENSG00000135723	FHOD1	3.42E+00	2.82E-124	1.52E-121
ENSG00000063245	EPN1	2.40E+00	2.87E-121	1.47E-118
ENSG00000151176	PLBD2	3.12E+00	3.04E-121	1.51E-118
ENSG00000105397	TYK2	2.84E+00	3.09E-120	1.49E-117
ENSG00000100036	SLC35E4	3.60E+00	4.79E-120	2.26E-117
ENSG00000168140	VASN	2.08E+00	5.99E-120	2.75E-117
ENSG00000178053	MLF1	3.47E+00	1.21E-118	5.42E-116
ENSG00000197746	PSAP	1.33E+00	1.36E-118	5.95E-116

ENSG00000112378	PERP	3.38E+00	2.61E-118	1.11E-115
ENSG00000013588	GPRC5A	2.76E+00	1.53E-117	6.40E-115
ENSG00000008513	ST3GAL1	4.19E+00	5.42E-113	2.12E-110
ENSG00000169093	ASMTL	2.63E+00	7.96E-113	3.05E-110
ENSG00000109062	SLC9A3R1	2.33E+00	5.74E-112	2.15E-109
ENSG00000172270	BSG	2.85E+00	2.02E-110	7.44E-108
ENSG00000134531	EMP1	5.81E+00	8.46E-109	3.05E-106
ENSG00000140941	MAP1LC3B	2.28E+00	2.93E-108	1.04E-105
ENSG00000035862	TIMP2	2.13E+00	2.34E-105	8.12E-103
ENSG00000198768	APCDD1L	3.07E+00	1.49E-104	4.96E-102
ENSG00000124831	LRRFIP1	2.51E+00	4.79E-104	1.57E-101
ENSG00000184185	KCNJ12	5.49E+00	1.82E-102	5.87E-100
ENSG00000092068	SLC7A8	6.36E+00	1.46E-96	4.54E-94
ENSG00000173546	CSPG4	2.91E+00	3.67E-96	1.12E-93
ENSG00000205420	KRT6A	1.46E+01	4.36E-96	1.31E-93
ENSG00000089060	SLC8B1	4.34E+00	6.13E-96	1.82E-93
ENSG00000142627	EPHA2	3.39E+00	2.14E-95	6.23E-93
ENSG00000179348	GATA2	3.51E+00	4.07E-95	1.17E-92
ENSG00000149679	CABLES2	2.30E+00	9.01E-94	2.55E-91
ENSG00000175866	BAIAP2	2.50E+00	2.48E-93	6.81E-91
ENSG00000085978	ATG16L1	3.22E+00	1.28E-92	3.47E-90
ENSG00000184489	PTP4A3	6.03E+00	1.47E-92	3.91E-90
ENSG00000204248	COL11A2	7.06E+00	1.16E-91	3.05E-89
ENSG00000221988	PPT2	2.53E+00	1.36E-90	3.52E-88
ENSG00000066248	NGEF	7.48E+00	1.63E-90	4.17E-88
ENSG00000167470	MIDN	2.39E+00	3.62E-90	9.12E-88
ENSG00000130821	SLC6A8	2.64E+00	1.05E-89	2.60E-87
ENSG00000166165	CKB	3.30E+00	3.47E-88	8.40E-86
ENSG00000179403	VWA1	3.00E+00	3.58E-88	8.54E-86
ENSG00000165272	AQP3	6.63E+00	4.02E-87	9.34E-85
ENSG00000173868	PHOSPHO1	5.98E+00	3.11E-86	7.14E-84
ENSG00000100994	PYGB	2.00E+00	1.99E-85	4.52E-83
ENSG00000148180	GSN	2.96E+00	7.97E-85	1.79E-82
ENSG00000104783	KCNN4	6.49E+00	6.59E-83	1.44E-80
ENSG00000185896	LAMP1	1.40E+00	1.12E-82	2.42E-80
ENSG00000154370	TRIM11	2.89E+00	8.08E-82	1.73E-79
ENSG00000125730	C3	5.67E+00	1.20E-81	2.54E-79
ENSG00000197457	STMN3	3.38E+00	2.14E-81	4.47E-79
ENSG00000143162	CREG1	2.94E+00	3.88E-81	8.00E-79
ENSG00000070404	FSTL3	3.12E+00	4.79E-81	9.78E-79



ENSG00000034152	MAP2K3	2.22E+00	6.28E-81	1.27E-78
ENSG00000109787	KLF3	4.01E+00	2.27E-79	4.49E-77
ENSG00000133466	C1QTNF6	3.26E+00	3.70E-79	7.24E-77
ENSG00000141232	TOB1	2.37E+00	3.80E-79	7.35E-77
ENSG00000272398	CD24	6.32E+00	5.12E-79	9.79E-77
ENSG00000204103	MAFB	4.20E+00	7.89E-79	1.50E-76
ENSG00000079385	CEACAM1	6.49E+00	1.91E-78	3.58E-76
ENSG00000110090	CPT1A	2.89E+00	1.78E-77	3.31E-75
ENSG00000188643	S100A16	5.31E+00	2.27E-77	4.13E-75
ENSG00000055118	KCNH2	6.21E+00	1.31E-76	2.37E-74
ENSG00000110400	NECTIN1	3.77E+00	5.34E-76	9.52E-74
ENSG00000169783	LINGO1	4.49E+00	1.42E-75	2.50E-73
ENSG00000178209	PLEC	3.24E+00	2.21E-75	3.87E-73
ENSG00000099875	MKNK2	2.07E+00	2.41E-75	4.17E-73
ENSG00000155090	KLF10	2.44E+00	9.65E-75	1.64E-72
ENSG00000092295	TGM1	5.45E+00	5.63E-74	9.49E-72
ENSG00000092758	COL9A3	4.43E+00	6.28E-74	1.05E-71
ENSG00000169583	CLIC3	5.35E+00	9.91E-72	1.64E-69
ENSG00000104879	CKM	1.06E+01	1.84E-69	2.93E-67
ENSG00000076356	PLXNA2	5.48E+00	3.43E-69	5.44E-67
ENSG00000196352	CD55	4.45E+00	5.24E-69	8.22E-67
ENSG00000116260	QSOX1	2.08E+00	6.19E-69	9.64E-67
ENSG00000162040	HS3ST6	8.09E+00	6.43E-69	9.93E-67
ENSG00000135926	TMBIM1	3.04E+00	2.27E-68	3.44E-66
ENSG00000196878	LAMB3	4.30E+00	5.08E-68	7.66E-66
ENSG00000204539	CDSN	1.24E+01	7.78E-68	1.16E-65
ENSG00000117984	CTSD	2.77E+00	1.43E-67	2.10E-65
ENSG00000240583	AQP1	9.68E+00	1.74E-67	2.54E-65
ENSG00000101187	SLCO4A1	3.86E+00	5.29E-67	7.66E-65
ENSG00000143631	FLG	1.16E+01	7.60E-67	1.09E-64
ENSG00000010278	CD9	3.13E+00	7.71E-67	1.10E-64
ENSG00000167157	PRRX2	4.32E+00	1.52E-66	2.15E-64
ENSG00000105427	CNFN	3.84E+00	1.75E-66	2.45E-64
ENSG00000120675	DNAJC15	4.52E+00	1.98E-66	2.75E-64
ENSG00000083454	P2RX5	3.54E+00	1.49E-65	2.06E-63
ENSG00000105355	PLIN3	2.59E+00	2.80E-65	3.84E-63
ENSG00000147676	MAL2	6.71E+00	5.43E-65	7.39E-63
ENSG00000167600	CYP2S1	3.48E+00	6.19E-65	8.36E-63
ENSG00000104805	NUCB1	2.75E+00	6.42E-65	8.61E-63
ENSG00000260458	KCNJ18	1.22E+01	6.59E-65	8.77E-63

ENSG00000124942	AHNAK	2.89E+00	8.72E-65	1.14E-62
ENSG00000111684	LPCAT3	2.25E+00	1.35E-64	1.77E-62
ENSG00000197976	AKAP17A	2.18E+00	3.34E-64	4.32E-62
ENSG00000101782	RIOK3	2.47E+00	4.29E-64	5.51E-62
ENSG00000130513	GDF15	3.31E+00	4.36E-64	5.57E-62
ENSG00000164530	PI16	1.10E+01	2.16E-63	2.72E-61
ENSG00000159720	ATP6V0D1	1.65E+00	3.42E-63	4.27E-61
ENSG00000188536	HBA2	1.21E+01	6.59E-63	8.07E-61
ENSG00000173327	MAP3K11	2.10E+00	8.23E-63	1.00E-60
ENSG00000129757	CDKN1C	5.38E+00	8.60E-63	1.04E-60
ENSG00000136802	LRRC8A	2.11E+00	8.81E-63	1.06E-60
ENSG00000102034	ELF4	2.54E+00	3.28E-62	3.91E-60
ENSG00000008710	PKD1	2.24E+00	8.28E-62	9.81E-60
ENSG00000185000	DGAT1	2.75E+00	2.64E-61	3.11E-59
ENSG00000090776	EFNB1	2.98E+00	3.28E-61	3.84E-59
ENSG00000076826	CAMSAP3	5.16E+00	3.43E-61	3.99E-59
ENSG00000163993	S100P	1.21E+01	5.07E-61	5.86E-59
ENSG00000130702	LAMA5	2.75E+00	8.89E-61	1.01E-58
ENSG00000148671	ADIRF	8.04E+00	1.01E-60	1.15E-58
ENSG00000148346	LCN2	9.68E+00	4.49E-60	5.00E-58
ENSG00000103089	FA2H	9.75E+00	4.75E-60	5.26E-58
ENSG00000185507	IRF7	3.30E+00	5.57E-60	6.13E-58
ENSG00000085741	WNT11	4.69E+00	8.31E-60	9.09E-58
ENSG00000111341	MGP	7.64E+00	1.01E-59	1.08E-57
ENSG00000157227	MMP14	2.71E+00	1.01E-59	1.08E-57
ENSG00000114854	TNNC1	7.41E+00	1.65E-59	1.76E-57
ENSG00000139433	GLTP	2.33E+00	6.44E-59	6.80E-57
ENSG00000148120	AOPEP	2.44E+00	1.17E-58	1.23E-56
ENSG00000096696	DSP	3.81E+00	2.09E-58	2.18E-56
ENSG00000124107	SLPI	7.15E+00	2.40E-58	2.49E-56
ENSG00000118640	VAMP8	5.30E+00	4.14E-58	4.27E-56
ENSG00000143375	CGN	4.66E+00	5.15E-58	5.29E-56
ENSG00000168056	LTBP3	2.79E+00	9.38E-58	9.58E-56
ENSG00000100504	PYGL	1.75E+00	1.98E-57	2.00E-55
ENSG00000116701	NCF2	9.53E+00	2.03E-57	2.04E-55
ENSG00000128564	VGf	4.97E+00	4.68E-57	4.65E-55
ENSG00000186806	VSIG10L	5.51E+00	5.33E-57	5.27E-55
ENSG00000107731	UNC5B	4.77E+00	6.72E-57	6.61E-55
ENSG00000065618	COL17A1	1.06E+01	9.67E-57	9.45E-55
ENSG00000138623	SEMA7A	3.94E+00	6.17E-56	5.90E-54

ENSG00000197766	CFD	6.46E+00	7.52E-56	7.16E-54
ENSG00000160111	CPAMD8	7.04E+00	8.28E-56	7.84E-54
ENSG00000175793	SFN	6.94E+00	1.69E-55	1.59E-53
ENSG00000116017	ARID3A	3.18E+00	1.84E-54	1.68E-52
ENSG00000001617	SEMA3F	4.42E+00	2.60E-54	2.37E-52
ENSG00000124145	SDC4	2.02E+00	2.70E-54	2.45E-52
ENSG00000123992	DNPEP	2.34E+00	6.61E-54	5.87E-52
ENSG00000158769	F11R	3.22E+00	8.73E-54	7.71E-52
ENSG00000187954	CYHR1	1.84E+00	7.10E-53	6.24E-51
ENSG00000078902	TOLLIP	1.85E+00	1.04E-52	9.08E-51
ENSG00000167778	SPRYD3	3.19E+00	2.05E-52	1.78E-50
ENSG00000104888	SLC17A7	3.79E+00	2.96E-52	2.54E-50
ENSG00000124762	CDKN1A	2.10E+00	3.02E-52	2.58E-50
ENSG00000084733	RAB10	1.58E+00	5.87E-52	4.97E-50
ENSG00000030582	GRN	1.75E+00	2.07E-51	1.74E-49
ENSG00000115758	ODC1	1.39E+00	2.42E-51	2.02E-49
ENSG00000092820	EZR	1.51E+00	6.42E-51	5.34E-49
ENSG00000112139	MDGA1	4.29E+00	6.80E-51	5.61E-49
ENSG00000115762	PLEKHB2	1.83E+00	7.03E-51	5.77E-49
ENSG00000175084	DES	1.02E+01	1.04E-50	8.45E-49
ENSG00000187531	SIRT7	2.60E+00	1.31E-50	1.06E-48
ENSG00000093167	LRRFIP2	2.12E+00	1.41E-50	1.14E-48
ENSG00000167642	SPINT2	6.11E+00	1.96E-50	1.57E-48
ENSG00000131037	EPS8L1	4.07E+00	1.99E-50	1.59E-48
ENSG00000068305	MEF2A	2.09E+00	2.71E-50	2.15E-48
ENSG00000116661	FBXO2	3.70E+00	5.36E-50	4.23E-48
ENSG00000117525	F3	2.91E+00	7.77E-50	6.10E-48
ENSG00000128274	A4GALT	3.46E+00	1.56E-49	1.22E-47
ENSG00000148344	PTGES	5.04E+00	4.51E-49	3.51E-47
ENSG00000176531	PHLDB3	3.23E+00	6.43E-49	4.99E-47
ENSG00000129437	KLK14	1.10E+01	1.40E-48	1.08E-46
ENSG00000167487	KLHL26	4.24E+00	2.18E-48	1.67E-46
ENSG00000130656	HBZ	7.71E+00	2.43E-48	1.84E-46
ENSG00000122756	CNTFR	3.76E+00	2.56E-48	1.93E-46
ENSG00000074416	MGLL	4.61E+00	2.68E-48	2.02E-46
ENSG00000182759	MAFA	3.77E+00	3.18E-48	2.39E-46
ENSG00000129451	KLK10	9.74E+00	9.48E-48	7.02E-46
ENSG00000186529	CYP4F3	7.52E+00	1.04E-47	7.70E-46
ENSG00000162545	CAMK2N1	2.41E+00	1.51E-47	1.11E-45
ENSG00000185022	MAFF	3.24E+00	1.61E-47	1.18E-45

ENSG00000163961	RNF168	1.89E+00	2.48E-47	1.81E-45
ENSG00000171159	C9orf16	3.55E+00	3.62E-47	2.63E-45
ENSG00000177335	C8orf31	5.90E+00	5.79E-47	4.17E-45
ENSG00000168918	INPP5D	5.45E+00	6.49E-47	4.66E-45
ENSG00000138594	TMOD3	1.51E+00	6.76E-47	4.83E-45
ENSG00000144476	ACKR3	9.70E+00	7.87E-47	5.58E-45
ENSG00000135932	CAB39	1.83E+00	1.06E-46	7.43E-45
ENSG00000169403	PTAFR	5.82E+00	1.18E-46	8.25E-45
ENSG00000149218	ENDOD1	3.98E+00	4.42E-46	3.07E-44
ENSG00000160293	VAV2	2.18E+00	5.01E-46	3.46E-44
ENSG00000130402	ACTN4	1.57E+00	1.63E-45	1.12E-43
ENSG00000183255	PTTG1IP	1.61E+00	2.65E-45	1.81E-43
ENSG00000147804	SLC39A4	1.01E+01	2.73E-45	1.86E-43
ENSG00000075043	KCNQ2	4.83E+00	5.70E-45	3.82E-43
ENSG00000173442	EHBP1L1	2.70E+00	5.79E-45	3.87E-43
ENSG00000116717	GADD45A	1.93E+00	7.58E-45	5.04E-43
ENSG00000157483	MYO1E	2.26E+00	1.48E-44	9.73E-43
ENSG00000105287	PRKD2	1.86E+00	1.51E-44	9.92E-43
ENSG00000184502	GAST	1.05E+01	1.80E-44	1.18E-42
ENSG00000173846	PLK3	3.04E+00	1.82E-44	1.19E-42
ENSG00000012171	SEMA3B	4.38E+00	2.12E-44	1.37E-42
ENSG00000042445	RETSAT	1.97E+00	3.28E-44	2.12E-42
ENSG00000169442	CD52	1.06E+01	3.77E-44	2.43E-42
ENSG00000138944	SHISAL1	4.06E+00	3.86E-44	2.48E-42
ENSG00000167656	LY6D	9.97E+00	4.34E-44	2.78E-42
ENSG00000115738	ID2	6.38E+00	4.94E-44	3.15E-42
ENSG00000188064	WNT7B	5.67E+00	4.95E-44	3.15E-42
ENSG00000137699	TRIM29	9.29E+00	8.39E-44	5.30E-42
ENSG00000109846	CRYAB	7.03E+00	9.43E-44	5.94E-42
ENSG00000125968	ID1	2.53E+00	9.85E-44	6.18E-42
ENSG00000105519	CAPS	6.74E+00	1.21E-43	7.55E-42
ENSG00000142156	COL6A1	1.87E+00	1.39E-43	8.63E-42
ENSG00000112576	CCND3	1.74E+00	1.89E-43	1.17E-41
ENSG00000099337	KCNK6	3.01E+00	3.25E-43	2.00E-41
ENSG00000100605	ITPK1	3.60E+00	4.08E-43	2.51E-41
ENSG00000174307	PHLDA3	2.84E+00	4.14E-43	2.54E-41
ENSG00000085552	IGSF9	4.51E+00	4.62E-43	2.82E-41
ENSG00000140937	CDH11	2.22E+00	4.65E-43	2.83E-41
ENSG00000087510	TFAP2C	3.10E+00	4.67E-43	2.83E-41
ENSG00000178381	ZFAND2A	3.19E+00	8.42E-43	5.05E-41

ENSG00000164236	ANKRD33B	2.71E+00	1.16E-42	6.93E-41
ENSG00000177542	SLC25A22	3.12E+00	1.63E-42	9.64E-41
ENSG00000109089	CDR2L	1.60E+00	1.66E-42	9.77E-41
ENSG00000101210	EEF1A2	2.63E+00	4.71E-42	2.75E-40
ENSG00000171401	KRT13	9.79E+00	4.94E-42	2.87E-40
ENSG00000225783	MIAT	5.34E+00	6.50E-42	3.77E-40
ENSG00000172667	ZMAT3	1.96E+00	7.04E-42	4.06E-40
ENSG00000095932	SMIM24	7.55E+00	7.25E-42	4.17E-40
ENSG00000130589	HELZ2	2.33E+00	9.45E-42	5.41E-40
ENSG00000156453	PCDH1	7.24E+00	9.48E-42	5.41E-40
ENSG00000139722	VPS37B	1.92E+00	1.07E-41	6.09E-40
ENSG00000147689	FAM83A	5.29E+00	1.23E-41	6.96E-40
ENSG00000158050	DUSP2	4.97E+00	1.32E-41	7.45E-40
ENSG00000124216	SNAI1	1.42E+00	1.79E-41	1.00E-39
ENSG00000010438	PRSS3	4.59E+00	1.82E-41	1.02E-39
ENSG00000204866	IGFL2	7.72E+00	1.85E-41	1.03E-39
ENSG00000061938	TNK2	2.30E+00	2.31E-41	1.29E-39
ENSG00000186854	TRABD2A	3.33E+00	2.60E-41	1.44E-39
ENSG00000162413	KLHL21	2.22E+00	4.38E-41	2.42E-39
ENSG00000099204	ABLIM1	2.60E+00	6.69E-41	3.67E-39
ENSG00000274180	NATD1	4.89E+00	9.30E-41	5.07E-39
ENSG00000176845	METRNL	2.11E+00	9.51E-41	5.17E-39
ENSG00000015413	DPEP1	9.81E+00	9.59E-41	5.20E-39
ENSG00000105048	TNNT1	3.03E+00	1.01E-40	5.48E-39
ENSG00000196154	S100A4	4.55E+00	1.08E-40	5.83E-39
ENSG00000135679	MDM2	2.08E+00	1.88E-40	1.00E-38
ENSG00000032444	PNPLA6	1.53E+00	1.95E-40	1.04E-38
ENSG00000179148	ALOXE3	8.39E+00	2.24E-40	1.19E-38
ENSG00000225968	ELFN1	3.03E+00	2.42E-40	1.29E-38
ENSG00000108433	GOSR2	1.63E+00	2.74E-40	1.45E-38
ENSG00000253368	TRNP1	3.38E+00	4.35E-40	2.30E-38
ENSG00000103056	SMPD3	5.23E+00	5.27E-40	2.76E-38
ENSG00000131620	ANO1	6.55E+00	5.32E-40	2.78E-38
ENSG00000149782	PLCB3	2.34E+00	7.14E-40	3.72E-38
ENSG00000170100	ZNF778	2.49E+00	1.34E-39	6.94E-38
ENSG00000198576	ARC	7.24E+00	2.85E-39	1.46E-37
ENSG00000173530	TNFRSF10D	2.19E+00	2.87E-39	1.47E-37
ENSG00000166925	TSC22D4	1.77E+00	3.14E-39	1.60E-37
ENSG00000104419	NDRG1	2.14E+00	4.58E-39	2.32E-37
ENSG00000114771	AADAC	4.29E+00	4.67E-39	2.36E-37

ENSG00000168389	MFSD2A	2.04E+00	6.02E-39	3.02E-37
ENSG00000128567	PODXL	2.57E+00	6.78E-39	3.40E-37
ENSG00000144452	ABCA12	5.86E+00	8.81E-39	4.37E-37
ENSG00000182492	BGN	2.66E+00	8.84E-39	4.38E-37
ENSG00000152377	SPOCK1	3.16E+00	1.10E-38	5.42E-37
ENSG00000185112	FAM43A	2.55E+00	1.16E-38	5.70E-37
ENSG00000196361	ELAVL3	5.21E+00	1.18E-38	5.79E-37
ENSG00000184640	SEPTIN9	1.47E+00	1.23E-38	6.00E-37
ENSG00000171551	ECEL1	5.93E+00	1.35E-38	6.59E-37
ENSG00000148331	ASB6	2.24E+00	1.85E-38	9.01E-37
ENSG00000178951	ZBTB7A	1.68E+00	2.07E-38	1.01E-36
ENSG00000160691	SHC1	1.15E+00	2.34E-38	1.13E-36
ENSG00000171206	TRIM8	1.85E+00	2.41E-38	1.16E-36
ENSG00000172005	MAL	9.42E+00	3.05E-38	1.47E-36
ENSG00000141524	TMC6	3.17E+00	4.12E-38	1.98E-36
ENSG00000148426	PROSER2	3.16E+00	5.56E-38	2.65E-36
ENSG00000176903	PNMA1	1.64E+00	6.48E-38	3.08E-36
ENSG00000148411	NACC2	1.84E+00	8.17E-38	3.87E-36
ENSG00000123384	LRP1	2.83E+00	8.20E-38	3.88E-36
ENSG00000168993	CPLX1	7.90E+00	9.82E-38	4.62E-36
ENSG00000143217	NECTIN4	3.55E+00	9.86E-38	4.63E-36
ENSG00000163110	PDLIM5	1.15E+00	1.03E-37	4.84E-36
ENSG00000103175	WFDC1	8.72E+00	1.10E-37	5.13E-36
ENSG00000185215	TNFAIP2	1.95E+00	1.10E-37	5.13E-36
ENSG00000197461	PDGFA	2.11E+00	1.20E-37	5.59E-36
ENSG00000130203	APOE	3.45E+00	1.71E-37	7.89E-36
ENSG00000109321	AREG	4.65E+00	1.96E-37	9.03E-36
ENSG00000140545	MFGE8	2.02E+00	2.42E-37	1.11E-35
ENSG00000167757	KLK11	9.05E+00	2.62E-37	1.20E-35
ENSG00000141580	WDR45B	1.76E+00	2.83E-37	1.29E-35
ENSG00000172478	MAB21L4	9.28E+00	2.86E-37	1.30E-35
ENSG00000205336	ADGRG1	2.59E+00	2.96E-37	1.35E-35
ENSG00000140368	PSTPIP1	9.48E+00	3.03E-37	1.37E-35
ENSG00000101421	CHMP4B	1.19E+00	3.53E-37	1.60E-35
ENSG00000100092	SH3BP1	2.89E+00	4.03E-37	1.82E-35
ENSG00000117868	ESYT2	1.63E+00	4.61E-37	2.07E-35
ENSG00000102901	CENPT	1.74E+00	6.12E-37	2.74E-35
ENSG00000131389	SLC6A6	2.03E+00	6.23E-37	2.78E-35
ENSG00000142669	SH3BGRL3	2.14E+00	7.96E-37	3.54E-35
ENSG00000188910	GJB3	8.67E+00	1.04E-36	4.61E-35

ENSG00000179477	ALOX12B	7.60E+00	1.26E-36	5.55E-35
ENSG00000185567	AHNAK2	4.99E+00	1.26E-36	5.57E-35
ENSG00000110092	CCND1	2.34E+00	1.42E-36	6.23E-35
ENSG00000028277	POU2F2	3.22E+00	2.67E-36	1.16E-34
ENSG00000063322	MED29	1.87E+00	2.77E-36	1.20E-34
ENSG00000166592	RRAD	2.11E+00	2.83E-36	1.22E-34
ENSG00000059728	MXD1	2.97E+00	2.84E-36	1.22E-34
ENSG00000038427	VCAN	3.19E+00	3.03E-36	1.30E-34
ENSG00000138069	RAB1A	1.38E+00	3.43E-36	1.47E-34
ENSG00000167748	KLK1	8.98E+00	4.64E-36	1.99E-34
ENSG00000169710	FASN	2.21E+00	1.10E-35	4.67E-34
ENSG00000125775	SDCBP2	4.08E+00	1.26E-35	5.32E-34
ENSG00000077463	SIRT6	3.06E+00	1.47E-35	6.21E-34
ENSG00000139626	ITGB7	7.98E+00	1.51E-35	6.36E-34
ENSG00000160685	ZBTB7B	2.60E+00	1.90E-35	7.94E-34
ENSG00000179335	CLK3	1.63E+00	1.93E-35	8.05E-34
ENSG00000176393	RNPEP	1.92E+00	2.20E-35	9.14E-34
ENSG00000095203	EPB41L4B	3.40E+00	2.40E-35	9.96E-34
ENSG00000101057	MYBL2	1.41E+00	2.96E-35	1.22E-33
ENSG00000158792	SPATA2L	2.89E+00	3.25E-35	1.34E-33
ENSG00000134504	KCTD1	2.08E+00	5.28E-35	2.17E-33
ENSG00000171368	TPPP	5.95E+00	6.36E-35	2.61E-33
ENSG00000100647	SUSD6	2.32E+00	6.90E-35	2.82E-33
ENSG00000130766	SESN2	2.11E+00	6.97E-35	2.85E-33
ENSG00000136068	FLNB	1.85E+00	7.99E-35	3.26E-33
ENSG00000159733	ZFYVE28	5.63E+00	9.24E-35	3.75E-33
ENSG00000188112	C6orf132	4.91E+00	9.33E-35	3.78E-33
ENSG00000169635	HIC2	2.71E+00	1.01E-34	4.10E-33
ENSG00000156671	SAMD8	2.20E+00	1.04E-34	4.21E-33
ENSG00000189114	BLOC1S3	2.50E+00	1.21E-34	4.88E-33
ENSG00000148339	SLC25A25	1.96E+00	1.55E-34	6.22E-33
ENSG00000131069	ACSS2	2.32E+00	1.64E-34	6.55E-33
ENSG00000135636	DYSF	3.20E+00	1.83E-34	7.31E-33
ENSG00000203485	INF2	2.02E+00	1.91E-34	7.62E-33
ENSG00000079308	TNS1	3.09E+00	2.60E-34	1.04E-32
ENSG00000071553	ATP6AP1	1.38E+00	2.98E-34	1.18E-32
ENSG00000188783	PRELP	8.31E+00	3.14E-34	1.24E-32
ENSG00000006712	PAF1	1.23E+00	3.83E-34	1.51E-32
ENSG00000163286	ALPG	8.75E+00	3.97E-34	1.56E-32
ENSG00000167759	KLK13	8.78E+00	4.57E-34	1.79E-32

ENSG00000088826	SMOX	2.43E+00	5.39E-34	2.11E-32
ENSG00000011347	SYT7	3.44E+00	6.85E-34	2.67E-32
ENSG00000119801	YPEL5	2.06E+00	7.75E-34	3.01E-32
ENSG00000261678	SCRT1	8.75E+00	8.54E-34	3.31E-32
ENSG00000101076	HNF4A	8.65E+00	1.38E-33	5.31E-32
ENSG00000188338	SLC38A3	2.47E+00	1.41E-33	5.42E-32
ENSG00000133328	PLAAT2	9.10E+00	1.48E-33	5.67E-32
ENSG00000119862	LGALSL	3.00E+00	1.77E-33	6.79E-32
ENSG00000128591	FLNC	1.55E+00	1.79E-33	6.82E-32
ENSG00000132359	RAP1GAP2	4.45E+00	1.79E-33	6.83E-32
ENSG00000145782	ATG12	1.46E+00	1.99E-33	7.54E-32
ENSG00000196415	PRTN3	7.65E+00	2.27E-33	8.61E-32
ENSG00000244509	APOBEC3C	2.04E+00	2.33E-33	8.81E-32
ENSG00000184828	ZBTB7C	8.81E+00	2.35E-33	8.85E-32
ENSG00000142319	SLC6A3	8.25E+00	3.16E-33	1.19E-31
ENSG00000134317	GRHL1	3.90E+00	6.79E-33	2.52E-31
ENSG00000065357	DGKA	3.14E+00	6.97E-33	2.59E-31
ENSG00000134830	C5AR2	7.77E+00	7.03E-33	2.61E-31
ENSG00000167962	ZNF598	1.39E+00	1.48E-32	5.41E-31
ENSG00000183671	GPR1	5.49E+00	1.53E-32	5.60E-31
ENSG00000114859	CLCN2	2.79E+00	1.60E-32	5.80E-31
ENSG00000185963	BICD2	1.49E+00	1.61E-32	5.83E-31
ENSG00000135127	BICDL1	5.19E+00	1.80E-32	6.53E-31
ENSG00000134308	YWHAQ	1.08E+00	1.89E-32	6.85E-31
ENSG00000076351	SLC46A1	3.16E+00	2.10E-32	7.55E-31
ENSG00000092929	UNC13D	5.13E+00	2.09E-32	7.55E-31
ENSG00000100234	TIMP3	2.05E+00	2.15E-32	7.75E-31
ENSG00000143793	C1orf35	1.69E+00	2.22E-32	7.97E-31
ENSG00000130707	ASS1	2.04E+00	2.28E-32	8.16E-31
ENSG00000104267	CA2	7.18E+00	2.29E-32	8.20E-31
ENSG00000158747	NBL1	2.49E+00	2.59E-32	9.23E-31
ENSG00000100592	DAAM1	1.66E+00	2.81E-32	1.00E-30
ENSG00000133985	TTC9	6.05E+00	3.05E-32	1.08E-30
ENSG00000164086	DUSP7	1.61E+00	3.38E-32	1.20E-30
ENSG00000126233	SLURP1	9.44E+00	4.08E-32	1.44E-30
ENSG00000185988	PLK5	7.81E+00	4.41E-32	1.56E-30
ENSG00000101146	RAE1	1.13E+00	5.00E-32	1.76E-30
ENSG00000171954	CYP4F22	7.76E+00	5.25E-32	1.84E-30
ENSG00000136830	NIBAN2	1.99E+00	5.80E-32	2.03E-30
ENSG00000130396	AFDN	2.08E+00	6.27E-32	2.19E-30



ENSG00000068383	INPP5A	2.04E+00	6.94E-32	2.42E-30
ENSG00000174640	SLCO2A1	2.64E+00	7.59E-32	2.64E-30
ENSG00000129194	SOX15	7.83E+00	1.00E-31	3.48E-30
ENSG00000198719	DLL1	5.07E+00	1.03E-31	3.56E-30
ENSG00000151689	INPP1	2.37E+00	1.06E-31	3.65E-30
ENSG00000142798	HSPG2	3.17E+00	1.11E-31	3.82E-30
ENSG00000197632	SERPINB2	6.43E+00	1.26E-31	4.32E-30
ENSG00000183044	ABAT	4.72E+00	1.35E-31	4.62E-30
ENSG00000158089	GALNT14	3.86E+00	1.42E-31	4.86E-30
ENSG00000162772	ATF3	2.56E+00	1.96E-31	6.69E-30
ENSG00000085063	CD59	1.41E+00	2.42E-31	8.17E-30
ENSG00000129991	TNNI3	5.88E+00	3.23E-31	1.09E-29
ENSG00000095383	TBC1D2	5.26E+00	3.38E-31	1.13E-29
ENSG00000107819	SFXN3	2.17E+00	3.94E-31	1.32E-29
ENSG00000136854	STXBP1	2.60E+00	4.48E-31	1.49E-29
ENSG00000183963	SMTN	2.18E+00	5.21E-31	1.73E-29
ENSG00000162552	WNT4	4.53E+00	5.83E-31	1.93E-29
ENSG00000173153	ESRRA	2.11E+00	6.78E-31	2.24E-29
ENSG00000167114	SLC27A4	1.50E+00	7.98E-31	2.63E-29
ENSG00000180176	TH	8.36E+00	8.12E-31	2.67E-29
ENSG00000206075	SERPINB5	8.10E+00	8.37E-31	2.75E-29
ENSG00000197063	MAFG	1.64E+00	9.21E-31	3.02E-29
ENSG00000237330	RNF223	7.93E+00	1.00E-30	3.28E-29
ENSG00000178726	THBD	3.67E+00	1.04E-30	3.39E-29
ENSG00000088836	SLC4A11	2.08E+00	1.05E-30	3.44E-29
ENSG00000180914	OXTR	2.77E+00	1.06E-30	3.46E-29
ENSG00000224259	LINC01133	7.22E+00	1.11E-30	3.60E-29
ENSG00000206077	ZDHHC11B	6.41E+00	1.18E-30	3.82E-29
ENSG00000141503	MINK1	1.68E+00	1.58E-30	5.09E-29
ENSG00000124201	ZNFX1	1.51E+00	1.60E-30	5.16E-29
ENSG00000101096	NFATC2	3.88E+00	1.64E-30	5.27E-29
ENSG00000245532	NEAT1	1.15E+00	1.79E-30	5.74E-29
ENSG00000100242	SUN2	1.16E+00	1.79E-30	5.75E-29
ENSG00000084234	APLP2	1.49E+00	1.88E-30	6.00E-29
ENSG00000116688	MFN2	1.30E+00	2.06E-30	6.59E-29
ENSG00000140832	MARVELD3	8.35E+00	2.30E-30	7.33E-29
ENSG00000124570	SERPINB6	1.47E+00	2.53E-30	8.06E-29
ENSG00000102755	FLT1	2.71E+00	2.64E-30	8.38E-29
ENSG00000116690	PRG4	8.57E+00	2.99E-30	9.47E-29
ENSG00000119537	KDSR	1.41E+00	4.08E-30	1.29E-28

ENSG00000171552	BCL2L1	1.78E+00	4.26E-30	1.34E-28
ENSG00000197386	HTT	1.76E+00	5.12E-30	1.61E-28
ENSG00000174791	RIN1	3.78E+00	5.52E-30	1.73E-28
ENSG00000158055	GRHL3	6.73E+00	6.04E-30	1.89E-28
ENSG00000133612	AGAP3	1.60E+00	6.24E-30	1.95E-28
ENSG00000131584	ACAP3	2.09E+00	6.28E-30	1.96E-28
ENSG00000100784	RPS6KA5	2.56E+00	7.95E-30	2.47E-28
ENSG00000130635	COL5A1	1.95E+00	8.11E-30	2.52E-28
ENSG00000181026	AEN	1.65E+00	8.33E-30	2.58E-28
ENSG00000167646	DNAAF3	4.90E+00	8.38E-30	2.59E-28
ENSG00000130669	PAK4	1.31E+00	9.60E-30	2.96E-28
ENSG00000197077	KIAA1671	2.87E+00	9.75E-30	3.00E-28
ENSG00000155380	SLC16A1	1.20E+00	1.71E-29	5.24E-28
ENSG00000162729	IGSF8	2.78E+00	1.76E-29	5.39E-28
ENSG00000234127	TRIM26	1.99E+00	1.80E-29	5.49E-28
ENSG00000167106	FAM102A	1.93E+00	2.22E-29	6.78E-28
ENSG00000114796	KLHL24	2.77E+00	2.37E-29	7.24E-28
ENSG00000271447	MMP28	8.46E+00	2.44E-29	7.43E-28
ENSG00000197943	PLCG2	3.90E+00	2.53E-29	7.69E-28
ENSG00000187446	CHP1	2.07E+00	3.70E-29	1.12E-27
ENSG00000148357	HMCN2	7.01E+00	3.72E-29	1.13E-27
ENSG00000186591	UBE2H	1.06E+00	4.24E-29	1.28E-27
ENSG00000130592	LSP1	5.73E+00	5.02E-29	1.51E-27
ENSG00000187678	SPRY4	3.12E+00	5.47E-29	1.64E-27
ENSG00000181652	ATG9B	7.28E+00	5.64E-29	1.68E-27
ENSG00000160888	IER2	1.77E+00	5.71E-29	1.70E-27
ENSG00000143850	PLEKHA6	5.82E+00	5.86E-29	1.74E-27
ENSG00000126822	PLEKHG3	1.94E+00	6.44E-29	1.91E-27
ENSG00000159314	ARHGAP27	2.93E+00	7.04E-29	2.08E-27
ENSG00000161992	PRR35	7.03E+00	7.78E-29	2.29E-27
ENSG00000131873	CHSY1	1.86E+00	9.24E-29	2.72E-27
ENSG00000158555	GDPD5	2.62E+00	1.15E-28	3.36E-27
ENSG00000151748	SAV1	1.54E+00	1.16E-28	3.38E-27
ENSG00000021355	SERPINB1	2.27E+00	1.36E-28	3.95E-27
ENSG00000114019	AMOTL2	1.36E+00	1.38E-28	3.98E-27
ENSG00000170893	TRH	1.17E+01	1.46E-28	4.20E-27
ENSG00000189001	SBSN	8.18E+00	1.46E-28	4.20E-27
ENSG00000170017	ALCAM	1.82E+00	1.57E-28	4.49E-27
ENSG00000160712	IL6R	4.51E+00	1.58E-28	4.52E-27
ENSG00000189433	GJB4	8.19E+00	2.06E-28	5.88E-27

ENSG00000186895	FGF3	7.25E+00	2.38E-28	6.80E-27
ENSG00000080644	CHRNA3	7.72E+00	2.57E-28	7.33E-27
ENSG00000113742	CPEB4	1.95E+00	2.95E-28	8.38E-27
ENSG00000105443	CYTH2	1.41E+00	2.98E-28	8.46E-27
ENSG00000187800	PEAR1	7.27E+00	3.28E-28	9.29E-27
ENSG00000185955	C7orf61	5.82E+00	3.92E-28	1.11E-26
ENSG00000111725	PRKAB1	1.85E+00	4.38E-28	1.24E-26
ENSG00000204538	PSORS1C2	7.99E+00	4.99E-28	1.41E-26
ENSG00000158825	CDA	4.60E+00	7.51E-28	2.11E-26
ENSG00000152137	HSPB8	2.36E+00	8.73E-28	2.45E-26
ENSG00000139219	COL2A1	4.57E+00	9.10E-28	2.54E-26
ENSG00000166619	BLCAP	1.30E+00	9.58E-28	2.67E-26
ENSG00000130720	FIBCD1	5.23E+00	1.03E-27	2.86E-26
ENSG00000175416	CLTB	2.84E+00	1.20E-27	3.34E-26
ENSG00000155158	TTC39B	3.10E+00	1.32E-27	3.66E-26
ENSG00000132481	TRIM47	2.39E+00	1.38E-27	3.81E-26
ENSG00000160213	CSTB	2.49E+00	1.38E-27	3.81E-26
ENSG00000164300	SERINC5	3.28E+00	1.40E-27	3.85E-26
ENSG00000006611	USH1C	5.39E+00	1.50E-27	4.12E-26
ENSG00000275832	ARHGAP23	1.80E+00	1.75E-27	4.79E-26
ENSG00000091409	ITGA6	2.89E+00	1.90E-27	5.20E-26
ENSG00000161243	FBXO27	3.06E+00	2.22E-27	6.07E-26
ENSG00000122863	CHST3	2.43E+00	2.37E-27	6.47E-26
ENSG00000137440	FGFBP1	7.97E+00	2.47E-27	6.72E-26
ENSG00000137474	MYO7A	8.09E+00	2.63E-27	7.14E-26
ENSG00000184254	ALDH1A3	1.47E+00	3.77E-27	1.02E-25
ENSG00000139116	KIF21A	2.21E+00	3.77E-27	1.02E-25
ENSG00000010319	SEMA3G	5.92E+00	4.13E-27	1.11E-25
ENSG00000173762	CD7	6.20E+00	4.15E-27	1.11E-25
ENSG00000146054	TRIM7	2.59E+00	4.55E-27	1.22E-25
ENSG00000180190	TDRP	2.84E+00	4.84E-27	1.29E-25
ENSG00000186081	KRT5	8.19E+00	4.91E-27	1.31E-25
ENSG00000165684	SNAPC4	1.39E+00	6.34E-27	1.68E-25
ENSG00000189334	S100A14	7.91E+00	7.44E-27	1.97E-25
ENSG00000186474	KLK12	7.98E+00	1.20E-26	3.15E-25
ENSG00000204839	MROH6	3.36E+00	1.26E-26	3.30E-25
ENSG00000159788	RGS12	1.87E+00	1.44E-26	3.79E-25
ENSG00000135046	ANXA1	2.09E+00	1.53E-26	4.00E-25
ENSG00000186517	ARHGAP30	5.47E+00	1.54E-26	4.04E-25
ENSG00000184545	DUSP8	2.57E+00	1.75E-26	4.58E-25

ENSG00000140320	BAHD1	1.84E+00	1.83E-26	4.77E-25
ENSG00000104892	KLC3	2.59E+00	1.96E-26	5.10E-25
ENSG00000176092	CRYBG2	4.30E+00	2.01E-26	5.21E-25
ENSG00000162909	CAPN2	1.41E+00	2.02E-26	5.24E-25
ENSG00000178950	GAK	1.72E+00	2.42E-26	6.27E-25
ENSG00000107738	VSIR	2.85E+00	2.44E-26	6.31E-25
ENSG00000130558	OLFM1	4.37E+00	2.48E-26	6.40E-25
ENSG00000100554	ATP6V1D	1.18E+00	3.07E-26	7.90E-25
ENSG00000066735	KIF26A	3.23E+00	3.65E-26	9.37E-25
ENSG00000188015	S100A3	3.13E+00	3.80E-26	9.73E-25
ENSG00000140470	ADAMTS17	6.89E+00	4.06E-26	1.04E-24
ENSG00000197353	LYPD2	7.96E+00	4.44E-26	1.13E-24
ENSG00000154127	UBASH3B	1.52E+00	5.16E-26	1.31E-24
ENSG00000116014	KISS1R	7.57E+00	7.11E-26	1.80E-24
ENSG00000184160	ADRA2C	5.86E+00	7.74E-26	1.95E-24
ENSG00000185950	IRS2	2.74E+00	8.69E-26	2.19E-24
ENSG00000103888	CEMIP	2.63E+00	8.82E-26	2.21E-24
ENSG00000140297	GCNT3	7.95E+00	8.82E-26	2.21E-24
ENSG00000120899	PTK2B	4.55E+00	8.98E-26	2.25E-24
ENSG00000153487	ING1	1.47E+00	9.44E-26	2.36E-24
ENSG00000182831	C16orf72	1.61E+00	9.89E-26	2.47E-24
ENSG00000143537	ADAM15	2.82E+00	1.02E-25	2.54E-24
ENSG00000204421	LY6G6C	8.01E+00	1.08E-25	2.68E-24
ENSG00000103066	PLA2G15	1.92E+00	1.27E-25	3.16E-24
ENSG00000173404	INSM1	7.98E+00	1.34E-25	3.32E-24
ENSG00000225190	PLEKHM1	2.10E+00	1.34E-25	3.32E-24
ENSG00000163191	S100A11	2.10E+00	1.40E-25	3.48E-24
ENSG00000066322	ELOVL1	2.64E+00	1.57E-25	3.87E-24
ENSG00000171747	LGALS4	7.72E+00	1.70E-25	4.19E-24
ENSG00000182325	FBXL6	2.57E+00	1.87E-25	4.60E-24
ENSG00000164266	SPINK1	8.43E+00	2.15E-25	5.27E-24
ENSG00000172613	RAD9A	2.00E+00	2.25E-25	5.52E-24
ENSG00000124493	GRM4	7.13E+00	2.31E-25	5.64E-24
ENSG00000087494	PTHLH	4.99E+00	2.36E-25	5.77E-24
ENSG00000176058	TPRN	1.88E+00	2.38E-25	5.81E-24
ENSG00000163293	NIPAL1	2.52E+00	2.69E-25	6.55E-24
ENSG00000151929	BAG3	1.91E+00	2.96E-25	7.20E-24
ENSG00000102572	STK24	1.17E+00	3.07E-25	7.45E-24
ENSG00000180900	SCRIB	1.91E+00	4.83E-25	1.17E-23
ENSG00000078804	TP53INP2	1.82E+00	5.57E-25	1.34E-23

ENSG0000007372	PAX6	2.42E+00	6.37E-25	1.53E-23
ENSG00000176046	NUPR1	2.49E+00	6.57E-25	1.58E-23
ENSG00000181218	HIST3H2A	2.77E+00	7.58E-25	1.82E-23
ENSG00000160789	LMNA	1.31E+00	8.07E-25	1.93E-23
ENSG00000134108	ARL8B	1.17E+00	8.10E-25	1.94E-23
ENSG00000266412	NCOA4	1.05E+00	8.27E-25	1.97E-23
ENSG00000101188	NTSR1	7.86E+00	8.52E-25	2.03E-23
ENSG00000179833	SERTAD2	1.73E+00	9.59E-25	2.27E-23
ENSG00000163083	INHBB	4.03E+00	1.03E-24	2.44E-23
ENSG00000091592	NLRP1	3.57E+00	1.07E-24	2.53E-23
ENSG00000167281	RBFOX3	7.92E+00	1.14E-24	2.69E-23
ENSG00000151693	ASAP2	1.81E+00	1.29E-24	3.03E-23
ENSG00000074370	ATP2A3	2.79E+00	1.33E-24	3.13E-23
ENSG00000182220	ATP6AP2	1.14E+00	1.46E-24	3.41E-23
ENSG00000234465	PINLYP	6.44E+00	1.50E-24	3.49E-23
ENSG00000188883	KLRG2	6.20E+00	1.65E-24	3.83E-23
ENSG00000069482	GAL	2.29E+00	1.69E-24	3.94E-23
ENSG00000196576	PLXNB2	1.43E+00	1.98E-24	4.59E-23
ENSG00000161638	ITGA5	1.78E+00	2.09E-24	4.84E-23
ENSG00000164171	ITGA2	2.80E+00	2.10E-24	4.86E-23
ENSG00000109079	TNFAIP1	1.59E+00	2.41E-24	5.57E-23
ENSG00000179604	CDC42EP4	1.39E+00	2.51E-24	5.80E-23
ENSG00000072163	LIMS2	3.17E+00	2.55E-24	5.87E-23
ENSG00000158373	HIST1H2BD	2.33E+00	2.71E-24	6.23E-23
ENSG00000175592	FOSL1	2.13E+00	2.86E-24	6.56E-23
ENSG00000164045	CDC25A	1.25E+00	2.99E-24	6.85E-23
ENSG00000136842	TMOD1	4.31E+00	3.32E-24	7.59E-23
ENSG00000076685	NT5C2	1.60E+00	3.38E-24	7.71E-23
ENSG00000196975	ANXA4	1.69E+00	3.38E-24	7.71E-23
ENSG00000080546	SESN1	2.46E+00	3.48E-24	7.91E-23
ENSG00000114473	IQCG	2.38E+00	4.07E-24	9.20E-23
ENSG00000127870	RNF6	1.42E+00	4.48E-24	1.01E-22
ENSG00000237512	UNC5B-AS1	6.32E+00	5.21E-24	1.17E-22
ENSG00000108669	CYTH1	1.38E+00	6.54E-24	1.46E-22
ENSG00000188522	FAM83G	2.23E+00	7.05E-24	1.57E-22
ENSG00000189143	CLDN4	5.27E+00	8.81E-24	1.95E-22
ENSG00000189337	KAZN	3.26E+00	1.01E-23	2.23E-22
ENSG00000106608	URGCP	1.89E+00	1.06E-23	2.34E-22
ENSG00000132561	MATN2	2.11E+00	1.06E-23	2.34E-22
ENSG00000105281	SLC1A5	1.34E+00	1.08E-23	2.38E-22

ENSG00000159871	LYPD5	4.08E+00	1.15E-23	2.52E-22
ENSG00000105993	DNAJB6	1.08E+00	1.17E-23	2.57E-22
ENSG00000080503	SMARCA2	1.97E+00	1.20E-23	2.63E-22
ENSG00000131746	TNS4	7.62E+00	1.27E-23	2.77E-22
ENSG00000171403	KRT9	7.52E+00	1.29E-23	2.83E-22
ENSG00000120889	TNFRSF10B	1.12E+00	1.34E-23	2.93E-22
ENSG00000010310	GIPR	4.79E+00	1.36E-23	2.96E-22
ENSG00000168961	LGALS9	4.74E+00	1.39E-23	3.03E-22
ENSG00000182326	C1S	1.97E+00	1.74E-23	3.78E-22
ENSG00000160753	RUSC1	1.62E+00	1.81E-23	3.94E-22
ENSG00000176153	GPX2	7.62E+00	1.82E-23	3.94E-22
ENSG00000178882	RFLNA	4.93E+00	1.85E-23	4.00E-22
ENSG00000151640	DPYSL4	2.33E+00	1.90E-23	4.11E-22
ENSG00000014216	CAPN1	1.72E+00	2.19E-23	4.73E-22
ENSG00000058404	CAMK2B	4.77E+00	2.38E-23	5.14E-22
ENSG00000131759	RARA	1.44E+00	2.47E-23	5.30E-22
ENSG00000188070	C11orf95	2.44E+00	2.83E-23	6.09E-22
ENSG00000179292	TMEM151A	3.45E+00	2.90E-23	6.22E-22
ENSG00000125633	CCDC93	1.41E+00	2.93E-23	6.27E-22
ENSG00000118046	STK11	1.60E+00	3.09E-23	6.60E-22
ENSG00000166558	SLC38A8	7.16E+00	3.18E-23	6.79E-22
ENSG00000151348	EXT2	1.20E+00	3.89E-23	8.27E-22
ENSG00000163956	LRPAP1	1.19E+00	4.30E-23	9.13E-22
ENSG00000165949	IFI27	4.69E+00	4.73E-23	1.00E-21
ENSG00000117676	RPS6KA1	2.10E+00	4.77E-23	1.01E-21
ENSG00000100596	SPTLC2	1.53E+00	4.91E-23	1.04E-21
ENSG00000139624	CERS5	1.89E+00	4.96E-23	1.05E-21
ENSG00000167653	PSCA	5.54E+00	5.85E-23	1.23E-21
ENSG00000141644	MBD1	1.29E+00	6.06E-23	1.28E-21
ENSG00000105370	LIM2	7.31E+00	7.02E-23	1.48E-21
ENSG00000146112	PPP1R18	1.50E+00	7.14E-23	1.50E-21
ENSG00000154217	PITPNC1	3.02E+00	7.36E-23	1.55E-21
ENSG00000131042	LILRB2	7.52E+00	7.58E-23	1.59E-21
ENSG00000184371	CSF1	1.78E+00	7.76E-23	1.63E-21
ENSG00000064961	HMG20B	1.41E+00	7.97E-23	1.67E-21
ENSG00000138814	PPP3CA	1.07E+00	9.34E-23	1.94E-21
ENSG00000268621	IGFL2-AS1	3.63E+00	9.92E-23	2.06E-21
ENSG00000109670	FBXW7	1.28E+00	1.04E-22	2.15E-21
ENSG00000210082	MT-RNR2	1.12E+00	1.13E-22	2.33E-21
ENSG00000117472	TSPAN1	6.58E+00	1.18E-22	2.44E-21

ENSG00000161249	DMKN	4.07E+00	1.23E-22	2.54E-21
ENSG00000170734	POLH	1.98E+00	1.28E-22	2.62E-21
ENSG00000177508	IRX3	2.09E+00	1.29E-22	2.64E-21
ENSG00000162344	FGF19	7.29E+00	1.37E-22	2.81E-21
ENSG00000159674	SPON2	7.28E+00	1.44E-22	2.94E-21
ENSG00000096433	ITPR3	1.91E+00	1.61E-22	3.26E-21
ENSG00000134871	COL4A2	1.09E+00	1.93E-22	3.90E-21
ENSG00000119541	VPS4B	1.54E+00	2.02E-22	4.10E-21
ENSG00000110047	EHD1	1.77E+00	2.09E-22	4.23E-21
ENSG00000182372	CLN8	1.74E+00	2.11E-22	4.26E-21
ENSG00000258791	LINC00520	7.77E+00	2.13E-22	4.30E-21
ENSG00000177469	CAVIN1	1.06E+00	2.46E-22	4.94E-21
ENSG00000167302	TEPSIN	1.96E+00	2.68E-22	5.38E-21
ENSG00000189280	GJB5	7.29E+00	2.81E-22	5.63E-21
ENSG00000065613	SLK	1.46E+00	2.97E-22	5.94E-21
ENSG00000161714	PLCD3	1.69E+00	3.28E-22	6.57E-21
ENSG00000166016	ABTB2	2.57E+00	3.46E-22	6.92E-21
ENSG00000213047	DENND1B	2.46E+00	3.51E-22	7.01E-21
ENSG00000168300	PCMTD1	1.97E+00	3.84E-22	7.65E-21
ENSG00000128298	BAIAP2L2	6.46E+00	4.68E-22	9.29E-21
ENSG00000050165	DKK3	1.63E+00	4.76E-22	9.45E-21
ENSG00000101204	CHRNA4	7.24E+00	7.73E-22	1.53E-20
ENSG00000108819	PPP1R9B	1.38E+00	8.28E-22	1.63E-20
ENSG00000119782	FKBP1B	3.61E+00	8.29E-22	1.63E-20
ENSG00000158859	ADAMTS4	6.05E+00	1.13E-21	2.21E-20
ENSG00000167306	MYO5B	5.12E+00	1.14E-21	2.22E-20
ENSG00000011600	TYROBP	7.64E+00	1.18E-21	2.30E-20
ENSG00000107262	BAG1	1.24E+00	1.24E-21	2.42E-20
ENSG00000090339	ICAM1	1.91E+00	1.27E-21	2.46E-20
ENSG00000138166	DUSP5	1.96E+00	1.30E-21	2.52E-20
ENSG00000172216	CEBPB	1.22E+00	1.41E-21	2.73E-20
ENSG00000205413	SAMD9	1.95E+00	1.45E-21	2.81E-20
ENSG00000130340	SNX9	1.36E+00	1.49E-21	2.87E-20
ENSG00000031698	SARS	1.02E+00	1.66E-21	3.21E-20
ENSG00000148672	GLUD1	1.15E+00	1.82E-21	3.49E-20
ENSG00000179862	CITED4	3.54E+00	1.93E-21	3.70E-20
ENSG00000065054	SLC9A3R2	1.83E+00	1.97E-21	3.77E-20
ENSG00000178297	TMPRSS9	7.22E+00	2.00E-21	3.82E-20
ENSG00000214135	AC132008.2	2.56E+00	2.02E-21	3.85E-20
ENSG00000162783	IER5	1.67E+00	2.31E-21	4.41E-20

ENSG00000100997	ABHD12	1.69E+00	2.57E-21	4.91E-20
ENSG00000104885	DOT1L	1.96E+00	2.71E-21	5.15E-20
ENSG00000157637	SLC38A10	1.38E+00	2.71E-21	5.15E-20
ENSG00000137575	SDCBP	1.05E+00	2.72E-21	5.18E-20
ENSG00000130294	KIF1A	5.80E+00	3.13E-21	5.94E-20
ENSG00000077009	NMRK2	7.56E+00	3.23E-21	6.11E-20
ENSG00000099331	MYO9B	1.56E+00	3.30E-21	6.23E-20
ENSG00000153303	FRMD1	7.23E+00	3.38E-21	6.38E-20
ENSG00000126705	AHDC1	1.78E+00	3.55E-21	6.68E-20
ENSG00000175121	WFDC5	7.46E+00	3.63E-21	6.84E-20
ENSG00000101134	DOK5	7.19E+00	3.85E-21	7.22E-20
ENSG00000054598	FOXC1	1.99E+00	3.88E-21	7.27E-20
ENSG00000137975	CLCA2	5.19E+00	4.09E-21	7.66E-20
ENSG00000128016	ZFP36	2.93E+00	4.42E-21	8.28E-20
ENSG00000111981	ULBP1	2.51E+00	4.60E-21	8.61E-20
ENSG00000177494	ZBED2	7.33E+00	4.66E-21	8.70E-20
ENSG00000100523	DDHD1	2.01E+00	4.72E-21	8.80E-20
ENSG00000099804	CDC34	1.92E+00	4.82E-21	8.99E-20
ENSG00000184792	OSBP2	2.63E+00	5.32E-21	9.91E-20
ENSG00000129538	RNASE1	7.09E+00	5.38E-21	1.00E-19
ENSG00000164082	GRM2	5.42E+00	5.42E-21	1.01E-19
ENSG00000143590	EFNA3	2.23E+00	5.71E-21	1.06E-19
ENSG00000057657	PRDM1	4.07E+00	6.34E-21	1.18E-19
ENSG00000164853	UNCX	7.52E+00	7.14E-21	1.32E-19
ENSG00000161642	ZNF385A	2.06E+00	7.57E-21	1.40E-19
ENSG00000110628	SLC22A18	2.76E+00	7.89E-21	1.45E-19
ENSG00000170836	PPM1D	2.02E+00	8.74E-21	1.61E-19
ENSG00000128294	TPST2	1.96E+00	9.29E-21	1.70E-19
ENSG00000108309	RUNDC3A	5.80E+00	9.51E-21	1.74E-19
ENSG00000139410	SDSL	2.18E+00	9.65E-21	1.77E-19
ENSG00000005700	IBTK	1.35E+00	1.14E-20	2.07E-19
ENSG00000002726	AOC1	7.33E+00	1.14E-20	2.08E-19
ENSG00000162572	SCNN1D	3.66E+00	1.42E-20	2.57E-19
ENSG00000161835	GRASP	3.68E+00	1.44E-20	2.61E-19
ENSG00000122359	ANXA11	1.50E+00	1.45E-20	2.62E-19
ENSG00000124222	STX16	1.59E+00	1.58E-20	2.85E-19
ENSG00000213722	DDAH2	1.75E+00	1.69E-20	3.04E-19
ENSG00000085433	WDR47	2.08E+00	1.92E-20	3.45E-19
ENSG00000100346	CACNA1I	6.51E+00	2.03E-20	3.64E-19
ENSG00000100427	MLC1	6.97E+00	2.04E-20	3.64E-19



ENSG00000111897	SERINC1	1.28E+00	2.09E-20	3.73E-19
ENSG00000121039	RDH10	2.35E+00	2.15E-20	3.83E-19
ENSG00000112715	VEGFA	1.82E+00	2.17E-20	3.87E-19
ENSG00000214688	C10orf105	7.27E+00	2.17E-20	3.87E-19
ENSG00000197747	S100A10	1.26E+00	2.64E-20	4.69E-19
ENSG00000072786	STK10	1.77E+00	2.68E-20	4.76E-19
ENSG00000101152	DNAJC5	1.04E+00	2.71E-20	4.79E-19
ENSG00000153395	LPCAT1	2.24E+00	3.00E-20	5.30E-19
ENSG00000242802	AP5Z1	1.63E+00	3.21E-20	5.65E-19
ENSG00000180155	LYNX1	3.13E+00	3.47E-20	6.10E-19
ENSG00000262152	LINC00514	6.77E+00	3.59E-20	6.29E-19
ENSG00000099617	EFNA2	3.59E+00	4.02E-20	7.05E-19
ENSG00000116198	CEP104	1.26E+00	4.08E-20	7.13E-19
ENSG00000107679	PLEKHA1	1.56E+00	4.29E-20	7.49E-19
ENSG00000105388	CEACAM5	7.28E+00	4.29E-20	7.49E-19
ENSG00000181222	POLR2A	1.51E+00	4.73E-20	8.23E-19
ENSG00000182580	EPHB3	2.43E+00	5.03E-20	8.74E-19
ENSG00000078808	SDF4	1.06E+00	5.11E-20	8.87E-19
ENSG00000149115	TNKS1BP1	1.48E+00	5.64E-20	9.78E-19
ENSG00000026103	FAS	3.29E+00	5.79E-20	1.00E-18
ENSG00000011422	PLAUR	2.39E+00	5.92E-20	1.03E-18
ENSG00000105376	ICAM5	3.53E+00	6.15E-20	1.06E-18
ENSG00000136153	LMO7	1.47E+00	6.28E-20	1.08E-18
ENSG00000005238	FAM214B	3.45E+00	6.35E-20	1.10E-18
ENSG00000100744	GSKIP	2.08E+00	6.80E-20	1.17E-18
ENSG00000154118	JPH3	4.59E+00	6.83E-20	1.17E-18
ENSG00000116032	GRIN3B	6.50E+00	6.88E-20	1.18E-18
ENSG00000169994	MYO7B	7.00E+00	6.89E-20	1.18E-18
ENSG00000130595	TNNT3	7.06E+00	7.22E-20	1.23E-18
ENSG00000078237	TIGAR	2.52E+00	7.36E-20	1.26E-18
ENSG00000107736	CDH23	3.59E+00	7.56E-20	1.29E-18
ENSG00000093000	NUP50	1.34E+00	7.72E-20	1.31E-18
ENSG00000111344	RASAL1	6.27E+00	7.82E-20	1.33E-18
ENSG00000130703	OSBPL2	1.33E+00	8.77E-20	1.49E-18
ENSG00000186810	CXCR3	6.71E+00	9.26E-20	1.57E-18
ENSG00000005513	SOX8	7.11E+00	9.30E-20	1.57E-18
ENSG00000177374	HIC1	2.40E+00	9.34E-20	1.58E-18
ENSG00000163283	ALPP	4.71E+00	9.64E-20	1.63E-18
ENSG00000163501	IHH	5.76E+00	9.94E-20	1.67E-18
ENSG00000168938	PPIC	1.55E+00	1.01E-19	1.71E-18

ENSG00000133101	CCNA1	3.06E+00	1.05E-19	1.77E-18
ENSG00000104055	TGM5	6.58E+00	1.07E-19	1.79E-18
ENSG00000100412	ACO2	1.05E+00	1.21E-19	2.02E-18
ENSG00000104976	SNAPC2	1.55E+00	1.40E-19	2.33E-18
ENSG00000135047	CTSL	1.14E+00	1.52E-19	2.54E-18
ENSG00000160570	DEDD2	1.49E+00	1.58E-19	2.62E-18
ENSG00000175155	YPEL2	3.63E+00	1.65E-19	2.74E-18
ENSG00000071205	ARHGAP10	1.78E+00	1.65E-19	2.74E-18
ENSG00000179242	CDH4	5.53E+00	1.77E-19	2.94E-18
ENSG00000088833	NSFL1C	1.17E+00	1.81E-19	2.99E-18
ENSG00000105664	COMP	4.10E+00	1.81E-19	3.00E-18
ENSG00000198736	MSRB1	1.73E+00	1.82E-19	3.00E-18
ENSG00000164221	CCDC112	1.80E+00	1.82E-19	3.01E-18
ENSG00000167702	KIFC2	2.30E+00	1.86E-19	3.07E-18
ENSG00000172890	NADSYN1	2.19E+00	2.25E-19	3.70E-18
ENSG00000109046	WSB1	1.09E+00	2.32E-19	3.81E-18
ENSG00000184113	CLDN5	6.86E+00	2.36E-19	3.86E-18
ENSG00000104756	KCTD9	1.18E+00	2.48E-19	4.06E-18
ENSG00000187017	ESPN	6.85E+00	2.85E-19	4.65E-18
ENSG00000012223	LTF	6.25E+00	2.86E-19	4.66E-18
ENSG00000261150	EPPK1	2.46E+00	3.01E-19	4.90E-18
ENSG00000116761	CTH	4.07E+00	3.21E-19	5.23E-18
ENSG00000167110	GOLGA2	1.40E+00	3.32E-19	5.40E-18
ENSG00000238266	LINC00707	6.63E+00	3.42E-19	5.54E-18
ENSG00000215182	MUC5AC	6.81E+00	3.67E-19	5.94E-18
ENSG00000101439	CST3	1.74E+00	3.70E-19	5.98E-18
ENSG00000268041	ERFL	3.86E+00	3.80E-19	6.14E-18
ENSG00000109099	PMP22	1.26E+00	3.85E-19	6.22E-18
ENSG00000167173	C15orf39	1.52E+00	4.03E-19	6.50E-18
ENSG00000105856	HBP1	1.82E+00	4.24E-19	6.83E-18
ENSG00000114353	GNAI2	1.14E+00	4.53E-19	7.31E-18
ENSG00000127663	KDM4B	1.72E+00	5.00E-19	8.05E-18
ENSG00000087116	ADAMTS2	5.01E+00	5.18E-19	8.32E-18
ENSG00000161671	EMC10	1.07E+00	5.69E-19	9.12E-18
ENSG00000215915	ATAD3C	5.54E+00	6.21E-19	9.96E-18
ENSG00000169155	ZBTB43	1.90E+00	6.45E-19	1.03E-17
ENSG00000179134	SAMD4B	1.21E+00	6.59E-19	1.05E-17
ENSG00000153162	BMP6	6.13E+00	6.74E-19	1.08E-17
ENSG00000130529	TRPM4	2.26E+00	6.94E-19	1.11E-17
ENSG00000198142	SOWAHC	1.77E+00	6.94E-19	1.11E-17

ENSG00000120885	CLU	1.30E+00	7.35E-19	1.17E-17
ENSG00000105699	LSR	1.69E+00	7.63E-19	1.21E-17
ENSG00000105127	AKAP8	1.29E+00	8.36E-19	1.33E-17
ENSG00000145901	TNIP1	1.14E+00	8.38E-19	1.33E-17
ENSG00000198853	RUSC2	1.94E+00	9.73E-19	1.54E-17
ENSG00000167754	KLK5	7.16E+00	1.02E-18	1.61E-17
ENSG00000137843	PAK6	4.19E+00	1.10E-18	1.73E-17
ENSG00000177694	NAALADL2	7.40E+00	1.11E-18	1.74E-17
ENSG00000117139	KDM5B	1.89E+00	1.16E-18	1.81E-17
ENSG00000110076	NRXN2	3.53E+00	1.32E-18	2.06E-17
ENSG00000181045	SLC26A11	2.32E+00	1.41E-18	2.21E-17
ENSG00000183077	AFMID	1.68E+00	1.56E-18	2.43E-17
ENSG00000100867	DHRS2	2.71E+00	1.58E-18	2.45E-17
ENSG00000130052	STARD8	3.48E+00	1.59E-18	2.47E-17
ENSG00000080854	IGSF9B	3.89E+00	1.63E-18	2.52E-17
ENSG00000108175	ZMIZ1	1.44E+00	1.74E-18	2.70E-17
ENSG00000135114	OASL	4.64E+00	1.85E-18	2.87E-17
ENSG00000102802	MEDAG	3.98E+00	1.91E-18	2.96E-17
ENSG00000155744	FAM126B	2.03E+00	1.97E-18	3.03E-17
ENSG00000022567	SLC45A4	2.43E+00	2.16E-18	3.32E-17
ENSG00000198805	PNP	1.44E+00	2.19E-18	3.36E-17
ENSG00000182173	TSEN54	1.31E+00	2.20E-18	3.37E-17
ENSG00000198959	TGM2	2.79E+00	2.20E-18	3.37E-17
ENSG00000055609	KMT2C	1.85E+00	2.39E-18	3.66E-17
ENSG00000048392	RRM2B	1.74E+00	2.44E-18	3.73E-17
ENSG00000167941	SOST	6.84E+00	2.49E-18	3.81E-17
ENSG00000075891	PAX2	6.74E+00	2.55E-18	3.88E-17
ENSG00000204542	C6orf15	6.87E+00	2.56E-18	3.89E-17
ENSG00000166908	PIP4K2C	1.66E+00	2.74E-18	4.17E-17
ENSG00000145107	TM4SF19	5.56E+00	2.97E-18	4.50E-17
ENSG00000132334	PTPRE	1.58E+00	3.41E-18	5.14E-17
ENSG00000153531	ADPRHL1	4.18E+00	3.83E-18	5.75E-17
ENSG00000161533	ACOX1	1.37E+00	3.97E-18	5.96E-17
ENSG00000118689	FOXO3	1.47E+00	4.16E-18	6.24E-17
ENSG00000127585	FBXL16	4.37E+00	4.46E-18	6.66E-17
ENSG00000085185	BCORL1	2.18E+00	4.86E-18	7.25E-17
ENSG00000116663	FBXO6	3.31E+00	4.93E-18	7.35E-17
ENSG00000033867	SLC4A7	1.11E+00	5.33E-18	7.94E-17
ENSG00000168792	ABHD15	2.08E+00	5.41E-18	8.05E-17
ENSG00000050820	BCAR1	1.11E+00	5.42E-18	8.06E-17

ENSG00000104228	TRIM35	2.00E+00	6.32E-18	9.36E-17
ENSG00000196998	WDR45	1.52E+00	6.76E-18	9.97E-17
ENSG00000196557	CACNA1H	3.85E+00	7.00E-18	1.03E-16
ENSG00000103034	NDRG4	4.11E+00	7.12E-18	1.05E-16
ENSG00000107745	MICU1	1.23E+00	7.34E-18	1.08E-16
ENSG00000099917	MED15	1.26E+00	7.64E-18	1.12E-16
ENSG00000178597	PSAPL1	6.79E+00	7.75E-18	1.14E-16
ENSG00000052344	PRSS8	5.24E+00	7.86E-18	1.15E-16
ENSG00000165105	RASEF	2.87E+00	7.99E-18	1.17E-16
ENSG00000163499	CRYBA2	4.93E+00	8.12E-18	1.19E-16
ENSG00000135002	RFK	1.51E+00	8.20E-18	1.20E-16
ENSG00000196586	MYO6	1.62E+00	8.38E-18	1.22E-16
ENSG00000158828	PINK1	1.78E+00	8.46E-18	1.23E-16
ENSG00000005884	ITGA3	1.13E+00	8.50E-18	1.24E-16
ENSG00000198892	SHISA4	2.23E+00	8.63E-18	1.25E-16
ENSG00000159625	DRC7	6.34E+00	8.67E-18	1.26E-16
ENSG00000116574	RHOU	4.87E+00	8.91E-18	1.29E-16
ENSG00000131196	NFATC1	2.25E+00	9.22E-18	1.34E-16
ENSG00000047249	ATP6V1H	1.22E+00	9.25E-18	1.34E-16
ENSG00000169181	GSG1L	6.79E+00	9.28E-18	1.34E-16
ENSG00000166473	PKD1L2	6.43E+00	9.50E-18	1.37E-16
ENSG00000122507	BBS9	2.67E+00	1.00E-17	1.45E-16
ENSG00000206140	TMEM191C	6.24E+00	1.02E-17	1.47E-16
ENSG00000186594	MIR22HG	1.55E+00	1.09E-17	1.57E-16
ENSG00000170421	KRT8	2.07E+00	1.13E-17	1.62E-16
ENSG00000171793	CTPS1	1.18E+00	1.14E-17	1.64E-16
ENSG00000069011	PITX1	1.18E+00	1.43E-17	2.05E-16
ENSG00000007306	CEACAM7	6.68E+00	1.48E-17	2.12E-16
ENSG00000164379	FOXQ1	7.00E+00	1.49E-17	2.13E-16
ENSG00000262714	AC007342.5	6.83E+00	1.52E-17	2.18E-16
ENSG00000173621	LRFN4	1.33E+00	1.59E-17	2.26E-16
ENSG00000176953	NFATC2IP	1.09E+00	1.71E-17	2.43E-16
ENSG00000100311	PDGFB	2.88E+00	1.75E-17	2.49E-16
ENSG00000182795	C1orf116	6.38E+00	1.78E-17	2.52E-16
ENSG00000171105	INSR	1.56E+00	1.82E-17	2.58E-16
ENSG00000109107	ALDOC	5.03E+00	1.84E-17	2.59E-16
ENSG00000048740	CELF2	6.06E+00	1.85E-17	2.61E-16
ENSG00000231290	APCDD1L-DT	2.67E+00	1.95E-17	2.75E-16
ENSG00000013364	MVP	2.25E+00	2.05E-17	2.90E-16
ENSG00000186642	PDE2A	4.61E+00	2.15E-17	3.03E-16

ENSG00000130477	UNC13A	4.68E+00	2.16E-17	3.05E-16
ENSG00000124104	SNX21	1.33E+00	2.23E-17	3.13E-16
ENSG00000159388	BTG2	1.83E+00	2.24E-17	3.14E-16
ENSG00000175470	PPP2R2D	1.27E+00	2.25E-17	3.15E-16
ENSG00000178934	LGALS7B	7.02E+00	2.38E-17	3.33E-16
ENSG00000101180	HRH3	6.93E+00	2.41E-17	3.37E-16
ENSG00000113070	HBEGF	1.42E+00	2.48E-17	3.47E-16
ENSG00000197780	TAF13	1.44E+00	2.53E-17	3.54E-16
ENSG00000156026	MCU	1.30E+00	2.62E-17	3.66E-16
ENSG00000126214	KLC1	1.43E+00	2.82E-17	3.93E-16
ENSG00000133703	KRAS	1.15E+00	2.84E-17	3.97E-16
ENSG00000174564	IL20RB	4.47E+00	2.88E-17	4.01E-16
ENSG00000006453	BAIAP2L1	1.26E+00	3.10E-17	4.30E-16
ENSG00000140199	SLC12A6	2.24E+00	3.12E-17	4.34E-16
ENSG00000160209	PDXK	1.30E+00	3.35E-17	4.65E-16
ENSG00000196208	GREB1	3.54E+00	3.54E-17	4.90E-16
ENSG00000238045	AC009133.1	5.59E+00	3.60E-17	4.98E-16
ENSG00000105409	ATP1A3	4.16E+00	3.65E-17	5.04E-16
ENSG00000130055	GDPD2	6.39E+00	3.84E-17	5.30E-16
ENSG00000189319	FAM53B	1.61E+00	3.99E-17	5.51E-16
ENSG00000121552	CSTA	4.16E+00	4.02E-17	5.55E-16
ENSG00000069956	MAPK6	1.33E+00	4.48E-17	6.16E-16
ENSG00000116213	WRAP73	1.39E+00	4.53E-17	6.23E-16
ENSG00000075426	FOSL2	1.36E+00	4.66E-17	6.40E-16
ENSG00000198074	AKR1B10	3.87E+00	4.79E-17	6.57E-16
ENSG00000150457	LATS2	2.10E+00	5.10E-17	6.97E-16
ENSG00000171794	UTF1	6.82E+00	5.48E-17	7.49E-16
ENSG00000131771	PPP1R1B	6.54E+00	5.49E-17	7.50E-16
ENSG00000131941	RHPN2	1.67E+00	5.94E-17	8.10E-16
ENSG00000135638	EMX1	5.99E+00	6.00E-17	8.18E-16
ENSG00000059804	SLC2A3	1.47E+00	6.02E-17	8.19E-16
ENSG00000240194	CYMP	6.65E+00	6.32E-17	8.60E-16
ENSG00000169118	CSNK1G1	1.54E+00	6.62E-17	8.99E-16
ENSG00000064932	SBNO2	1.06E+00	6.99E-17	9.47E-16
ENSG00000138834	MAPK8IP3	2.25E+00	7.20E-17	9.73E-16
ENSG00000177169	ULK1	1.76E+00	7.33E-17	9.89E-16
ENSG00000125089	SH3TC1	3.30E+00	7.37E-17	9.94E-16
ENSG00000163347	CLDN1	3.65E+00	8.47E-17	1.14E-15
ENSG00000067606	PRKCZ	1.69E+00	8.66E-17	1.16E-15
ENSG00000128923	MINDY2	1.56E+00	8.87E-17	1.19E-15

ENSG00000243225	AC007686.1	3.15E+00	9.20E-17	1.23E-15
ENSG00000119686	FLVCR2	3.75E+00	9.23E-17	1.24E-15
ENSG00000092054	MYH7	6.43E+00	9.44E-17	1.26E-15
ENSG00000130640	TUBGCP2	1.06E+00	9.85E-17	1.32E-15
ENSG00000166183	ASPG	6.39E+00	1.01E-16	1.35E-15
ENSG00000186635	ARAP1	1.68E+00	1.03E-16	1.37E-15
ENSG00000127578	WFIKKN1	4.96E+00	1.08E-16	1.43E-15
ENSG00000060069	CTDP1	1.90E+00	1.13E-16	1.50E-15
ENSG00000135363	LMO2	6.37E+00	1.15E-16	1.53E-15
ENSG00000156299	TIAM1	2.65E+00	1.16E-16	1.54E-15
ENSG00000177042	TMEM80	2.39E+00	1.31E-16	1.74E-15
ENSG00000087074	PPP1R15A	1.75E+00	1.39E-16	1.84E-15
ENSG00000164463	CREBRF	2.05E+00	1.40E-16	1.85E-15
ENSG00000182378	PLCXD1	1.86E+00	1.42E-16	1.88E-15
ENSG00000104497	SNX16	1.24E+00	1.43E-16	1.89E-15
ENSG00000176973	FAM89B	2.23E+00	1.45E-16	1.91E-15
ENSG00000099834	CDHR5	6.32E+00	1.47E-16	1.94E-15
ENSG00000099849	RASSF7	2.13E+00	1.47E-16	1.94E-15
ENSG00000172818	OVOL1	6.18E+00	1.51E-16	1.99E-15
ENSG00000143816	WNT9A	5.13E+00	1.54E-16	2.02E-15
ENSG00000157445	CACNA2D3	5.89E+00	1.63E-16	2.13E-15
ENSG00000183020	AP2A2	1.27E+00	1.69E-16	2.21E-15
ENSG00000196155	PLEKHG4	5.22E+00	1.72E-16	2.26E-15
ENSG00000109814	UGDH	1.36E+00	1.95E-16	2.54E-15
ENSG00000166377	ATP9B	2.99E+00	2.19E-16	2.85E-15
ENSG00000167771	RCOR2	2.99E+00	2.21E-16	2.87E-15
ENSG00000168556	ING2	1.07E+00	2.32E-16	3.02E-15
ENSG00000128340	RAC2	5.58E+00	2.45E-16	3.19E-15
ENSG00000141574	SECTM1	3.80E+00	2.47E-16	3.21E-15
ENSG00000013288	MAN2B2	1.77E+00	2.59E-16	3.35E-15
ENSG00000138207	RBP4	3.97E+00	2.82E-16	3.65E-15
ENSG00000197380	DACT3	2.45E+00	2.97E-16	3.83E-15
ENSG00000225697	SLC26A6	1.45E+00	3.01E-16	3.88E-15
ENSG00000156273	BACH1	1.24E+00	3.19E-16	4.11E-15
ENSG00000278195	SSTR3	6.30E+00	3.19E-16	4.11E-15
ENSG00000167705	RILP	2.39E+00	3.34E-16	4.29E-15
ENSG00000176454	LPCAT4	1.94E+00	4.13E-16	5.28E-15
ENSG00000169926	KLF13	2.77E+00	4.15E-16	5.31E-15
ENSG00000105974	CAV1	1.63E+00	4.22E-16	5.39E-15
ENSG00000112559	MDF1	5.12E+00	4.40E-16	5.62E-15

ENSG00000166446	CDYL2	2.00E+00	4.67E-16	5.95E-15
ENSG00000273604	EPOP	1.77E+00	4.93E-16	6.26E-15
ENSG00000168994	PXDC1	1.46E+00	5.39E-16	6.83E-15
ENSG00000124882	EREG	4.03E+00	5.94E-16	7.52E-15
ENSG00000007264	MATK	4.61E+00	5.97E-16	7.55E-15
ENSG00000168447	SCNN1B	6.46E+00	6.00E-16	7.58E-15
ENSG00000061936	SFSWAP	1.05E+00	6.38E-16	8.05E-15
ENSG00000164867	NOS3	6.30E+00	6.39E-16	8.05E-15
ENSG00000164877	MICALL2	1.11E+00	6.78E-16	8.54E-15
ENSG00000181626	ANKRD62	6.67E+00	7.60E-16	9.56E-15
ENSG00000257704	INAFM1	1.26E+00	7.88E-16	9.90E-15
ENSG00000178301	AQP11	3.66E+00	7.97E-16	1.00E-14
ENSG00000175197	DDIT3	1.68E+00	8.00E-16	1.00E-14
ENSG00000131242	RAB11FIP4	1.94E+00	8.21E-16	1.03E-14
ENSG00000104880	ARHGEF18	1.77E+00	8.40E-16	1.05E-14
ENSG00000135655	USP15	1.22E+00	8.52E-16	1.06E-14
ENSG00000186111	PIP5K1C	1.58E+00	8.96E-16	1.12E-14
ENSG00000158246	TENT5B	2.11E+00	9.00E-16	1.12E-14
ENSG00000130643	CALY	6.30E+00	1.02E-15	1.26E-14
ENSG00000011198	ABHD5	1.39E+00	1.04E-15	1.29E-14
ENSG00000181191	PJA1	1.59E+00	1.05E-15	1.31E-14
ENSG00000135924	DNAJB2	1.16E+00	1.06E-15	1.32E-14
ENSG00000105229	PIAS4	1.21E+00	1.07E-15	1.32E-14
ENSG00000168394	TAP1	1.20E+00	1.11E-15	1.37E-14
ENSG00000104881	PPP1R13L	1.53E+00	1.11E-15	1.37E-14
ENSG00000178773	CPNE7	3.53E+00	1.11E-15	1.37E-14
ENSG00000171310	CHST11	2.19E+00	1.12E-15	1.38E-14
ENSG00000149260	CAPN5	1.39E+00	1.14E-15	1.41E-14
ENSG00000117143	UAP1	1.23E+00	1.24E-15	1.53E-14
ENSG00000105298	CACTIN	1.74E+00	1.25E-15	1.54E-14
ENSG00000134955	SLC37A2	4.13E+00	1.28E-15	1.58E-14
ENSG00000184350	MRGBPRE	6.19E+00	1.29E-15	1.58E-14
ENSG00000170677	SOCS6	1.42E+00	1.35E-15	1.65E-14
ENSG00000129990	SYT5	6.66E+00	1.38E-15	1.69E-14
ENSG00000087245	MMP2	1.69E+00	1.41E-15	1.73E-14
ENSG00000135750	KCNK1	4.27E+00	1.43E-15	1.75E-14
ENSG00000106992	AK1	1.73E+00	1.45E-15	1.77E-14
ENSG00000276758	AC245884.12	6.79E+00	1.46E-15	1.79E-14
ENSG00000166340	TPP1	1.24E+00	1.64E-15	2.00E-14
ENSG00000138271	GPR87	3.79E+00	1.67E-15	2.03E-14

ENSG00000063978	RNF4	1.19E+00	1.92E-15	2.33E-14
ENSG00000053747	LAMA3	4.22E+00	1.97E-15	2.38E-14
ENSG00000157107	FCHO2	1.88E+00	1.98E-15	2.39E-14
ENSG00000056972	TRAF3IP2	2.20E+00	2.16E-15	2.61E-14
ENSG00000204389	HSPA1A	1.12E+00	2.19E-15	2.65E-14
ENSG00000185633	NDUFA4L2	4.96E+00	2.22E-15	2.69E-14
ENSG00000114541	FRMD4B	3.40E+00	2.23E-15	2.69E-14
ENSG00000102891	MT4	7.42E+00	2.28E-15	2.75E-14
ENSG00000170385	SLC30A1	1.76E+00	2.32E-15	2.80E-14
ENSG00000148826	NKX6-2	6.01E+00	2.32E-15	2.80E-14
ENSG00000131100	ATP6V1E1	1.46E+00	2.37E-15	2.85E-14
ENSG00000099812	MISP	6.28E+00	2.39E-15	2.88E-14
ENSG00000154153	RETREG1	3.90E+00	2.66E-15	3.20E-14
ENSG00000140332	TLE3	1.28E+00	2.89E-15	3.46E-14
ENSG00000087253	LPCAT2	1.91E+00	2.92E-15	3.50E-14
ENSG00000131408	NR1H2	1.34E+00	3.36E-15	4.02E-14
ENSG00000060656	PTPRU	3.15E+00	3.42E-15	4.09E-14
ENSG00000184232	OAF	1.63E+00	3.45E-15	4.12E-14
ENSG00000163814	CDCP1	1.55E+00	3.64E-15	4.33E-14
ENSG00000102854	MSLN	5.32E+00	3.96E-15	4.71E-14
ENSG00000066056	TIE1	5.84E+00	4.23E-15	5.01E-14
ENSG00000173120	KDM2A	1.25E+00	4.22E-15	5.01E-14
ENSG00000182687	GALR2	4.76E+00	4.23E-15	5.01E-14
ENSG00000142235	LMTK3	3.48E+00	4.38E-15	5.18E-14
ENSG00000166589	CDH16	6.52E+00	4.64E-15	5.48E-14
ENSG00000137267	TUBB2A	1.17E+00	4.70E-15	5.54E-14
ENSG00000160360	GPSM1	1.47E+00	4.77E-15	5.61E-14
ENSG00000101624	CEP76	1.43E+00	4.87E-15	5.73E-14
ENSG00000164237	CMBL	1.68E+00	4.98E-15	5.84E-14
ENSG00000144485	HES6	1.62E+00	5.37E-15	6.29E-14
ENSG00000054611	TBC1D22A	1.63E+00	5.54E-15	6.48E-14
ENSG00000006125	AP2B1	1.09E+00	5.80E-15	6.77E-14
ENSG00000110697	PITPNM1	1.61E+00	6.11E-15	7.12E-14
ENSG00000100884	CPNE6	6.37E+00	6.12E-15	7.13E-14
ENSG00000140323	DISP2	4.46E+00	6.38E-15	7.41E-14
ENSG00000136003	ISCU	1.27E+00	6.40E-15	7.44E-14
ENSG00000105058	FAM32A	1.12E+00	6.41E-15	7.44E-14
ENSG00000129910	CDH15	5.08E+00	6.52E-15	7.56E-14
ENSG00000130600	H19	6.33E+00	7.00E-15	8.09E-14
ENSG00000000938	FGR	6.21E+00	7.02E-15	8.11E-14



ENSG00000155846	PPARGC1B	2.45E+00	7.22E-15	8.33E-14
ENSG00000133961	NUMB	1.16E+00	8.24E-15	9.47E-14
ENSG00000166311	SMPD1	1.48E+00	8.32E-15	9.56E-14
ENSG00000131459	GFPT2	1.28E+00	8.52E-15	9.77E-14
ENSG00000242086	MUC20-OT1	1.90E+00	8.91E-15	1.02E-13
ENSG00000112782	CLIC5	6.60E+00	8.92E-15	1.02E-13
ENSG00000162706	CADM3	3.86E+00	9.04E-15	1.03E-13
ENSG00000101000	PROCR	2.01E+00	9.12E-15	1.04E-13
ENSG00000131504	DIAPH1	1.12E+00	9.99E-15	1.14E-13
ENSG00000125378	BMP4	2.30E+00	1.03E-14	1.17E-13
ENSG00000107140	TESK1	1.45E+00	1.05E-14	1.20E-13
ENSG00000182606	TRAK1	1.59E+00	1.10E-14	1.25E-13
ENSG00000188811	NHLRC3	2.05E+00	1.13E-14	1.28E-13
ENSG00000008323	PLEKHG6	5.71E+00	1.15E-14	1.30E-13
ENSG00000115457	IGFBP2	2.76E+00	1.20E-14	1.36E-13
ENSG00000100739	BDKRB1	2.61E+00	1.24E-14	1.40E-13
ENSG00000197694	SPTAN1	1.77E+00	1.26E-14	1.42E-13
ENSG00000186204	CYP4F12	6.66E+00	1.28E-14	1.45E-13
ENSG00000147010	SH3KBP1	1.29E+00	1.29E-14	1.46E-13
ENSG00000169035	KLK7	6.58E+00	1.30E-14	1.47E-13
ENSG00000076928	ARHGEF1	1.09E+00	1.31E-14	1.47E-13
ENSG00000170684	ZNF296	3.38E+00	1.32E-14	1.48E-13
ENSG00000131015	ULBP2	2.31E+00	1.42E-14	1.60E-13
ENSG00000237289	CKMT1B	4.55E+00	1.43E-14	1.60E-13
ENSG00000168528	SERINC2	1.93E+00	1.43E-14	1.60E-13
ENSG00000070423	RNF126	1.20E+00	1.45E-14	1.63E-13
ENSG00000115155	OTOF	6.27E+00	1.50E-14	1.68E-13
ENSG00000248690	HAS2-AS1	4.08E+00	1.51E-14	1.69E-13
ENSG00000197608	ZNF841	2.93E+00	1.59E-14	1.78E-13
ENSG00000163435	ELF3	4.58E+00	1.63E-14	1.82E-13
ENSG00000189190	ZNF600	2.09E+00	1.66E-14	1.85E-13
ENSG00000213672	NCKIPSD	1.32E+00	1.69E-14	1.87E-13
ENSG00000108849	PPY	5.96E+00	1.75E-14	1.94E-13
ENSG00000158109	TPRG1L	1.97E+00	1.85E-14	2.04E-13
ENSG00000175376	EIF1AD	1.43E+00	1.93E-14	2.13E-13
ENSG00000156427	FGF18	4.19E+00	1.95E-14	2.15E-13
ENSG00000127666	TICAM1	1.70E+00	1.99E-14	2.19E-13
ENSG00000130940	CASZ1	2.71E+00	2.01E-14	2.21E-13
ENSG00000157570	TSPAN18	3.04E+00	2.07E-14	2.28E-13
ENSG00000175832	ETV4	1.55E+00	2.11E-14	2.33E-13

ENSG00000257122	RRN3P3	1.82E+00	2.22E-14	2.43E-13
ENSG00000149792	MRPL49	1.16E+00	2.31E-14	2.54E-13
ENSG00000241839	PLEKHO2	1.33E+00	2.47E-14	2.70E-13
ENSG00000196535	MYO18A	1.53E+00	2.51E-14	2.74E-13
ENSG00000165632	TAF3	1.25E+00	2.59E-14	2.83E-13
ENSG00000038532	CLEC16A	1.73E+00	2.61E-14	2.85E-13
ENSG00000154822	PLCL2	4.43E+00	2.71E-14	2.96E-13
ENSG00000186847	KRT14	9.49E+00	2.76E-14	3.00E-13
ENSG00000101470	TNNC2	4.39E+00	2.82E-14	3.07E-13
ENSG00000083812	ZNF324	1.29E+00	2.84E-14	3.09E-13
ENSG00000040487	SLC66A1	1.69E+00	3.11E-14	3.36E-13
ENSG00000161267	BDH1	1.97E+00	3.39E-14	3.66E-13
ENSG00000075568	TMEM131	1.34E+00	3.61E-14	3.88E-13
ENSG00000119844	AFTPH	1.28E+00	3.64E-14	3.91E-13
ENSG00000161513	FDXR	1.38E+00	3.78E-14	4.07E-13
ENSG00000283632	EXOC3L2	6.06E+00	3.98E-14	4.27E-13
ENSG00000152953	STK32B	1.46E+00	4.13E-14	4.42E-13
ENSG00000178605	GTPBP6	1.15E+00	4.24E-14	4.53E-13
ENSG00000196116	TDRD7	2.02E+00	4.39E-14	4.70E-13
ENSG00000197273	GUCA2A	6.27E+00	4.56E-14	4.87E-13
ENSG00000154358	OBSCN	3.45E+00	4.60E-14	4.91E-13
ENSG00000106003	LFNG	1.87E+00	4.90E-14	5.22E-13
ENSG00000006459	KDM7A	2.26E+00	4.95E-14	5.26E-13
ENSG00000136856	SLC2A8	2.15E+00	5.03E-14	5.34E-13
ENSG00000141968	VAV1	5.09E+00	5.04E-14	5.35E-13
ENSG00000170855	TRIAP1	1.15E+00	5.13E-14	5.44E-13
ENSG00000156860	FBRS	1.04E+00	5.33E-14	5.65E-13
ENSG00000153922	CHD1	1.29E+00	5.42E-14	5.74E-13
ENSG00000137266	SLC22A23	2.89E+00	5.56E-14	5.89E-13
ENSG00000135253	KCP	5.32E+00	5.61E-14	5.94E-13
ENSG00000205076	LGALS7	7.08E+00	6.17E-14	6.51E-13
ENSG00000172830	SSH3	1.84E+00	6.19E-14	6.52E-13
ENSG00000132470	ITGB4	3.55E+00	6.21E-14	6.55E-13
ENSG00000095539	SEMA4G	2.32E+00	6.45E-14	6.79E-13
ENSG00000160326	SLC2A6	1.46E+00	6.62E-14	6.95E-13
ENSG00000107187	LHX3	4.99E+00	7.17E-14	7.51E-13
ENSG00000121769	FABP3	6.00E+00	8.00E-14	8.36E-13
ENSG00000162104	ADCY9	1.73E+00	8.51E-14	8.87E-13
ENSG00000223802	CERS1	1.49E+00	9.07E-14	9.45E-13
ENSG00000103326	CAPN15	1.14E+00	9.41E-14	9.78E-13

ENSG00000113555	PCDH12	6.04E+00	9.41E-14	9.78E-13
ENSG00000183018	SPNS2	5.36E+00	9.64E-14	1.00E-12
ENSG00000141577	CEP131	1.48E+00	9.70E-14	1.01E-12
ENSG00000130054	FAM155B	4.22E+00	9.95E-14	1.03E-12
ENSG00000163827	LRRC2	4.48E+00	1.06E-13	1.10E-12
ENSG00000114315	HES1	1.04E+00	1.07E-13	1.11E-12
ENSG00000110422	HIPK3	1.31E+00	1.08E-13	1.12E-12
ENSG00000092051	JPH4	4.31E+00	1.11E-13	1.14E-12
ENSG00000154930	ACSS1	2.51E+00	1.36E-13	1.39E-12
ENSG00000107404	DVL1	1.28E+00	1.42E-13	1.46E-12
ENSG00000181467	RAP2B	1.52E+00	1.42E-13	1.46E-12
ENSG00000136717	BIN1	1.27E+00	1.46E-13	1.50E-12
ENSG00000100796	PPP4R3A	1.29E+00	1.47E-13	1.50E-12
ENSG00000197119	SLC25A29	1.54E+00	1.49E-13	1.53E-12
ENSG00000186174	BCL9L	1.56E+00	1.52E-13	1.56E-12
ENSG00000171540	OTP	6.62E+00	1.55E-13	1.58E-12
ENSG00000134363	FST	2.48E+00	1.60E-13	1.63E-12
ENSG00000181649	PHLDA2	1.55E+00	1.65E-13	1.69E-12
ENSG00000145990	GFOD1	1.95E+00	1.74E-13	1.77E-12
ENSG00000254827	SLC22A18AS	6.67E+00	1.74E-13	1.77E-12
ENSG00000144711	IQSEC1	1.46E+00	1.82E-13	1.85E-12
ENSG00000103264	FBXO31	1.32E+00	1.82E-13	1.85E-12
ENSG00000130222	GADD45G	4.35E+00	1.83E-13	1.85E-12
ENSG00000167797	CDK2AP2	1.42E+00	1.83E-13	1.86E-12
ENSG00000130193	THEM6	1.86E+00	1.95E-13	1.97E-12
ENSG00000169217	CD2BP2	1.09E+00	2.00E-13	2.02E-12
ENSG00000074964	ARHGEF10L	2.00E+00	2.02E-13	2.04E-12
ENSG00000229314	ORM1	6.18E+00	2.09E-13	2.11E-12
ENSG00000106976	DNM1	2.05E+00	2.37E-13	2.38E-12
ENSG00000099377	HSD3B7	3.36E+00	2.48E-13	2.49E-12
ENSG00000133818	RRAS2	1.10E+00	2.50E-13	2.51E-12
ENSG00000160862	AZGP1	6.33E+00	2.58E-13	2.58E-12
ENSG00000102897	LYRM1	1.45E+00	2.61E-13	2.61E-12
ENSG00000054179	ENTPD2	4.17E+00	2.67E-13	2.67E-12
ENSG00000103042	SLC38A7	1.09E+00	2.70E-13	2.69E-12
ENSG00000109220	CHIC2	2.09E+00	2.77E-13	2.76E-12
ENSG00000186481	ANKRD20A5P	2.64E+00	2.85E-13	2.84E-12
ENSG00000106018	VIPR2	5.81E+00	2.96E-13	2.94E-12
ENSG00000163694	RBM47	1.76E+00	3.01E-13	3.00E-12
ENSG00000100276	RASL10A	5.36E+00	3.11E-13	3.09E-12

ENSG00000175264	CHST1	2.40E+00	3.34E-13	3.32E-12
ENSG00000260912	AL158206.1	2.66E+00	3.35E-13	3.33E-12
ENSG00000013563	DNASE1L1	2.43E+00	3.50E-13	3.47E-12
ENSG00000157601	MX1	4.15E+00	3.51E-13	3.47E-12
ENSG00000251322	SHANK3	2.12E+00	3.51E-13	3.48E-12
ENSG00000276023	DUSP14	1.30E+00	3.58E-13	3.54E-12
ENSG00000137449	CPEB2	2.45E+00	3.66E-13	3.61E-12
ENSG00000187730	GABRD	2.82E+00	3.75E-13	3.71E-12
ENSG00000082397	EPB41L3	4.19E+00	3.78E-13	3.73E-12
ENSG00000088367	EPB41L1	1.49E+00	3.79E-13	3.74E-12
ENSG00000005007	UPF1	1.27E+00	3.86E-13	3.80E-12
ENSG00000064687	ABCA7	2.59E+00	4.39E-13	4.32E-12
ENSG00000164916	FOXK1	1.48E+00	4.45E-13	4.37E-12
ENSG00000154133	ROBO4	3.80E+00	4.52E-13	4.45E-12
ENSG00000164050	PLXNB1	1.71E+00	4.57E-13	4.49E-12
ENSG00000081059	TCF7	1.30E+00	4.64E-13	4.56E-12
ENSG00000102760	RGCC	6.34E+00	4.70E-13	4.61E-12
ENSG00000105643	ARRDC2	1.30E+00	4.72E-13	4.62E-12
ENSG00000116786	PLEKHM2	1.16E+00	4.72E-13	4.62E-12
ENSG00000100292	HMOX1	2.31E+00	4.85E-13	4.75E-12
ENSG00000204604	ZNF468	2.13E+00	4.98E-13	4.86E-12
ENSG00000223573	TINCR	3.88E+00	5.20E-13	5.08E-12
ENSG00000099625	CBARP	2.57E+00	5.36E-13	5.22E-12
ENSG00000138193	PLCE1	1.91E+00	5.79E-13	5.63E-12
ENSG00000124159	MATN4	4.38E+00	5.92E-13	5.76E-12
ENSG00000108262	GIT1	1.17E+00	6.04E-13	5.86E-12
ENSG00000167723	TRPV3	6.03E+00	6.07E-13	5.89E-12
ENSG00000143367	TUFT1	1.51E+00	6.11E-13	5.93E-12
ENSG00000164051	CCDC51	1.43E+00	6.49E-13	6.30E-12
ENSG00000167676	PLIN4	3.76E+00	6.77E-13	6.56E-12
ENSG00000099860	GADD45B	1.53E+00	7.17E-13	6.93E-12
ENSG00000089159	PXN	1.17E+00	7.18E-13	6.93E-12
ENSG00000170961	HAS2	2.25E+00	7.20E-13	6.96E-12
ENSG00000186115	CYP4F2	5.33E+00	7.68E-13	7.42E-12
ENSG00000126368	NR1D1	2.81E+00	7.77E-13	7.49E-12
ENSG00000100985	MMP9	2.28E+00	7.79E-13	7.50E-12
ENSG00000128159	TUBGCP6	2.26E+00	7.94E-13	7.64E-12
ENSG00000125850	OVOL2	5.96E+00	8.02E-13	7.70E-12
ENSG00000136943	CTSV	1.16E+00	8.45E-13	8.10E-12
ENSG00000115685	PPP1R7	1.09E+00	8.58E-13	8.21E-12

ENSG00000160932	LY6E	1.73E+00	8.57E-13	8.21E-12
ENSG00000039068	CDH1	4.72E+00	8.85E-13	8.47E-12
ENSG00000274602	PI4KAP1	2.27E+00	8.98E-13	8.59E-12
ENSG00000171813	PWWP2B	1.86E+00	9.26E-13	8.84E-12
ENSG00000066027	PPP2R5A	1.44E+00	9.36E-13	8.93E-12
ENSG00000226490	AC138647.1	6.11E+00	9.41E-13	8.97E-12
ENSG00000142675	CNKSR1	5.68E+00	9.66E-13	9.20E-12
ENSG00000189120	SP6	2.29E+00	9.87E-13	9.40E-12
ENSG00000118454	ANKRD13C	1.10E+00	1.02E-12	9.68E-12
ENSG00000082996	RNF13	1.37E+00	1.09E-12	1.03E-11
ENSG00000140279	DUOX2	6.42E+00	1.14E-12	1.08E-11
ENSG00000080031	PTPRH	3.31E+00	1.23E-12	1.16E-11
ENSG00000142173	COL6A2	1.01E+00	1.24E-12	1.17E-11
ENSG00000089327	FXVD5	1.04E+00	1.26E-12	1.19E-11
ENSG00000242265	PEG10	1.76E+00	1.29E-12	1.22E-11
ENSG00000141753	IGFBP4	1.19E+00	1.38E-12	1.29E-11
ENSG00000197019	SERTAD1	1.60E+00	1.47E-12	1.37E-11
ENSG00000130244	FAM98C	1.65E+00	1.50E-12	1.40E-11
ENSG00000161082	CELF5	3.50E+00	1.51E-12	1.41E-11
ENSG00000168546	GFRA2	5.92E+00	1.51E-12	1.41E-11
ENSG00000151117	TMEM86A	3.32E+00	1.52E-12	1.42E-11
ENSG00000260916	CCPG1	1.53E+00	1.55E-12	1.45E-11
ENSG00000136754	ABI1	1.41E+00	1.59E-12	1.48E-11
ENSG00000215712	TMEM242	1.18E+00	1.62E-12	1.51E-11
ENSG00000112837	TBX18	1.44E+00	1.75E-12	1.62E-11
ENSG00000244242	IFITM10	5.92E+00	1.76E-12	1.64E-11
ENSG00000143842	SOX13	1.75E+00	1.80E-12	1.67E-11
ENSG00000155066	PROM2	5.50E+00	1.90E-12	1.75E-11
ENSG00000214193	SH3D21	2.22E+00	1.96E-12	1.81E-11
ENSG00000185291	IL3RA	5.79E+00	2.07E-12	1.91E-11
ENSG00000182240	BACE2	1.01E+00	2.09E-12	1.92E-11
ENSG00000275329	AL138781.1	4.66E+00	2.09E-12	1.92E-11
ENSG00000167785	ZNF558	1.95E+00	2.15E-12	1.98E-11
ENSG00000249673	NOP14-AS1	2.69E+00	2.22E-12	2.04E-11
ENSG00000197417	SHPK	1.56E+00	2.23E-12	2.05E-11
ENSG00000161091	MFSD12	1.35E+00	2.26E-12	2.07E-11
ENSG00000148158	SNX30	1.69E+00	2.26E-12	2.07E-11
ENSG00000036448	MYOM2	2.09E+00	2.28E-12	2.09E-11
ENSG00000124466	LYPD3	3.28E+00	2.41E-12	2.21E-11
ENSG00000144550	CPNE9	5.85E+00	2.50E-12	2.29E-11

ENSG00000180644	PRF1	5.99E+00	2.54E-12	2.32E-11
ENSG00000251095	AC093866.1	4.82E+00	2.56E-12	2.34E-11
ENSG00000166484	MAPK7	1.70E+00	2.57E-12	2.34E-11
ENSG00000138119	MYOF	1.10E+00	2.60E-12	2.37E-11
ENSG00000142867	BCL10	1.43E+00	2.68E-12	2.44E-11
ENSG00000164619	BMPER	4.34E+00	2.80E-12	2.54E-11
ENSG00000159363	ATP13A2	1.65E+00	2.81E-12	2.55E-11
ENSG00000119522	DENND1A	1.26E+00	3.12E-12	2.83E-11
ENSG00000124302	CHST8	4.90E+00	3.17E-12	2.87E-11
ENSG00000142765	SYTL1	3.16E+00	3.20E-12	2.89E-11
ENSG00000095637	SORBS1	2.50E+00	3.28E-12	2.96E-11
ENSG00000198156	NPIPB6	5.42E+00	3.31E-12	2.98E-11
ENSG00000197122	SRC	1.12E+00	3.41E-12	3.07E-11
ENSG00000110046	ATG2A	1.79E+00	3.53E-12	3.17E-11
ENSG00000159069	FBXW5	1.03E+00	3.56E-12	3.19E-11
ENSG00000166863	TAC3	4.93E+00	3.56E-12	3.20E-11
ENSG00000227500	SCAMP4	1.12E+00	3.57E-12	3.20E-11
ENSG00000188897	AC099489.1	5.20E+00	3.68E-12	3.30E-11
ENSG00000137177	KIF13A	1.30E+00	3.69E-12	3.30E-11
ENSG00000133131	MORC4	1.44E+00	3.79E-12	3.39E-11
ENSG00000137831	UACA	1.08E+00	3.80E-12	3.39E-11
ENSG00000071894	CPSF1	1.06E+00	3.83E-12	3.42E-11
ENSG00000105464	GRIN2D	6.03E+00	4.07E-12	3.63E-11
ENSG00000211445	GPX3	1.05E+00	4.21E-12	3.75E-11
ENSG00000118292	C1orf54	4.30E+00	4.28E-12	3.81E-11
ENSG00000001461	NIPAL3	1.74E+00	4.65E-12	4.13E-11
ENSG00000120868	APAF1	1.79E+00	4.67E-12	4.14E-11
ENSG00000116299	KIAA1324	3.25E+00	4.68E-12	4.16E-11
ENSG00000063241	ISOC2	1.96E+00	4.94E-12	4.38E-11
ENSG00000117983	MUC5B	5.72E+00	4.98E-12	4.41E-11
ENSG00000168907	PLA2G4F	6.03E+00	5.04E-12	4.47E-11
ENSG00000198729	PPP1R14C	3.02E+00	5.11E-12	4.52E-11
ENSG00000132376	INPP5K	1.59E+00	5.19E-12	4.59E-11
ENSG00000109927	TECTA	6.73E+00	5.40E-12	4.76E-11
ENSG00000270765	GAS2L2	6.53E+00	5.40E-12	4.76E-11
ENSG00000173714	WFIKKN2	6.09E+00	5.50E-12	4.84E-11
ENSG00000156535	CD109	1.15E+00	5.59E-12	4.91E-11
ENSG00000164690	SHH	6.38E+00	5.60E-12	4.93E-11
ENSG00000269958	AL049840.5	1.60E+00	5.97E-12	5.23E-11
ENSG00000224294	PINCR	4.16E+00	5.97E-12	5.24E-11

ENSG00000162723	SLAMF9	5.97E+00	5.98E-12	5.24E-11
ENSG00000082438	COBLL1	2.84E+00	6.12E-12	5.35E-11
ENSG00000074527	NTN4	3.08E+00	6.24E-12	5.46E-11
ENSG00000140836	ZFHX3	1.22E+00	6.33E-12	5.53E-11
ENSG00000127129	EDN2	5.13E+00	6.37E-12	5.56E-11
ENSG00000073417	PDE8A	1.05E+00	6.41E-12	5.60E-11
ENSG00000126107	HECTD3	1.78E+00	6.43E-12	5.61E-11
ENSG00000162522	KIAA1522	1.29E+00	6.43E-12	5.61E-11
ENSG00000141452	RMC1	1.20E+00	6.80E-12	5.92E-11
ENSG00000092148	HECTD1	1.28E+00	7.18E-12	6.25E-11
ENSG00000103496	STX4	1.25E+00	7.18E-12	6.25E-11
ENSG00000166086	JAM3	1.00E+00	7.30E-12	6.35E-11
ENSG00000183114	FAM43B	2.27E+00	7.32E-12	6.36E-11
ENSG00000105251	SHD	5.61E+00	7.47E-12	6.48E-11
ENSG00000179119	SPTY2D1	1.16E+00	7.63E-12	6.61E-11
ENSG00000137500	CCDC90B	1.04E+00	7.66E-12	6.64E-11
ENSG00000171970	ZNF57	2.67E+00	7.73E-12	6.69E-11
ENSG00000131149	GSE1	1.22E+00	7.74E-12	6.70E-11
ENSG00000250920	AC105460.1	6.00E+00	7.91E-12	6.85E-11
ENSG00000127452	FBXL12	1.03E+00	7.98E-12	6.90E-11
ENSG00000167434	CA4	5.37E+00	8.02E-12	6.93E-11
ENSG00000183734	ASCL2	6.01E+00	8.10E-12	6.99E-11
ENSG00000164855	TMEM184A	1.78E+00	8.26E-12	7.13E-11
ENSG00000103528	SYT17	5.17E+00	8.37E-12	7.21E-11
ENSG00000183087	GAS6	1.15E+00	8.81E-12	7.58E-11
ENSG00000048405	ZNF800	1.26E+00	8.84E-12	7.60E-11
ENSG00000185479	KRT6B	5.38E+00	9.03E-12	7.76E-11
ENSG00000103249	CLCN7	1.10E+00	9.20E-12	7.90E-11
ENSG00000006432	MAP3K9	1.63E+00	9.33E-12	8.00E-11
ENSG00000076864	RAP1GAP	2.52E+00	1.04E-11	8.90E-11
ENSG00000092330	TINF2	1.42E+00	1.04E-11	8.92E-11
ENSG00000197415	VEPH1	5.09E+00	1.07E-11	9.10E-11
ENSG00000099821	POLRMT	1.01E+00	1.16E-11	9.92E-11
ENSG00000221986	MYBPHL	5.77E+00	1.19E-11	1.01E-10
ENSG00000197774	EME2	2.23E+00	1.26E-11	1.07E-10
ENSG00000161542	PRPSAP1	1.08E+00	1.28E-11	1.09E-10
ENSG00000243279	PRAF2	1.31E+00	1.29E-11	1.09E-10
ENSG00000180758	GPR157	1.69E+00	1.30E-11	1.10E-10
ENSG00000105053	VRK3	1.16E+00	1.32E-11	1.12E-10
ENSG00000185485	SDHAP1	1.86E+00	1.35E-11	1.14E-10

ENSG00000163273	NPPC	4.23E+00	1.40E-11	1.19E-10
ENSG00000182866	LCK	4.54E+00	1.48E-11	1.25E-10
ENSG00000152503	TRIM36	2.82E+00	1.48E-11	1.25E-10
ENSG00000156983	BRPF1	1.29E+00	1.50E-11	1.26E-10
ENSG00000204388	HSPA1B	1.16E+00	1.57E-11	1.32E-10
ENSG00000185033	SEMA4B	1.59E+00	1.61E-11	1.35E-10
ENSG00000155366	RHOC	1.84E+00	1.64E-11	1.38E-10
ENSG00000183578	TNFAIP8L3	4.79E+00	1.65E-11	1.39E-10
ENSG00000183092	BEGAIN	4.62E+00	1.67E-11	1.40E-10
ENSG00000100604	CHGA	5.96E+00	1.74E-11	1.46E-10
ENSG00000135241	PNPLA8	1.21E+00	1.74E-11	1.46E-10
ENSG00000181381	DDX60L	2.18E+00	1.77E-11	1.48E-10
ENSG00000162494	LRRC38	5.22E+00	1.90E-11	1.59E-10
ENSG00000108823	SGCA	5.15E+00	1.97E-11	1.64E-10
ENSG00000049089	COL9A2	3.36E+00	1.98E-11	1.65E-10
ENSG00000219607	PPP1R3G	3.21E+00	2.01E-11	1.67E-10
ENSG00000167880	EVPL	5.88E+00	2.07E-11	1.72E-10
ENSG00000165695	AK8	4.50E+00	2.07E-11	1.72E-10
ENSG00000198408	OGA	1.27E+00	2.13E-11	1.77E-10
ENSG00000143674	MAP3K21	2.71E+00	2.17E-11	1.80E-10
ENSG00000205277	MUC12	3.88E+00	2.18E-11	1.80E-10
ENSG00000197562	RAB40C	1.51E+00	2.26E-11	1.87E-10
ENSG00000160439	RDH13	1.88E+00	2.39E-11	1.97E-10
ENSG00000178928	TPRX1	5.94E+00	2.40E-11	1.98E-10
ENSG00000132274	TRIM22	3.11E+00	2.41E-11	1.99E-10
ENSG00000198786	MT-ND5	1.32E+00	2.42E-11	2.00E-10
ENSG00000226812	AL117382.1	5.52E+00	2.53E-11	2.08E-10
ENSG00000234965	SHISA8	2.39E+00	2.54E-11	2.09E-10
ENSG00000104381	GDAP1	1.52E+00	2.58E-11	2.13E-10
ENSG00000163071	SPATA18	5.87E+00	2.59E-11	2.13E-10
ENSG00000187094	CCK	5.92E+00	2.64E-11	2.17E-10
ENSG00000130762	ARHGEF16	2.23E+00	2.68E-11	2.20E-10
ENSG00000136867	SLC31A2	1.65E+00	2.71E-11	2.23E-10
ENSG00000132879	FBXO44	1.68E+00	2.73E-11	2.24E-10
ENSG00000162444	RBP7	2.70E+00	2.76E-11	2.27E-10
ENSG00000107929	LARP4B	1.25E+00	2.84E-11	2.33E-10
ENSG00000261804	AC007342.4	5.88E+00	2.90E-11	2.38E-10
ENSG00000134574	DDB2	1.39E+00	2.91E-11	2.38E-10
ENSG00000125144	MT1G	5.89E+00	2.91E-11	2.38E-10
ENSG00000118898	PPL	4.44E+00	2.98E-11	2.44E-10



ENSG00000175984	DENND2C	3.21E+00	3.00E-11	2.45E-10
ENSG00000141458	NPC1	1.13E+00	3.04E-11	2.48E-10
ENSG00000250385	AC106772.2	5.43E+00	3.05E-11	2.48E-10
ENSG00000125779	PANK2	1.08E+00	3.18E-11	2.59E-10
ENSG00000140511	HAPLN3	1.52E+00	3.18E-11	2.59E-10
ENSG00000171446	KRT27	5.88E+00	3.26E-11	2.65E-10
ENSG00000101191	DIDO1	1.08E+00	3.28E-11	2.66E-10
ENSG00000130779	CLIP1	1.17E+00	3.33E-11	2.71E-10
ENSG00000188505	NCCRP1	5.71E+00	3.40E-11	2.76E-10
ENSG00000169896	ITGAM	3.92E+00	3.44E-11	2.79E-10
ENSG00000125772	GPCPD1	1.06E+00	3.56E-11	2.89E-10
ENSG00000198873	GRK5	1.48E+00	3.69E-11	2.99E-10
ENSG00000135842	NIBAN1	3.35E+00	3.70E-11	2.99E-10
ENSG00000286389	AL731702.1	5.50E+00	3.71E-11	3.00E-10
ENSG00000156232	WHAMM	1.17E+00	3.91E-11	3.16E-10
ENSG00000275880	AL139385.1	5.11E+00	4.04E-11	3.26E-10
ENSG00000108511	HOXB6	1.49E+00	4.07E-11	3.28E-10
ENSG00000196502	SULT1A1	2.88E+00	4.45E-11	3.58E-10
ENSG00000172292	CERS6	1.22E+00	4.47E-11	3.59E-10
ENSG00000149328	GLB1L2	2.49E+00	4.55E-11	3.65E-10
ENSG00000075785	RAB7A	1.00E+00	4.64E-11	3.72E-10
ENSG00000132740	IGHMBP2	1.23E+00	4.66E-11	3.73E-10
ENSG00000197177	ADGRA1	5.70E+00	4.70E-11	3.77E-10
ENSG00000101336	HCK	5.15E+00	4.73E-11	3.79E-10
ENSG00000197620	CXorf40A	2.82E+00	4.78E-11	3.82E-10
ENSG00000108256	NUFIP2	1.11E+00	4.89E-11	3.91E-10
ENSG00000065000	AP3D1	1.16E+00	5.16E-11	4.12E-10
ENSG00000183943	PRKX	1.41E+00	5.26E-11	4.19E-10
ENSG00000088808	PPP1R13B	2.00E+00	5.38E-11	4.28E-10
ENSG00000173083	HPSE	2.72E+00	5.55E-11	4.41E-10
ENSG00000135956	TMEM127	1.06E+00	5.69E-11	4.52E-10
ENSG00000115884	SDC1	1.64E+00	5.95E-11	4.72E-10
ENSG00000109586	GALNT7	1.20E+00	6.19E-11	4.89E-10
ENSG00000198780	FAM169A	2.20E+00	6.20E-11	4.90E-10
ENSG00000100290	BIK	3.90E+00	6.28E-11	4.96E-10
ENSG00000165474	GJB2	4.27E+00	6.34E-11	5.00E-10
ENSG00000092931	MFSD11	1.12E+00	6.37E-11	5.02E-10
ENSG00000060558	GNA15	5.04E+00	6.39E-11	5.04E-10
ENSG00000169877	AHSP	6.06E+00	6.47E-11	5.10E-10
ENSG00000160460	SPTBN4	5.19E+00	6.48E-11	5.10E-10

ENSG00000176994	SMCR8	1.46E+00	6.54E-11	5.14E-10
ENSG00000068650	ATP11A	1.45E+00	6.68E-11	5.25E-10
ENSG00000101276	SLC52A3	5.77E+00	6.70E-11	5.26E-10
ENSG00000144583	MARCH4	3.33E+00	6.77E-11	5.32E-10
ENSG00000105656	ELL	1.61E+00	6.89E-11	5.40E-10
ENSG00000143867	OSR1	3.29E+00	7.55E-11	5.90E-10
ENSG00000188770	OPTC	5.64E+00	7.70E-11	6.01E-10
ENSG00000090020	SLC9A1	1.11E+00	8.01E-11	6.24E-10
ENSG00000196734	LCE1B	4.84E+00	8.06E-11	6.27E-10
ENSG00000108523	RNF167	1.29E+00	8.12E-11	6.32E-10
ENSG00000140678	ITGAX	4.00E+00	8.29E-11	6.44E-10
ENSG00000023287	RB1CC1	1.03E+00	8.43E-11	6.55E-10
ENSG00000166289	PLEKHF1	2.73E+00	8.43E-11	6.55E-10
ENSG00000129450	SIGLEC9	5.49E+00	8.47E-11	6.58E-10
ENSG00000159658	EFCAB14	1.07E+00	8.65E-11	6.71E-10
ENSG00000157216	SSBP3	1.07E+00	9.04E-11	7.01E-10
ENSG00000160972	PPP1R16A	1.20E+00	9.18E-11	7.11E-10
ENSG00000130338	TULP4	1.06E+00	9.35E-11	7.24E-10
ENSG00000125966	MMP24	2.91E+00	9.81E-11	7.59E-10
ENSG00000154832	CXXC1	1.34E+00	1.00E-10	7.73E-10
ENSG00000128590	DNAJB9	1.61E+00	1.06E-10	8.17E-10
ENSG00000143858	SYT2	5.78E+00	1.08E-10	8.30E-10
ENSG00000100241	SBF1	1.43E+00	1.09E-10	8.37E-10
ENSG00000196730	DAPK1	2.72E+00	1.09E-10	8.39E-10
ENSG00000157985	AGAP1	1.20E+00	1.12E-10	8.61E-10
ENSG00000175938	ORAI3	1.99E+00	1.13E-10	8.65E-10
ENSG00000109065	NAT9	1.23E+00	1.14E-10	8.71E-10
ENSG00000104825	NFKBIB	1.34E+00	1.16E-10	8.90E-10
ENSG00000109756	RAPGEF2	1.26E+00	1.16E-10	8.92E-10
ENSG00000165244	ZNF367	1.59E+00	1.27E-10	9.70E-10
ENSG00000136928	GABBR2	3.97E+00	1.36E-10	1.03E-09
ENSG00000226332	AL354836.1	3.03E+00	1.41E-10	1.07E-09
ENSG00000135631	RAB11FIP5	1.32E+00	1.42E-10	1.07E-09
ENSG00000204428	LY6G5C	4.36E+00	1.47E-10	1.11E-09
ENSG00000214087	ARL16	1.44E+00	1.47E-10	1.11E-09
ENSG00000135423	GLS2	2.30E+00	1.47E-10	1.12E-09
ENSG00000141744	PNMT	3.55E+00	1.48E-10	1.12E-09
ENSG00000114737	CISH	1.68E+00	1.50E-10	1.13E-09
ENSG00000125657	TNFSF9	1.89E+00	1.52E-10	1.14E-09
ENSG00000110660	SLC35F2	1.24E+00	1.53E-10	1.16E-09

ENSG00000145113	MUC4	5.79E+00	1.57E-10	1.18E-09
ENSG00000156475	PPP2R2B	5.78E+00	1.60E-10	1.21E-09
ENSG00000173702	MUC13	5.82E+00	1.61E-10	1.21E-09
ENSG00000119630	PGF	1.09E+00	1.66E-10	1.25E-09
ENSG00000128849	CGNL1	2.79E+00	1.67E-10	1.26E-09
ENSG00000139718	SETD1B	1.44E+00	1.70E-10	1.28E-09
ENSG00000196562	SULF2	1.06E+00	1.70E-10	1.28E-09
ENSG00000177303	CASKIN2	1.44E+00	1.78E-10	1.33E-09
ENSG00000090061	CCNK	1.46E+00	1.79E-10	1.34E-09
ENSG00000185522	LMNTD2	4.55E+00	1.82E-10	1.36E-09
ENSG00000143878	RHOB	1.38E+00	1.84E-10	1.37E-09
ENSG00000154040	CABYR	2.05E+00	1.84E-10	1.38E-09
ENSG00000156574	NODAL	5.48E+00	1.87E-10	1.40E-09
ENSG00000184584	TMEM173	1.66E+00	1.96E-10	1.46E-09
ENSG00000167065	DUSP18	1.62E+00	1.97E-10	1.47E-09
ENSG00000007384	RHBDF1	1.96E+00	1.97E-10	1.47E-09
ENSG00000177663	IL17RA	1.24E+00	2.00E-10	1.49E-09
ENSG00000100151	PICK1	1.52E+00	2.02E-10	1.50E-09
ENSG00000158220	ESYT3	3.20E+00	2.15E-10	1.60E-09
ENSG00000175315	CST6	5.80E+00	2.19E-10	1.63E-09
ENSG00000182175	RGMA	4.02E+00	2.32E-10	1.72E-09
ENSG00000166166	TRMT61A	1.12E+00	2.34E-10	1.73E-09
ENSG00000175048	ZDHHC14	1.23E+00	2.35E-10	1.74E-09
ENSG00000104237	RP1	4.95E+00	2.37E-10	1.75E-09
ENSG00000146826	MAP11	1.99E+00	2.39E-10	1.77E-09
ENSG00000105499	PLA2G4C	2.83E+00	2.39E-10	1.77E-09
ENSG00000177685	CRACR2B	4.88E+00	2.44E-10	1.80E-09
ENSG00000058085	LAMC2	4.26E+00	2.46E-10	1.81E-09
ENSG00000135090	TAOK3	1.02E+00	2.47E-10	1.82E-09
ENSG00000184811	TRARG1	5.50E+00	2.47E-10	1.82E-09
ENSG00000141741	MIEN1	1.38E+00	2.61E-10	1.92E-09
ENSG00000188916	INSYN2A	4.00E+00	2.63E-10	1.93E-09
ENSG00000039987	BEST2	6.15E+00	2.66E-10	1.95E-09
ENSG00000231826	LINC01819	4.92E+00	2.66E-10	1.95E-09
ENSG00000175105	ZNF654	1.71E+00	2.75E-10	2.01E-09
ENSG00000120875	DUSP4	1.50E+00	2.76E-10	2.02E-09
ENSG00000163513	TGFBR2	1.06E+00	2.79E-10	2.04E-09
ENSG00000092871	RFFL	1.45E+00	2.84E-10	2.07E-09
ENSG00000101842	VSIG1	4.83E+00	2.86E-10	2.09E-09
ENSG00000130479	MAP1S	1.05E+00	2.89E-10	2.11E-09

ENSG0000005882	PDK2	1.50E+00	2.90E-10	2.11E-09
ENSG00000197084	LCE1C	5.21E+00	2.92E-10	2.12E-09
ENSG00000124313	IQSEC2	1.87E+00	3.09E-10	2.24E-09
ENSG00000083223	TUT7	1.36E+00	3.32E-10	2.40E-09
ENSG00000138083	SIX3	5.22E+00	3.36E-10	2.43E-09
ENSG00000105855	ITGB8	1.93E+00	3.42E-10	2.47E-09
ENSG00000124171	PARD6B	1.18E+00	3.43E-10	2.48E-09
ENSG00000167562	ZNF701	1.77E+00	3.52E-10	2.55E-09
ENSG00000116977	LGALS8	1.45E+00	3.55E-10	2.56E-09
ENSG00000104413	ESRP1	3.62E+00	3.59E-10	2.59E-09
ENSG00000118495	PLAGL1	1.28E+00	3.60E-10	2.59E-09
ENSG00000204282	TNRC6C-AS1	4.92E+00	3.62E-10	2.61E-09
ENSG00000100109	TFIP11	1.12E+00	3.73E-10	2.68E-09
ENSG00000117308	GALE	1.68E+00	3.82E-10	2.74E-09
ENSG00000198125	MB	4.43E+00	4.03E-10	2.90E-09
ENSG00000100077	GRK3	1.59E+00	4.14E-10	2.97E-09
ENSG00000187024	PTRH1	1.62E+00	4.29E-10	3.07E-09
ENSG00000137478	FCHSD2	1.33E+00	4.45E-10	3.19E-09
ENSG00000147509	RGS20	1.77E+00	4.46E-10	3.19E-09
ENSG00000171223	JUNB	1.06E+00	4.54E-10	3.24E-09
ENSG00000099822	HCN2	2.05E+00	4.71E-10	3.36E-09
ENSG00000189077	TMEM120A	1.89E+00	4.83E-10	3.45E-09
ENSG00000168477	TNXB	5.83E+00	4.87E-10	3.47E-09
ENSG00000066629	EML1	4.96E+00	5.04E-10	3.59E-09
ENSG00000118160	SLC8A2	4.60E+00	5.14E-10	3.66E-09
ENSG00000197081	IGF2R	1.09E+00	5.28E-10	3.76E-09
ENSG00000138942	RNF185	1.57E+00	5.32E-10	3.78E-09
ENSG00000244734	HBB	5.81E+00	5.58E-10	3.96E-09
ENSG00000121316	PLBD1	3.43E+00	5.84E-10	4.14E-09
ENSG00000123243	ITIH5	4.94E+00	5.89E-10	4.17E-09
ENSG00000120549	KIAA1217	2.08E+00	5.92E-10	4.19E-09
ENSG00000266074	BAHCC1	1.77E+00	5.99E-10	4.24E-09
ENSG00000160703	NLRX1	1.79E+00	6.03E-10	4.26E-09
ENSG00000138674	SEC31A	1.04E+00	6.12E-10	4.32E-09
ENSG00000132517	SLC52A1	3.27E+00	6.18E-10	4.36E-09
ENSG00000124126	PREX1	1.75E+00	6.26E-10	4.41E-09
ENSG00000164081	TEX264	1.58E+00	6.37E-10	4.49E-09
ENSG00000166167	BTRC	1.48E+00	6.51E-10	4.59E-09
ENSG00000174562	KLK15	5.85E+00	6.53E-10	4.60E-09
ENSG00000173706	HEG1	1.17E+00	6.76E-10	4.76E-09

ENSG00000068078	FGFR3	1.30E+00	6.78E-10	4.77E-09
ENSG00000197558	SSPO	4.06E+00	6.90E-10	4.85E-09
ENSG00000267440	LINC02594	5.98E+00	6.93E-10	4.87E-09
ENSG00000160741	CRTC2	1.04E+00	7.43E-10	5.21E-09
ENSG00000213676	ATF6B	2.45E+00	7.64E-10	5.35E-09
ENSG00000072134	EPN2	1.58E+00	7.97E-10	5.58E-09
ENSG00000015592	STMN4	5.07E+00	8.32E-10	5.82E-09
ENSG00000134996	OSTF1	1.34E+00	8.42E-10	5.88E-09
ENSG00000086548	CEACAM6	6.03E+00	9.15E-10	6.38E-09
ENSG00000137936	BCAR3	1.77E+00	9.16E-10	6.38E-09
ENSG00000137857	DUOX1	4.24E+00	9.24E-10	6.43E-09
ENSG00000169221	TBC1D10B	1.00E+00	9.72E-10	6.75E-09
ENSG00000197329	PELI1	2.29E+00	9.73E-10	6.75E-09
ENSG00000170802	FOXN2	1.25E+00	9.79E-10	6.79E-09
ENSG00000203499	IQANK1	4.72E+00	1.01E-09	6.99E-09
ENSG00000158955	WNT9B	5.57E+00	1.01E-09	7.03E-09
ENSG00000109472	CPE	1.04E+00	1.02E-09	7.04E-09
ENSG00000215788	TNFRSF25	2.51E+00	1.04E-09	7.17E-09
ENSG00000263343	AC009088.4	1.81E+00	1.05E-09	7.27E-09
ENSG00000104081	BMF	2.31E+00	1.06E-09	7.34E-09
ENSG00000166689	PLEKHA7	5.02E+00	1.08E-09	7.49E-09
ENSG00000156675	RAB11FIP1	1.14E+00	1.12E-09	7.75E-09
ENSG00000174788	PCP2	5.16E+00	1.14E-09	7.85E-09
ENSG00000089902	RCOR1	1.31E+00	1.17E-09	8.08E-09
ENSG00000181378	CFAP65	5.40E+00	1.21E-09	8.30E-09
ENSG00000164331	ANKRA2	1.32E+00	1.21E-09	8.32E-09
ENSG00000040608	RTN4R	1.78E+00	1.25E-09	8.57E-09
ENSG00000256982	AC135782.1	3.28E+00	1.25E-09	8.58E-09
ENSG00000150403	TMCO3	1.11E+00	1.27E-09	8.68E-09
ENSG00000143061	IGSF3	1.89E+00	1.29E-09	8.85E-09
ENSG00000116667	C1orf21	2.40E+00	1.30E-09	8.87E-09
ENSG00000047346	FAM214A	2.01E+00	1.31E-09	8.94E-09
ENSG00000131634	TMEM204	5.26E+00	1.33E-09	9.10E-09
ENSG00000150782	IL18	4.05E+00	1.35E-09	9.23E-09
ENSG00000112659	CUL9	1.83E+00	1.36E-09	9.27E-09
ENSG00000159082	SYNJ1	1.31E+00	1.40E-09	9.55E-09
ENSG00000256087	ZNF432	1.59E+00	1.41E-09	9.58E-09
ENSG00000170075	GPR37L1	5.28E+00	1.42E-09	9.63E-09
ENSG00000277363	SRCIN1	2.52E+00	1.42E-09	9.63E-09
ENSG00000105085	MED26	1.04E+00	1.45E-09	9.87E-09

ENSG00000136378	ADAMTS7	2.16E+00	1.46E-09	9.92E-09
ENSG00000234949	AC104667.2	5.80E+00	1.49E-09	1.01E-08
ENSG00000074211	PPP2R2C	3.85E+00	1.49E-09	1.01E-08
ENSG00000197530	MIB2	1.45E+00	1.50E-09	1.01E-08
ENSG00000184985	SORCS2	3.38E+00	1.52E-09	1.03E-08
ENSG00000182022	CHST15	2.31E+00	1.57E-09	1.06E-08
ENSG00000175920	DOK7	5.32E+00	1.59E-09	1.08E-08
ENSG00000135116	HRK	4.40E+00	1.61E-09	1.08E-08
ENSG00000107147	KCNT1	4.81E+00	1.66E-09	1.12E-08
ENSG00000149480	MTA2	1.11E+00	1.77E-09	1.19E-08
ENSG00000188211	NCR3LG1	2.73E+00	1.77E-09	1.19E-08
ENSG00000166170	BAG5	1.48E+00	1.81E-09	1.21E-08
ENSG00000081913	PHLPP1	1.40E+00	1.81E-09	1.22E-08
ENSG00000183196	CHST6	1.85E+00	1.82E-09	1.22E-08
ENSG00000070882	OSBPL3	2.04E+00	1.85E-09	1.24E-08
ENSG00000143669	LYST	1.47E+00	1.88E-09	1.26E-08
ENSG00000113504	SLC12A7	1.67E+00	1.91E-09	1.28E-08
ENSG00000126062	TMEM115	1.08E+00	1.91E-09	1.28E-08
ENSG00000014164	ZC3H3	1.46E+00	1.92E-09	1.28E-08
ENSG00000122490	SLC66A2	1.13E+00	2.01E-09	1.34E-08
ENSG00000117114	ADGRL2	2.55E+00	2.07E-09	1.38E-08
ENSG00000178038	ALS2CL	2.89E+00	2.07E-09	1.38E-08
ENSG00000119986	AVPI1	1.88E+00	2.10E-09	1.40E-08
ENSG00000164181	ELOVL7	2.17E+00	2.11E-09	1.40E-08
ENSG00000244300	GATA2-AS1	2.02E+00	2.15E-09	1.43E-08
ENSG00000221866	PLXNA4	6.05E+00	2.16E-09	1.44E-08
ENSG00000167105	TMEM92	4.84E+00	2.28E-09	1.51E-08
ENSG00000171056	SOX7	2.49E+00	2.33E-09	1.55E-08
ENSG00000131969	ABHD12B	5.47E+00	2.39E-09	1.59E-08
ENSG00000213889	PPM1N	2.03E+00	2.46E-09	1.63E-08
ENSG00000125266	EFNB2	1.15E+00	2.54E-09	1.68E-08
ENSG00000164543	STK17A	1.05E+00	2.58E-09	1.70E-08
ENSG00000162551	ALPL	5.24E+00	2.59E-09	1.71E-08
ENSG00000159640	ACE	5.21E+00	2.63E-09	1.74E-08
ENSG00000163623	NKX6-1	5.21E+00	2.64E-09	1.74E-08
ENSG00000115266	APC2	2.90E+00	2.66E-09	1.75E-08
ENSG00000165757	JCAD	1.92E+00	2.67E-09	1.76E-08
ENSG00000166147	FBN1	1.14E+00	2.76E-09	1.82E-08
ENSG00000104361	NIPAL2	2.67E+00	2.82E-09	1.85E-08
ENSG00000101280	ANGPT4	5.21E+00	2.88E-09	1.90E-08

ENSG00000137265	IRF4	5.45E+00	2.89E-09	1.90E-08
ENSG00000131711	MAP1B	1.07E+00	2.94E-09	1.93E-08
ENSG00000134070	IRAK2	1.35E+00	2.98E-09	1.96E-08
ENSG00000144230	GPR17	5.28E+00	2.98E-09	1.96E-08
ENSG00000160072	ATAD3B	1.21E+00	2.99E-09	1.96E-08
ENSG00000204060	FOXO6	2.87E+00	3.04E-09	1.99E-08
ENSG00000220201	ZGLP1	1.88E+00	3.22E-09	2.11E-08
ENSG00000101665	SMAD7	1.43E+00	3.32E-09	2.16E-08
ENSG00000185559	DLK1	5.92E+00	3.55E-09	2.32E-08
ENSG00000149091	DGKZ	1.02E+00	3.56E-09	2.32E-08
ENSG00000105088	OLFM2	3.02E+00	3.67E-09	2.39E-08
ENSG00000173156	RHOD	3.07E+00	3.78E-09	2.46E-08
ENSG00000147459	DOCK5	1.18E+00	3.81E-09	2.48E-08
ENSG00000101181	MTG2	1.07E+00	3.85E-09	2.50E-08
ENSG00000124212	PTGIS	3.59E+00	3.88E-09	2.52E-08
ENSG00000105467	SYNGR4	6.24E+00	3.94E-09	2.55E-08
ENSG00000130598	TNNI2	5.85E+00	3.95E-09	2.56E-08
ENSG00000121905	HPCA	4.06E+00	4.12E-09	2.67E-08
ENSG00000224940	PRRT4	3.27E+00	4.13E-09	2.68E-08
ENSG00000260428	SCX	3.35E+00	4.14E-09	2.68E-08
ENSG00000119888	EPCAM	4.31E+00	4.14E-09	2.68E-08
ENSG00000167861	HID1	3.86E+00	4.14E-09	2.68E-08
ENSG00000166897	ELFN2	2.52E+00	4.17E-09	2.69E-08
ENSG00000204673	AKT1S1	1.24E+00	4.17E-09	2.69E-08
ENSG00000111961	SASH1	1.49E+00	4.19E-09	2.70E-08
ENSG00000105369	CD79A	4.14E+00	4.22E-09	2.72E-08
ENSG00000180979	LRRC57	1.33E+00	4.35E-09	2.80E-08
ENSG00000204516	MICB	1.29E+00	4.36E-09	2.81E-08
ENSG00000128917	DLL4	3.26E+00	4.38E-09	2.82E-08
ENSG00000163220	S100A9	4.72E+00	4.59E-09	2.95E-08
ENSG00000161381	PLXDC1	3.84E+00	4.76E-09	3.05E-08
ENSG00000165097	KDM1B	1.88E+00	4.76E-09	3.06E-08
ENSG00000205978	NYNRIN	2.96E+00	4.78E-09	3.06E-08
ENSG00000183421	RIPK4	1.99E+00	4.87E-09	3.12E-08
ENSG00000087303	NID2	1.28E+00	4.95E-09	3.17E-08
ENSG00000183049	CAMK1D	1.62E+00	5.35E-09	3.42E-08
ENSG00000232956	SNHG15	1.32E+00	5.37E-09	3.43E-08
ENSG00000136044	APPL2	1.19E+00	5.46E-09	3.49E-08
ENSG00000100439	ABHD4	1.15E+00	5.52E-09	3.52E-08
ENSG00000250337	PURPL	3.16E+00	5.64E-09	3.60E-08

ENSG00000123159	GIPC1	1.25E+00	5.71E-09	3.64E-08
ENSG00000198538	ZNF28	1.73E+00	5.73E-09	3.65E-08
ENSG00000147799	ARHGAP39	1.58E+00	5.75E-09	3.66E-08
ENSG00000116035	VAX2	3.82E+00	6.20E-09	3.94E-08
ENSG00000107175	CREB3	1.15E+00	6.21E-09	3.95E-08
ENSG00000116514	RNF19B	1.14E+00	6.29E-09	3.99E-08
ENSG00000085831	TTC39A	4.16E+00	6.33E-09	4.02E-08
ENSG00000159023	EPB41	1.28E+00	6.40E-09	4.06E-08
ENSG00000124920	MYRF	1.87E+00	6.40E-09	4.06E-08
ENSG00000178078	STAP2	2.26E+00	6.48E-09	4.10E-08
ENSG00000062524	LTK	4.28E+00	6.53E-09	4.13E-08
ENSG00000214655	ZSWIM8	1.10E+00	6.63E-09	4.19E-08
ENSG00000007516	BAIAP3	2.17E+00	6.73E-09	4.25E-08
ENSG00000006283	CACNA1G	2.73E+00	6.85E-09	4.33E-08
ENSG00000164168	TMEM184C	1.12E+00	7.23E-09	4.56E-08
ENSG00000187244	BCAM	1.46E+00	7.39E-09	4.66E-08
ENSG00000104808	DHDH	2.97E+00	7.47E-09	4.70E-08
ENSG00000204577	LILRB3	5.14E+00	7.70E-09	4.85E-08
ENSG00000159224	GIP	3.43E+00	8.03E-09	5.05E-08
ENSG00000091536	MYO15A	5.17E+00	8.04E-09	5.05E-08
ENSG00000148798	INA	2.02E+00	8.26E-09	5.18E-08
ENSG00000174939	ASPHD1	1.56E+00	8.34E-09	5.23E-08
ENSG00000121350	PYROXD1	1.39E+00	8.43E-09	5.28E-08
ENSG00000267458	AC092069.1	1.04E+01	8.68E-09	5.43E-08
ENSG00000132906	CASP9	2.02E+00	8.85E-09	5.53E-08
ENSG00000099785	MARCH2	2.06E+00	8.89E-09	5.56E-08
ENSG00000100285	NEFH	6.09E+00	9.39E-09	5.86E-08
ENSG00000111860	CEP85L	1.04E+00	9.81E-09	6.11E-08
ENSG00000072832	CRMP1	1.96E+00	9.89E-09	6.15E-08
ENSG00000126583	PRKCG	4.77E+00	9.90E-09	6.16E-08
ENSG00000088726	TMEM40	3.01E+00	1.00E-08	6.21E-08
ENSG00000125845	BMP2	5.27E+00	1.01E-08	6.30E-08
ENSG00000170577	SIX2	1.45E+00	1.03E-08	6.38E-08
ENSG00000197506	SLC28A3	5.37E+00	1.04E-08	6.45E-08
ENSG00000104689	TNFRSF10A	1.32E+00	1.04E-08	6.45E-08
ENSG00000139044	B4GALNT3	2.75E+00	1.05E-08	6.49E-08
ENSG00000104866	PPP1R37	1.40E+00	1.05E-08	6.53E-08
ENSG00000187775	DNAH17	4.61E+00	1.06E-08	6.57E-08
ENSG00000172201	ID4	4.51E+00	1.09E-08	6.73E-08
ENSG00000158186	MRAS	1.35E+00	1.09E-08	6.75E-08



ENSG00000126432	PRDX5	1.49E+00	1.10E-08	6.79E-08
ENSG00000085117	CD82	1.06E+00	1.11E-08	6.83E-08
ENSG00000250934	AC016924.1	4.92E+00	1.11E-08	6.84E-08
ENSG00000145920	CPLX2	5.71E+00	1.12E-08	6.90E-08
ENSG00000223729	LINC02247	5.20E+00	1.13E-08	6.97E-08
ENSG00000172061	LRRC15	4.46E+00	1.19E-08	7.34E-08
ENSG00000109929	SC5D	1.11E+00	1.21E-08	7.48E-08
ENSG00000170776	AKAP13	1.04E+00	1.23E-08	7.54E-08
ENSG00000176842	IRX5	2.27E+00	1.26E-08	7.72E-08
ENSG00000179388	EGR3	2.21E+00	1.26E-08	7.74E-08
ENSG00000103534	TMC5	5.59E+00	1.27E-08	7.77E-08
ENSG00000105696	TMEM59L	2.95E+00	1.27E-08	7.79E-08
ENSG00000044012	GUCA2B	5.71E+00	1.30E-08	7.94E-08
ENSG00000107821	KAZALD1	1.99E+00	1.35E-08	8.28E-08
ENSG00000049323	LTBP1	2.13E+00	1.37E-08	8.38E-08
ENSG00000119681	LTBP2	1.36E+00	1.39E-08	8.47E-08
ENSG00000170426	SDR9C7	5.18E+00	1.40E-08	8.52E-08
ENSG00000101230	ISM1	4.91E+00	1.40E-08	8.55E-08
ENSG00000125637	PSD4	3.12E+00	1.43E-08	8.74E-08
ENSG00000157625	TAB3	1.30E+00	1.46E-08	8.91E-08
ENSG00000144655	CSRNP1	1.17E+00	1.47E-08	8.93E-08
ENSG00000137491	SLCO2B1	5.71E+00	1.50E-08	9.12E-08
ENSG00000188760	TMEM198	2.77E+00	1.53E-08	9.27E-08
ENSG00000125998	FAM83C	5.43E+00	1.56E-08	9.50E-08
ENSG00000148925	BTBD10	1.17E+00	1.57E-08	9.50E-08
ENSG00000118971	CCND2	5.04E+00	1.58E-08	9.56E-08
ENSG00000170369	CST2	5.39E+00	1.58E-08	9.61E-08
ENSG00000180098	TRNAU1AP	1.08E+00	1.60E-08	9.72E-08
ENSG00000105248	YJU2	1.22E+00	1.61E-08	9.75E-08
ENSG00000197696	NMB	1.54E+00	1.63E-08	9.84E-08
ENSG00000169696	ASPSCR1	1.41E+00	1.65E-08	1.00E-07
ENSG00000102349	KLF8	5.47E+00	1.70E-08	1.03E-07
ENSG00000099814	CEP170B	1.62E+00	1.72E-08	1.04E-07
ENSG00000266094	RASSF5	2.68E+00	1.74E-08	1.05E-07
ENSG00000105339	DENND3	3.90E+00	1.84E-08	1.11E-07
ENSG00000174600	CMKLR1	4.00E+00	1.85E-08	1.12E-07
ENSG00000072954	TMEM38A	2.39E+00	1.86E-08	1.12E-07
ENSG00000186648	CARMIL3	3.70E+00	1.88E-08	1.13E-07
ENSG00000087085	ACHE	4.32E+00	1.93E-08	1.16E-07
ENSG00000078687	TNRC6C	1.18E+00	1.96E-08	1.18E-07

ENSG00000261143	ADAMTS7P3	5.28E+00	1.98E-08	1.19E-07
ENSG00000005102	MEOX1	5.22E+00	2.05E-08	1.23E-07
ENSG00000198133	TMEM229B	3.47E+00	2.06E-08	1.23E-07
ENSG00000146083	RNF44	1.35E+00	2.07E-08	1.24E-07
ENSG00000086544	ITPKC	1.45E+00	2.07E-08	1.24E-07
ENSG00000175213	ZNF408	1.31E+00	2.09E-08	1.25E-07
ENSG00000099994	SUSD2	3.86E+00	2.14E-08	1.28E-07
ENSG00000110203	FOLR3	5.59E+00	2.18E-08	1.30E-07
ENSG00000125734	GPR108	1.06E+00	2.18E-08	1.30E-07
ENSG00000115183	TANC1	1.04E+00	2.20E-08	1.31E-07
ENSG00000168917	SLC35G2	1.34E+00	2.22E-08	1.32E-07
ENSG00000255501	CARD18	5.12E+00	2.26E-08	1.34E-07
ENSG00000196431	CRYBA4	5.99E+00	2.27E-08	1.35E-07
ENSG00000131096	PYY	5.47E+00	2.36E-08	1.40E-07
ENSG00000130475	FCHO1	2.62E+00	2.41E-08	1.43E-07
ENSG00000169733	RFNG	1.12E+00	2.42E-08	1.43E-07
ENSG00000168754	FAM178B	5.05E+00	2.45E-08	1.45E-07
ENSG00000186994	KANK3	2.86E+00	2.49E-08	1.47E-07
ENSG00000261600	AC233266.2	4.05E+00	2.58E-08	1.52E-07
ENSG00000136002	ARHGEF4	1.80E+00	2.59E-08	1.53E-07
ENSG00000131018	SYNE1	1.39E+00	2.67E-08	1.58E-07
ENSG00000197021	CXorf40B	1.44E+00	2.67E-08	1.58E-07
ENSG00000275437	AL121832.3	3.42E+00	2.71E-08	1.60E-07
ENSG00000167889	MGAT5B	1.91E+00	2.77E-08	1.63E-07
ENSG00000144048	DUSP11	1.06E+00	2.80E-08	1.64E-07
ENSG00000165359	INTS6L	4.39E+00	2.81E-08	1.65E-07
ENSG00000214176	PLEKHM1P1	2.53E+00	2.82E-08	1.65E-07
ENSG00000069020	MAST4	2.17E+00	2.85E-08	1.67E-07
ENSG00000179111	HES7	2.52E+00	2.90E-08	1.69E-07
ENSG00000183979	NPB	3.95E+00	2.94E-08	1.72E-07
ENSG00000133805	AMPD3	2.39E+00	2.98E-08	1.74E-07
ENSG00000185798	WDR53	1.34E+00	2.98E-08	1.74E-07
ENSG00000163788	SNRK	1.49E+00	3.03E-08	1.77E-07
ENSG00000177380	PPFIA3	1.52E+00	3.10E-08	1.81E-07
ENSG00000272275	AC092687.3	3.26E+00	3.10E-08	1.81E-07
ENSG00000164520	RAET1E	5.53E+00	3.14E-08	1.83E-07
ENSG00000162511	LAPTM5	3.19E+00	3.14E-08	1.83E-07
ENSG00000133056	PIK3C2B	1.76E+00	3.29E-08	1.91E-07
ENSG00000162510	MATN1	5.12E+00	3.35E-08	1.95E-07
ENSG00000213918	DNASE1	1.31E+00	3.35E-08	1.95E-07

ENSG00000172458	IL17D	3.10E+00	3.41E-08	1.98E-07
ENSG00000008300	CELSR3	2.37E+00	3.41E-08	1.98E-07
ENSG00000229723	LINC01054	5.06E+00	3.41E-08	1.98E-07
ENSG00000120278	PLEKHG1	3.10E+00	3.53E-08	2.04E-07
ENSG00000283294	AP005212.4	2.76E+00	3.72E-08	2.15E-07
ENSG00000160471	COX6B2	3.87E+00	3.75E-08	2.17E-07
ENSG00000159579	RSPRY1	1.01E+00	3.81E-08	2.20E-07
ENSG00000136286	MYO1G	4.84E+00	3.91E-08	2.25E-07
ENSG00000256229	ZNF486	1.33E+00	3.96E-08	2.28E-07
ENSG00000171606	ZNF274	1.06E+00	4.13E-08	2.37E-07
ENSG00000260196	AC124798.1	2.81E+00	4.15E-08	2.39E-07
ENSG00000141682	PMAIP1	1.03E+00	4.27E-08	2.45E-07
ENSG00000003137	CYP26B1	2.29E+00	4.37E-08	2.51E-07
ENSG00000068903	SIRT2	1.03E+00	4.38E-08	2.51E-07
ENSG00000055163	CYFIP2	1.88E+00	4.49E-08	2.57E-07
ENSG00000145349	CAMK2D	1.49E+00	4.53E-08	2.59E-07
ENSG00000182919	C11orf54	1.41E+00	4.53E-08	2.59E-07
ENSG00000159339	PADI4	4.24E+00	4.55E-08	2.61E-07
ENSG00000132000	PODNL1	1.77E+00	4.62E-08	2.64E-07
ENSG00000149451	ADAM33	4.42E+00	4.62E-08	2.64E-07
ENSG00000258616	LINC02303	4.69E+00	4.66E-08	2.66E-07
ENSG00000227234	SPANXB1	5.13E+00	4.82E-08	2.75E-07
ENSG00000137171	KLC4	1.21E+00	5.07E-08	2.89E-07
ENSG00000076201	PTPN23	1.41E+00	5.16E-08	2.94E-07
ENSG00000160224	AIRE	5.77E+00	5.17E-08	2.94E-07
ENSG00000197302	ZNF720	1.21E+00	5.22E-08	2.97E-07
ENSG00000198715	GLMP	1.15E+00	5.22E-08	2.97E-07
ENSG00000005001	PRSS22	5.19E+00	5.28E-08	3.00E-07
ENSG00000130559	CAMSAP1	1.16E+00	5.34E-08	3.03E-07
ENSG00000173175	ADCY5	4.64E+00	5.35E-08	3.04E-07
ENSG00000211584	SLC48A1	2.07E+00	5.57E-08	3.16E-07
ENSG00000136848	DAB2IP	1.12E+00	5.60E-08	3.17E-07
ENSG00000006606	CCL26	3.03E+00	5.77E-08	3.26E-07
ENSG00000141738	GRB7	4.62E+00	5.84E-08	3.30E-07
ENSG00000153815	CMIP	1.02E+00	5.95E-08	3.36E-07
ENSG00000140090	SLC24A4	5.17E+00	6.03E-08	3.40E-07
ENSG00000158062	UBXN11	1.03E+00	6.06E-08	3.42E-07
ENSG00000151892	GFRA1	1.52E+00	6.07E-08	3.42E-07
ENSG00000123146	ADGRE5	1.02E+00	6.24E-08	3.51E-07
ENSG00000116668	SWT1	2.17E+00	6.30E-08	3.54E-07

ENSG00000135925	WNT10A	4.60E+00	6.40E-08	3.60E-07
ENSG00000147206	NXF3	5.35E+00	6.48E-08	3.64E-07
ENSG00000141579	ZNF750	5.48E+00	6.53E-08	3.67E-07
ENSG00000119138	KLF9	1.22E+00	6.54E-08	3.67E-07
ENSG00000115145	STAM2	1.02E+00	6.65E-08	3.73E-07
ENSG00000153214	TMEM87B	1.11E+00	6.65E-08	3.73E-07
ENSG00000205352	PRR13	1.18E+00	6.80E-08	3.81E-07
ENSG00000172927	MYEOV	3.62E+00	6.87E-08	3.84E-07
ENSG00000127603	MACF1	1.03E+00	6.92E-08	3.87E-07
ENSG00000054967	RELT	1.04E+00	7.03E-08	3.93E-07
ENSG00000003402	CFLAR	1.02E+00	7.18E-08	4.01E-07
ENSG00000104067	TJP1	1.30E+00	7.27E-08	4.06E-07
ENSG00000114378	HYAL1	4.51E+00	7.36E-08	4.10E-07
ENSG00000174672	BRSK2	1.82E+00	7.48E-08	4.17E-07
ENSG00000167772	ANGPTL4	1.87E+00	7.52E-08	4.19E-07
ENSG00000167968	DNASE1L2	2.32E+00	7.59E-08	4.22E-07
ENSG00000151240	DIP2C	1.31E+00	7.73E-08	4.30E-07
ENSG00000103044	HAS3	2.81E+00	7.77E-08	4.32E-07
ENSG00000170271	FAXDC2	2.97E+00	8.03E-08	4.45E-07
ENSG00000260027	HOXB7	1.15E+00	8.26E-08	4.58E-07
ENSG00000102683	SGCG	5.47E+00	8.48E-08	4.69E-07
ENSG00000182261	NLRP10	5.14E+00	8.48E-08	4.69E-07
ENSG00000173237	C11orf86	3.13E+00	8.75E-08	4.83E-07
ENSG00000152661	GJA1	1.28E+00	8.93E-08	4.92E-07
ENSG00000188157	AGRN	1.17E+00	8.99E-08	4.95E-07
ENSG00000138964	PARVG	6.05E+00	9.41E-08	5.18E-07
ENSG00000141664	ZCCHC2	1.71E+00	9.45E-08	5.19E-07
ENSG00000011332	DPF1	1.28E+00	9.46E-08	5.20E-07
ENSG00000137825	ITPKA	1.24E+00	9.54E-08	5.24E-07
ENSG00000028116	VRK2	1.29E+00	9.71E-08	5.33E-07
ENSG00000175591	P2RY2	5.20E+00	9.80E-08	5.38E-07
ENSG00000110799	VWF	4.28E+00	9.88E-08	5.42E-07
ENSG00000100078	PLA2G3	5.26E+00	9.93E-08	5.45E-07
ENSG00000106299	WASL	1.06E+00	9.97E-08	5.46E-07
ENSG00000141560	FN3KRP	1.07E+00	1.02E-07	5.58E-07
ENSG00000143776	CDC42BPA	1.04E+00	1.03E-07	5.62E-07
ENSG00000141542	RAB40B	1.51E+00	1.04E-07	5.67E-07
ENSG00000287356	AL590822.3	2.51E+00	1.08E-07	5.90E-07
ENSG00000188833	ENTPD8	4.70E+00	1.08E-07	5.91E-07
ENSG00000112787	FBRSL1	1.17E+00	1.09E-07	5.96E-07

ENSG00000109610	SOD3	4.86E+00	1.11E-07	6.02E-07
ENSG00000073605	GSDMB	1.82E+00	1.15E-07	6.23E-07
ENSG00000090565	RAB11FIP3	1.11E+00	1.15E-07	6.27E-07
ENSG00000184557	SOCS3	1.11E+00	1.15E-07	6.27E-07
ENSG00000133424	LARGE1	2.56E+00	1.16E-07	6.31E-07
ENSG00000141505	ASGR1	2.08E+00	1.21E-07	6.56E-07
ENSG00000132003	ZSWIM4	1.76E+00	1.22E-07	6.60E-07
ENSG00000172375	C2CD2L	1.15E+00	1.22E-07	6.63E-07
ENSG00000141854	MISP3	3.71E+00	1.23E-07	6.67E-07
ENSG00000118900	UBN1	1.16E+00	1.25E-07	6.78E-07
ENSG00000126016	AMOT	2.97E+00	1.26E-07	6.82E-07
ENSG00000184730	APOBR	5.09E+00	1.29E-07	6.98E-07
ENSG00000215154	AC141586.1	2.20E+00	1.30E-07	7.02E-07
ENSG00000103154	NECAB2	3.80E+00	1.35E-07	7.26E-07
ENSG00000147174	GCNA	2.62E+00	1.40E-07	7.54E-07
ENSG00000145794	MEGF10	1.65E+00	1.46E-07	7.86E-07
ENSG00000167311	ART5	2.70E+00	1.46E-07	7.87E-07
ENSG00000066468	FGFR2	1.79E+00	1.48E-07	7.94E-07
ENSG00000261359	PYCARD-AS1	3.33E+00	1.53E-07	8.21E-07
ENSG00000198265	HELZ	1.26E+00	1.56E-07	8.33E-07
ENSG00000176912	TYMSOS	1.90E+00	1.57E-07	8.38E-07
ENSG00000186350	RXRA	1.04E+00	1.58E-07	8.43E-07
ENSG00000215156	AC138409.1	5.21E+00	1.59E-07	8.48E-07
ENSG00000186222	BLOC1S4	1.09E+00	1.60E-07	8.53E-07
ENSG00000021762	OSBPL5	2.15E+00	1.64E-07	8.76E-07
ENSG00000285517	AC010198.2	1.12E+00	1.66E-07	8.83E-07
ENSG00000154025	SLC5A10	4.75E+00	1.72E-07	9.18E-07
ENSG00000066422	ZBTB11	1.13E+00	1.74E-07	9.26E-07
ENSG00000196218	RYR1	4.59E+00	1.78E-07	9.44E-07
ENSG00000130270	ATP8B3	2.08E+00	1.79E-07	9.50E-07
ENSG00000180209	MYLPF	3.51E+00	1.82E-07	9.67E-07
ENSG00000155265	GOLGA7B	3.49E+00	1.84E-07	9.75E-07
ENSG00000178372	CALML5	5.52E+00	1.84E-07	9.75E-07
ENSG00000129003	VPS13C	1.18E+00	1.89E-07	1.00E-06
ENSG00000141298	SSH2	1.02E+00	1.90E-07	1.01E-06
ENSG00000182324	KCNJ14	2.08E+00	1.90E-07	1.01E-06
ENSG00000120690	ELF1	1.01E+00	1.95E-07	1.03E-06
ENSG00000183337	BCOR	1.22E+00	1.95E-07	1.03E-06
ENSG00000161682	FAM171A2	1.35E+00	1.98E-07	1.05E-06
ENSG00000150401	DCUN1D2	1.40E+00	1.99E-07	1.05E-06

ENSG00000167414	GNG8	5.57E+00	2.02E-07	1.07E-06
ENSG00000258602	LINC01629	4.20E+00	2.19E-07	1.15E-06
ENSG00000169594	BNC1	1.79E+00	2.31E-07	1.22E-06
ENSG00000092067	CEBPE	4.94E+00	2.33E-07	1.22E-06
ENSG00000167100	SAMD14	1.62E+00	2.35E-07	1.24E-06
ENSG00000184012	TMPRSS2	4.10E+00	2.39E-07	1.25E-06
ENSG00000171621	SPSB1	1.40E+00	2.39E-07	1.26E-06
ENSG00000075945	KIFAP3	1.96E+00	2.43E-07	1.27E-06
ENSG00000175147	TMEM51-AS1	4.36E+00	2.47E-07	1.29E-06
ENSG00000224051	CPTP	1.37E+00	2.48E-07	1.30E-06
ENSG00000081277	PKP1	4.42E+00	2.51E-07	1.31E-06
ENSG00000275395	FCGBP	3.84E+00	2.55E-07	1.33E-06
ENSG00000179588	ZFPM1	1.32E+00	2.58E-07	1.35E-06
ENSG00000204084	INPP5B	1.63E+00	2.61E-07	1.36E-06
ENSG00000225746	MEG8	5.06E+00	2.64E-07	1.37E-06
ENSG00000145780	FEM1C	1.19E+00	2.64E-07	1.38E-06
ENSG00000178573	MAF	2.40E+00	2.68E-07	1.39E-06
ENSG00000139132	FGD4	2.33E+00	2.74E-07	1.42E-06
ENSG00000267607	AC011511.5	5.65E+00	2.76E-07	1.44E-06
ENSG00000165804	ZNF219	1.18E+00	2.79E-07	1.45E-06
ENSG00000204882	GPR20	4.56E+00	2.80E-07	1.46E-06
ENSG00000228705	LINC00659	4.66E+00	2.81E-07	1.46E-06
ENSG00000108370	RGS9	2.13E+00	2.83E-07	1.47E-06
ENSG00000261713	SSTR5-AS1	5.12E+00	2.86E-07	1.48E-06
ENSG00000099889	ARVCF	1.67E+00	2.87E-07	1.49E-06
ENSG00000215853	RPTN	5.27E+00	2.87E-07	1.49E-06
ENSG00000280027	AC007342.9	4.91E+00	2.89E-07	1.50E-06
ENSG00000170835	CEL	3.06E+00	2.89E-07	1.50E-06
ENSG00000280693	SH3PXD2A-AS	5.31E+00	2.91E-07	1.51E-06
ENSG00000273749	CYFIP1	1.04E+00	2.94E-07	1.52E-06
ENSG00000287431	AC027601.6	2.13E+00	3.00E-07	1.55E-06
ENSG00000186716	BCR	1.41E+00	3.02E-07	1.56E-06
ENSG00000196388	INCA1	3.42E+00	3.04E-07	1.57E-06
ENSG00000287763	AC068279.2	3.96E+00	3.05E-07	1.57E-06
ENSG00000135272	MDFIC	1.67E+00	3.17E-07	1.63E-06
ENSG00000205362	MT1A	5.12E+00	3.18E-07	1.64E-06
ENSG00000227051	C14orf132	1.25E+00	3.38E-07	1.74E-06
ENSG00000135540	NHSL1	1.80E+00	3.39E-07	1.74E-06
ENSG00000100314	CABP7	3.21E+00	3.44E-07	1.76E-06
ENSG0000010030	ETV7	2.58E+00	3.55E-07	1.81E-06

ENSG00000136720	HS6ST1	1.21E+00	3.57E-07	1.83E-06
ENSG00000198513	ATL1	2.08E+00	3.60E-07	1.84E-06
ENSG00000142149	HUNK	1.70E+00	3.63E-07	1.86E-06
ENSG00000140950	MEAK7	1.34E+00	3.64E-07	1.86E-06
ENSG00000165891	E2F7	1.05E+00	3.69E-07	1.89E-06
ENSG00000154710	RABGEF1	2.13E+00	3.73E-07	1.90E-06
ENSG00000144959	NCEH1	1.02E+00	3.74E-07	1.91E-06
ENSG00000167191	GPRC5B	1.34E+00	3.74E-07	1.91E-06
ENSG00000100055	CYTH4	5.04E+00	3.80E-07	1.94E-06
ENSG00000115596	WNT6	1.61E+00	3.82E-07	1.95E-06
ENSG00000110042	DTX4	2.75E+00	3.84E-07	1.96E-06
ENSG00000181097	AC105219.1	2.43E+00	3.85E-07	1.96E-06
ENSG00000116954	RRAGC	1.16E+00	3.87E-07	1.97E-06
ENSG00000251230	MIR3945HG	5.11E+00	4.02E-07	2.04E-06
ENSG00000146802	TMEM168	1.27E+00	4.09E-07	2.07E-06
ENSG00000109270	LAMTOR3	1.13E+00	4.09E-07	2.08E-06
ENSG00000100987	VSX1	4.69E+00	4.11E-07	2.08E-06
ENSG00000007237	GAS7	4.57E+00	4.16E-07	2.10E-06
ENSG00000266714	MYO15B	2.80E+00	4.36E-07	2.20E-06
ENSG00000198246	SLC29A3	1.67E+00	4.58E-07	2.31E-06
ENSG00000130706	ADRM1	1.03E+00	4.60E-07	2.32E-06
ENSG00000167549	CORO6	2.46E+00	4.63E-07	2.33E-06
ENSG00000166825	ANPEP	1.82E+00	4.64E-07	2.34E-06
ENSG00000135740	SLC9A5	1.53E+00	4.64E-07	2.34E-06
ENSG00000258102	MAP1LC3B2	2.92E+00	4.79E-07	2.41E-06
ENSG00000103316	CRYM	4.55E+00	4.85E-07	2.44E-06
ENSG00000156463	SH3RF2	2.07E+00	4.89E-07	2.46E-06
ENSG00000105538	RASIP1	3.56E+00	4.89E-07	2.46E-06
ENSG00000105289	TJP3	3.75E+00	4.98E-07	2.50E-06
ENSG00000091490	SEL1L3	1.27E+00	5.04E-07	2.53E-06
ENSG00000147437	GNRH1	2.33E+00	5.08E-07	2.54E-06
ENSG00000130287	NCAN	4.94E+00	5.13E-07	2.57E-06
ENSG00000245146	MALINC1	2.52E+00	5.15E-07	2.58E-06
ENSG00000185101	ANO9	4.74E+00	5.36E-07	2.68E-06
ENSG00000147100	SLC16A2	1.64E+00	5.53E-07	2.76E-06
ENSG00000158815	FGF17	4.67E+00	5.61E-07	2.80E-06
ENSG00000181885	CLDN7	4.30E+00	5.62E-07	2.80E-06
ENSG00000163297	ANTXR2	1.24E+00	5.67E-07	2.82E-06
ENSG00000249859	PVT1	1.02E+00	5.71E-07	2.84E-06
ENSG00000157766	ACAN	2.75E+00	5.84E-07	2.90E-06

ENSG00000137145	DENND4C	1.10E+00	5.84E-07	2.91E-06
ENSG00000260877	AP005233.2	5.30E+00	5.89E-07	2.93E-06
ENSG00000196436	NPIPB15	4.43E+00	5.92E-07	2.94E-06
ENSG00000287725	AP003071.5	3.90E+00	5.95E-07	2.95E-06
ENSG00000144130	NT5DC4	5.39E+00	6.12E-07	3.03E-06
ENSG00000106927	AMBP	3.81E+00	6.14E-07	3.04E-06
ENSG00000274422	AC245060.5	1.76E+00	6.19E-07	3.06E-06
ENSG00000168913	ENHO	1.52E+00	6.21E-07	3.07E-06
ENSG00000182612	TSPAN10	2.26E+00	6.23E-07	3.08E-06
ENSG00000154099	DNAAF1	5.21E+00	6.35E-07	3.13E-06
ENSG00000196605	ZNF846	2.77E+00	6.53E-07	3.22E-06
ENSG00000224614	TNK2-AS1	3.99E+00	6.54E-07	3.23E-06
ENSG00000188293	IGFL1	5.26E+00	6.63E-07	3.27E-06
ENSG00000172159	FRMD3	3.12E+00	6.70E-07	3.30E-06
ENSG00000037280	FLT4	3.67E+00	6.73E-07	3.31E-06
ENSG00000114547	ROPN1B	4.69E+00	6.73E-07	3.31E-06
ENSG00000272789	AC010976.2	4.43E+00	6.72E-07	3.31E-06
ENSG00000049759	NEDD4L	1.11E+00	6.87E-07	3.38E-06
ENSG00000171385	KCND3	5.44E+00	6.95E-07	3.41E-06
ENSG00000066455	GOLGA5	1.02E+00	7.03E-07	3.45E-06
ENSG00000125898	FAM110A	1.17E+00	7.10E-07	3.48E-06
ENSG00000136859	ANGPTL2	1.45E+00	7.10E-07	3.48E-06
ENSG00000287853	AL031668.2	3.47E+00	7.12E-07	3.49E-06
ENSG00000106012	IQCE	1.23E+00	7.13E-07	3.49E-06
ENSG00000171443	ZNF524	1.90E+00	7.25E-07	3.55E-06
ENSG00000189350	TOGARAM2	3.56E+00	7.48E-07	3.66E-06
ENSG00000064270	ATP2C2	4.25E+00	7.59E-07	3.71E-06
ENSG00000031081	ARHGAP31	1.29E+00	7.62E-07	3.73E-06
ENSG00000111679	PTPN6	3.72E+00	7.67E-07	3.75E-06
ENSG00000215769	ARHGAP27P1-	4.01E+00	7.71E-07	3.76E-06
ENSG00000141971	MVB12A	1.16E+00	7.81E-07	3.81E-06
ENSG00000160188	RSPH1	4.24E+00	7.87E-07	3.83E-06
ENSG00000198570	RD3	4.86E+00	7.87E-07	3.83E-06
ENSG00000100284	TOM1	1.05E+00	7.92E-07	3.86E-06
ENSG00000182704	TSKU	1.18E+00	7.93E-07	3.86E-06
ENSG00000256980	KHDC1L	4.15E+00	7.98E-07	3.89E-06
ENSG00000225511	LINC00475	3.28E+00	8.07E-07	3.93E-06
ENSG00000188100	FAM25A	5.97E+00	8.08E-07	3.93E-06
ENSG00000078900	TP73	1.62E+00	8.14E-07	3.96E-06
ENSG00000171316	CHD7	1.10E+00	8.20E-07	3.99E-06



ENSG00000063180	CA11	1.65E+00	8.20E-07	3.99E-06
ENSG00000107521	HPS1	1.06E+00	8.24E-07	4.00E-06
ENSG00000181404	WASHC1	1.51E+00	8.30E-07	4.03E-06
ENSG00000124299	PEPD	1.07E+00	8.42E-07	4.08E-06
ENSG00000198804	MT-CO1	1.03E+00	8.50E-07	4.12E-06
ENSG00000156050	FAM161B	1.55E+00	8.69E-07	4.21E-06
ENSG00000196378	ZNF34	2.89E+00	8.77E-07	4.24E-06
ENSG00000185024	BRF1	1.04E+00	8.82E-07	4.26E-06
ENSG00000251131	AC025171.3	3.40E+00	8.82E-07	4.27E-06
ENSG00000104833	TUBB4A	2.75E+00	9.27E-07	4.46E-06
ENSG00000167083	GNGT2	5.36E+00	9.42E-07	4.54E-06
ENSG00000071242	RPS6KA2	1.69E+00	9.62E-07	4.62E-06
ENSG00000175600	SUGCT	1.86E+00	9.76E-07	4.69E-06
ENSG00000163995	ABLIM2	4.90E+00	9.98E-07	4.79E-06
ENSG00000075388	FGF4	4.37E+00	1.03E-06	4.93E-06
ENSG00000215644	GCGR	5.05E+00	1.04E-06	4.99E-06
ENSG00000117036	ETV3	1.26E+00	1.06E-06	5.08E-06
ENSG00000104059	FAM189A1	4.22E+00	1.07E-06	5.11E-06
ENSG00000198300	PEG3	4.93E+00	1.07E-06	5.11E-06
ENSG00000120055	C10orf95	3.79E+00	1.07E-06	5.12E-06
ENSG00000178150	ZNF114	2.96E+00	1.11E-06	5.29E-06
ENSG00000070444	MNT	1.19E+00	1.12E-06	5.33E-06
ENSG00000182749	PAQR7	1.90E+00	1.16E-06	5.51E-06
ENSG00000120949	TNFRSF8	4.92E+00	1.17E-06	5.58E-06
ENSG00000221821	C6orf226	1.80E+00	1.17E-06	5.58E-06
ENSG00000164047	CAMP	4.62E+00	1.18E-06	5.62E-06
ENSG00000245025	AC107959.1	3.69E+00	1.18E-06	5.63E-06
ENSG00000164715	LMTK2	1.20E+00	1.18E-06	5.63E-06
ENSG00000228526	MIR34AHG	1.90E+00	1.20E-06	5.69E-06
ENSG00000223572	CKMT1A	3.32E+00	1.20E-06	5.72E-06
ENSG00000158258	CLSTN2	2.85E+00	1.21E-06	5.74E-06
ENSG00000099338	CATSPERG	4.92E+00	1.22E-06	5.78E-06
ENSG00000106991	ENG	1.24E+00	1.24E-06	5.90E-06
ENSG00000083844	ZNF264	1.23E+00	1.27E-06	6.01E-06
ENSG00000118420	UBE3D	1.21E+00	1.29E-06	6.08E-06
ENSG00000241404	EGFL8	3.47E+00	1.29E-06	6.10E-06
ENSG00000213977	TAX1BP3	1.03E+00	1.29E-06	6.11E-06
ENSG00000132510	KDM6B	1.17E+00	1.30E-06	6.14E-06
ENSG00000132950	ZMYM5	1.08E+00	1.32E-06	6.21E-06
ENSG00000101098	RIMS4	4.32E+00	1.34E-06	6.30E-06

ENSG00000067141	NEO1	1.69E+00	1.35E-06	6.38E-06
ENSG00000184163	C1QTNF12	3.23E+00	1.39E-06	6.53E-06
ENSG00000104972	LILRB1	5.17E+00	1.43E-06	6.72E-06
ENSG00000153029	MR1	1.48E+00	1.45E-06	6.82E-06
ENSG00000118137	APOA1	3.80E+00	1.47E-06	6.90E-06
ENSG00000160145	KALRN	1.25E+00	1.54E-06	7.22E-06
ENSG00000164626	KCNK5	3.13E+00	1.54E-06	7.22E-06
ENSG00000102302	FGD1	1.21E+00	1.54E-06	7.23E-06
ENSG00000274993	AC254629.1	4.71E+00	1.61E-06	7.55E-06
ENSG00000015520	NPC1L1	4.30E+00	1.63E-06	7.61E-06
ENSG00000233974	AC138951.1	5.13E+00	1.63E-06	7.62E-06
ENSG00000182389	CACNB4	4.63E+00	1.63E-06	7.65E-06
ENSG00000256940	PPP1R14B-AS	2.57E+00	1.64E-06	7.66E-06
ENSG00000166562	SEC11C	1.05E+00	1.66E-06	7.76E-06
ENSG00000160182	TFF1	5.07E+00	1.66E-06	7.77E-06
ENSG00000283235	AC139493.2	4.99E+00	1.66E-06	7.77E-06
ENSG00000170485	NPAS2	2.07E+00	1.67E-06	7.79E-06
ENSG00000173890	GPR160	2.96E+00	1.69E-06	7.88E-06
ENSG00000177427	MIEF2	1.39E+00	1.71E-06	7.96E-06
ENSG00000151116	UEVLD	1.28E+00	1.72E-06	8.00E-06
ENSG00000100056	ESS2	1.02E+00	1.73E-06	8.05E-06
ENSG00000106089	STX1A	1.66E+00	1.75E-06	8.15E-06
ENSG00000144045	DQX1	2.91E+00	1.75E-06	8.15E-06
ENSG00000003400	CASP10	5.02E+00	1.78E-06	8.27E-06
ENSG00000187258	NPSR1	5.06E+00	1.79E-06	8.31E-06
ENSG00000161509	GRIN2C	3.99E+00	1.79E-06	8.32E-06
ENSG00000047644	WWC3	1.11E+00	1.81E-06	8.41E-06
ENSG00000229967	MAGEA4-AS1	4.91E+00	1.84E-06	8.54E-06
ENSG00000124249	KCNK15	4.16E+00	1.86E-06	8.61E-06
ENSG00000168564	CDKN2AIP	1.07E+00	1.86E-06	8.62E-06
ENSG00000073737	DHRS9	5.22E+00	1.88E-06	8.72E-06
ENSG00000269404	SPIB	3.93E+00	1.89E-06	8.76E-06
ENSG00000112297	CRYBG1	1.08E+00	1.93E-06	8.92E-06
ENSG00000278558	TMEM191B	4.15E+00	1.94E-06	8.95E-06
ENSG00000109083	IFT20	1.01E+00	1.98E-06	9.16E-06
ENSG00000105472	CLEC11A	1.68E+00	2.00E-06	9.23E-06
ENSG00000185668	POU3F1	2.76E+00	2.02E-06	9.29E-06
ENSG00000117122	MFAP2	3.72E+00	2.05E-06	9.46E-06
ENSG00000221890	NPTXR	1.04E+00	2.06E-06	9.51E-06
ENSG00000090539	CHRD	2.46E+00	2.09E-06	9.64E-06

ENSG00000159399	HK2	1.32E+00	2.22E-06	1.02E-05
ENSG00000159753	CARMIL2	2.22E+00	2.24E-06	1.03E-05
ENSG00000143512	HHIPL2	4.64E+00	2.24E-06	1.03E-05
ENSG00000184574	LPAR5	3.25E+00	2.27E-06	1.04E-05
ENSG00000261371	PECAM1	2.75E+00	2.31E-06	1.06E-05
ENSG00000185339	TCN2	2.98E+00	2.33E-06	1.07E-05
ENSG00000030110	BAK1	1.25E+00	2.33E-06	1.07E-05
ENSG00000102312	PORCN	1.65E+00	2.36E-06	1.08E-05
ENSG00000107331	ABCA2	1.14E+00	2.49E-06	1.14E-05
ENSG00000158445	KCNB1	3.25E+00	2.54E-06	1.16E-05
ENSG00000269729	AC006262.2	4.95E+00	2.64E-06	1.20E-05
ENSG00000089847	ANKRD24	4.43E+00	2.64E-06	1.20E-05
ENSG00000173482	PTPRM	1.14E+00	2.75E-06	1.25E-05
ENSG00000158552	ZFAND2B	1.07E+00	2.77E-06	1.26E-05
ENSG00000197969	VPS13A	1.15E+00	2.83E-06	1.28E-05
ENSG00000198788	MUC2	5.54E+00	2.89E-06	1.31E-05
ENSG00000225630	MTND2P28	1.52E+00	2.90E-06	1.31E-05
ENSG00000188599	NPIPP1	1.70E+00	2.91E-06	1.32E-05
ENSG00000153391	INO80C	1.23E+00	3.06E-06	1.38E-05
ENSG00000129455	KLK8	5.50E+00	3.13E-06	1.41E-05
ENSG00000136932	TRMO	1.21E+00	3.13E-06	1.41E-05
ENSG00000167625	ZNF526	1.11E+00	3.17E-06	1.43E-05
ENSG00000101443	WFDC2	2.70E+00	3.19E-06	1.43E-05
ENSG00000065361	ERBB3	1.66E+00	3.20E-06	1.44E-05
ENSG00000130299	GTPBP3	1.08E+00	3.21E-06	1.44E-05
ENSG00000163464	CXCR1	5.04E+00	3.24E-06	1.45E-05
ENSG00000167972	ABCA3	2.22E+00	3.28E-06	1.47E-05
ENSG00000172543	CTSW	4.39E+00	3.29E-06	1.48E-05
ENSG00000130528	HRC	5.21E+00	3.29E-06	1.48E-05
ENSG00000068976	PYGM	4.43E+00	3.38E-06	1.51E-05
ENSG00000172197	MBOAT1	2.06E+00	3.42E-06	1.53E-05
ENSG00000139323	POC1B	1.36E+00	3.45E-06	1.54E-05
ENSG00000125531	FNDC11	3.63E+00	3.45E-06	1.54E-05
ENSG00000164764	SBSPON	4.16E+00	3.48E-06	1.56E-05
ENSG00000244694	PTCHD4	3.17E+00	3.65E-06	1.63E-05
ENSG00000182796	TMEM198B	1.70E+00	3.70E-06	1.65E-05
ENSG00000141977	CIB3	5.09E+00	3.74E-06	1.66E-05
ENSG00000214021	TTLL3	1.80E+00	3.78E-06	1.68E-05
ENSG00000134757	DSG3	5.40E+00	4.03E-06	1.79E-05
ENSG00000283196	AC006453.2	1.73E+00	4.09E-06	1.81E-05

ENSG00000250067	YJEFN3	1.53E+00	4.09E-06	1.81E-05
ENSG00000163295	ALPI	4.48E+00	4.10E-06	1.81E-05
ENSG00000134780	DAGLA	2.69E+00	4.15E-06	1.83E-05
ENSG00000134815	DHX34	1.53E+00	4.16E-06	1.84E-05
ENSG00000197933	ZNF823	1.73E+00	4.18E-06	1.85E-05
ENSG00000234678	ELF3-AS1	4.35E+00	4.24E-06	1.87E-05
ENSG00000120149	MSX2	1.04E+00	4.34E-06	1.91E-05
ENSG00000139117	CPNE8	1.59E+00	4.35E-06	1.92E-05
ENSG00000101198	NKAIN4	2.38E+00	4.37E-06	1.92E-05
ENSG00000131831	RAI2	4.21E+00	4.47E-06	1.97E-05
ENSG00000254531	AP001816.1	2.43E+00	4.48E-06	1.97E-05
ENSG00000167895	TMC8	4.35E+00	4.52E-06	1.99E-05
ENSG00000255860	AP000812.2	4.78E+00	4.56E-06	2.00E-05
ENSG00000100918	REC8	2.41E+00	4.58E-06	2.01E-05
ENSG00000163131	CTSS	1.66E+00	4.61E-06	2.02E-05
ENSG00000265190	ANXA8	3.57E+00	4.63E-06	2.03E-05
ENSG00000130584	ZBTB46	1.35E+00	4.81E-06	2.11E-05
ENSG00000197253	TPSB2	5.06E+00	4.83E-06	2.12E-05
ENSG00000103490	PYCARD	3.17E+00	4.88E-06	2.13E-05
ENSG00000119514	GALNT12	3.06E+00	4.93E-06	2.15E-05
ENSG00000154342	WNT3A	5.35E+00	4.95E-06	2.16E-05
ENSG00000182472	CAPN12	3.31E+00	4.96E-06	2.17E-05
ENSG00000140538	NTRK3	3.97E+00	5.01E-06	2.19E-05
ENSG00000171346	KRT15	3.09E+00	5.05E-06	2.20E-05
ENSG00000155629	PIK3AP1	2.56E+00	5.19E-06	2.26E-05
ENSG00000242612	DECR2	1.19E+00	5.21E-06	2.27E-05
ENSG00000104936	DMPK	1.28E+00	5.49E-06	2.39E-05
ENSG00000170373	CST1	3.75E+00	5.49E-06	2.39E-05
ENSG00000275216	AL161431.1	5.11E+00	5.50E-06	2.39E-05
ENSG00000069812	HES2	2.80E+00	5.66E-06	2.45E-05
ENSG00000110427	KIAA1549L	1.77E+00	5.71E-06	2.47E-05
ENSG00000148204	CRB2	4.94E+00	5.71E-06	2.47E-05
ENSG00000185946	RNPC3	1.20E+00	5.73E-06	2.48E-05
ENSG00000188215	DCUN1D3	1.05E+00	5.76E-06	2.49E-05
ENSG00000159496	RGL4	5.35E+00	5.82E-06	2.52E-05
ENSG00000159307	SCUBE1	3.45E+00	5.86E-06	2.53E-05
ENSG00000071282	LMCD1	1.35E+00	5.90E-06	2.55E-05
ENSG00000160013	PTGIR	3.99E+00	6.13E-06	2.64E-05
ENSG00000130711	PRDM12	5.13E+00	6.18E-06	2.66E-05
ENSG00000161896	IP6K3	2.37E+00	6.27E-06	2.70E-05

ENSG00000068971	PPP2R5B	1.30E+00	6.31E-06	2.72E-05
ENSG00000258738	AL121603.2	1.83E+00	6.52E-06	2.80E-05
ENSG00000105146	AURKC	2.59E+00	6.56E-06	2.82E-05
ENSG00000099282	TSPAN15	3.36E+00	6.62E-06	2.84E-05
ENSG00000007545	CRAMP1	1.43E+00	6.78E-06	2.91E-05
ENSG00000174945	AMZ1	3.44E+00	6.89E-06	2.95E-05
ENSG00000186654	PRR5	1.70E+00	6.95E-06	2.98E-05
ENSG00000268223	ARL14EPL	4.75E+00	7.01E-06	3.00E-05
ENSG00000169184	MN1	1.85E+00	7.09E-06	3.03E-05
ENSG00000049283	EPN3	3.98E+00	7.09E-06	3.03E-05
ENSG00000213904	LIPE-AS1	2.22E+00	7.12E-06	3.05E-05
ENSG00000215440	NPEPL1	2.15E+00	7.21E-06	3.08E-05
ENSG00000105063	PPP6R1	1.40E+00	7.24E-06	3.10E-05
ENSG00000040933	INPP4A	1.29E+00	7.29E-06	3.11E-05
ENSG00000078177	N4BP2	1.23E+00	7.33E-06	3.13E-05
ENSG00000049540	ELN	4.75E+00	7.37E-06	3.14E-05
ENSG00000105672	ETV2	2.01E+00	7.48E-06	3.19E-05
ENSG00000272768	AC004854.2	1.36E+00	7.50E-06	3.20E-05
ENSG00000102879	CORO1A	1.45E+00	7.56E-06	3.22E-05
ENSG00000279792	AC015909.5	2.54E+00	7.66E-06	3.26E-05
ENSG00000141750	STAC2	1.35E+00	7.81E-06	3.32E-05
ENSG00000102554	KLF5	2.48E+00	7.88E-06	3.35E-05
ENSG00000273812	BX640514.2	4.17E+00	8.04E-06	3.41E-05
ENSG00000148384	INPP5E	1.01E+00	8.32E-06	3.52E-05
ENSG00000197467	COL13A1	2.64E+00	8.40E-06	3.56E-05
ENSG00000256518	AP000812.3	5.04E+00	8.43E-06	3.57E-05
ENSG00000160179	ABCG1	3.28E+00	8.51E-06	3.60E-05
ENSG00000276600	RAB7B	1.71E+00	8.52E-06	3.60E-05
ENSG00000177426	TGIF1	1.01E+00	8.54E-06	3.61E-05
ENSG00000176387	HSD11B2	2.44E+00	8.55E-06	3.61E-05
ENSG00000197136	PCNX3	1.16E+00	8.68E-06	3.66E-05
ENSG00000196781	TLE1	1.17E+00	8.80E-06	3.72E-05
ENSG00000108306	FBXL20	1.13E+00	8.87E-06	3.74E-05
ENSG00000169972	PUSL1	1.19E+00	8.95E-06	3.77E-05
ENSG00000158106	RHPN1	1.60E+00	9.10E-06	3.83E-05
ENSG00000231969	AC007364.1	3.74E+00	9.35E-06	3.93E-05
ENSG00000232070	TMEM253	3.74E+00	9.62E-06	4.04E-05
ENSG00000260001	TGFBR3L	1.46E+00	9.68E-06	4.06E-05
ENSG00000095397	WHRN	1.36E+00	9.87E-06	4.14E-05
ENSG00000125820	NKX2-2	4.81E+00	1.00E-05	4.20E-05

ENSG00000188613	NANOS1	2.08E+00	1.02E-05	4.28E-05
ENSG00000130363	RSPH3	1.05E+00	1.02E-05	4.28E-05
ENSG00000235098	ANKRD65	4.12E+00	1.03E-05	4.30E-05
ENSG00000184363	PKP3	3.33E+00	1.04E-05	4.33E-05
ENSG00000176945	MUC20	4.36E+00	1.04E-05	4.34E-05
ENSG00000176136	MC5R	4.78E+00	1.04E-05	4.35E-05
ENSG00000112039	FANCE	1.31E+00	1.05E-05	4.38E-05
ENSG00000253741	LNCOC1	4.17E+00	1.10E-05	4.59E-05
ENSG00000065526	SPEN	1.05E+00	1.11E-05	4.61E-05
ENSG00000061455	PRDM6	3.91E+00	1.14E-05	4.73E-05
ENSG00000124343	XG	4.51E+00	1.15E-05	4.76E-05
ENSG00000239305	RNF103	1.06E+00	1.15E-05	4.77E-05
ENSG00000184343	SRPK3	4.33E+00	1.17E-05	4.86E-05
ENSG00000187608	ISG15	1.44E+00	1.17E-05	4.86E-05
ENSG00000164400	CSF2	3.61E+00	1.20E-05	4.98E-05
ENSG00000197279	ZNF165	2.00E+00	1.21E-05	4.99E-05
ENSG00000136999	CCN3	2.94E+00	1.21E-05	5.00E-05
ENSG00000273066	AL355987.4	1.64E+00	1.22E-05	5.05E-05
ENSG00000125740	FOSB	1.34E+00	1.25E-05	5.14E-05
ENSG00000108786	HSD17B1	2.40E+00	1.25E-05	5.15E-05
ENSG00000138678	GPAT3	2.60E+00	1.27E-05	5.23E-05
ENSG00000109686	SH3D19	1.17E+00	1.27E-05	5.25E-05
ENSG00000166401	SERPINB8	1.55E+00	1.29E-05	5.29E-05
ENSG00000158296	SLC13A3	3.72E+00	1.33E-05	5.47E-05
ENSG00000165046	LETM2	1.76E+00	1.33E-05	5.47E-05
ENSG00000213793	ZNF888	1.67E+00	1.34E-05	5.47E-05
ENSG00000223511	AL683807.1	3.83E+00	1.37E-05	5.61E-05
ENSG00000166225	FRS2	1.23E+00	1.37E-05	5.61E-05
ENSG00000171124	FUT3	4.81E+00	1.37E-05	5.62E-05
ENSG00000173926	MARCH3	1.50E+00	1.39E-05	5.67E-05
ENSG00000182327	GLTPD2	4.40E+00	1.39E-05	5.68E-05
ENSG00000259439	LINC01833	4.34E+00	1.40E-05	5.70E-05
ENSG00000168309	FAM107A	4.22E+00	1.45E-05	5.92E-05
ENSG00000168646	AXIN2	1.89E+00	1.47E-05	5.97E-05
ENSG00000136152	COG3	1.38E+00	1.48E-05	6.03E-05
ENSG00000262246	CORO7	1.32E+00	1.49E-05	6.07E-05
ENSG00000134245	WNT2B	2.97E+00	1.50E-05	6.11E-05
ENSG00000106789	CORO2A	1.18E+00	1.53E-05	6.22E-05
ENSG00000213398	LCAT	1.59E+00	1.57E-05	6.36E-05
ENSG00000161055	SCGB3A1	4.70E+00	1.60E-05	6.47E-05

ENSG00000164125	GASK1B	1.31E+00	1.63E-05	6.59E-05
ENSG00000168661	ZNF30	2.48E+00	1.67E-05	6.73E-05
ENSG00000185847	LINC01405	4.46E+00	1.68E-05	6.78E-05
ENSG00000100890	PRORP	1.48E+00	1.70E-05	6.84E-05
ENSG00000101445	PPP1R16B	2.99E+00	1.74E-05	7.00E-05
ENSG00000196433	ASMT	4.29E+00	1.77E-05	7.13E-05
ENSG00000116604	MEF2D	1.03E+00	1.78E-05	7.16E-05
ENSG00000263465	SRSF8	1.33E+00	1.79E-05	7.18E-05
ENSG00000133812	SBF2	1.27E+00	1.81E-05	7.28E-05
ENSG00000112195	TREML2	4.66E+00	1.84E-05	7.37E-05
ENSG00000277013	AC008556.1	4.69E+00	1.84E-05	7.38E-05
ENSG00000116691	MIIP	1.07E+00	1.85E-05	7.42E-05
ENSG00000142959	BEST4	4.57E+00	1.86E-05	7.43E-05
ENSG00000162896	PIGR	4.95E+00	1.86E-05	7.45E-05
ENSG00000105755	ETHE1	1.28E+00	1.88E-05	7.50E-05
ENSG00000150556	LYPD6B	4.30E+00	1.88E-05	7.50E-05
ENSG00000188315	C3orf62	1.65E+00	1.92E-05	7.66E-05
ENSG00000157379	DHRS1	2.59E+00	1.92E-05	7.66E-05
ENSG00000173653	RCE1	1.01E+00	1.93E-05	7.71E-05
ENSG00000166839	ANKDD1A	1.35E+00	1.94E-05	7.75E-05
ENSG00000205356	TECPR1	1.40E+00	1.99E-05	7.93E-05
ENSG00000236935	AP003774.2	4.71E+00	2.04E-05	8.13E-05
ENSG00000185615	PDIA2	2.99E+00	2.05E-05	8.15E-05
ENSG00000197191	CYSRT1	2.19E+00	2.05E-05	8.16E-05
ENSG00000178307	TMEM11	1.21E+00	2.06E-05	8.17E-05
ENSG00000159713	TPPP3	2.82E+00	2.07E-05	8.22E-05
ENSG00000137364	TPMT	1.00E+00	2.08E-05	8.27E-05
ENSG00000263934	SNORD3A	2.65E+00	2.09E-05	8.28E-05
ENSG00000176884	GRIN1	4.92E+00	2.18E-05	8.63E-05
ENSG00000162390	ACOT11	3.44E+00	2.19E-05	8.65E-05
ENSG00000070388	FGF22	4.38E+00	2.19E-05	8.67E-05
ENSG00000125746	EML2	2.21E+00	2.19E-05	8.67E-05
ENSG00000089692	LAG3	1.79E+00	2.21E-05	8.73E-05
ENSG00000170423	KRT78	4.76E+00	2.21E-05	8.74E-05
ENSG00000163898	LIPH	2.01E+00	2.25E-05	8.86E-05
ENSG00000012211	PRICKLE3	4.02E+00	2.27E-05	8.94E-05
ENSG00000261092	LINC02178	5.16E+00	2.27E-05	8.97E-05
ENSG00000287396	AL592464.3	4.66E+00	2.30E-05	9.07E-05
ENSG00000179044	EXOC3L1	4.38E+00	2.33E-05	9.18E-05
ENSG00000107317	PTGDS	4.37E+00	2.34E-05	9.19E-05

ENSG00000174446	SNAPC5	1.23E+00	2.42E-05	9.51E-05
ENSG00000287600	AC122719.3	4.23E+00	2.43E-05	9.53E-05
ENSG00000154639	CXADR	1.53E+00	2.44E-05	9.59E-05
ENSG00000226287	TMEM191A	2.17E+00	2.44E-05	9.59E-05
ENSG00000227252	AC012063.1	3.03E+00	2.46E-05	9.64E-05
ENSG00000175206	NPPA	4.99E+00	2.47E-05	9.67E-05
ENSG00000196689	TRPV1	2.05E+00	2.50E-05	9.78E-05
ENSG00000090674	MCOLN1	1.60E+00	2.56E-05	1.00E-04
ENSG00000287263	AC008875.3	1.81E+00	2.56E-05	1.00E-04
ENSG00000172731	LRRC20	1.65E+00	2.57E-05	1.00E-04
ENSG00000167716	WDR81	1.23E+00	2.59E-05	1.01E-04
ENSG00000127831	VIL1	4.84E+00	2.66E-05	1.04E-04
ENSG00000104870	FCGRT	2.56E+00	2.67E-05	1.04E-04
ENSG00000165868	HSPA12A	1.11E+00	2.70E-05	1.05E-04
ENSG00000187583	PLEKHN1	2.02E+00	2.76E-05	1.07E-04
ENSG00000204323	SMIM5	3.34E+00	2.80E-05	1.09E-04
ENSG00000112514	CUTA	1.05E+00	2.83E-05	1.10E-04
ENSG00000151651	ADAM8	2.76E+00	2.84E-05	1.10E-04
ENSG00000170681	CAVIN4	1.89E+00	2.87E-05	1.11E-04
ENSG00000234719	NPIPB2	2.54E+00	2.90E-05	1.13E-04
ENSG00000197971	MBP	1.68E+00	2.93E-05	1.13E-04
ENSG00000006534	ALDH3B1	1.66E+00	2.94E-05	1.14E-04
ENSG00000176406	RIMS2	2.67E+00	2.95E-05	1.14E-04
ENSG00000123358	NR4A1	1.06E+00	3.02E-05	1.17E-04
ENSG00000089116	LHX5	4.42E+00	3.14E-05	1.21E-04
ENSG00000157933	SKI	1.21E+00	3.16E-05	1.22E-04
ENSG00000164692	COL1A2	2.81E+00	3.25E-05	1.25E-04
ENSG00000179361	ARID3B	1.39E+00	3.36E-05	1.29E-04
ENSG00000258128	MKRN9P	4.99E+00	3.40E-05	1.31E-04
ENSG00000118369	USP35	1.83E+00	3.45E-05	1.32E-04
ENSG00000068831	RASGRP2	2.97E+00	3.50E-05	1.34E-04
ENSG00000237523	LINC00857	2.02E+00	3.56E-05	1.36E-04
ENSG00000205625	AL591499.1	4.91E+00	3.59E-05	1.37E-04
ENSG00000165898	ISCA2	1.08E+00	3.59E-05	1.37E-04
ENSG00000267248	AC025048.2	2.13E+00	3.62E-05	1.39E-04
ENSG00000069188	SDK2	4.15E+00	3.69E-05	1.41E-04
ENSG00000198223	CSF2RA	3.93E+00	3.88E-05	1.48E-04
ENSG00000133687	TMTC1	1.70E+00	3.94E-05	1.50E-04
ENSG00000187689	AMTN	4.19E+00	3.94E-05	1.50E-04
ENSG00000119689	DLST	1.14E+00	4.03E-05	1.53E-04



ENSG00000103449	SALL1	1.80E+00	4.03E-05	1.53E-04
ENSG00000167644	C19orf33	4.65E+00	4.12E-05	1.56E-04
ENSG00000086159	AQP6	4.55E+00	4.12E-05	1.56E-04
ENSG00000137842	TMEM62	1.52E+00	4.18E-05	1.58E-04
ENSG00000261889	AC108134.2	2.76E+00	4.20E-05	1.59E-04
ENSG00000188981	MSANTD1	3.88E+00	4.23E-05	1.60E-04
ENSG00000260260	SNHG19	1.18E+00	4.27E-05	1.62E-04
ENSG00000109762	SNX25	1.15E+00	4.31E-05	1.63E-04
ENSG00000225969	ABHD11-AS1	4.87E+00	4.31E-05	1.63E-04
ENSG00000139880	CDH24	1.55E+00	4.36E-05	1.65E-04
ENSG00000169418	NPR1	4.32E+00	4.38E-05	1.66E-04
ENSG00000164265	SCGB3A2	4.73E+00	4.57E-05	1.72E-04
ENSG00000187210	GCNT1	1.74E+00	4.58E-05	1.73E-04
ENSG00000213799	ZNF845	1.43E+00	4.62E-05	1.74E-04
ENSG00000106852	LHX6	2.52E+00	4.70E-05	1.77E-04
ENSG00000160190	SLC37A1	2.91E+00	4.93E-05	1.85E-04
ENSG00000273802	HIST1H2BG	1.68E+00	4.93E-05	1.85E-04
ENSG00000253438	PCAT1	3.11E+00	5.08E-05	1.90E-04
ENSG00000068615	REEP1	1.62E+00	5.11E-05	1.92E-04
ENSG00000156414	TDRD9	4.70E+00	5.12E-05	1.92E-04
ENSG00000254402	LRRC24	2.55E+00	5.12E-05	1.92E-04
ENSG00000185924	RTN4RL1	1.89E+00	5.14E-05	1.92E-04
ENSG00000149564	ESAM	2.45E+00	5.18E-05	1.94E-04
ENSG00000137507	LRRC32	4.33E+00	5.24E-05	1.96E-04
ENSG00000146477	SLC22A3	3.59E+00	5.32E-05	1.99E-04
ENSG00000235538	AL078602.1	4.54E+00	5.34E-05	1.99E-04
ENSG00000223638	RFPL4A	4.80E+00	5.38E-05	2.01E-04
ENSG00000171798	KNDC1	3.37E+00	5.45E-05	2.03E-04
ENSG00000072609	CHFR	1.03E+00	5.46E-05	2.03E-04
ENSG00000163885	CFAP100	4.91E+00	5.55E-05	2.06E-04
ENSG00000256481	AP006333.2	3.53E+00	5.67E-05	2.11E-04
ENSG00000108798	ABI3	3.74E+00	5.68E-05	2.11E-04
ENSG00000130147	SH3BP4	1.04E+00	5.68E-05	2.11E-04
ENSG00000139679	LPAR6	4.68E+00	5.73E-05	2.13E-04
ENSG00000163520	FBLN2	3.23E+00	5.75E-05	2.13E-04
ENSG00000172426	RSPH9	4.60E+00	5.78E-05	2.14E-04
ENSG00000225611	LINC02158	3.56E+00	5.78E-05	2.14E-04
ENSG00000180264	ADGRD2	4.83E+00	5.79E-05	2.15E-04
ENSG00000167780	SOAT2	3.28E+00	5.82E-05	2.15E-04
ENSG00000260220	CCDC187	4.16E+00	5.87E-05	2.17E-04

ENSG00000261594	TPBGL	2.45E+00	5.97E-05	2.21E-04
ENSG00000158292	GPR153	1.23E+00	6.01E-05	2.22E-04
ENSG00000214367	HAUS3	1.12E+00	6.05E-05	2.23E-04
ENSG00000184261	KCNK12	3.05E+00	6.05E-05	2.23E-04
ENSG00000168621	GDNF	2.59E+00	6.14E-05	2.26E-04
ENSG00000261514	LINC01976	4.92E+00	6.26E-05	2.31E-04
ENSG00000124602	UNC5CL	4.26E+00	6.40E-05	2.36E-04
ENSG00000279901	AC092117.2	2.93E+00	6.49E-05	2.39E-04
ENSG00000188283	ZNF383	1.31E+00	6.52E-05	2.40E-04
ENSG00000197405	C5AR1	3.07E+00	6.60E-05	2.43E-04
ENSG00000272293	AC083964.1	2.27E+00	6.67E-05	2.45E-04
ENSG00000269186	LINC01082	5.08E+00	6.73E-05	2.47E-04
ENSG00000150907	FOXO1	1.72E+00	6.74E-05	2.47E-04
ENSG00000170498	KISS1	5.46E+00	6.77E-05	2.48E-04
ENSG00000272459	AC139795.3	2.17E+00	6.79E-05	2.49E-04
ENSG00000180871	CXCR2	4.40E+00	6.95E-05	2.55E-04
ENSG00000267751	AC009005.1	2.44E+00	7.02E-05	2.57E-04
ENSG00000153234	NR4A2	3.54E+00	7.04E-05	2.58E-04
ENSG00000105321	CCDC9	1.33E+00	7.15E-05	2.61E-04
ENSG00000108405	P2RX1	4.67E+00	7.25E-05	2.65E-04
ENSG00000145687	SSBP2	2.55E+00	7.25E-05	2.65E-04
ENSG00000007402	CACNA2D2	1.85E+00	7.27E-05	2.65E-04
ENSG00000276952	AL121772.3	3.18E+00	7.30E-05	2.66E-04
ENSG00000099866	MADCAM1	2.47E+00	7.36E-05	2.69E-04
ENSG00000158158	CNNM4	1.12E+00	7.38E-05	2.69E-04
ENSG00000184678	HIST2H2BE	1.63E+00	7.39E-05	2.69E-04
ENSG00000130182	ZSCAN10	4.66E+00	7.45E-05	2.71E-04
ENSG00000108576	SLC6A4	4.20E+00	7.47E-05	2.72E-04
ENSG00000177984	LCN15	2.46E+00	7.50E-05	2.73E-04
ENSG00000164778	EN2	3.63E+00	7.60E-05	2.77E-04
ENSG00000172006	ZNF554	1.86E+00	7.62E-05	2.77E-04
ENSG00000138622	HCN4	3.03E+00	7.72E-05	2.80E-04
ENSG00000187513	GJA4	4.41E+00	7.78E-05	2.82E-04
ENSG00000182676	PPP1R27	3.74E+00	7.79E-05	2.83E-04
ENSG00000164972	C9orf24	3.99E+00	7.85E-05	2.85E-04
ENSG00000165731	RET	3.52E+00	7.92E-05	2.87E-04
ENSG00000123191	ATP7B	2.81E+00	7.95E-05	2.88E-04
ENSG00000160282	FTCD	2.98E+00	8.03E-05	2.91E-04
ENSG00000109101	FOXN1	4.66E+00	8.11E-05	2.93E-04
ENSG00000137393	RNF144B	2.26E+00	8.13E-05	2.94E-04

ENSG00000102886	GDPD3	1.91E+00	8.13E-05	2.94E-04
ENSG00000158125	XDH	2.89E+00	8.16E-05	2.95E-04
ENSG00000090006	LTBP4	1.18E+00	8.18E-05	2.95E-04
ENSG00000237499	WAKMAR2	2.23E+00	8.24E-05	2.97E-04
ENSG00000188818	ZDHHC11	2.90E+00	8.26E-05	2.98E-04
ENSG00000277449	CEBPB-AS1	2.21E+00	8.28E-05	2.98E-04
ENSG00000057149	SERPINB3	3.58E+00	8.31E-05	2.99E-04
ENSG00000268518	AC020909.2	4.78E+00	8.33E-05	3.00E-04
ENSG00000164938	TP53INP1	1.30E+00	8.45E-05	3.03E-04
ENSG00000268601	AC115522.1	3.59E+00	8.46E-05	3.04E-04
ENSG00000286519	AC009236.1	3.55E+00	8.65E-05	3.10E-04
ENSG00000287510	AL137857.1	4.89E+00	8.78E-05	3.15E-04
ENSG00000167701	GPT	4.57E+00	8.79E-05	3.15E-04
ENSG00000120156	TEK	3.74E+00	8.86E-05	3.17E-04
ENSG00000100302	RASD2	2.87E+00	8.92E-05	3.19E-04
ENSG00000185561	TLCD2	1.10E+00	8.92E-05	3.19E-04
ENSG00000069667	RORA	2.50E+00	8.93E-05	3.19E-04
ENSG00000070729	CNGB1	4.57E+00	9.10E-05	3.25E-04
ENSG00000001460	STPG1	1.51E+00	9.16E-05	3.27E-04
ENSG00000287413	AL449363.2	4.85E+00	9.28E-05	3.31E-04
ENSG00000131773	KHDRBS3	1.32E+00	9.53E-05	3.39E-04
ENSG00000160318	CLDND2	2.59E+00	9.55E-05	3.40E-04
ENSG00000196581	AJAP1	2.68E+00	9.61E-05	3.42E-04
ENSG00000124664	SPDEF	3.05E+00	9.71E-05	3.45E-04
ENSG00000186684	CYP27C1	1.28E+00	9.76E-05	3.47E-04
ENSG00000268858	AL118506.1	1.29E+00	9.82E-05	3.49E-04
ENSG00000101405	OXT	4.69E+00	9.85E-05	3.50E-04
ENSG00000011638	TMEM159	1.38E+00	1.01E-04	3.59E-04
ENSG00000236751	LINC01186	2.75E+00	1.02E-04	3.60E-04
ENSG00000267106	ZNF561-AS1	1.33E+00	1.02E-04	3.60E-04
ENSG00000104722	NEFM	4.19E+00	1.02E-04	3.61E-04
ENSG00000100298	APOBEC3H	4.43E+00	1.02E-04	3.62E-04
ENSG00000155962	CLIC2	3.59E+00	1.06E-04	3.73E-04
ENSG00000082269	FAM135A	1.10E+00	1.06E-04	3.73E-04
ENSG00000104154	SLC30A4	1.70E+00	1.06E-04	3.74E-04
ENSG00000262484	CCER2	3.53E+00	1.08E-04	3.80E-04
ENSG00000141540	TTYH2	1.96E+00	1.08E-04	3.82E-04
ENSG00000141449	GREB1L	1.21E+00	1.09E-04	3.84E-04
ENSG00000160336	ZNF761	1.61E+00	1.10E-04	3.87E-04
ENSG00000155918	RAET1L	3.55E+00	1.10E-04	3.88E-04

ENSG00000205363	INSYN1	1.79E+00	1.10E-04	3.88E-04
ENSG00000135205	CCDC146	1.93E+00	1.13E-04	3.98E-04
ENSG00000134571	MYBPC3	4.36E+00	1.13E-04	3.98E-04
ENSG00000226979	LTA	3.55E+00	1.13E-04	3.99E-04
ENSG00000236301	MRGPRG-AS1	4.50E+00	1.14E-04	4.01E-04
ENSG00000173093	CCDC63	4.01E+00	1.14E-04	4.02E-04
ENSG00000186162	CIDEC1	1.16E+00	1.17E-04	4.10E-04
ENSG00000164850	GP1R1	3.46E+00	1.18E-04	4.14E-04
ENSG00000170412	GPRC5C	1.20E+00	1.23E-04	4.28E-04
ENSG00000150967	ABCB9	1.14E+00	1.23E-04	4.30E-04
ENSG00000233558	AL050331.1	2.88E+00	1.23E-04	4.31E-04
ENSG00000183770	FOXL2	2.99E+00	1.24E-04	4.32E-04
ENSG00000260231	KDM7A-DT	2.14E+00	1.24E-04	4.32E-04
ENSG00000248538	AC022784.1	4.24E+00	1.25E-04	4.34E-04
ENSG00000187764	SEMA4D	1.14E+00	1.25E-04	4.36E-04
ENSG00000171790	SLFNL1	4.44E+00	1.26E-04	4.39E-04
ENSG00000101695	RNF125	2.25E+00	1.29E-04	4.50E-04
ENSG00000051009	FAM160A2	1.07E+00	1.31E-04	4.54E-04
ENSG00000102780	DGKH	1.39E+00	1.31E-04	4.54E-04
ENSG00000067191	CACNB1	1.52E+00	1.31E-04	4.56E-04
ENSG00000102935	ZNF423	1.58E+00	1.32E-04	4.59E-04
ENSG00000196420	S100A5	3.81E+00	1.32E-04	4.59E-04
ENSG00000204618	RNF39	3.75E+00	1.33E-04	4.62E-04
ENSG00000211892	IGHG4	4.86E+00	1.34E-04	4.63E-04
ENSG00000280287	AC131212.3	2.08E+00	1.35E-04	4.67E-04
ENSG00000196152	ZNF79	1.48E+00	1.36E-04	4.71E-04
ENSG00000236432	AC097662.1	2.72E+00	1.37E-04	4.73E-04
ENSG00000169946	ZFPM2	4.34E+00	1.40E-04	4.85E-04
ENSG00000182621	PLCB1	4.28E+00	1.40E-04	4.85E-04
ENSG00000285529	AC016816.1	5.01E+00	1.40E-04	4.85E-04
ENSG00000103852	TTC23	1.09E+00	1.41E-04	4.86E-04
ENSG00000197847	SLC22A20P	4.08E+00	1.42E-04	4.91E-04
ENSG00000144218	AFF3	2.58E+00	1.44E-04	4.98E-04
ENSG00000185640	KRT79	3.41E+00	1.45E-04	4.99E-04
ENSG00000172828	CES3	3.20E+00	1.45E-04	5.00E-04
ENSG00000166106	ADAMTS15	1.65E+00	1.46E-04	5.02E-04
ENSG00000253692	IGHEP1	4.66E+00	1.48E-04	5.09E-04
ENSG00000133794	ARNTL	1.15E+00	1.48E-04	5.10E-04
ENSG00000198198	SZT2	1.09E+00	1.50E-04	5.17E-04
ENSG00000270344	POC1B-AS1	1.81E+00	1.56E-04	5.34E-04

ENSG00000052795	FNIP2	1.05E+00	1.56E-04	5.36E-04
ENSG00000167614	TTYH1	3.57E+00	1.56E-04	5.36E-04
ENSG00000154265	ABCA5	1.17E+00	1.65E-04	5.64E-04
ENSG00000157873	TNFRSF14	2.73E+00	1.69E-04	5.77E-04
ENSG00000110876	SELPLG	2.35E+00	1.69E-04	5.77E-04
ENSG00000143556	S100A7	4.31E+00	1.69E-04	5.78E-04
ENSG00000078814	MYH7B	4.15E+00	1.71E-04	5.83E-04
ENSG00000160801	PTH1R	2.56E+00	1.72E-04	5.87E-04
ENSG00000115844	DLX2	1.66E+00	1.72E-04	5.87E-04
ENSG00000198342	ZNF442	2.14E+00	1.73E-04	5.90E-04
ENSG00000105516	DBP	1.18E+00	1.75E-04	5.96E-04
ENSG00000267655	AC125437.1	3.10E+00	1.75E-04	5.97E-04
ENSG00000062038	CDH3	1.78E+00	1.78E-04	6.06E-04
ENSG00000197283	SYNGAP1	1.75E+00	1.79E-04	6.08E-04
ENSG00000259904	ACTG1P15	4.53E+00	1.81E-04	6.15E-04
ENSG00000173805	HAP1	1.60E+00	1.81E-04	6.16E-04
ENSG00000116774	OLFML3	3.19E+00	1.83E-04	6.22E-04
ENSG00000166348	USP54	1.28E+00	1.83E-04	6.23E-04
ENSG00000149781	FERMT3	2.50E+00	1.86E-04	6.32E-04
ENSG00000259374	NDUFB4P11	4.55E+00	1.87E-04	6.33E-04
ENSG00000250041	AC069360.1	3.37E+00	1.88E-04	6.36E-04
ENSG00000197471	SPN	3.85E+00	1.89E-04	6.41E-04
ENSG00000135144	DTX1	4.37E+00	1.93E-04	6.51E-04
ENSG00000205922	ONECUT3	4.48E+00	1.93E-04	6.53E-04
ENSG00000132854	KANK4	1.85E+00	1.95E-04	6.57E-04
ENSG00000279035	AC022211.4	3.75E+00	1.96E-04	6.60E-04
ENSG00000272686	AC006333.2	1.82E+00	1.96E-04	6.62E-04
ENSG00000230453	ANKRD18B	1.10E+00	1.98E-04	6.66E-04
ENSG00000215458	AATBC	4.17E+00	1.99E-04	6.70E-04
ENSG00000023892	DEF6	1.10E+00	2.01E-04	6.76E-04
ENSG00000285848	AC025280.3	5.10E+00	2.03E-04	6.83E-04
ENSG00000174628	IQCK	1.27E+00	2.03E-04	6.84E-04
ENSG00000106078	COBL	3.47E+00	2.06E-04	6.92E-04
ENSG00000158023	WDR66	2.59E+00	2.08E-04	6.96E-04
ENSG00000135643	KCNMB4	3.37E+00	2.11E-04	7.06E-04
ENSG00000233930	KRTAP5-AS1	3.51E+00	2.11E-04	7.06E-04
ENSG00000164124	TMEM144	1.70E+00	2.12E-04	7.09E-04
ENSG00000106948	AKNA	1.41E+00	2.13E-04	7.14E-04
ENSG00000172508	CARNS1	3.76E+00	2.16E-04	7.23E-04
ENSG00000008516	MMP25	1.91E+00	2.17E-04	7.25E-04

ENSG00000188508	KRTDAP	4.48E+00	2.20E-04	7.34E-04
ENSG00000146700	SSC4D	3.43E+00	2.20E-04	7.35E-04
ENSG00000173269	MMRN2	3.51E+00	2.25E-04	7.50E-04
ENSG00000237515	SHISA9	2.24E+00	2.29E-04	7.63E-04
ENSG00000279692	AC110285.6	1.56E+00	2.31E-04	7.67E-04
ENSG00000167333	TRIM68	1.10E+00	2.34E-04	7.79E-04
ENSG00000144596	GRIP2	3.34E+00	2.36E-04	7.83E-04
ENSG00000163803	PLB1	3.23E+00	2.37E-04	7.87E-04
ENSG00000177181	RIMKLA	2.85E+00	2.40E-04	7.97E-04
ENSG00000100336	APOL4	3.72E+00	2.41E-04	7.97E-04
ENSG00000278993	AC002350.2	3.39E+00	2.46E-04	8.13E-04
ENSG00000261040	WFDC21P	1.50E+00	2.46E-04	8.14E-04
ENSG00000261609	GAN	1.01E+00	2.53E-04	8.35E-04
ENSG00000196220	SRGAP3	1.64E+00	2.54E-04	8.39E-04
ENSG00000168079	SCARA5	4.96E+00	2.54E-04	8.39E-04
ENSG00000085871	MGST2	1.21E+00	2.54E-04	8.40E-04
ENSG00000173011	TADA2B	1.04E+00	2.55E-04	8.41E-04
ENSG00000168453	HR	1.03E+00	2.61E-04	8.60E-04
ENSG00000164620	RELL2	1.20E+00	2.64E-04	8.71E-04
ENSG00000250251	PKD1P6	1.36E+00	2.65E-04	8.72E-04
ENSG00000107485	GATA3	1.42E+00	2.67E-04	8.77E-04
ENSG00000138111	MFSD13A	1.67E+00	2.69E-04	8.85E-04
ENSG00000171045	TSNARE1	1.79E+00	2.82E-04	9.23E-04
ENSG00000248334	WHAMMP2	1.81E+00	2.85E-04	9.32E-04
ENSG00000260807	AC009041.2	4.23E+00	2.87E-04	9.38E-04
ENSG00000160401	CFAP157	3.50E+00	2.88E-04	9.42E-04
ENSG00000225978	HAR1A	2.86E+00	2.88E-04	9.43E-04
ENSG00000165810	BTNL9	3.20E+00	2.88E-04	9.43E-04
ENSG00000160161	CILP2	1.42E+00	2.91E-04	9.50E-04
ENSG00000091129	NRCAM	3.49E+00	2.92E-04	9.52E-04
ENSG00000186442	KRT3	3.17E+00	2.92E-04	9.52E-04
ENSG00000106086	PLEKHA8	1.09E+00	2.94E-04	9.60E-04
ENSG00000105971	CAV2	1.02E+00	2.96E-04	9.64E-04
ENSG00000164120	HPGD	3.34E+00	3.02E-04	9.83E-04
ENSG00000213638	ADAT3	3.04E+00	3.02E-04	9.83E-04
ENSG00000105143	SLC1A6	4.40E+00	3.03E-04	9.87E-04
ENSG00000130300	PLVAP	4.14E+00	3.03E-04	9.87E-04
ENSG00000141404	GNAL	1.18E+00	3.05E-04	9.93E-04
ENSG00000268583	AC011466.1	3.30E+00	3.06E-04	9.96E-04
ENSG00000117115	PADI2	3.37E+00	3.07E-04	9.97E-04

ENSG00000272636	DOC2B	3.41E+00	3.08E-04	1.00E-03
ENSG00000258405	ZNF578	3.93E+00	3.11E-04	1.01E-03
ENSG00000155367	PPM1J	3.41E+00	3.13E-04	1.01E-03
ENSG00000236242	MYO16-AS1	4.42E+00	3.15E-04	1.02E-03
ENSG00000272836	AL022328.1	3.71E+00	3.19E-04	1.03E-03
ENSG00000182165	TP53TG1	1.15E+00	3.22E-04	1.05E-03
ENSG00000224153	LINC02054	4.27E+00	3.23E-04	1.05E-03
ENSG00000185338	SOCS1	1.01E+00	3.25E-04	1.05E-03
ENSG00000041353	RAB27B	1.82E+00	3.29E-04	1.07E-03
ENSG00000137628	DDX60	1.14E+00	3.33E-04	1.08E-03
ENSG00000182557	SPNS3	4.39E+00	3.34E-04	1.08E-03
ENSG00000101638	ST8SIA5	3.88E+00	3.41E-04	1.10E-03
ENSG00000170477	KRT4	4.53E+00	3.43E-04	1.11E-03
ENSG00000078081	LAMP3	1.95E+00	3.45E-04	1.11E-03
ENSG00000170909	OSCAR	3.30E+00	3.46E-04	1.12E-03
ENSG00000116833	NR5A2	4.02E+00	3.47E-04	1.12E-03
ENSG00000144119	C1QL2	4.34E+00	3.48E-04	1.12E-03
ENSG00000167984	NLRC3	3.90E+00	3.51E-04	1.13E-03
ENSG00000181135	ZNF707	1.20E+00	3.54E-04	1.14E-03
ENSG00000167654	ATCAY	3.14E+00	3.56E-04	1.14E-03
ENSG00000002746	HECW1	2.00E+00	3.68E-04	1.18E-03
ENSG00000198720	ANKRD13B	1.17E+00	3.72E-04	1.19E-03
ENSG00000198915	RASGEF1A	4.69E+00	3.75E-04	1.20E-03
ENSG00000188549	CCDC9B	1.21E+00	3.79E-04	1.21E-03
ENSG00000129993	CBFA2T3	4.29E+00	3.82E-04	1.22E-03
ENSG00000265096	C1QTNF1-AS1	2.31E+00	3.84E-04	1.22E-03
ENSG00000169239	CA5B	1.11E+00	3.85E-04	1.23E-03
ENSG00000162747	FCGR3B	4.42E+00	3.87E-04	1.23E-03
ENSG00000137648	TMPRSS4	4.39E+00	3.91E-04	1.25E-03
ENSG00000232453	LINC02777	3.97E+00	3.94E-04	1.26E-03
ENSG00000245848	CEBPA	1.59E+00	3.99E-04	1.27E-03
ENSG00000119547	ONECUT2	1.60E+00	4.01E-04	1.27E-03
ENSG00000102218	RP2	1.00E+00	4.12E-04	1.31E-03
ENSG00000137460	FHDC1	1.01E+00	4.15E-04	1.32E-03
ENSG00000241170	AP001992.1	2.43E+00	4.15E-04	1.32E-03
ENSG00000160973	FOXH1	4.47E+00	4.17E-04	1.32E-03
ENSG00000125798	FOXA2	2.85E+00	4.18E-04	1.32E-03
ENSG00000116544	DLGAP3	3.49E+00	4.18E-04	1.33E-03
ENSG00000232237	ASCL5	4.26E+00	4.27E-04	1.35E-03
ENSG00000066230	SLC9A3	4.48E+00	4.28E-04	1.35E-03

ENSG00000184916	JAG2	1.51E+00	4.29E-04	1.36E-03
ENSG00000259153	AC004816.1	1.04E+00	4.31E-04	1.36E-03
ENSG00000059915	PSD	1.51E+00	4.33E-04	1.37E-03
ENSG00000234546	LNCTAM34A	2.46E+00	4.38E-04	1.38E-03
ENSG00000237399	PITRM1-AS1	4.07E+00	4.39E-04	1.38E-03
ENSG00000197852	INKA2	1.09E+00	4.40E-04	1.39E-03
ENSG00000104848	KCNA7	3.98E+00	4.40E-04	1.39E-03
ENSG00000162643	WDR63	2.13E+00	4.41E-04	1.39E-03
ENSG00000248968	AC012640.1	2.42E+00	4.57E-04	1.44E-03
ENSG00000180438	TPRXL	4.66E+00	4.58E-04	1.44E-03
ENSG00000196296	ATP2A1	1.91E+00	4.60E-04	1.44E-03
ENSG00000183647	ZNF530	1.10E+00	4.60E-04	1.44E-03
ENSG00000244310	AC093904.3	4.08E+00	4.60E-04	1.44E-03
ENSG00000156384	SFR1	1.42E+00	4.66E-04	1.46E-03
ENSG00000197568	HHLA3	1.43E+00	4.72E-04	1.48E-03
ENSG00000206432	TMEM200C	3.70E+00	4.72E-04	1.48E-03
ENSG00000247317	LY6E-DT	2.74E+00	4.74E-04	1.48E-03
ENSG00000196358	NTNG2	3.58E+00	4.76E-04	1.49E-03
ENSG00000023839	ABCC2	2.16E+00	4.79E-04	1.50E-03
ENSG00000054690	PLEKHH1	2.46E+00	4.80E-04	1.50E-03
ENSG00000205903	ZNF316	1.05E+00	4.82E-04	1.50E-03
ENSG00000182484	WASH6P	1.76E+00	4.84E-04	1.51E-03
ENSG00000163497	FEV	3.65E+00	4.86E-04	1.52E-03
ENSG00000110436	SLC1A2	4.16E+00	4.89E-04	1.52E-03
ENSG00000246273	SBF2-AS1	2.06E+00	4.90E-04	1.53E-03
ENSG00000115112	TFCP2L1	3.10E+00	4.90E-04	1.53E-03
ENSG00000257702	LBX2-AS1	3.49E+00	4.95E-04	1.54E-03
ENSG00000157087	ATP2B2	4.32E+00	4.97E-04	1.55E-03
ENSG00000239998	LILRA2	4.26E+00	4.97E-04	1.55E-03
ENSG00000226742	HSBP1L1	1.42E+00	5.02E-04	1.56E-03
ENSG00000255100	AP003119.2	3.06E+00	5.05E-04	1.57E-03
ENSG00000204666	AC010624.1	3.30E+00	5.11E-04	1.59E-03
ENSG00000145708	CRHBP	3.49E+00	5.19E-04	1.61E-03
ENSG00000279571	AL162426.1	3.65E+00	5.21E-04	1.61E-03
ENSG00000226281	AL031123.1	4.50E+00	5.21E-04	1.61E-03
ENSG00000170537	TMC7	2.14E+00	5.21E-04	1.61E-03
ENSG00000143630	HCN3	1.55E+00	5.21E-04	1.62E-03
ENSG00000243660	ZNF487	1.78E+00	5.33E-04	1.65E-03
ENSG00000144488	ESPNL	3.35E+00	5.40E-04	1.67E-03
ENSG00000167799	NUDT8	1.43E+00	5.44E-04	1.68E-03



ENSG00000011201	ANOS1	1.59E+00	5.49E-04	1.69E-03
ENSG00000273174	AC108673.2	2.25E+00	5.53E-04	1.71E-03
ENSG00000286138	AC010336.8	2.97E+00	5.53E-04	1.71E-03
ENSG00000287677	AC025839.1	4.19E+00	5.54E-04	1.71E-03
ENSG00000213199	ASIC3	2.12E+00	5.58E-04	1.72E-03
ENSG00000197406	DIO3	3.93E+00	5.62E-04	1.73E-03
ENSG00000100968	NFATC4	3.94E+00	5.67E-04	1.74E-03
ENSG00000111863	ADTRP	2.46E+00	5.71E-04	1.76E-03
ENSG00000196754	S100A2	1.53E+00	5.72E-04	1.76E-03
ENSG00000047056	WDR37	1.31E+00	5.77E-04	1.78E-03
ENSG00000166188	ZNF319	1.35E+00	5.79E-04	1.78E-03
ENSG00000282961	PRNCR1	3.01E+00	5.91E-04	1.81E-03
ENSG00000212864	RNF208	1.75E+00	5.93E-04	1.82E-03
ENSG00000181016	LSMEM1	2.22E+00	6.01E-04	1.84E-03
ENSG00000240889	NDUFB2-AS1	1.67E+00	6.07E-04	1.86E-03
ENSG00000162341	TPCN2	1.42E+00	6.08E-04	1.86E-03
ENSG00000270640	AC104695.4	1.93E+00	6.15E-04	1.88E-03
ENSG00000165233	CARD19	1.09E+00	6.17E-04	1.89E-03
ENSG00000262370	AC108134.3	5.45E+00	6.19E-04	1.89E-03
ENSG00000065665	SEC61A2	1.07E+00	6.27E-04	1.91E-03
ENSG00000172663	TMEM134	1.01E+00	6.29E-04	1.92E-03
ENSG00000175294	CATSPER1	2.29E+00	6.29E-04	1.92E-03
ENSG00000204385	SLC44A4	4.21E+00	6.34E-04	1.94E-03
ENSG00000166888	STAT6	3.36E+00	6.36E-04	1.94E-03
ENSG00000231086	TSSK1A	4.20E+00	6.38E-04	1.95E-03
ENSG00000142538	PTH2	4.19E+00	6.39E-04	1.95E-03
ENSG00000271009	AC116667.1	1.97E+00	6.42E-04	1.96E-03
ENSG00000166257	SCN3B	2.46E+00	6.54E-04	1.99E-03
ENSG00000228793	AL033523.1	2.09E+00	6.59E-04	2.00E-03
ENSG00000160588	MPZL3	1.23E+00	6.60E-04	2.01E-03
ENSG00000140396	NCOA2	1.04E+00	6.66E-04	2.02E-03
ENSG00000179564	LSMEM2	4.52E+00	6.71E-04	2.04E-03
ENSG00000279140	AL590326.1	1.68E+00	6.75E-04	2.05E-03
ENSG00000165238	WNK2	1.69E+00	6.76E-04	2.05E-03
ENSG00000140795	MYLK3	4.14E+00	6.86E-04	2.08E-03
ENSG00000187122	SLIT1	4.10E+00	6.86E-04	2.08E-03
ENSG00000108342	CSF3	2.74E+00	6.91E-04	2.09E-03
ENSG00000197993	KEL	4.03E+00	6.95E-04	2.10E-03
ENSG00000253802	SIRLNT	1.20E+00	7.03E-04	2.13E-03
ENSG00000148408	CACNA1B	4.20E+00	7.11E-04	2.15E-03

ENSG00000131697	NPHP4	1.02E+00	7.12E-04	2.15E-03
ENSG00000260401	AP002761.4	4.34E+00	7.12E-04	2.15E-03
ENSG00000198169	ZNF251	1.18E+00	7.18E-04	2.17E-03
ENSG00000177614	PGBD5	3.63E+00	7.20E-04	2.17E-03
ENSG00000225720	AL031846.1	3.90E+00	7.29E-04	2.20E-03
ENSG00000166387	PPFIBP2	2.83E+00	7.31E-04	2.20E-03
ENSG00000155465	SLC7A7	1.61E+00	7.34E-04	2.21E-03
ENSG00000101194	SLC17A9	3.94E+00	7.40E-04	2.23E-03
ENSG00000255200	PGAM1P8	2.65E+00	7.47E-04	2.25E-03
ENSG00000119915	ELOVL3	4.09E+00	7.52E-04	2.26E-03
ENSG00000176956	LY6H	4.96E+00	7.64E-04	2.30E-03
ENSG00000262898	AC139099.2	4.01E+00	7.73E-04	2.32E-03
ENSG00000135439	AGAP2	2.76E+00	7.74E-04	2.32E-03
ENSG00000188755	TBC1D3P2	3.95E+00	7.75E-04	2.32E-03
ENSG00000122733	PHF24	3.96E+00	7.85E-04	2.35E-03
ENSG00000118960	HS1BP3	1.30E+00	7.88E-04	2.36E-03
ENSG00000273204	AC104506.1	2.47E+00	7.90E-04	2.36E-03
ENSG00000285188	AC008397.2	3.00E+00	7.93E-04	2.37E-03
ENSG00000187796	CARD9	2.61E+00	8.02E-04	2.40E-03
ENSG00000197614	MFAP5	4.17E+00	8.05E-04	2.40E-03
ENSG00000272994	AC012360.3	1.13E+00	8.09E-04	2.41E-03
ENSG00000162641	AKNAD1	2.90E+00	8.11E-04	2.42E-03
ENSG00000163792	TCF23	4.17E+00	8.16E-04	2.43E-03
ENSG00000121454	LHX4	2.78E+00	8.18E-04	2.44E-03
ENSG00000204498	NFKBIL1	1.34E+00	8.20E-04	2.44E-03
ENSG00000214049	UCA1	4.02E+00	8.28E-04	2.47E-03
ENSG00000048707	VPS13D	1.05E+00	8.31E-04	2.47E-03
ENSG00000139192	TAPBPL	2.00E+00	8.40E-04	2.50E-03
ENSG00000085465	OVGP1	3.00E+00	8.41E-04	2.50E-03
ENSG00000196357	ZNF565	1.50E+00	8.41E-04	2.50E-03
ENSG00000172985	SH3RF3	3.49E+00	8.45E-04	2.51E-03
ENSG00000167711	SERPINF2	2.93E+00	8.48E-04	2.52E-03
ENSG00000149295	DRD2	2.75E+00	8.53E-04	2.53E-03
ENSG00000168490	PHYHIP	1.63E+00	8.76E-04	2.60E-03
ENSG00000278920	AC005005.4	4.00E+00	8.86E-04	2.62E-03
ENSG00000100150	DEPDC5	1.12E+00	8.87E-04	2.62E-03
ENSG00000279161	AC093503.3	3.94E+00	8.90E-04	2.63E-03
ENSG00000129654	FOXJ1	2.65E+00	8.95E-04	2.65E-03
ENSG00000260103	AC012435.2	2.83E+00	9.02E-04	2.67E-03
ENSG00000261239	ANKRD26P1	3.70E+00	9.06E-04	2.68E-03

ENSG00000169509	CRCT1	4.31E+00	9.19E-04	2.71E-03
ENSG00000130783	CCDC62	3.72E+00	9.27E-04	2.74E-03
ENSG00000237596	AL138828.1	4.22E+00	9.30E-04	2.74E-03
ENSG00000187123	LYPD6	2.34E+00	9.44E-04	2.78E-03
ENSG00000135094	SDS	3.83E+00	9.46E-04	2.79E-03
ENSG00000133392	MYH11	4.00E+00	9.54E-04	2.81E-03
ENSG00000113749	HRH2	3.23E+00	9.57E-04	2.82E-03
ENSG00000168481	LGI3	2.62E+00	9.58E-04	2.82E-03
ENSG00000240891	PLCXD2	1.77E+00	9.59E-04	2.82E-03
ENSG00000197653	DNAH10	3.79E+00	9.63E-04	2.83E-03
ENSG00000180448	ARHGAP45	1.59E+00	9.67E-04	2.84E-03
ENSG00000182885	ADGRG3	2.95E+00	9.84E-04	2.89E-03
ENSG00000104133	SPG11	1.00E+00	9.88E-04	2.90E-03
ENSG00000173991	TCAP	1.93E+00	9.91E-04	2.91E-03
ENSG00000111249	CUX2	4.15E+00	9.93E-04	2.91E-03
ENSG00000212464	SNORA12	2.38E+00	1.01E-03	2.95E-03
ENSG00000118402	ELOVL4	1.12E+00	1.01E-03	2.96E-03
ENSG00000182600	SNORC	2.39E+00	1.03E-03	3.01E-03
ENSG00000068028	RASSF1	1.01E+00	1.03E-03	3.02E-03
ENSG00000143554	SLC27A3	1.43E+00	1.04E-03	3.06E-03
ENSG00000180769	WDFY3-AS2	1.45E+00	1.05E-03	3.08E-03
ENSG00000135709	KIAA0513	1.27E+00	1.07E-03	3.13E-03
ENSG00000258441	LINC00641	1.53E+00	1.07E-03	3.13E-03
ENSG00000172349	IL16	4.24E+00	1.09E-03	3.18E-03
ENSG00000250271	AC068647.2	3.02E+00	1.09E-03	3.18E-03
ENSG00000107859	PITX3	3.40E+00	1.09E-03	3.18E-03
ENSG00000119508	NR4A3	1.68E+00	1.09E-03	3.18E-03
ENSG00000267577	AC010327.4	4.73E+00	1.10E-03	3.21E-03
ENSG00000129595	EPB41L4A	4.09E+00	1.10E-03	3.21E-03
ENSG00000176809	LRRC37A3	2.18E+00	1.11E-03	3.24E-03
ENSG00000143774	GUK1	1.04E+00	1.13E-03	3.28E-03
ENSG00000134917	ADAMTS8	3.96E+00	1.13E-03	3.29E-03
ENSG00000074855	ANO8	1.53E+00	1.14E-03	3.30E-03
ENSG00000130829	DUSP9	1.06E+00	1.15E-03	3.35E-03
ENSG00000279491	AP003733.3	3.45E+00	1.16E-03	3.36E-03
ENSG00000164142	FAM160A1	1.48E+00	1.16E-03	3.37E-03
ENSG00000163536	SERPINI1	2.34E+00	1.17E-03	3.40E-03
ENSG00000169682	SPNS1	2.88E+00	1.17E-03	3.40E-03
ENSG00000224903	AC005534.1	3.50E+00	1.18E-03	3.41E-03
ENSG00000144681	STAC	2.76E+00	1.19E-03	3.43E-03

ENSG00000146707	POMZP3	1.20E+00	1.20E-03	3.47E-03
ENSG00000171695	LKAAEAR1	1.94E+00	1.20E-03	3.47E-03
ENSG00000136237	RAPGEF5	1.90E+00	1.21E-03	3.49E-03
ENSG00000183034	OTOP2	4.29E+00	1.22E-03	3.52E-03
ENSG00000049246	PER3	1.20E+00	1.23E-03	3.56E-03
ENSG00000105737	GRIK5	2.59E+00	1.25E-03	3.59E-03
ENSG00000204936	CD177	3.02E+00	1.25E-03	3.59E-03
ENSG00000226251	LINC02608	3.86E+00	1.25E-03	3.60E-03
ENSG00000248429	FAM198B-AS1	3.00E+00	1.27E-03	3.66E-03
ENSG00000227748	AL138916.1	4.07E+00	1.27E-03	3.66E-03
ENSG00000143429	LSP1P4	1.23E+00	1.27E-03	3.67E-03
ENSG00000225828	FAM229A	1.83E+00	1.31E-03	3.75E-03
ENSG00000132196	HSD17B7	1.13E+00	1.31E-03	3.75E-03
ENSG00000189221	MAOA	1.41E+00	1.31E-03	3.75E-03
ENSG00000116741	RGS2	3.79E+00	1.31E-03	3.77E-03
ENSG00000104983	CCDC61	1.39E+00	1.32E-03	3.77E-03
ENSG00000186919	ZACN	4.05E+00	1.32E-03	3.79E-03
ENSG00000224330	AC005019.2	4.46E+00	1.33E-03	3.80E-03
ENSG00000197483	ZNF628	1.02E+00	1.33E-03	3.80E-03
ENSG00000140092	FBLN5	3.24E+00	1.34E-03	3.84E-03
ENSG00000117266	CDK18	1.19E+00	1.37E-03	3.92E-03
ENSG00000205592	MUC19	3.32E+00	1.38E-03	3.95E-03
ENSG00000186283	TOR3A	1.15E+00	1.39E-03	3.97E-03
ENSG00000163624	CDS1	2.24E+00	1.41E-03	4.02E-03
ENSG00000273230	AC102953.2	1.26E+00	1.42E-03	4.04E-03
ENSG00000187268	FAM9C	4.47E+00	1.42E-03	4.05E-03
ENSG00000203900	AL121827.1	3.72E+00	1.42E-03	4.05E-03
ENSG00000149043	SYT8	3.96E+00	1.43E-03	4.07E-03
ENSG00000280011	AL031595.2	3.61E+00	1.44E-03	4.09E-03
ENSG00000198346	ZNF813	1.27E+00	1.44E-03	4.09E-03
ENSG00000095713	CRTAC1	3.44E+00	1.45E-03	4.11E-03
ENSG00000187134	AKR1C1	2.69E+00	1.45E-03	4.13E-03
ENSG00000177432	NAP1L5	1.27E+00	1.45E-03	4.13E-03
ENSG00000074317	SNCB	1.59E+00	1.46E-03	4.14E-03
ENSG00000224621	AL451042.1	3.53E+00	1.47E-03	4.18E-03
ENSG00000053702	NRIP2	3.70E+00	1.48E-03	4.21E-03
ENSG00000140557	ST8SIA2	4.63E+00	1.49E-03	4.22E-03
ENSG00000095587	TLL2	3.43E+00	1.50E-03	4.26E-03
ENSG00000285906	AC083855.2	3.74E+00	1.51E-03	4.27E-03
ENSG00000274828	AC068473.5	1.45E+00	1.51E-03	4.27E-03

ENSG00000233554	B4GALT1-AS1	3.11E+00	1.52E-03	4.29E-03
ENSG00000168071	CCDC88B	1.77E+00	1.53E-03	4.32E-03
ENSG00000100319	ZMAT5	1.19E+00	1.53E-03	4.32E-03
ENSG00000177464	GPR4	2.05E+00	1.54E-03	4.34E-03
ENSG00000107968	MAP3K8	1.70E+00	1.56E-03	4.40E-03
ENSG00000166736	HTR3A	4.40E+00	1.57E-03	4.41E-03
ENSG00000111261	MANSC1	2.12E+00	1.58E-03	4.46E-03
ENSG00000146856	AGBL3	1.79E+00	1.59E-03	4.47E-03
ENSG00000184347	SLIT3	2.52E+00	1.61E-03	4.52E-03
ENSG00000258839	MC1R	1.58E+00	1.61E-03	4.53E-03
ENSG00000176473	WDR25	1.11E+00	1.61E-03	4.53E-03
ENSG00000176771	NCKAP5	1.46E+00	1.62E-03	4.55E-03
ENSG00000143595	AQP10	4.03E+00	1.65E-03	4.64E-03
ENSG00000118308	LRMP	3.61E+00	1.67E-03	4.67E-03
ENSG00000105655	ISYNA1	1.13E+00	1.67E-03	4.68E-03
ENSG00000172361	CFAP53	2.89E+00	1.67E-03	4.68E-03
ENSG00000099840	IZUMO4	2.78E+00	1.68E-03	4.70E-03
ENSG00000271882	AP001330.4	3.07E+00	1.68E-03	4.72E-03
ENSG00000139890	REM2	2.41E+00	1.69E-03	4.74E-03
ENSG00000272115	AC233992.3	3.76E+00	1.71E-03	4.79E-03
ENSG00000267419	AC011477.1	1.90E+00	1.72E-03	4.82E-03
ENSG00000287200	AC022506.2	3.39E+00	1.72E-03	4.83E-03
ENSG00000129214	SHBG	2.66E+00	1.73E-03	4.84E-03
ENSG00000074660	SCARF1	2.54E+00	1.77E-03	4.95E-03
ENSG00000259820	AC083843.3	1.26E+00	1.77E-03	4.96E-03
ENSG00000168781	PPIP5K1	1.62E+00	1.81E-03	5.05E-03
ENSG00000107954	NEURL1	3.61E+00	1.82E-03	5.06E-03
ENSG00000176927	EFCAB5	2.24E+00	1.83E-03	5.09E-03
ENSG00000196814	MVB12B	1.31E+00	1.86E-03	5.16E-03
ENSG00000188368	PRR19	2.04E+00	1.87E-03	5.20E-03
ENSG00000085514	PILRA	3.14E+00	1.88E-03	5.21E-03
ENSG00000161944	ASGR2	4.08E+00	1.90E-03	5.28E-03
ENSG00000270210	AC104695.3	3.93E+00	1.90E-03	5.28E-03
ENSG00000178502	KLHL11	1.95E+00	1.92E-03	5.33E-03
ENSG00000139832	RAB20	1.15E+00	1.95E-03	5.39E-03
ENSG00000253716	MINCR	1.96E+00	1.96E-03	5.40E-03
ENSG00000197956	S100A6	1.37E+00	1.97E-03	5.43E-03
ENSG00000197587	DMBX1	3.04E+00	1.99E-03	5.49E-03
ENSG00000253200	AC037459.2	2.63E+00	1.99E-03	5.50E-03
ENSG00000162894	FCMR	2.72E+00	2.02E-03	5.58E-03

ENSG00000142748	FCN3	4.56E+00	2.05E-03	5.65E-03
ENSG00000282988	AL031777.3	2.53E+00	2.05E-03	5.65E-03
ENSG00000213088	ACKR1	3.22E+00	2.06E-03	5.68E-03
ENSG00000184144	CNTN2	5.13E+00	2.07E-03	5.70E-03
ENSG00000158856	DMTN	1.62E+00	2.07E-03	5.70E-03
ENSG00000261790	AC005606.2	4.27E+00	2.08E-03	5.72E-03
ENSG00000154485	MMP21	4.05E+00	2.09E-03	5.76E-03
ENSG00000163141	BNIPL	2.60E+00	2.10E-03	5.77E-03
ENSG00000285756	BX890604.2	1.04E+00	2.11E-03	5.81E-03
ENSG00000197561	ELANE	3.91E+00	2.11E-03	5.81E-03
ENSG00000145040	UCN2	1.11E+00	2.14E-03	5.88E-03
ENSG00000138795	LEF1	3.33E+00	2.15E-03	5.89E-03
ENSG00000258891	AC005480.1	4.76E+00	2.16E-03	5.91E-03
ENSG00000163958	ZDHH19	1.81E+00	2.16E-03	5.92E-03
ENSG00000237575	PYY2	3.17E+00	2.17E-03	5.94E-03
ENSG00000277117	FP565260.3	2.95E+00	2.19E-03	5.99E-03
ENSG00000116254	CHD5	2.24E+00	2.19E-03	6.00E-03
ENSG00000257513	NPIPB1P	4.16E+00	2.23E-03	6.10E-03
ENSG00000268460	AC006262.1	3.66E+00	2.23E-03	6.12E-03
ENSG00000168491	CCDC110	3.95E+00	2.24E-03	6.13E-03
ENSG00000273448	AC006480.2	2.58E+00	2.28E-03	6.23E-03
ENSG00000153157	SYCP2L	1.43E+00	2.30E-03	6.28E-03
ENSG00000160838	LRRRC71	4.03E+00	2.32E-03	6.32E-03
ENSG00000243742	RPLP0P2	1.40E+00	2.32E-03	6.32E-03
ENSG00000251455	AC092611.1	3.68E+00	2.34E-03	6.38E-03
ENSG00000247271	ZBED5-AS1	1.65E+00	2.36E-03	6.42E-03
ENSG00000138311	ZNF365	1.55E+00	2.36E-03	6.43E-03
ENSG00000177133	PRDM16-DT	2.97E+00	2.36E-03	6.44E-03
ENSG00000143333	RGS16	2.38E+00	2.38E-03	6.49E-03
ENSG00000105290	APLP1	1.08E+00	2.39E-03	6.52E-03
ENSG00000175003	SLC22A1	2.27E+00	2.42E-03	6.58E-03
ENSG00000163362	INAVA	1.94E+00	2.42E-03	6.58E-03
ENSG00000151090	THRB	3.24E+00	2.43E-03	6.60E-03
ENSG00000151133	CCDC88C	1.68E+00	2.44E-03	6.64E-03
ENSG00000122254	HS3ST2	4.01E+00	2.45E-03	6.66E-03
ENSG00000252835	SCARNA21	3.73E+00	2.45E-03	6.66E-03
ENSG00000161921	CXCL16	1.24E+00	2.46E-03	6.67E-03
ENSG00000142611	PRDM16	2.06E+00	2.46E-03	6.68E-03
ENSG00000261087	AP003469.4	2.53E+00	2.47E-03	6.70E-03
ENSG00000224652	LINC00885	4.02E+00	2.47E-03	6.70E-03

ENSG00000187045	TMPRSS6	4.09E+00	2.51E-03	6.80E-03
ENSG00000163491	NEK10	2.45E+00	2.51E-03	6.81E-03
ENSG00000197580	BCO2	2.73E+00	2.54E-03	6.87E-03
ENSG00000239868	RN7SL34P	4.16E+00	2.55E-03	6.92E-03
ENSG00000261845	AC124283.1	3.82E+00	2.59E-03	6.99E-03
ENSG00000180316	PNPLA1	3.82E+00	2.60E-03	7.04E-03
ENSG00000259790	ANP32BP1	3.49E+00	2.61E-03	7.05E-03
ENSG00000205488	CALML3-AS1	3.28E+00	2.64E-03	7.12E-03
ENSG00000160255	ITGB2	3.11E+00	2.64E-03	7.13E-03
ENSG00000187391	MAGI2	1.54E+00	2.65E-03	7.14E-03
ENSG00000169252	ADRB2	3.12E+00	2.65E-03	7.16E-03
ENSG00000103241	FOXF1	1.45E+00	2.68E-03	7.22E-03
ENSG00000101441	CST4	4.40E+00	2.68E-03	7.23E-03
ENSG00000229585	RPL21P44	2.07E+00	2.69E-03	7.24E-03
ENSG00000140022	STON2	2.47E+00	2.70E-03	7.27E-03
ENSG00000236204	LINC01376	4.18E+00	2.72E-03	7.32E-03
ENSG00000189423	USP32P3	1.48E+00	2.75E-03	7.39E-03
ENSG00000219133	AL592114.1	3.67E+00	2.76E-03	7.42E-03
ENSG00000261278	AC009094.1	3.58E+00	2.76E-03	7.42E-03
ENSG00000248489	LINC02062	1.67E+00	2.78E-03	7.45E-03
ENSG00000204315	FKBPL	1.23E+00	2.80E-03	7.52E-03
ENSG00000166682	TMPRSS5	3.13E+00	2.81E-03	7.54E-03
ENSG00000230798	FOXD3-AS1	2.39E+00	2.82E-03	7.55E-03
ENSG00000131095	GFAP	3.47E+00	2.83E-03	7.59E-03
ENSG00000169704	GP9	4.36E+00	2.87E-03	7.67E-03
ENSG00000228288	PCAT6	2.83E+00	2.87E-03	7.69E-03
ENSG00000088320	REM1	3.78E+00	2.88E-03	7.72E-03
ENSG00000147394	ZNF185	1.67E+00	2.89E-03	7.73E-03
ENSG00000171817	ZNF540	1.98E+00	2.89E-03	7.73E-03
ENSG00000264148	AC138207.3	2.47E+00	2.89E-03	7.74E-03
ENSG00000198771	RCSD1	3.32E+00	2.96E-03	7.90E-03
ENSG00000196666	FAM180B	3.70E+00	2.96E-03	7.90E-03
ENSG00000141441	GAREM1	2.47E+00	2.99E-03	7.96E-03
ENSG00000249618	LINC02465	4.63E+00	2.99E-03	7.97E-03
ENSG00000262877	AC110285.2	2.24E+00	3.01E-03	8.01E-03
ENSG00000198650	TAT	3.85E+00	3.04E-03	8.08E-03
ENSG00000225889	AC012368.1	4.54E+00	3.05E-03	8.11E-03
ENSG00000130045	NXNL2	2.08E+00	3.07E-03	8.15E-03
ENSG00000226864	ATE1-AS1	1.87E+00	3.08E-03	8.17E-03
ENSG00000224721	AC007182.1	3.74E+00	3.09E-03	8.20E-03

ENSG00000159212	CLIC6	3.17E+00	3.10E-03	8.24E-03
ENSG00000145911	N4BP3	2.75E+00	3.11E-03	8.25E-03
ENSG00000231160	KLF3-AS1	3.41E+00	3.12E-03	8.28E-03
ENSG00000177551	NHLH2	2.26E+00	3.13E-03	8.31E-03
ENSG00000165025	SYK	4.19E+00	3.14E-03	8.31E-03
ENSG00000256955	AC131009.2	2.36E+00	3.15E-03	8.35E-03
ENSG00000103740	ACSBG1	3.86E+00	3.16E-03	8.36E-03
ENSG00000141837	CACNA1A	1.27E+00	3.16E-03	8.38E-03
ENSG00000205323	SARNP	1.38E+00	3.17E-03	8.38E-03
ENSG00000102003	SYP	1.42E+00	3.20E-03	8.46E-03
ENSG00000286288	AL109809.5	3.49E+00	3.21E-03	8.49E-03
ENSG00000268218	AC137932.3	3.01E+00	3.23E-03	8.53E-03
ENSG00000122133	PAEP	3.51E+00	3.28E-03	8.66E-03
ENSG00000088538	DOCK3	1.62E+00	3.29E-03	8.68E-03
ENSG00000163959	SLC51A	3.24E+00	3.30E-03	8.71E-03
ENSG00000118407	FILIP1	2.34E+00	3.30E-03	8.71E-03
ENSG00000149243	KLHL35	4.30E+00	3.37E-03	8.86E-03
ENSG00000141665	FBXO15	2.95E+00	3.39E-03	8.91E-03
ENSG00000064655	EYA2	1.54E+00	3.40E-03	8.94E-03
ENSG00000182575	NXPH3	2.61E+00	3.43E-03	9.01E-03
ENSG00000144821	MYH15	3.11E+00	3.45E-03	9.06E-03
ENSG00000176472	ZNF575	2.27E+00	3.46E-03	9.08E-03
ENSG00000263201	DPEP2NB	3.71E+00	3.46E-03	9.10E-03
ENSG00000244558	KCNK15-AS1	2.98E+00	3.50E-03	9.18E-03
ENSG00000143226	FCGR2A	3.00E+00	3.51E-03	9.20E-03
ENSG00000166145	SPINT1	2.07E+00	3.51E-03	9.20E-03
ENSG00000203722	RAET1G	2.30E+00	3.54E-03	9.27E-03
ENSG00000178404	CEP295NL	2.35E+00	3.56E-03	9.32E-03
ENSG00000287170	AC010327.8	3.30E+00	3.59E-03	9.40E-03
ENSG00000135077	HAVCR2	3.87E+00	3.59E-03	9.41E-03
ENSG00000125084	WNT1	4.00E+00	3.62E-03	9.47E-03
ENSG00000184060	ADAP2	2.89E+00	3.66E-03	9.56E-03
ENSG00000266680	AL135905.1	2.80E+00	3.67E-03	9.60E-03
ENSG00000153789	FAM92B	2.63E+00	3.67E-03	9.60E-03
ENSG00000270681	AC095055.1	3.31E+00	3.69E-03	9.65E-03
ENSG00000188766	SPRED3	2.36E+00	3.71E-03	9.69E-03
ENSG00000121797	CCRL2	2.88E+00	3.72E-03	9.69E-03
ENSG00000105219	CNTD2	3.41E+00	3.72E-03	9.70E-03
ENSG00000159714	ZDHHC1	3.67E+00	3.74E-03	9.74E-03
ENSG00000069702	TGFBR3	1.89E+00	3.75E-03	9.76E-03



ENSG00000163472	TMEM79	1.13E+00	3.75E-03	9.77E-03
ENSG00000228126	FALEC	1.81E+00	3.76E-03	9.80E-03
ENSG00000270091	AC015726.1	2.13E+00	3.77E-03	9.82E-03
ENSG00000278383	AL031673.1	2.73E+00	3.77E-03	9.82E-03
ENSG00000269028	MTRNR2L12	2.34E+00	3.78E-03	9.82E-03
ENSG00000166924	NYAP1	3.08E+00	3.79E-03	9.85E-03
ENSG00000111087	GLI1	2.29E+00	3.80E-03	9.88E-03
ENSG00000106258	CYP3A5	3.52E+00	3.80E-03	9.88E-03
ENSG00000196139	AKR1C3	2.99E+00	3.81E-03	9.90E-03
ENSG00000286156	AC026273.1	1.10E+00	3.83E-03	9.94E-03
ENSG00000147036	LANCL3	3.14E+00	3.83E-03	9.95E-03
ENSG00000166220	TBATA	4.08E+00	3.84E-03	9.96E-03
ENSG00000260302	AP005482.1	3.02E+00	3.85E-03	9.98E-03
ENSG00000255642	PABPC1P4	1.16E+00	3.91E-03	1.01E-02
ENSG00000111837	MAK	1.52E+00	3.94E-03	1.02E-02
ENSG00000142405	NLRP12	4.05E+00	3.94E-03	1.02E-02
ENSG00000198855	FICD	1.33E+00	3.95E-03	1.02E-02
ENSG00000264575	LINC00526	1.92E+00	3.96E-03	1.02E-02
ENSG00000141622	RNF165	1.20E+00	3.96E-03	1.03E-02
ENSG00000248593	DSTNP2	1.31E+00	3.97E-03	1.03E-02
ENSG00000108381	ASPA	3.10E+00	3.97E-03	1.03E-02
ENSG00000178623	GPR35	2.15E+00	3.97E-03	1.03E-02
ENSG00000101049	SGK2	3.05E+00	3.98E-03	1.03E-02
ENSG00000173110	HSPA6	1.92E+00	4.01E-03	1.04E-02
ENSG00000104967	NOVA2	2.19E+00	4.03E-03	1.04E-02
ENSG00000264112	AC015813.1	2.30E+00	4.04E-03	1.04E-02
ENSG00000211891	IGHE	3.91E+00	4.07E-03	1.05E-02
ENSG00000135063	FAM189A2	3.68E+00	4.08E-03	1.05E-02
ENSG00000120903	CHRNA2	3.90E+00	4.10E-03	1.06E-02
ENSG00000234580	AL356157.1	3.99E+00	4.10E-03	1.06E-02
ENSG00000187135	VSTM2B	3.51E+00	4.12E-03	1.06E-02
ENSG00000104728	ARHGEF10	1.18E+00	4.12E-03	1.06E-02
ENSG00000219163	HMGB1P20	3.01E+00	4.12E-03	1.06E-02
ENSG00000260942	CAPN10-DT	1.21E+00	4.13E-03	1.06E-02
ENSG00000261655	AC100803.3	3.48E+00	4.13E-03	1.06E-02
ENSG00000143412	ANXA9	3.42E+00	4.16E-03	1.07E-02
ENSG00000138136	LBX1	3.44E+00	4.16E-03	1.07E-02
ENSG00000173013	CCDC96	1.50E+00	4.18E-03	1.08E-02
ENSG00000267249	AP005482.3	1.99E+00	4.18E-03	1.08E-02
ENSG00000179832	MROH1	1.13E+00	4.19E-03	1.08E-02

ENSG00000153902	LGI4	2.32E+00	4.20E-03	1.08E-02
ENSG00000260160	AC011468.1	2.03E+00	4.26E-03	1.09E-02
ENSG00000261542	AC011978.2	1.97E+00	4.27E-03	1.10E-02
ENSG00000142609	CFAP74	2.56E+00	4.28E-03	1.10E-02
ENSG00000186190	BPIFB3	4.37E+00	4.28E-03	1.10E-02
ENSG00000095370	SH2D3C	2.67E+00	4.28E-03	1.10E-02
ENSG00000124194	GDAP1L1	2.33E+00	4.29E-03	1.10E-02
ENSG00000099251	HSD17B7P2	2.97E+00	4.30E-03	1.10E-02
ENSG00000069424	KCNAB2	1.23E+00	4.30E-03	1.10E-02
ENSG00000170827	CELP	3.79E+00	4.34E-03	1.11E-02
ENSG00000170325	PRDM10	1.01E+00	4.38E-03	1.12E-02
ENSG00000130540	SULT4A1	2.56E+00	4.40E-03	1.13E-02
ENSG00000254614	AP003068.2	1.52E+00	4.41E-03	1.13E-02
ENSG00000166448	TMEM130	2.86E+00	4.41E-03	1.13E-02
ENSG00000182771	GRID1	3.16E+00	4.47E-03	1.14E-02
ENSG00000252010	SCARNA5	1.86E+00	4.50E-03	1.15E-02
ENSG00000136457	CHAD	3.76E+00	4.50E-03	1.15E-02
ENSG00000261068	AL512274.1	3.93E+00	4.53E-03	1.16E-02
ENSG00000173227	SYT12	1.68E+00	4.54E-03	1.16E-02
ENSG00000283511	AC137936.2	3.06E+00	4.57E-03	1.17E-02
ENSG00000164695	CHMP4C	2.83E+00	4.57E-03	1.17E-02
ENSG00000253230	LINC00599	4.98E+00	4.60E-03	1.17E-02
ENSG00000276851	AC002401.4	1.74E+00	4.62E-03	1.18E-02
ENSG00000154263	ABCA10	2.59E+00	4.79E-03	1.22E-02
ENSG00000198221	AFDN-DT	3.75E+00	4.82E-03	1.22E-02
ENSG00000167971	CASKIN1	2.24E+00	4.82E-03	1.22E-02
ENSG00000143882	ATP6V1C2	3.52E+00	4.85E-03	1.23E-02
ENSG00000100362	PVALB	3.99E+00	4.86E-03	1.23E-02
ENSG00000233098	CCDC144NL-A	2.46E+00	4.92E-03	1.25E-02
ENSG00000008056	SYN1	2.37E+00	4.98E-03	1.26E-02
ENSG00000182938	OTOP3	4.51E+00	4.99E-03	1.26E-02
ENSG00000259711	AC106738.1	3.83E+00	5.02E-03	1.27E-02
ENSG00000167641	PPP1R14A	2.89E+00	5.03E-03	1.27E-02
ENSG00000138347	MYPN	2.34E+00	5.05E-03	1.28E-02
ENSG00000002933	TMEM176A	4.54E+00	5.07E-03	1.28E-02
ENSG00000137877	SPTBN5	2.62E+00	5.14E-03	1.30E-02
ENSG00000143248	RGS5	2.15E+00	5.14E-03	1.30E-02
ENSG00000136167	LCP1	1.74E+00	5.22E-03	1.31E-02
ENSG00000106077	ABHD11	1.04E+00	5.22E-03	1.31E-02
ENSG00000204540	PSORS1C1	2.63E+00	5.29E-03	1.33E-02

ENSG00000136960	ENPP2	2.11E+00	5.30E-03	1.33E-02
ENSG00000170190	SLC16A5	1.16E+00	5.33E-03	1.34E-02
ENSG00000147697	GSDMC	3.64E+00	5.34E-03	1.34E-02
ENSG00000189420	ZFP92	1.95E+00	5.35E-03	1.34E-02
ENSG00000273489	AC008264.2	3.47E+00	5.37E-03	1.35E-02
ENSG00000174130	TLR6	1.50E+00	5.37E-03	1.35E-02
ENSG00000272842	AL391834.1	2.37E+00	5.45E-03	1.36E-02
ENSG00000246203	AL353807.3	3.08E+00	5.46E-03	1.37E-02
ENSG00000177363	LRRN4CL	3.15E+00	5.61E-03	1.40E-02
ENSG00000177398	UMODL1	4.29E+00	5.61E-03	1.40E-02
ENSG00000173320	STOX2	2.06E+00	5.65E-03	1.41E-02
ENSG00000222035	KIAA2012-AS1	3.51E+00	5.66E-03	1.41E-02
ENSG00000259494	MRPL46	1.44E+00	5.72E-03	1.43E-02
ENSG00000188277	C15orf62	3.18E+00	5.73E-03	1.43E-02
ENSG00000167992	VWCE	2.75E+00	5.73E-03	1.43E-02
ENSG00000125046	SSUH2	2.94E+00	5.76E-03	1.43E-02
ENSG00000205642	VCX3B	2.81E+00	5.79E-03	1.44E-02
ENSG00000135519	KCNH3	1.56E+00	5.82E-03	1.45E-02
ENSG00000177025	C19orf18	2.08E+00	5.83E-03	1.45E-02
ENSG00000276170	AC244153.1	2.20E+00	5.95E-03	1.48E-02
ENSG00000163328	GPR155	1.54E+00	6.01E-03	1.49E-02
ENSG00000169548	ZNF280A	3.66E+00	6.03E-03	1.49E-02
ENSG00000006071	ABCC8	3.93E+00	6.03E-03	1.50E-02
ENSG00000151136	BTBD11	2.96E+00	6.05E-03	1.50E-02
ENSG00000255823	MTRNR2L8	2.90E+00	6.05E-03	1.50E-02
ENSG00000149418	ST14	3.14E+00	6.06E-03	1.50E-02
ENSG00000227070	AC104170.1	3.60E+00	6.08E-03	1.50E-02
ENSG00000288380	CRIPAK	1.76E+00	6.09E-03	1.51E-02
ENSG00000204344	STK19	1.33E+00	6.09E-03	1.51E-02
ENSG00000177465	ACOT4	1.47E+00	6.18E-03	1.53E-02
ENSG00000163564	PYHIN1	3.42E+00	6.19E-03	1.53E-02
ENSG00000232079	LINC01697	4.13E+00	6.22E-03	1.54E-02
ENSG00000162105	SHANK2	4.00E+00	6.26E-03	1.55E-02
ENSG00000214612	RPS19P1	1.83E+00	6.27E-03	1.55E-02
ENSG00000006740	ARHGAP44	1.33E+00	6.27E-03	1.55E-02
ENSG00000160781	PAQR6	3.17E+00	6.31E-03	1.56E-02
ENSG00000109265	KIAA1211	2.53E+00	6.36E-03	1.57E-02
ENSG00000257831	AL136418.1	4.41E+00	6.42E-03	1.58E-02
ENSG00000102575	ACP5	2.93E+00	6.44E-03	1.58E-02
ENSG00000267719	LINC02078	3.97E+00	6.47E-03	1.59E-02

ENSG00000272106	AL691432.2	1.57E+00	6.47E-03	1.59E-02
ENSG00000272288	AL451165.2	1.66E+00	6.55E-03	1.61E-02
ENSG00000105613	MAST1	1.43E+00	6.59E-03	1.62E-02
ENSG00000064201	TSPAN32	4.20E+00	6.60E-03	1.62E-02
ENSG00000129646	QRICH2	2.28E+00	6.64E-03	1.63E-02
ENSG00000148541	FAM13C	2.02E+00	6.68E-03	1.64E-02
ENSG00000272092	AC087623.2	2.87E+00	6.71E-03	1.64E-02
ENSG00000197016	ZNF470	1.02E+00	6.71E-03	1.64E-02
ENSG00000205464	ATP6AP1L	1.08E+00	6.73E-03	1.65E-02
ENSG00000095303	PTGS1	1.92E+00	6.75E-03	1.65E-02
ENSG00000168404	MLKL	1.05E+00	6.78E-03	1.66E-02
ENSG00000182870	GALNT9	2.77E+00	6.79E-03	1.66E-02
ENSG00000261997	AC007336.1	2.32E+00	6.91E-03	1.69E-02
ENSG00000122679	RAMP3	3.83E+00	6.91E-03	1.69E-02
ENSG00000251141	MRPS30-DT	2.71E+00	6.94E-03	1.70E-02
ENSG00000189233	NUGGC	3.71E+00	6.96E-03	1.70E-02
ENSG00000260086	AC007611.1	2.56E+00	6.96E-03	1.70E-02
ENSG00000177076	ACER2	2.50E+00	7.01E-03	1.71E-02
ENSG00000175556	LONRF3	2.09E+00	7.08E-03	1.73E-02
ENSG00000137642	SORL1	2.14E+00	7.08E-03	1.73E-02
ENSG00000100433	KCNK10	3.68E+00	7.12E-03	1.74E-02
ENSG00000139629	GALNT6	1.24E+00	7.16E-03	1.75E-02
ENSG00000279092	AC025678.3	1.43E+00	7.23E-03	1.76E-02
ENSG00000186191	BPIFB4	3.74E+00	7.27E-03	1.77E-02
ENSG00000167608	TMC4	3.57E+00	7.33E-03	1.78E-02
ENSG00000270195	AC016773.1	2.21E+00	7.34E-03	1.78E-02
ENSG00000155980	KIF5A	2.39E+00	7.50E-03	1.82E-02
ENSG00000185332	AC027601.1	4.05E+00	7.50E-03	1.82E-02
ENSG00000104826	LHB	3.04E+00	7.54E-03	1.83E-02
ENSG00000146005	PSD2	2.75E+00	7.54E-03	1.83E-02
ENSG00000099869	IGF2-AS	3.59E+00	7.56E-03	1.83E-02
ENSG00000119457	SLC46A2	3.86E+00	7.63E-03	1.85E-02
ENSG00000212694	LINC01089	1.20E+00	7.66E-03	1.85E-02
ENSG00000019186	CYP24A1	2.67E+00	7.75E-03	1.87E-02
ENSG00000257950	P2RX5-TAX1BI	2.39E+00	7.78E-03	1.88E-02
ENSG00000273311	DGCR11	1.24E+00	7.82E-03	1.89E-02
ENSG00000174951	FUT1	1.17E+00	7.83E-03	1.89E-02
ENSG00000186230	ZNF749	1.44E+00	7.88E-03	1.90E-02
ENSG00000279227	AC009303.4	1.94E+00	7.90E-03	1.91E-02
ENSG00000162383	SLC1A7	3.36E+00	7.96E-03	1.92E-02

ENSG00000111319	SCNN1A	2.66E+00	7.98E-03	1.92E-02
ENSG00000198590	C3orf35	2.18E+00	8.00E-03	1.93E-02
ENSG00000273137	AL022328.2	2.93E+00	8.04E-03	1.94E-02
ENSG00000183778	B3GALT5	4.09E+00	8.04E-03	1.94E-02
ENSG00000181126	HLA-V	4.15E+00	8.06E-03	1.94E-02
ENSG00000088002	SULT2B1	2.43E+00	8.08E-03	1.94E-02
ENSG00000211897	IGHG3	3.35E+00	8.11E-03	1.95E-02
ENSG00000135299	ANKRD6	1.17E+00	8.15E-03	1.96E-02
ENSG00000253878	AC087752.3	4.49E+00	8.27E-03	1.98E-02
ENSG00000197046	SIGLEC15	3.69E+00	8.32E-03	1.99E-02
ENSG00000274341	AC005899.6	3.96E+00	8.33E-03	2.00E-02
ENSG00000142583	SLC2A5	2.75E+00	8.37E-03	2.01E-02
ENSG00000167074	TEF	1.51E+00	8.50E-03	2.03E-02
ENSG00000152315	KCNK13	3.04E+00	8.52E-03	2.04E-02
ENSG00000260317	AC009812.4	2.10E+00	8.55E-03	2.04E-02
ENSG00000179913	B3GNT3	3.61E+00	8.56E-03	2.05E-02
ENSG00000138378	STAT4	3.86E+00	8.58E-03	2.05E-02
ENSG00000121075	TBX4	3.75E+00	8.58E-03	2.05E-02
ENSG00000267226	AC104971.1	3.24E+00	8.63E-03	2.06E-02
ENSG00000112499	SLC22A2	3.36E+00	8.67E-03	2.07E-02
ENSG00000189223	PAX8-AS1	3.01E+00	8.71E-03	2.08E-02
ENSG00000010327	STAB1	3.68E+00	8.72E-03	2.08E-02
ENSG00000250312	ZNF718	1.38E+00	8.75E-03	2.08E-02
ENSG00000239569	KMT2E-AS1	1.74E+00	8.78E-03	2.09E-02
ENSG00000186564	FOXD2	1.13E+00	8.84E-03	2.11E-02
ENSG00000152056	AP1S3	1.00E+00	8.90E-03	2.12E-02
ENSG00000115718	PROC	1.85E+00	8.96E-03	2.13E-02
ENSG00000245275	SAP30L-AS1	1.76E+00	9.00E-03	2.14E-02
ENSG00000163082	SGPP2	3.13E+00	9.05E-03	2.15E-02
ENSG00000151067	CACNA1C	1.29E+00	9.08E-03	2.16E-02
ENSG00000130700	GATA5	2.22E+00	9.11E-03	2.17E-02
ENSG00000204362	LINC02783	3.98E+00	9.19E-03	2.18E-02
ENSG00000123453	SARDH	1.31E+00	9.24E-03	2.19E-02
ENSG00000172901	LVRN	2.63E+00	9.26E-03	2.20E-02
ENSG00000270607	AC009549.1	1.91E+00	9.26E-03	2.20E-02
ENSG00000120645	IQSEC3	3.83E+00	9.37E-03	2.22E-02
ENSG00000169330	MINAR1	1.70E+00	9.45E-03	2.24E-02
ENSG00000111846	GCNT2	1.56E+00	9.46E-03	2.24E-02
ENSG00000005961	ITGA2B	1.05E+00	9.48E-03	2.24E-02
ENSG00000166126	AMN	3.32E+00	9.56E-03	2.26E-02

ENSG00000169885	CALML6	2.41E+00	9.61E-03	2.27E-02
ENSG00000183248	PRR36	2.52E+00	9.63E-03	2.28E-02
ENSG00000254815	AP006284.1	3.08E+00	9.64E-03	2.28E-02
ENSG00000248476	BACH1-IT1	1.72E+00	9.67E-03	2.29E-02
ENSG00000115705	TPO	4.16E+00	9.75E-03	2.30E-02
ENSG00000151687	ANKAR	2.28E+00	9.90E-03	2.33E-02
ENSG00000162746	FCRLB	2.52E+00	9.93E-03	2.34E-02
ENSG00000197180	AC244090.1	1.18E+00	9.94E-03	2.34E-02
ENSG00000236548	RNF217-AS1	3.23E+00	9.94E-03	2.34E-02
ENSG00000224079	AC091729.1	3.60E+00	9.95E-03	2.35E-02
ENSG00000238005	AL391832.2	2.87E+00	9.96E-03	2.35E-02
ENSG00000278000	AC139100.2	1.84E+00	1.00E-02	2.36E-02
ENSG00000255284	AP006621.3	1.62E+00	1.02E-02	2.39E-02
ENSG00000254423	AC087203.1	4.47E+00	1.02E-02	2.39E-02
ENSG00000147642	SYBU	3.33E+00	1.03E-02	2.43E-02
ENSG00000112562	SMOC2	3.99E+00	1.04E-02	2.43E-02
ENSG00000271992	AL354872.2	2.71E+00	1.04E-02	2.44E-02
ENSG00000271788	AC008875.1	3.27E+00	1.04E-02	2.44E-02
ENSG00000113522	RAD50	1.30E+00	1.04E-02	2.45E-02
ENSG00000167874	TMEM88	2.11E+00	1.05E-02	2.46E-02
ENSG00000198515	CNGA1	2.95E+00	1.06E-02	2.47E-02
ENSG00000153012	LGI2	3.10E+00	1.06E-02	2.48E-02
ENSG00000100341	PNPLA5	3.15E+00	1.06E-02	2.49E-02
ENSG00000130487	KLHDC7B	3.45E+00	1.06E-02	2.49E-02
ENSG00000100678	SLC8A3	3.71E+00	1.06E-02	2.49E-02
ENSG00000262454	MIR193BHG	1.10E+00	1.08E-02	2.53E-02
ENSG00000262712	AC012676.1	1.88E+00	1.10E-02	2.56E-02
ENSG00000173210	ABLIM3	1.27E+00	1.10E-02	2.57E-02
ENSG00000235652	AL356599.1	1.91E+00	1.11E-02	2.58E-02
ENSG00000233542	AL391845.2	4.26E+00	1.11E-02	2.59E-02
ENSG00000234771	SLC25A25-AS1	1.22E+00	1.12E-02	2.61E-02
ENSG00000171811	CFAP46	1.53E+00	1.13E-02	2.62E-02
ENSG00000137496	IL18BP	1.50E+00	1.13E-02	2.62E-02
ENSG00000183873	SCN5A	1.27E+00	1.13E-02	2.63E-02
ENSG00000144671	SLC22A14	2.86E+00	1.13E-02	2.63E-02
ENSG00000255145	STX17-AS1	3.42E+00	1.14E-02	2.65E-02
ENSG00000116983	HPCAL4	1.19E+00	1.14E-02	2.66E-02
ENSG00000164093	PITX2	1.75E+00	1.14E-02	2.66E-02
ENSG00000171658	NMRAL2P	3.23E+00	1.15E-02	2.66E-02
ENSG00000231799	PA2G4P6	3.31E+00	1.15E-02	2.66E-02

ENSG00000101213	PTK6	3.54E+00	1.15E-02	2.67E-02
ENSG00000174514	MFSD4A	3.19E+00	1.16E-02	2.68E-02
ENSG00000264230	ANXA8L1	2.55E+00	1.16E-02	2.69E-02
ENSG00000142178	SIK1	1.58E+00	1.17E-02	2.70E-02
ENSG00000178401	DNAJC22	2.24E+00	1.17E-02	2.70E-02
ENSG00000214553	LRRC37A11P	3.50E+00	1.17E-02	2.72E-02
ENSG00000149527	PLCH2	3.41E+00	1.18E-02	2.72E-02
ENSG00000048052	HDAC9	1.40E+00	1.18E-02	2.73E-02
ENSG00000164309	CMYA5	2.39E+00	1.19E-02	2.74E-02
ENSG00000224660	SH3BP5-AS1	1.50E+00	1.19E-02	2.75E-02
ENSG00000251576	LINC01267	3.64E+00	1.19E-02	2.76E-02
ENSG00000259479	SORD2P	3.95E+00	1.20E-02	2.78E-02
ENSG00000198835	GJC2	1.95E+00	1.20E-02	2.78E-02
ENSG00000261220	AC103706.1	2.04E+00	1.21E-02	2.78E-02
ENSG00000137709	POU2F3	3.26E+00	1.21E-02	2.78E-02
ENSG00000279806	AC018629.1	4.13E+00	1.21E-02	2.79E-02
ENSG00000143110	C1orf162	2.46E+00	1.21E-02	2.80E-02
ENSG00000284640	AL590434.1	2.96E+00	1.22E-02	2.80E-02
ENSG00000122547	EEPDI	1.58E+00	1.22E-02	2.81E-02
ENSG00000235663	SAPCD1-AS1	3.06E+00	1.22E-02	2.81E-02
ENSG00000141639	MAPK4	4.08E+00	1.22E-02	2.81E-02
ENSG00000189149	CRYM-AS1	2.53E+00	1.23E-02	2.82E-02
ENSG00000226088	AL158839.1	3.80E+00	1.23E-02	2.83E-02
ENSG00000173599	PC	1.04E+00	1.23E-02	2.84E-02
ENSG00000206538	VGLL3	1.01E+00	1.24E-02	2.86E-02
ENSG00000176532	PRR15	3.90E+00	1.25E-02	2.88E-02
ENSG00000215158	AC138409.2	1.27E+00	1.25E-02	2.88E-02
ENSG00000226338	AC079150.1	1.20E+00	1.26E-02	2.89E-02
ENSG00000243284	VSIG8	2.52E+00	1.26E-02	2.89E-02
ENSG00000235385	LINC02154	3.24E+00	1.26E-02	2.89E-02
ENSG00000164744	SUN3	3.00E+00	1.27E-02	2.91E-02
ENSG00000241255	AL136126.1	2.35E+00	1.27E-02	2.91E-02
ENSG00000123405	NFE2	1.61E+00	1.28E-02	2.94E-02
ENSG00000207864	MIR27B	3.98E+00	1.28E-02	2.94E-02
ENSG00000180861	LINC01559	3.34E+00	1.29E-02	2.94E-02
ENSG00000279502	AC016542.2	1.62E+00	1.29E-02	2.95E-02
ENSG00000226179	LINC00685	1.40E+00	1.30E-02	2.97E-02
ENSG00000174502	SLC26A9	3.37E+00	1.30E-02	2.97E-02
ENSG00000232653	GOLGA8N	2.63E+00	1.31E-02	2.98E-02
ENSG00000197249	SERPINA1	2.87E+00	1.31E-02	2.99E-02

ENSG00000169031	COL4A3	3.95E+00	1.31E-02	3.00E-02
ENSG00000280239	AC011498.7	1.52E+00	1.32E-02	3.01E-02
ENSG00000203727	SAMD5	3.33E+00	1.32E-02	3.01E-02
ENSG00000060718	COL11A1	4.14E+00	1.33E-02	3.02E-02
ENSG00000236753	MKLN1-AS	1.24E+00	1.33E-02	3.03E-02
ENSG00000008128	CDK11A	1.83E+00	1.33E-02	3.03E-02
ENSG00000285867	BX470102.2	3.23E+00	1.34E-02	3.04E-02
ENSG00000124134	KCNS1	2.51E+00	1.34E-02	3.05E-02
ENSG00000104814	MAP4K1	2.17E+00	1.34E-02	3.05E-02
ENSG00000171219	CDC42BPG	1.43E+00	1.34E-02	3.05E-02
ENSG00000130304	SLC27A1	1.07E+00	1.35E-02	3.07E-02
ENSG00000089199	CHGB	2.92E+00	1.36E-02	3.09E-02
ENSG00000121577	POPDC2	2.62E+00	1.36E-02	3.09E-02
ENSG00000175463	TBC1D10C	3.41E+00	1.37E-02	3.10E-02
ENSG00000279518	AC083843.4	1.70E+00	1.37E-02	3.10E-02
ENSG00000179406	LINC00174	1.83E+00	1.37E-02	3.11E-02
ENSG00000155754	C2CD6	3.53E+00	1.38E-02	3.14E-02
ENSG00000249346	LINC01016	3.66E+00	1.38E-02	3.14E-02
ENSG00000205212	CCDC144NL	3.48E+00	1.39E-02	3.14E-02
ENSG00000185499	MUC1	1.35E+00	1.39E-02	3.14E-02
ENSG00000161912	ADCY10P1	1.37E+00	1.39E-02	3.15E-02
ENSG00000206344	HCG27	2.03E+00	1.39E-02	3.15E-02
ENSG00000233058	LINC00884	1.49E+00	1.39E-02	3.15E-02
ENSG00000261730	AL034346.1	3.12E+00	1.40E-02	3.17E-02
ENSG00000273599	AL731571.1	3.26E+00	1.41E-02	3.18E-02
ENSG00000272054	AC007390.2	1.64E+00	1.41E-02	3.18E-02
ENSG00000205593	DENND6B	1.59E+00	1.41E-02	3.19E-02
ENSG00000117013	KCNQ4	2.52E+00	1.41E-02	3.19E-02
ENSG00000183208	GDPGP1	1.40E+00	1.42E-02	3.20E-02
ENSG00000163531	NFASC	1.37E+00	1.43E-02	3.22E-02
ENSG00000229414	KCNQ1-AS1	3.85E+00	1.43E-02	3.23E-02
ENSG00000157306	ZFH2-AS1	1.08E+00	1.44E-02	3.26E-02
ENSG00000273156	AC124016.2	2.11E+00	1.47E-02	3.31E-02
ENSG00000230387	AL118508.1	4.17E+00	1.50E-02	3.37E-02
ENSG00000203883	SOX18	1.35E+00	1.50E-02	3.37E-02
ENSG00000279474	AC125437.2	2.08E+00	1.51E-02	3.39E-02
ENSG00000072182	ASIC4	2.99E+00	1.51E-02	3.39E-02
ENSG00000176678	FOXL1	1.83E+00	1.53E-02	3.43E-02
ENSG00000173261	PLAC8L1	3.26E+00	1.53E-02	3.43E-02
ENSG00000235672	AC090286.3	1.96E+00	1.54E-02	3.44E-02



ENSG00000043591	ADRB1	2.85E+00	1.55E-02	3.46E-02
ENSG00000184349	EFNA5	2.89E+00	1.55E-02	3.47E-02
ENSG00000260459	FTLP14	3.79E+00	1.56E-02	3.48E-02
ENSG00000141401	IMPA2	1.07E+00	1.56E-02	3.50E-02
ENSG00000027869	SH2D2A	2.70E+00	1.57E-02	3.50E-02
ENSG00000240370	RPL13P5	1.50E+00	1.57E-02	3.51E-02
ENSG00000267206	LCN6	3.40E+00	1.58E-02	3.52E-02
ENSG00000235530	AC087294.1	2.12E+00	1.58E-02	3.53E-02
ENSG00000202111	VTRNA1-2	2.03E+00	1.58E-02	3.53E-02
ENSG00000232656	IDI2-AS1	3.28E+00	1.59E-02	3.55E-02
ENSG00000151690	MFSD6	1.11E+00	1.60E-02	3.56E-02
ENSG00000286261	AC022137.3	2.17E+00	1.60E-02	3.57E-02
ENSG00000168427	KLHL30	2.24E+00	1.61E-02	3.58E-02
ENSG00000173641	HSPB7	3.39E+00	1.61E-02	3.59E-02
ENSG00000127507	ADGRE2	1.96E+00	1.62E-02	3.61E-02
ENSG00000169894	MUC3A	3.99E+00	1.64E-02	3.65E-02
ENSG00000158315	RHBDL2	2.29E+00	1.64E-02	3.65E-02
ENSG00000186732	MPPED1	3.48E+00	1.65E-02	3.66E-02
ENSG00000274373	AC148476.1	3.52E+00	1.65E-02	3.67E-02
ENSG00000273796	BX322562.1	2.19E+00	1.66E-02	3.68E-02
ENSG00000165553	NGB	2.99E+00	1.66E-02	3.69E-02
ENSG00000260947	AL356489.2	1.56E+00	1.67E-02	3.71E-02
ENSG00000268751	SCGB1B2P	1.32E+00	1.67E-02	3.71E-02
ENSG00000176641	RNF152	1.40E+00	1.68E-02	3.72E-02
ENSG00000021488	SLC7A9	3.11E+00	1.68E-02	3.72E-02
ENSG00000261308	FIGNL2	1.77E+00	1.69E-02	3.74E-02
ENSG00000204511	MCCD1	3.92E+00	1.69E-02	3.74E-02
ENSG00000110195	FOLR1	2.81E+00	1.69E-02	3.75E-02
ENSG00000259100	AL157791.1	3.33E+00	1.70E-02	3.76E-02
ENSG00000229292	RFPL4AL1	3.87E+00	1.70E-02	3.77E-02
ENSG00000279529	AC008764.8	1.77E+00	1.70E-02	3.77E-02
ENSG00000118557	PMFBP1	1.96E+00	1.71E-02	3.78E-02
ENSG00000107742	SPOCK2	2.06E+00	1.71E-02	3.79E-02
ENSG00000266498	AC055811.3	1.85E+00	1.72E-02	3.79E-02
ENSG00000173267	SNCG	1.21E+00	1.72E-02	3.81E-02
ENSG00000176868	AL358781.1	3.38E+00	1.73E-02	3.82E-02
ENSG00000235449	AC098934.3	2.73E+00	1.73E-02	3.82E-02
ENSG00000284740	AL645728.2	2.31E+00	1.73E-02	3.82E-02
ENSG00000131480	AOC2	1.79E+00	1.73E-02	3.82E-02
ENSG00000125731	SH2D3A	3.47E+00	1.74E-02	3.83E-02

ENSG00000226453	LINC02542	3.37E+00	1.74E-02	3.85E-02
ENSG00000254703	SENCR	1.77E+00	1.75E-02	3.87E-02
ENSG00000251194	AL133330.1	1.42E+00	1.76E-02	3.89E-02
ENSG00000267430	AC036176.2	2.41E+00	1.77E-02	3.91E-02
ENSG00000102981	PAR6A	2.14E+00	1.77E-02	3.91E-02
ENSG00000135406	PRPH	2.94E+00	1.78E-02	3.92E-02
ENSG00000259947	LINC02124	4.00E+00	1.78E-02	3.92E-02
ENSG00000126500	FLRT1	2.09E+00	1.79E-02	3.93E-02
ENSG00000280138	AC027290.2	1.25E+00	1.80E-02	3.96E-02
ENSG00000275484	AP003419.3	2.53E+00	1.81E-02	3.98E-02
ENSG00000253210	AC040970.1	2.06E+00	1.82E-02	3.99E-02
ENSG00000175697	GPR156	2.81E+00	1.82E-02	3.99E-02
ENSG00000122852	SFTPA1	3.26E+00	1.82E-02	3.99E-02
ENSG00000227379	PPIAP2	1.36E+00	1.82E-02	3.99E-02
ENSG00000283361	CFAP97D2	3.57E+00	1.84E-02	4.03E-02
ENSG00000240405	SAMMSON	3.60E+00	1.84E-02	4.04E-02
ENSG00000274897	PANO1	1.62E+00	1.84E-02	4.04E-02
ENSG00000254573	AP004550.1	3.40E+00	1.85E-02	4.05E-02
ENSG00000177238	TRIM72	3.44E+00	1.85E-02	4.06E-02
ENSG00000273729	AC007686.3	2.80E+00	1.85E-02	4.06E-02
ENSG00000182950	ODF3L1	2.78E+00	1.86E-02	4.07E-02
ENSG00000260296	AC095057.3	2.44E+00	1.86E-02	4.08E-02
ENSG00000004939	SLC4A1	3.61E+00	1.87E-02	4.08E-02
ENSG00000256667	KLRA1P	1.57E+00	1.88E-02	4.10E-02
ENSG00000183666	GUSBP1	1.09E+00	1.88E-02	4.11E-02
ENSG00000272330	AC002044.1	1.03E+00	1.89E-02	4.13E-02
ENSG00000079393	DUSP13	2.67E+00	1.89E-02	4.13E-02
ENSG00000269318	AC007292.2	2.39E+00	1.90E-02	4.16E-02
ENSG00000186409	CCDC30	1.92E+00	1.91E-02	4.17E-02
ENSG00000079337	RAPGEF3	2.23E+00	1.92E-02	4.19E-02
ENSG00000279799	AC006077.2	1.75E+00	1.94E-02	4.22E-02
ENSG00000260750	AC092720.1	3.10E+00	1.94E-02	4.23E-02
ENSG00000272205	AL451050.2	3.00E+00	1.95E-02	4.24E-02
ENSG00000047617	ANO2	2.48E+00	1.95E-02	4.25E-02
ENSG00000253819	LINC01151	2.94E+00	1.95E-02	4.25E-02
ENSG00000273084	AC092171.5	1.92E+00	1.96E-02	4.26E-02
ENSG00000170370	EMX2	3.84E+00	1.97E-02	4.29E-02
ENSG00000226644	AL121899.1	1.75E+00	1.97E-02	4.29E-02
ENSG00000278192	AL118505.1	4.03E+00	1.99E-02	4.32E-02
ENSG00000123612	ACVR1C	2.70E+00	1.99E-02	4.33E-02

ENSG00000152433	ZNF547	1.15E+00	2.01E-02	4.37E-02
ENSG00000148483	TMEM236	3.98E+00	2.01E-02	4.37E-02
ENSG00000215089	KRT18P11	1.01E+00	2.02E-02	4.37E-02
ENSG00000228801	AC064807.1	1.04E+00	2.02E-02	4.39E-02
ENSG00000223774	AL513217.1	2.34E+00	2.03E-02	4.41E-02
ENSG00000260646	AL031705.1	3.32E+00	2.04E-02	4.42E-02
ENSG00000143382	ADAMTSL4	1.66E+00	2.05E-02	4.43E-02
ENSG00000187867	PALM3	1.14E+00	2.06E-02	4.46E-02
ENSG00000154553	PDLIM3	1.08E+00	2.07E-02	4.48E-02
ENSG00000100399	CHADL	2.49E+00	2.08E-02	4.49E-02
ENSG00000184497	TMEM255B	1.03E+00	2.10E-02	4.54E-02
ENSG00000181284	TMEM102	1.84E+00	2.10E-02	4.54E-02
ENSG00000197616	MYH6	3.20E+00	2.10E-02	4.54E-02
ENSG00000185905	C16orf54	3.88E+00	2.10E-02	4.54E-02
ENSG00000137270	GCM1	2.80E+00	2.10E-02	4.54E-02
ENSG00000275894	AL021578.1	2.14E+00	2.11E-02	4.54E-02
ENSG00000261253	AC137932.2	3.18E+00	2.11E-02	4.55E-02
ENSG00000152779	SLC16A12	1.59E+00	2.12E-02	4.57E-02
ENSG00000138735	PDE5A	1.04E+00	2.12E-02	4.57E-02
ENSG00000183682	BMP8A	2.33E+00	2.14E-02	4.61E-02
ENSG00000237452	BHMG1	3.42E+00	2.14E-02	4.62E-02
ENSG00000177628	GBA	1.96E+00	2.15E-02	4.62E-02
ENSG00000274678	AC106886.3	3.18E+00	2.15E-02	4.62E-02
ENSG00000234009	RPL5P34	2.09E+00	2.18E-02	4.68E-02
ENSG00000276744	AC105137.2	2.78E+00	2.18E-02	4.69E-02
ENSG00000168484	SFTPC	2.38E+00	2.19E-02	4.70E-02
ENSG00000162438	CTRC	2.89E+00	2.21E-02	4.74E-02
ENSG00000158764	ITLN2	3.16E+00	2.22E-02	4.76E-02
ENSG00000228242	AC093495.1	2.62E+00	2.22E-02	4.77E-02
ENSG00000159208	CIART	1.22E+00	2.23E-02	4.78E-02
ENSG00000159337	PLA2G4D	3.25E+00	2.23E-02	4.79E-02
ENSG00000256443	AP003559.1	3.33E+00	2.24E-02	4.80E-02
ENSG00000198203	SULT1C2	2.64E+00	2.24E-02	4.80E-02
ENSG00000196132	MYT1	1.54E+00	2.25E-02	4.82E-02
ENSG00000082196	C1QTNF3	2.06E+00	2.27E-02	4.85E-02
ENSG00000137841	PLCB2	2.43E+00	2.27E-02	4.85E-02
ENSG00000259642	ST20-AS1	1.34E+00	2.27E-02	4.86E-02
ENSG00000287222	AC234917.3	1.43E+00	2.27E-02	4.86E-02
ENSG00000142233	NTN5	3.25E+00	2.27E-02	4.86E-02
ENSG00000225914	TSBP1-AS1	2.76E+00	2.28E-02	4.88E-02

ENSG00000160678	S100A1	2.11E+00	2.28E-02	4.88E-02
ENSG00000231133	HAR1B	2.57E+00	2.29E-02	4.89E-02
ENSG00000274292	AC084018.2	1.83E+00	2.29E-02	4.90E-02
ENSG00000213300	HNRNPA3P6	2.43E+00	2.30E-02	4.92E-02
ENSG00000143851	PTPN7	2.82E+00	2.31E-02	4.94E-02
ENSG00000122735	DNAI1	2.74E+00	2.32E-02	4.94E-02
ENSG00000126895	AVPR2	2.91E+00	2.32E-02	4.94E-02
ENSG00000263011	AC108134.4	2.50E+00	2.32E-02	4.96E-02
ENSG00000105697	HAMP	3.83E+00	2.32E-02	4.96E-02

**Supplementary table 8. Significant DRGs in Ad-KLF4 versus Ad-EGFP transduced samples.**

Gene ID	Gene name	Log2(FC)	P value	FDR
ENSG00000120708	TGFBI	-2.44E+00	3.34E-150	2.92E-147
ENSG00000128050	PAICS	-2.57E+00	1.17E-140	8.92E-138
ENSG00000003436	TFPI	-3.52E+00	1.16E-134	7.61E-132
ENSG00000115414	FN1	-2.65E+00	3.43E-122	1.80E-119
ENSG00000140416	TPM1	-2.03E+00	2.40E-116	9.81E-114
ENSG00000166741	NNMT	-3.82E+00	6.23E-116	2.49E-113
ENSG00000277443	MARCKS	-2.16E+00	2.92E-105	9.92E-103
ENSG00000101335	MYL9	-3.38E+00	1.27E-99	4.01E-97
ENSG00000133110	POSTN	-4.66E+00	1.17E-93	3.25E-91
ENSG00000156804	FBXO32	-3.29E+00	4.60E-89	1.13E-86
ENSG00000165512	ZNF22	-3.36E+00	1.98E-87	4.67E-85
ENSG00000137801	THBS1	-2.94E+00	2.58E-83	5.72E-81
ENSG00000122884	P4HA1	-1.79E+00	9.96E-80	1.99E-77
ENSG00000162692	VCAM1	-7.38E+00	2.20E-77	4.04E-75
ENSG00000152952	PLOD2	-1.91E+00	3.96E-75	6.80E-73
ENSG00000105137	SYDE1	-3.33E+00	1.19E-71	1.96E-69
ENSG00000122786	CALD1	-1.80E+00	3.64E-70	5.91E-68
ENSG00000128606	LRRC17	-2.99E+00	4.04E-70	6.51E-68
ENSG00000128989	ARPP19	-2.28E+00	1.41E-68	2.16E-66
ENSG00000135486	HNRNPA1	-1.23E+00	1.16E-67	1.72E-65
ENSG00000117519	CNN3	-1.92E+00	6.97E-65	9.22E-63
ENSG00000122641	INHBA	-3.19E+00	1.35E-63	1.71E-61
ENSG00000178860	MSC	-5.62E+00	4.33E-63	5.38E-61
ENSG00000146729	NIPSNAP2	-3.84E+00	5.91E-63	7.29E-61
ENSG00000185551	NR2F2	-2.32E+00	5.86E-61	6.72E-59
ENSG00000004478	FKBP4	-1.65E+00	2.44E-60	2.75E-58
ENSG00000118523	CCN2	-3.03E+00	3.23E-60	3.62E-58
ENSG00000106484	MEST	-2.67E+00	8.72E-60	9.48E-58
ENSG00000138385	SSB	-1.71E+00	3.42E-59	3.63E-57
ENSG00000160991	ORAI2	-2.47E+00	1.63E-57	1.65E-55
ENSG00000131378	RFTN1	-3.11E+00	3.15E-57	3.14E-55
ENSG00000119403	PHF19	-2.13E+00	1.88E-56	1.83E-54
ENSG00000041982	TNC	-4.52E+00	2.47E-56	2.39E-54
ENSG00000111716	LDHB	-2.21E+00	4.12E-56	3.96E-54
ENSG00000134333	LDHA	-1.77E+00	1.93E-55	1.81E-53
ENSG00000057019	DCBLD2	-1.63E+00	3.15E-55	2.93E-53
ENSG00000100345	MYH9	-2.12E+00	4.46E-55	4.14E-53
ENSG00000164104	HMGB2	-1.11E+00	5.49E-55	5.06E-53

ENSG00000106799	TGFBR1	-2.58E+00	1.72E-54	1.58E-52
ENSG00000170558	CDH2	-2.23E+00	2.73E-54	2.46E-52
ENSG00000101361	NOP56	-1.83E+00	4.85E-54	4.35E-52
ENSG00000130826	DKC1	-2.08E+00	1.25E-52	1.09E-50
ENSG00000152795	HNRNPDL	-1.19E+00	2.37E-52	2.04E-50
ENSG00000115380	EFEMP1	-2.38E+00	4.56E-52	3.88E-50
ENSG00000132780	NASP	-1.64E+00	1.41E-51	1.19E-49
ENSG00000213160	KLHL23	-3.03E+00	6.49E-51	5.37E-49
ENSG00000163017	ACTG2	-5.58E+00	7.77E-51	6.35E-49
ENSG00000122406	RPL5	-1.83E+00	2.87E-50	2.27E-48
ENSG00000080608	PUM3	-2.33E+00	1.11E-48	8.55E-47
ENSG00000117020	AKT3	-2.11E+00	1.65E-48	1.27E-46
ENSG00000143228	NUF2	-1.94E+00	3.43E-48	2.56E-46
ENSG00000143401	ANP32E	-1.84E+00	8.64E-48	6.43E-46
ENSG00000104408	EIF3E	-1.27E+00	4.94E-47	3.58E-45
ENSG00000113758	DBN1	-2.44E+00	7.25E-47	5.16E-45
ENSG00000010292	NCAPD2	-1.74E+00	7.90E-47	5.58E-45
ENSG00000075142	SRI	-2.71E+00	1.49E-46	1.04E-44
ENSG00000134013	LOXL2	-2.26E+00	1.82E-46	1.27E-44
ENSG00000113721	PDGFRB	-3.12E+00	9.42E-46	6.48E-44
ENSG00000152558	TMEM123	-2.09E+00	2.98E-45	2.02E-43
ENSG00000102172	SMS	-2.11E+00	4.86E-45	3.28E-43
ENSG00000134057	CCNB1	-1.85E+00	4.92E-45	3.31E-43
ENSG00000114446	IFT57	-1.88E+00	7.75E-45	5.14E-43
ENSG00000101255	TRIB3	-2.84E+00	1.14E-44	7.56E-43
ENSG00000114450	GNB4	-2.26E+00	6.80E-44	4.31E-42
ENSG00000072958	AP1M1	-2.19E+00	1.24E-43	7.71E-42
ENSG00000235531	MSC-AS1	-2.80E+00	5.52E-43	3.34E-41
ENSG00000114251	WNT5A	-1.83E+00	9.33E-43	5.58E-41
ENSG00000064102	INTS13	-1.63E+00	1.26E-42	7.48E-41
ENSG00000107833	NPM3	-3.10E+00	1.32E-42	7.80E-41
ENSG00000162614	NEXN	-2.75E+00	2.06E-42	1.21E-40
ENSG00000144381	HSPD1	-1.10E+00	2.28E-42	1.34E-40
ENSG00000165704	HPRT1	-2.02E+00	6.89E-42	3.98E-40
ENSG00000155189	AGPAT5	-1.34E+00	1.69E-41	9.50E-40
ENSG00000166681	BEX3	-2.32E+00	2.69E-41	1.49E-39
ENSG00000168685	IL7R	-4.46E+00	6.69E-41	3.67E-39
ENSG00000186470	BTN3A2	-2.96E+00	7.85E-41	4.29E-39
ENSG00000157500	APPL1	-2.54E+00	1.50E-40	8.06E-39
ENSG00000058056	USP13	-2.54E+00	4.57E-40	2.40E-38

ENSG00000116251	RPL22	-1.91E+00	5.27E-40	2.76E-38
ENSG00000000003	TSPAN6	-2.06E+00	1.02E-39	5.29E-38
ENSG00000069275	NUCKS1	-1.29E+00	2.57E-39	1.32E-37
ENSG00000074219	TEAD2	-3.04E+00	4.36E-39	2.22E-37
ENSG00000164932	CTHRC1	-4.45E+00	4.38E-39	2.22E-37
ENSG00000144642	RBMS3	-3.59E+00	4.71E-39	2.37E-37
ENSG00000179222	MAGED1	-1.49E+00	8.10E-39	4.05E-37
ENSG00000198034	RPS4X	-1.56E+00	8.21E-39	4.09E-37
ENSG00000121152	NCAPH	-2.07E+00	4.73E-38	2.27E-36
ENSG00000103485	QPRT	-3.04E+00	5.51E-38	2.64E-36
ENSG00000176014	TUBB6	-1.89E+00	8.10E-38	3.85E-36
ENSG00000184220	CMSS1	-1.81E+00	1.63E-37	7.56E-36
ENSG00000159164	SV2A	-2.13E+00	2.16E-37	9.93E-36
ENSG00000136026	CKAP4	-1.37E+00	5.54E-37	2.49E-35
ENSG00000115561	CHMP3	-1.81E+00	7.34E-37	3.27E-35
ENSG00000108691	CCL2	-8.16E+00	1.22E-36	5.39E-35
ENSG00000149591	TAGLN	-3.28E+00	1.33E-36	5.84E-35
ENSG00000178035	IMPDH2	-1.54E+00	1.62E-36	7.09E-35
ENSG00000204856	FAM216A	-3.45E+00	1.71E-36	7.47E-35
ENSG00000145934	TENM2	-4.03E+00	1.92E-36	8.37E-35
ENSG00000180340	FZD2	-3.17E+00	4.99E-36	2.13E-34
ENSG00000181588	MEX3D	-1.77E+00	5.27E-36	2.25E-34
ENSG00000141522	ARHGDI A	-1.52E+00	5.89E-36	2.51E-34
ENSG00000165801	ARHGEF40	-2.48E+00	5.92E-36	2.51E-34
ENSG00000147687	TATDN1	-2.43E+00	1.87E-35	7.83E-34
ENSG00000154096	THY1	-2.76E+00	1.88E-35	7.85E-34
ENSG00000171951	SCG2	-5.57E+00	3.29E-35	1.35E-33
ENSG00000105202	FBL	-1.69E+00	1.12E-34	4.53E-33
ENSG00000145386	CCNA2	-1.49E+00	3.14E-34	1.24E-32
ENSG00000164649	CDCA7L	-2.11E+00	4.80E-34	1.88E-32
ENSG00000164292	RHOBTB3	-2.81E+00	5.94E-34	2.32E-32
ENSG00000103202	NME4	-3.20E+00	8.97E-34	3.47E-32
ENSG00000167552	TUBA1A	-1.71E+00	1.60E-33	6.14E-32
ENSG00000105849	TWISTNB	-1.94E+00	1.79E-33	6.83E-32
ENSG00000186185	KIF18B	-2.19E+00	2.84E-33	1.07E-31
ENSG00000152556	PFKM	-2.23E+00	4.01E-33	1.50E-31
ENSG00000137154	RPS6	-1.53E+00	4.83E-33	1.81E-31
ENSG00000099194	SCD	-1.39E+00	4.87E-33	1.81E-31
ENSG00000072042	RDH11	-1.39E+00	8.24E-33	3.05E-31
ENSG00000115594	IL1R1	-3.25E+00	8.47E-33	3.12E-31

ENSG00000109805	NCAPG	-1.48E+00	8.54E-33	3.14E-31
ENSG00000114023	FAM162A	-2.01E+00	1.12E-32	4.11E-31
ENSG00000118418	HMG3	-2.19E+00	1.45E-32	5.33E-31
ENSG00000206053	JPT2	-1.45E+00	1.58E-32	5.76E-31
ENSG00000143799	PARP1	-1.35E+00	3.45E-32	1.22E-30
ENSG00000055044	NOP58	-1.13E+00	6.43E-32	2.25E-30
ENSG00000128283	CDC42EP1	-2.34E+00	1.01E-31	3.49E-30
ENSG00000100316	RPL3	-1.18E+00	1.24E-31	4.26E-30
ENSG00000182985	CADM1	-2.19E+00	1.87E-31	6.37E-30
ENSG00000196628	TCF4	-2.69E+00	2.09E-31	7.13E-30
ENSG00000134294	SLC38A2	-1.26E+00	2.27E-31	7.72E-30
ENSG00000101447	FAM83D	-1.58E+00	2.34E-31	7.94E-30
ENSG00000071539	TRIP13	-1.53E+00	3.06E-31	1.03E-29
ENSG00000198755	RPL10A	-1.68E+00	3.21E-31	1.08E-29
ENSG00000105255	FSD1	-2.21E+00	3.28E-31	1.10E-29
ENSG00000084112	SSH1	-1.92E+00	4.09E-31	1.36E-29
ENSG00000164109	MAD2L1	-1.66E+00	4.49E-31	1.49E-29
ENSG00000152990	ADGRA3	-2.50E+00	6.59E-31	2.18E-29
ENSG00000134986	NREP	-6.29E+00	1.32E-30	4.27E-29
ENSG00000077150	NFKB2	-1.73E+00	1.50E-30	4.84E-29
ENSG00000113368	LMNB1	-1.92E+00	2.54E-30	8.07E-29
ENSG00000111799	COL12A1	-3.94E+00	2.98E-30	9.44E-29
ENSG00000196715	VKORC1L1	-2.19E+00	6.99E-30	2.18E-28
ENSG00000116005	PCYOX1	-1.87E+00	9.02E-30	2.79E-28
ENSG00000196700	ZNF512B	-3.01E+00	1.69E-29	5.21E-28
ENSG00000135698	MPHOSPH6	-1.76E+00	4.39E-29	1.33E-27
ENSG00000089351	GRAMD1A	-1.88E+00	5.12E-29	1.54E-27
ENSG00000105185	PDCD5	-2.37E+00	5.62E-29	1.68E-27
ENSG00000069998	HDHD5	-1.79E+00	6.07E-29	1.81E-27
ENSG00000105825	TFPI2	-4.20E+00	6.61E-29	1.96E-27
ENSG00000123131	PRDX4	-1.96E+00	6.62E-29	1.96E-27
ENSG00000039560	RAI14	-1.72E+00	8.68E-29	2.56E-27
ENSG00000167635	ZNF146	-1.37E+00	9.59E-29	2.81E-27
ENSG00000189403	HMGB1	-1.01E+00	1.00E-28	2.94E-27
ENSG00000225663	MCRIP1	-3.81E+00	1.04E-28	3.05E-27
ENSG00000196363	WDR5	-2.37E+00	1.12E-28	3.28E-27
ENSG00000198796	ALPK2	-3.43E+00	1.20E-28	3.49E-27
ENSG00000126457	PRMT1	-1.96E+00	1.39E-28	4.01E-27
ENSG00000197894	ADH5	-1.79E+00	1.44E-28	4.15E-27
ENSG00000136490	LIMD2	-3.18E+00	2.38E-28	6.79E-27



ENSG00000122565	CBX3	-1.45E+00	3.97E-28	1.12E-26
ENSG00000121940	CLCC1	-3.14E+00	9.01E-28	2.52E-26
ENSG00000159128	IFNGR2	-1.88E+00	9.07E-28	2.54E-26
ENSG00000111275	ALDH2	-2.33E+00	1.29E-27	3.58E-26
ENSG00000135074	ADAM19	-2.28E+00	1.42E-27	3.91E-26
ENSG00000178921	PFAS	-2.52E+00	1.52E-27	4.18E-26
ENSG00000163938	GNL3	-1.32E+00	2.52E-27	6.86E-26
ENSG00000104884	ERCC2	-2.37E+00	2.64E-27	7.16E-26
ENSG00000131238	PPT1	-1.29E+00	2.95E-27	7.97E-26
ENSG00000159131	GART	-1.26E+00	3.46E-27	9.36E-26
ENSG00000173511	VEGFB	-3.11E+00	3.79E-27	1.02E-25
ENSG00000145425	RPS3A	-1.71E+00	3.96E-27	1.06E-25
ENSG00000136261	BZW2	-2.16E+00	4.06E-27	1.09E-25
ENSG00000128602	SMO	-2.82E+00	4.81E-27	1.28E-25
ENSG00000026559	KCNG1	-1.64E+00	4.97E-27	1.32E-25
ENSG00000182054	IDH2	-1.99E+00	7.63E-27	2.02E-25
ENSG00000117228	GBP1	-1.60E+00	8.06E-27	2.13E-25
ENSG00000146281	PM20D2	-2.11E+00	8.33E-27	2.20E-25
ENSG00000117650	NEK2	-1.65E+00	1.60E-26	4.17E-25
ENSG00000111252	SH2B3	-2.67E+00	1.79E-26	4.67E-25
ENSG00000255302	EID1	-1.18E+00	2.80E-26	7.23E-25
ENSG00000076248	UNG	-1.55E+00	3.23E-26	8.31E-25
ENSG00000139684	ESD	-1.99E+00	4.14E-26	1.06E-24
ENSG00000142945	KIF2C	-1.63E+00	4.28E-26	1.09E-24
ENSG00000163661	PTX3	-2.68E+00	4.33E-26	1.10E-24
ENSG00000163535	SGO2	-2.15E+00	5.62E-26	1.43E-24
ENSG00000145907	G3BP1	-1.14E+00	6.81E-26	1.73E-24
ENSG00000112984	KIF20A	-2.02E+00	7.21E-26	1.82E-24
ENSG00000183098	GPC6	-4.53E+00	7.51E-26	1.89E-24
ENSG00000175792	RUVBL1	-1.60E+00	1.13E-25	2.81E-24
ENSG00000148677	ANKRD1	-4.43E+00	1.81E-25	4.46E-24
ENSG00000126787	DLGAP5	-1.74E+00	2.28E-25	5.58E-24
ENSG00000184117	NIPSNAP1	-3.19E+00	3.06E-25	7.43E-24
ENSG00000134072	CAMK1	-3.38E+00	4.01E-25	9.72E-24
ENSG00000080573	COL5A3	-2.41E+00	4.03E-25	9.76E-24
ENSG00000132541	RIDA	-2.22E+00	4.15E-25	1.00E-23
ENSG00000168542	COL3A1	-2.42E+00	6.64E-25	1.59E-23
ENSG00000073111	MCM2	-1.35E+00	8.38E-25	2.00E-23
ENSG00000147274	RBMX	-1.10E+00	8.70E-25	2.07E-23
ENSG00000165283	STOML2	-1.87E+00	8.70E-25	2.07E-23

ENSG00000140350	ANP32A	-1.22E+00	9.18E-25	2.18E-23
ENSG00000101346	POFUT1	-1.19E+00	1.27E-24	3.00E-23
ENSG00000115053	NCL	-1.16E+00	1.33E-24	3.11E-23
ENSG00000080200	CRYBG3	-2.25E+00	1.41E-24	3.30E-23
ENSG00000146416	AIG1	-3.06E+00	1.45E-24	3.40E-23
ENSG00000141905	NFIC	-1.59E+00	1.60E-24	3.74E-23
ENSG00000150630	VEGFC	-2.88E+00	2.35E-24	5.44E-23
ENSG00000143815	LBR	-1.41E+00	2.70E-24	6.21E-23
ENSG00000176171	BNIP3	-2.59E+00	3.43E-24	7.82E-23
ENSG00000161970	RPL26	-2.32E+00	3.47E-24	7.89E-23
ENSG00000044459	CNTLN	-1.74E+00	3.51E-24	7.97E-23
ENSG00000142676	RPL11	-1.52E+00	3.61E-24	8.20E-23
ENSG00000126602	TRAP1	-1.75E+00	4.00E-24	9.05E-23
ENSG00000168268	NT5DC2	-1.63E+00	4.27E-24	9.63E-23
ENSG00000087586	AURKA	-1.60E+00	4.75E-24	1.07E-22
ENSG00000123975	CKS2	-2.47E+00	4.83E-24	1.09E-22
ENSG00000198830	HMG2N	-1.85E+00	6.33E-24	1.42E-22
ENSG00000116120	FARSB	-2.00E+00	6.45E-24	1.44E-22
ENSG00000204262	COL5A2	-1.53E+00	6.59E-24	1.47E-22
ENSG00000148848	ADAM12	-1.98E+00	6.89E-24	1.54E-22
ENSG00000141030	COPS3	-1.05E+00	7.42E-24	1.65E-22
ENSG00000100644	HIF1A	-1.00E+00	7.66E-24	1.70E-22
ENSG00000181163	NPM1	-1.36E+00	8.49E-24	1.89E-22
ENSG00000163808	KIF15	-1.98E+00	8.72E-24	1.93E-22
ENSG00000153993	SEMA3D	-2.36E+00	1.11E-23	2.43E-22
ENSG00000132639	SNAP25	-3.56E+00	1.20E-23	2.63E-22
ENSG00000123179	EBPL	-2.51E+00	1.82E-23	3.94E-22
ENSG00000182199	SHMT2	-1.06E+00	2.10E-23	4.53E-22
ENSG00000135624	CCT7	-1.20E+00	2.89E-23	6.21E-22
ENSG00000145220	LYAR	-1.27E+00	2.98E-23	6.37E-22
ENSG00000145604	SKP2	-1.91E+00	3.33E-23	7.10E-22
ENSG00000153936	HS2ST1	-1.47E+00	3.49E-23	7.43E-22
ENSG00000196531	NACA	-1.11E+00	6.74E-23	1.42E-21
ENSG00000058804	NDC1	-1.89E+00	7.86E-23	1.64E-21
ENSG00000137076	TLN1	-1.85E+00	8.01E-23	1.67E-21
ENSG00000128059	PPAT	-1.76E+00	8.26E-23	1.72E-21
ENSG00000100526	CDKN3	-1.87E+00	8.47E-23	1.76E-21
ENSG00000006634	DBF4	-1.52E+00	8.78E-23	1.83E-21
ENSG00000198826	ARHGAP11A	-1.48E+00	1.00E-22	2.08E-21
ENSG00000111450	STX2	-2.56E+00	1.25E-22	2.58E-21

ENSG00000132341	RAN	-1.29E+00	1.26E-22	2.59E-21
ENSG00000026025	VIM	-1.75E+00	1.28E-22	2.63E-21
ENSG00000104332	SFRP1	-1.64E+00	1.31E-22	2.68E-21
ENSG00000139793	MBNL2	-1.91E+00	1.39E-22	2.83E-21
ENSG00000146376	ARHGAP18	-2.73E+00	1.49E-22	3.04E-21
ENSG00000023608	SNAPC1	-1.31E+00	1.82E-22	3.69E-21
ENSG00000196465	MYL6B	-2.26E+00	2.41E-22	4.86E-21
ENSG00000178105	DDX10	-2.16E+00	3.58E-22	7.15E-21
ENSG00000147604	RPL7	-1.13E+00	3.62E-22	7.21E-21
ENSG00000100413	POLR3H	-1.45E+00	4.18E-22	8.31E-21
ENSG00000029993	HMGB3	-1.19E+00	4.82E-22	9.56E-21
ENSG00000183527	PSMG1	-2.08E+00	5.47E-22	1.08E-20
ENSG00000271601	LIX1L	-1.73E+00	8.13E-22	1.61E-20
ENSG00000180198	RCC1	-1.80E+00	8.20E-22	1.62E-20
ENSG00000077348	EXOSC5	-2.96E+00	8.84E-22	1.74E-20
ENSG00000184838	PRR16	-5.39E+00	8.84E-22	1.74E-20
ENSG00000182718	ANXA2	-1.14E+00	8.90E-22	1.74E-20
ENSG00000186468	RPS23	-1.83E+00	1.07E-21	2.10E-20
ENSG00000138074	SLC5A6	-1.94E+00	1.08E-21	2.12E-20
ENSG00000089009	RPL6	-1.16E+00	1.28E-21	2.49E-20
ENSG00000092096	SLC22A17	-2.06E+00	1.46E-21	2.83E-20
ENSG00000125148	MT2A	-3.00E+00	1.64E-21	3.17E-20
ENSG00000101189	MRGBP	-1.53E+00	1.76E-21	3.39E-20
ENSG00000129128	SPCS3	-1.19E+00	1.81E-21	3.48E-20
ENSG0000015475	BID	-3.23E+00	1.85E-21	3.56E-20
ENSG00000180801	ARSJ	-2.20E+00	2.39E-21	4.56E-20
ENSG00000111859	NEDD9	-2.72E+00	2.86E-21	5.44E-20
ENSG00000099250	NRP1	-2.19E+00	3.49E-21	6.59E-20
ENSG00000149273	RPS3	-1.81E+00	3.51E-21	6.61E-20
ENSG00000164294	GPX8	-1.17E+00	4.85E-21	9.04E-20
ENSG00000127863	TNFRSF19	-3.42E+00	6.19E-21	1.15E-19
ENSG00000157456	CCNB2	-1.38E+00	6.98E-21	1.29E-19
ENSG00000170854	RIOX2	-2.25E+00	7.08E-21	1.31E-19
ENSG00000197498	RPF2	-1.32E+00	8.70E-21	1.60E-19
ENSG00000114861	FOXP1	-1.73E+00	8.87E-21	1.63E-19
ENSG00000157350	ST3GAL2	-1.11E+00	9.10E-21	1.67E-19
ENSG00000066117	SMARCD1	-1.28E+00	1.02E-20	1.86E-19
ENSG00000139278	GLIPR1	-2.53E+00	1.16E-20	2.11E-19
ENSG00000111845	PAK1IP1	-1.61E+00	1.17E-20	2.12E-19
ENSG00000150347	ARID5B	-2.09E+00	1.29E-20	2.35E-19

ENSG00000131370	SH3BP5	-2.57E+00	1.32E-20	2.39E-19
ENSG00000104856	RELB	-1.94E+00	1.36E-20	2.47E-19
ENSG00000178531	CTXN1	-1.73E+00	1.81E-20	3.26E-19
ENSG00000188846	RPL14	-1.47E+00	1.90E-20	3.41E-19
ENSG00000131943	C19orf12	-2.80E+00	1.96E-20	3.52E-19
ENSG00000136244	IL6	-4.75E+00	2.37E-20	4.21E-19
ENSG00000135521	LTV1	-1.19E+00	2.37E-20	4.22E-19
ENSG00000166347	CYB5A	-2.36E+00	2.46E-20	4.37E-19
ENSG00000211455	STK38L	-1.25E+00	2.71E-20	4.79E-19
ENSG00000233913	RPL10P9	-2.36E+00	2.72E-20	4.81E-19
ENSG00000123610	TNFAIP6	-5.28E+00	2.74E-20	4.84E-19
ENSG00000154310	TNIK	-2.56E+00	3.03E-20	5.33E-19
ENSG00000148154	UGCG	-1.17E+00	3.12E-20	5.50E-19
ENSG00000122970	IFT81	-1.57E+00	3.17E-20	5.59E-19
ENSG00000076382	SPAG5	-1.30E+00	3.63E-20	6.36E-19
ENSG00000213186	TRIM59	-1.99E+00	4.18E-20	7.31E-19
ENSG00000140682	TGFB111	-1.69E+00	4.44E-20	7.74E-19
ENSG00000125743	SNRPD2	-2.80E+00	6.10E-20	1.05E-18
ENSG00000183207	RUVBL2	-1.35E+00	6.62E-20	1.14E-18
ENSG00000113048	MRPS27	-1.44E+00	6.64E-20	1.14E-18
ENSG00000100243	CYB5R3	-1.65E+00	6.70E-20	1.15E-18
ENSG00000180616	SSTR2	-4.99E+00	7.47E-20	1.27E-18
ENSG00000099998	GGT5	-3.17E+00	7.69E-20	1.31E-18
ENSG00000138175	ARL3	-1.49E+00	7.77E-20	1.32E-18
ENSG00000160767	FAM189B	-1.89E+00	7.98E-20	1.36E-18
ENSG00000136108	CKAP2	-1.37E+00	8.71E-20	1.48E-18
ENSG00000181104	F2R	-1.87E+00	8.72E-20	1.48E-18
ENSG00000167088	SNRPD1	-1.94E+00	1.05E-19	1.77E-18
ENSG00000135549	PKIB	-3.78E+00	1.12E-19	1.88E-18
ENSG00000100196	KDELR3	-2.57E+00	1.21E-19	2.03E-18
ENSG00000151466	SCLT1	-1.67E+00	1.28E-19	2.14E-18
ENSG00000122873	CISD1	-1.40E+00	1.38E-19	2.30E-18
ENSG00000270885	RASL10B	-3.59E+00	1.46E-19	2.44E-18
ENSG00000101384	JAG1	-1.17E+00	1.50E-19	2.49E-18
ENSG00000123485	HJURP	-1.34E+00	1.53E-19	2.55E-18
ENSG00000164054	SHISA5	-1.25E+00	1.56E-19	2.59E-18
ENSG00000197061	HIST1H4C	-3.43E+00	2.09E-19	3.45E-18
ENSG00000108679	LGALS3BP	-1.48E+00	2.14E-19	3.52E-18
ENSG00000110108	TMEM109	-1.01E+00	2.46E-19	4.03E-18
ENSG00000112306	RPS12	-1.60E+00	2.51E-19	4.10E-18

ENSG00000112186	CAP2	-3.11E+00	3.34E-19	5.42E-18
ENSG00000114439	BBX	-1.48E+00	3.41E-19	5.54E-18
ENSG00000204628	RACK1	-1.60E+00	4.93E-19	7.94E-18
ENSG00000113719	ERGIC1	-1.55E+00	5.23E-19	8.41E-18
ENSG00000089685	BIRC5	-1.61E+00	6.73E-19	1.07E-17
ENSG00000109674	NEIL3	-2.32E+00	6.80E-19	1.08E-17
ENSG00000173638	SLC19A1	-1.77E+00	8.24E-19	1.31E-17
ENSG00000178999	AURKB	-1.85E+00	9.37E-19	1.48E-17
ENSG00000198015	MRPL42	-1.31E+00	9.52E-19	1.50E-17
ENSG00000088205	DDX18	-1.47E+00	9.81E-19	1.55E-17
ENSG00000080986	NDC80	-1.89E+00	9.96E-19	1.57E-17
ENSG00000113356	POLR3G	-1.98E+00	1.03E-18	1.62E-17
ENSG00000110700	RPS13	-1.73E+00	1.04E-18	1.63E-17
ENSG00000008311	AASS	-2.01E+00	1.06E-18	1.67E-17
ENSG00000138448	ITGAV	-1.24E+00	1.17E-18	1.82E-17
ENSG00000168028	RPSA	-1.28E+00	1.19E-18	1.86E-17
ENSG00000120833	SOCS2	-2.24E+00	1.32E-18	2.06E-17
ENSG00000164176	EDIL3	-1.25E+00	1.44E-18	2.24E-17
ENSG00000073670	ADAM11	-4.04E+00	1.46E-18	2.28E-17
ENSG00000154845	PPP4R1	-1.61E+00	1.57E-18	2.45E-17
ENSG00000135414	GDF11	-2.59E+00	1.61E-18	2.49E-17
ENSG00000119729	RHOQ	-1.44E+00	1.95E-18	3.02E-17
ENSG00000144815	NXPE3	-1.52E+00	1.97E-18	3.03E-17
ENSG00000169679	BUB1	-1.33E+00	2.03E-18	3.13E-17
ENSG00000117592	PRDX6	-1.21E+00	2.04E-18	3.13E-17
ENSG00000155115	GTF3C6	-1.26E+00	2.05E-18	3.16E-17
ENSG00000156471	PTDSS1	-1.36E+00	2.37E-18	3.63E-17
ENSG00000177706	FAM20C	-1.16E+00	2.50E-18	3.81E-17
ENSG00000114686	MRPL3	-1.12E+00	2.60E-18	3.95E-17
ENSG00000162585	FAAP20	-2.27E+00	2.64E-18	4.01E-17
ENSG00000130935	NOL11	-1.08E+00	2.90E-18	4.40E-17
ENSG00000152749	GPR180	-1.25E+00	3.07E-18	4.65E-17
ENSG00000010270	STARD3NL	-1.86E+00	3.16E-18	4.77E-17
ENSG00000135451	TROAP	-2.00E+00	3.23E-18	4.88E-17
ENSG00000065923	SLC9A7	-2.54E+00	3.27E-18	4.94E-17
ENSG00000138326	RPS24	-1.47E+00	3.44E-18	5.19E-17
ENSG00000235559	NOP56P1	-2.71E+00	3.80E-18	5.71E-17
ENSG00000143641	GALNT2	-1.20E+00	3.92E-18	5.89E-17
ENSG00000104964	TLE5	-1.52E+00	4.24E-18	6.35E-17
ENSG00000261236	BOP1	-1.50E+00	4.39E-18	6.58E-17

ENSG00000158234	FAIM	-1.97E+00	4.42E-18	6.61E-17
ENSG00000150760	DOCK1	-1.52E+00	5.15E-18	7.67E-17
ENSG00000175387	SMAD2	-1.20E+00	5.69E-18	8.45E-17
ENSG00000117395	EBNA1BP2	-1.53E+00	5.73E-18	8.50E-17
ENSG00000140443	IGF1R	-1.87E+00	6.32E-18	9.36E-17
ENSG00000143947	RPS27A	-1.78E+00	6.51E-18	9.63E-17
ENSG00000164904	ALDH7A1	-1.46E+00	6.60E-18	9.75E-17
ENSG00000142541	RPL13A	-1.93E+00	6.60E-18	9.75E-17
ENSG00000164032	H2AFZ	-1.23E+00	7.59E-18	1.12E-16
ENSG00000183386	FHL3	-1.86E+00	7.78E-18	1.14E-16
ENSG00000090971	NAT14	-2.30E+00	8.12E-18	1.19E-16
ENSG00000164985	PSIP1	-1.10E+00	8.27E-18	1.21E-16
ENSG00000154277	UCHL1	-1.24E+00	8.61E-18	1.25E-16
ENSG00000114391	RPL24	-1.45E+00	9.32E-18	1.35E-16
ENSG00000165304	MELK	-1.11E+00	1.00E-17	1.45E-16
ENSG00000125691	RPL23	-1.97E+00	1.02E-17	1.47E-16
ENSG00000131747	TOP2A	-1.62E+00	1.12E-17	1.61E-16
ENSG00000020256	ZFP64	-1.23E+00	1.41E-17	2.01E-16
ENSG00000111144	LTA4H	-1.47E+00	1.54E-17	2.20E-16
ENSG00000108561	C1QBP	-1.39E+00	1.60E-17	2.29E-16
ENSG00000125841	NRSN2	-1.41E+00	1.61E-17	2.29E-16
ENSG00000184277	TM2D3	-1.85E+00	1.71E-17	2.43E-16
ENSG00000142089	IFITM3	-1.27E+00	1.77E-17	2.51E-16
ENSG00000230629	RPS23P8	-1.78E+00	1.78E-17	2.52E-16
ENSG00000254726	MEX3A	-1.55E+00	1.89E-17	2.67E-16
ENSG00000101444	AHCY	-1.43E+00	2.20E-17	3.10E-16
ENSG00000109881	CCDC34	-1.02E+00	2.69E-17	3.75E-16
ENSG00000108559	NUP88	-1.04E+00	2.88E-17	4.01E-16
ENSG00000176619	LMNB2	-1.01E+00	2.92E-17	4.06E-16
ENSG00000130024	PHF10	-1.19E+00	3.37E-17	4.67E-16
ENSG00000137547	MRPL15	-1.66E+00	3.56E-17	4.93E-16
ENSG00000149541	B3GAT3	-1.96E+00	4.05E-17	5.57E-16
ENSG00000116337	AMPD2	-2.09E+00	4.23E-17	5.82E-16
ENSG00000075218	GTSE1	-1.21E+00	4.91E-17	6.74E-16
ENSG00000085491	SLC25A24	-1.02E+00	5.02E-17	6.87E-16
ENSG00000134138	MEIS2	-1.22E+00	6.89E-17	9.35E-16
ENSG00000147419	CCDC25	-1.07E+00	6.98E-17	9.47E-16
ENSG00000111786	SRSF9	-1.07E+00	7.09E-17	9.59E-16
ENSG00000079819	EPB41L2	-1.67E+00	7.11E-17	9.62E-16
ENSG00000172986	GXYLT2	-3.00E+00	7.11E-17	9.62E-16

ENSG00000081154	PCNP	-1.07E+00	7.94E-17	1.07E-15
ENSG00000092621	PHGDH	-1.13E+00	9.57E-17	1.28E-15
ENSG00000104320	NBN	-1.30E+00	1.04E-16	1.38E-15
ENSG00000097033	SH3GLB1	-1.48E+00	1.06E-16	1.41E-15
ENSG00000158290	CUL4B	-1.09E+00	1.36E-16	1.81E-15
ENSG00000226479	TMEM185B	-1.83E+00	1.44E-16	1.90E-15
ENSG00000103550	KNOP1	-1.09E+00	1.55E-16	2.03E-15
ENSG00000179041	RRS1	-2.00E+00	1.63E-16	2.14E-15
ENSG00000091127	PUS7	-2.02E+00	1.73E-16	2.26E-15
ENSG00000145332	KLHL8	-1.95E+00	1.80E-16	2.36E-15
ENSG00000071794	HLTF	-1.50E+00	1.85E-16	2.42E-15
ENSG00000040275	SPDL1	-1.01E+00	1.98E-16	2.59E-15
ENSG00000144749	LRIG1	-1.58E+00	2.09E-16	2.73E-15
ENSG00000148303	RPL7A	-1.27E+00	2.57E-16	3.34E-15
ENSG00000079616	KIF22	-1.01E+00	2.58E-16	3.35E-15
ENSG00000109861	CTSC	-2.20E+00	2.84E-16	3.68E-15
ENSG00000126749	EMG1	-1.72E+00	2.85E-16	3.69E-15
ENSG00000102967	DHODH	-3.07E+00	2.89E-16	3.74E-15
ENSG00000042062	RIPOR3	-5.27E+00	2.92E-16	3.77E-15
ENSG00000128609	NDUFA5	-1.01E+00	3.42E-16	4.39E-15
ENSG00000075914	EXOSC7	-1.02E+00	3.44E-16	4.42E-15
ENSG00000164114	MAP9	-1.42E+00	3.76E-16	4.82E-15
ENSG00000198417	MT1F	-6.68E+00	3.99E-16	5.11E-15
ENSG00000137807	KIF23	-1.22E+00	4.35E-16	5.55E-15
ENSG00000162377	COA7	-1.40E+00	4.42E-16	5.64E-15
ENSG00000135480	KRT7	-3.80E+00	4.58E-16	5.84E-15
ENSG00000153560	UBP1	-1.11E+00	4.68E-16	5.96E-15
ENSG00000141384	TAF4B	-3.79E+00	5.24E-16	6.65E-15
ENSG00000111817	DSE	-1.11E+00	5.50E-16	6.97E-15
ENSG00000166033	HTRA1	-2.72E+00	5.90E-16	7.48E-15
ENSG00000123416	TUBA1B	-1.27E+00	5.92E-16	7.50E-15
ENSG00000204576	PRR3	-2.01E+00	5.98E-16	7.55E-15
ENSG00000077152	UBE2T	-1.33E+00	7.07E-16	8.90E-15
ENSG00000255737	AGAP2-AS1	-3.77E+00	7.15E-16	9.00E-15
ENSG00000196177	ACADSB	-2.79E+00	7.97E-16	1.00E-14
ENSG00000135070	ISCA1	-1.47E+00	8.15E-16	1.02E-14
ENSG00000119397	CNTRL	-1.69E+00	8.82E-16	1.10E-14
ENSG00000112983	BRD8	-1.35E+00	9.48E-16	1.18E-14
ENSG00000171863	RPS7	-1.67E+00	9.83E-16	1.22E-14
ENSG00000004455	AK2	-1.57E+00	1.02E-15	1.26E-14

ENSG00000073536	NLE1	-2.30E+00	1.12E-15	1.38E-14
ENSG00000198498	TMA16	-1.20E+00	1.17E-15	1.45E-14
ENSG00000173757	STAT5B	-1.34E+00	1.28E-15	1.58E-14
ENSG00000171724	VAT1L	-2.32E+00	1.38E-15	1.69E-14
ENSG00000115365	LANCL1	-1.54E+00	1.41E-15	1.72E-14
ENSG00000142102	PGGHG	-4.94E+00	1.43E-15	1.75E-14
ENSG00000115541	HSPE1	-1.93E+00	1.56E-15	1.90E-14
ENSG00000182979	MTA1	-1.98E+00	1.60E-15	1.94E-14
ENSG00000165821	SALL2	-4.07E+00	1.83E-15	2.23E-14
ENSG00000134198	TSPAN2	-3.26E+00	1.86E-15	2.26E-14
ENSG00000151491	EPS8	-1.13E+00	1.89E-15	2.29E-14
ENSG00000143891	GALM	-2.43E+00	2.11E-15	2.56E-14
ENSG00000113594	LIFR	-2.17E+00	2.18E-15	2.64E-14
ENSG00000035499	DEPDC1B	-1.74E+00	2.26E-15	2.73E-14
ENSG00000187193	MT1X	-1.72E+00	2.92E-15	3.50E-14
ENSG00000169288	MRPL1	-1.24E+00	2.98E-15	3.57E-14
ENSG00000071575	TRIB2	-3.34E+00	3.00E-15	3.59E-14
ENSG00000162694	EXTL2	-1.54E+00	3.09E-15	3.69E-14
ENSG00000148690	FRA10AC1	-1.14E+00	3.47E-15	4.14E-14
ENSG00000142937	RPS8	-1.32E+00	3.53E-15	4.21E-14
ENSG00000166851	PLK1	-1.36E+00	3.57E-15	4.26E-14
ENSG00000122026	RPL21	-1.53E+00	3.67E-15	4.37E-14
ENSG00000112655	PTK7	-1.45E+00	3.97E-15	4.72E-14
ENSG00000164934	DCAF13	-1.03E+00	3.98E-15	4.73E-14
ENSG00000101871	MID1	-1.70E+00	4.38E-15	5.18E-14
ENSG00000163069	SGCB	-1.08E+00	4.58E-15	5.41E-14
ENSG00000065882	TBC1D1	-1.30E+00	4.66E-15	5.50E-14
ENSG00000104613	INTS10	-1.20E+00	4.68E-15	5.52E-14
ENSG00000120699	EXOSC8	-1.13E+00	4.92E-15	5.78E-14
ENSG00000134874	DZIP1	-1.12E+00	4.99E-15	5.85E-14
ENSG00000117318	ID3	-1.24E+00	5.06E-15	5.94E-14
ENSG00000168002	POLR2G	-1.66E+00	5.07E-15	5.94E-14
ENSG00000183010	PYCR1	-2.22E+00	5.42E-15	6.34E-14
ENSG00000139354	GAS2L3	-1.99E+00	5.60E-15	6.55E-14
ENSG00000089157	RPLP0	-1.25E+00	5.61E-15	6.56E-14
ENSG00000231500	RPS18	-1.81E+00	5.83E-15	6.81E-14
ENSG00000075213	SEMA3A	-3.18E+00	5.85E-15	6.82E-14
ENSG00000226950	DANCR	-2.38E+00	6.15E-15	7.17E-14
ENSG00000169490	TM2D2	-1.23E+00	6.69E-15	7.74E-14
ENSG00000005249	PRKAR2B	-2.18E+00	6.72E-15	7.78E-14



ENSG00000110172	CHORDC1	-1.10E+00	7.05E-15	8.14E-14
ENSG00000198721	ECI2	-1.26E+00	7.45E-15	8.59E-14
ENSG00000124614	RPS10	-2.29E+00	7.65E-15	8.82E-14
ENSG00000249669	CARMN	-2.81E+00	8.01E-15	9.22E-14
ENSG00000137463	MGARP	-3.29E+00	8.09E-15	9.30E-14
ENSG00000112208	BAG2	-1.58E+00	8.65E-15	9.91E-14
ENSG00000108861	DUSP3	-1.38E+00	8.68E-15	9.94E-14
ENSG00000112742	TTK	-1.28E+00	9.22E-15	1.05E-13
ENSG00000159228	CBR1	-1.58E+00	1.07E-14	1.22E-13
ENSG00000139263	LRIG3	-2.24E+00	1.10E-14	1.26E-13
ENSG00000109475	RPL34	-2.39E+00	1.14E-14	1.30E-13
ENSG00000139343	SNRPF	-1.72E+00	1.18E-14	1.34E-13
ENSG00000105854	PON2	-1.03E+00	1.19E-14	1.35E-13
ENSG00000103494	RPGRIP1L	-1.66E+00	1.32E-14	1.49E-13
ENSG00000067992	PDK3	-2.08E+00	1.36E-14	1.53E-13
ENSG00000171453	POLR1C	-1.06E+00	1.39E-14	1.56E-13
ENSG00000146232	NFKBIE	-2.28E+00	1.40E-14	1.57E-13
ENSG00000018510	AGPS	-1.23E+00	1.46E-14	1.63E-13
ENSG00000203666	EFCAB2	-1.75E+00	1.60E-14	1.78E-13
ENSG00000100105	PATZ1	-2.18E+00	1.64E-14	1.83E-13
ENSG00000137285	TUBB2B	-1.75E+00	1.64E-14	1.83E-13
ENSG00000134686	PHC2	-1.08E+00	1.65E-14	1.83E-13
ENSG00000102144	PGK1	-1.12E+00	1.70E-14	1.89E-13
ENSG00000154917	RAB6B	-2.06E+00	1.74E-14	1.92E-13
ENSG00000167272	POP5	-2.33E+00	1.74E-14	1.92E-13
ENSG00000146072	TNFRSF21	-1.65E+00	1.84E-14	2.03E-13
ENSG00000187514	PTMA	-1.28E+00	1.84E-14	2.04E-13
ENSG00000134775	FHOD3	-6.47E+00	2.14E-14	2.35E-13
ENSG00000184357	HIST1H1B	-2.81E+00	2.20E-14	2.42E-13
ENSG00000073060	SCARB1	-1.35E+00	2.25E-14	2.47E-13
ENSG00000100625	SIX4	-2.11E+00	2.46E-14	2.69E-13
ENSG00000198242	RPL23A	-1.39E+00	2.52E-14	2.75E-13
ENSG00000133706	LARS	-1.50E+00	2.52E-14	2.76E-13
ENSG00000156103	MMP16	-2.17E+00	2.70E-14	2.94E-13
ENSG00000136319	TTC5	-1.94E+00	2.73E-14	2.97E-13
ENSG00000167721	TSR1	-1.10E+00	2.93E-14	3.18E-13
ENSG00000164587	RPS14	-1.67E+00	2.95E-14	3.20E-13
ENSG00000169715	MT1E	-2.43E+00	2.98E-14	3.23E-13
ENSG00000213390	ARHGAP19	-2.42E+00	3.00E-14	3.25E-13
ENSG00000173085	COQ2	-1.43E+00	3.53E-14	3.80E-13

ENSG00000065183	WDR3	-1.86E+00	3.53E-14	3.80E-13
ENSG00000170425	ADORA2B	-1.38E+00	3.93E-14	4.22E-13
ENSG00000105810	CDK6	-1.40E+00	4.02E-14	4.31E-13
ENSG00000167291	TBC1D16	-2.38E+00	4.11E-14	4.41E-13
ENSG00000138587	MNS1	-1.63E+00	4.26E-14	4.55E-13
ENSG00000100632	ERH	-1.12E+00	4.34E-14	4.64E-13
ENSG00000175063	UBE2C	-1.03E+00	4.46E-14	4.76E-13
ENSG00000147130	ZMYM3	-1.84E+00	4.51E-14	4.81E-13
ENSG00000179241	LDLRAD3	-3.47E+00	4.74E-14	5.05E-13
ENSG00000198353	HOXC4	-1.79E+00	4.92E-14	5.23E-13
ENSG00000120738	EGR1	-2.71E+00	5.53E-14	5.85E-13
ENSG00000160446	ZDHH12	-2.52E+00	5.79E-14	6.12E-13
ENSG00000165819	METTL3	-1.45E+00	6.19E-14	6.53E-13
ENSG00000160124	CCDC58	-1.29E+00	6.53E-14	6.86E-13
ENSG00000005175	RPAP3	-1.20E+00	6.60E-14	6.93E-13
ENSG00000142168	SOD1	-1.24E+00	6.74E-14	7.07E-13
ENSG00000171497	PPID	-1.17E+00	7.54E-14	7.90E-13
ENSG00000173068	BNC2	-2.17E+00	7.79E-14	8.15E-13
ENSG00000120318	ARAP3	-2.48E+00	7.85E-14	8.22E-13
ENSG00000137809	ITGA11	-2.66E+00	7.97E-14	8.33E-13
ENSG00000111639	MRPL51	-1.20E+00	8.03E-14	8.38E-13
ENSG00000164116	GUCY1A1	-5.29E+00	8.48E-14	8.85E-13
ENSG00000148843	PDCD11	-1.28E+00	9.08E-14	9.46E-13
ENSG00000107672	NSMCE4A	-1.43E+00	9.39E-14	9.78E-13
ENSG00000117724	CENPF	-1.44E+00	1.13E-13	1.17E-12
ENSG00000152147	GEMIN6	-1.81E+00	1.13E-13	1.17E-12
ENSG00000118985	ELL2	-1.40E+00	1.13E-13	1.17E-12
ENSG00000159055	MIS18A	-1.15E+00	1.14E-13	1.17E-12
ENSG00000143771	CNIH4	-1.75E+00	1.16E-13	1.19E-12
ENSG00000100823	APEX1	-1.17E+00	1.27E-13	1.30E-12
ENSG00000092140	G2E3	-1.56E+00	1.33E-13	1.37E-12
ENSG00000070785	EIF2B3	-1.25E+00	1.38E-13	1.42E-12
ENSG00000156110	ADK	-1.09E+00	1.40E-13	1.44E-12
ENSG00000101220	C20orf27	-1.34E+00	1.44E-13	1.47E-12
ENSG00000160131	VMA21	-1.50E+00	1.66E-13	1.69E-12
ENSG00000162645	GBP2	-3.68E+00	1.67E-13	1.70E-12
ENSG00000110841	PPFIBP1	-1.05E+00	1.71E-13	1.74E-12
ENSG00000130176	CNN1	-1.80E+00	1.74E-13	1.77E-12
ENSG00000083807	SLC27A5	-4.08E+00	1.80E-13	1.83E-12
ENSG00000278540	ACACA	-1.54E+00	1.85E-13	1.87E-12

ENSG00000197043	ANXA6	-1.39E+00	1.93E-13	1.95E-12
ENSG00000198189	HSD17B11	-2.58E+00	2.19E-13	2.21E-12
ENSG00000049249	TNFRSF9	-2.35E+00	2.31E-13	2.32E-12
ENSG00000168298	HIST1H1E	-2.54E+00	2.33E-13	2.34E-12
ENSG00000158882	TOMM40L	-1.86E+00	2.37E-13	2.38E-12
ENSG00000186687	LYRM7	-2.33E+00	2.41E-13	2.42E-12
ENSG00000104231	ZFAND1	-1.96E+00	2.60E-13	2.60E-12
ENSG00000221869	CEBPD	-1.89E+00	3.12E-13	3.09E-12
ENSG00000155903	RASA2	-2.12E+00	3.52E-13	3.48E-12
ENSG00000060688	SNRNP40	-1.32E+00	3.96E-13	3.90E-12
ENSG00000101751	POLI	-3.97E+00	4.56E-13	4.48E-12
ENSG00000137692	DCUN1D5	-1.38E+00	4.69E-13	4.60E-12
ENSG00000104518	GSDMD	-1.66E+00	4.96E-13	4.85E-12
ENSG00000134954	ETS1	-1.22E+00	5.04E-13	4.92E-12
ENSG00000196683	TOMM7	-1.92E+00	5.61E-13	5.47E-12
ENSG00000153140	CETN3	-1.58E+00	5.66E-13	5.51E-12
ENSG00000147408	CSGALNACT1	-1.93E+00	5.71E-13	5.56E-12
ENSG00000187257	RSBN1L	-1.14E+00	6.54E-13	6.34E-12
ENSG00000025770	NCAPH2	-1.22E+00	6.60E-13	6.39E-12
ENSG00000131469	RPL27	-2.04E+00	7.08E-13	6.85E-12
ENSG00000169439	SDC2	-1.21E+00	7.78E-13	7.50E-12
ENSG00000257698	GIHCG	-2.40E+00	7.84E-13	7.54E-12
ENSG00000253414	AC124067.2	-3.67E+00	7.86E-13	7.56E-12
ENSG00000177732	SOX12	-1.20E+00	8.46E-13	8.11E-12
ENSG00000153071	DAB2	-1.82E+00	8.58E-13	8.21E-12
ENSG00000141934	PLPP2	-1.83E+00	8.97E-13	8.58E-12
ENSG00000118707	TGIF2	-1.46E+00	9.00E-13	8.60E-12
ENSG00000091732	ZC3HC1	-1.33E+00	9.15E-13	8.74E-12
ENSG00000144354	CDCA7	-1.65E+00	1.03E-12	9.78E-12
ENSG00000105186	ANKRD27	-1.61E+00	1.05E-12	9.96E-12
ENSG00000102038	SMARCA1	-1.23E+00	1.12E-12	1.06E-11
ENSG00000184661	CDCA2	-1.07E+00	1.13E-12	1.07E-11
ENSG00000166788	SAAL1	-1.20E+00	1.14E-12	1.08E-11
ENSG00000115525	ST3GAL5	-2.53E+00	1.18E-12	1.12E-11
ENSG00000151465	CDC123	-1.15E+00	1.18E-12	1.12E-11
ENSG00000066279	ASPM	-1.29E+00	1.20E-12	1.13E-11
ENSG00000136522	MRPL47	-1.22E+00	1.23E-12	1.16E-11
ENSG00000205084	TMEM231	-2.02E+00	1.27E-12	1.19E-11
ENSG00000106546	AHR	-1.21E+00	1.34E-12	1.26E-11
ENSG00000105011	ASF1B	-1.05E+00	1.39E-12	1.31E-11

ENSG00000244398	AC116533.1	-1.75E+00	1.40E-12	1.32E-11
ENSG00000106028	SSBP1	-1.18E+00	1.44E-12	1.35E-11
ENSG00000197756	RPL37A	-1.65E+00	1.48E-12	1.39E-11
ENSG00000188010	MORN2	-1.93E+00	1.50E-12	1.41E-11
ENSG00000135686	KLHL36	-1.69E+00	1.54E-12	1.44E-11
ENSG00000118965	WDR35	-2.40E+00	1.58E-12	1.48E-11
ENSG00000171055	FEZ2	-1.40E+00	1.64E-12	1.53E-11
ENSG00000165506	DNAAF2	-1.83E+00	1.74E-12	1.62E-11
ENSG00000083720	OXCT1	-1.26E+00	1.80E-12	1.67E-11
ENSG00000186314	PRELID2	-2.65E+00	1.94E-12	1.79E-11
ENSG00000115163	CENPA	-1.43E+00	1.95E-12	1.80E-11
ENSG00000090447	TFAP4	-2.74E+00	2.00E-12	1.85E-11
ENSG00000112175	BMP5	-6.04E+00	2.03E-12	1.88E-11
ENSG00000156398	SFXN2	-3.67E+00	2.03E-12	1.88E-11
ENSG00000164611	PTTG1	-1.57E+00	2.06E-12	1.90E-11
ENSG00000245648	AC022075.1	-2.33E+00	2.06E-12	1.90E-11
ENSG00000241837	ATP5PO	-1.16E+00	2.21E-12	2.03E-11
ENSG00000171262	FAM98B	-1.30E+00	2.26E-12	2.07E-11
ENSG00000178776	C5orf46	-3.62E+00	2.41E-12	2.21E-11
ENSG00000261327	AC134312.5	-2.31E+00	2.45E-12	2.24E-11
ENSG00000143363	PRUNE1	-2.38E+00	2.46E-12	2.25E-11
ENSG00000166250	CLMP	-1.36E+00	2.54E-12	2.32E-11
ENSG00000162384	CZIB	-1.42E+00	2.59E-12	2.36E-11
ENSG00000121864	ZNF639	-1.46E+00	2.74E-12	2.49E-11
ENSG00000162433	AK4	-1.44E+00	2.76E-12	2.51E-11
ENSG00000184374	COLEC10	-3.11E+00	2.79E-12	2.53E-11
ENSG00000162496	DHRS3	-1.40E+00	3.07E-12	2.78E-11
ENSG00000133243	BTBD2	-1.39E+00	3.16E-12	2.86E-11
ENSG00000122862	SRGN	-1.80E+00	3.18E-12	2.88E-11
ENSG00000140534	TICRR	-1.44E+00	3.25E-12	2.93E-11
ENSG00000111328	CDK2AP1	-1.27E+00	3.27E-12	2.95E-11
ENSG00000176697	BDNF	-1.82E+00	3.29E-12	2.97E-11
ENSG00000182179	UBA7	-3.37E+00	3.49E-12	3.14E-11
ENSG00000111358	GTF2H3	-1.34E+00	3.52E-12	3.16E-11
ENSG00000278619	MRM1	-2.36E+00	3.56E-12	3.20E-11
ENSG00000011426	ANLN	-1.01E+00	3.67E-12	3.29E-11
ENSG00000011295	TTC19	-1.19E+00	3.77E-12	3.38E-11
ENSG00000130810	PPAN	-2.00E+00	3.79E-12	3.39E-11
ENSG00000197594	ENPP1	-2.45E+00	3.94E-12	3.52E-11
ENSG00000056558	TRAF1	-2.78E+00	4.10E-12	3.66E-11

ENSG00000155229	MMS19	-1.00E+00	4.29E-12	3.81E-11
ENSG00000111832	RWDD1	-1.02E+00	4.41E-12	3.92E-11
ENSG00000177830	CHID1	-1.16E+00	4.64E-12	4.12E-11
ENSG00000116157	GPX7	-3.07E+00	4.75E-12	4.21E-11
ENSG00000184924	PTRHD1	-1.93E+00	5.10E-12	4.51E-11
ENSG00000048991	R3HDM1	-1.42E+00	5.19E-12	4.58E-11
ENSG00000123143	PKN1	-1.08E+00	5.20E-12	4.59E-11
ENSG00000163607	GTPBP8	-1.14E+00	5.35E-12	4.72E-11
ENSG00000198794	SCAMP5	-1.37E+00	5.36E-12	4.72E-11
ENSG00000140694	PARN	-1.08E+00	5.50E-12	4.84E-11
ENSG00000071082	RPL31	-1.59E+00	5.69E-12	5.00E-11
ENSG00000107159	CA9	-4.06E+00	5.72E-12	5.03E-11
ENSG00000133169	BEX1	-2.05E+00	5.76E-12	5.06E-11
ENSG00000138442	WDR12	-1.34E+00	5.89E-12	5.17E-11
ENSG00000059573	ALDH18A1	-1.27E+00	5.92E-12	5.20E-11
ENSG00000269190	FBXO17	-1.69E+00	6.04E-12	5.29E-11
ENSG00000138182	KIF20B	-1.00E+00	6.33E-12	5.53E-11
ENSG00000157657	ZNF618	-1.77E+00	6.67E-12	5.82E-11
ENSG00000143067	ZNF697	-2.03E+00	7.47E-12	6.48E-11
ENSG00000005302	MSL3	-1.29E+00	7.56E-12	6.56E-11
ENSG00000131844	MCCC2	-1.39E+00	8.05E-12	6.95E-11
ENSG00000086475	SEPHS1	-1.11E+00	8.06E-12	6.96E-11
ENSG00000143499	SMYD2	-2.63E+00	8.40E-12	7.24E-11
ENSG00000136997	MYC	-1.43E+00	8.50E-12	7.32E-11
ENSG00000116001	TIA1	-1.37E+00	9.22E-12	7.91E-11
ENSG00000180694	TMEM64	-1.52E+00	9.25E-12	7.94E-11
ENSG00000169554	ZEB2	-1.81E+00	9.36E-12	8.02E-11
ENSG00000145623	OSMR	-1.60E+00	1.02E-11	8.71E-11
ENSG00000165030	NFIL3	-1.77E+00	1.02E-11	8.71E-11
ENSG00000126249	PDCD2L	-2.11E+00	1.03E-11	8.77E-11
ENSG00000155393	HEATR3	-1.29E+00	1.09E-11	9.26E-11
ENSG00000068097	HEATR6	-1.50E+00	1.11E-11	9.50E-11
ENSG00000104447	TRPS1	-1.83E+00	1.17E-11	9.92E-11
ENSG00000008324	SS18L2	-1.37E+00	1.18E-11	1.01E-10
ENSG00000105677	TMEM147	-1.40E+00	1.20E-11	1.02E-10
ENSG00000118564	FBXL5	-1.54E+00	1.23E-11	1.05E-10
ENSG00000182004	SNRPE	-1.75E+00	1.30E-11	1.10E-10
ENSG00000117877	CD3EAP	-1.18E+00	1.31E-11	1.11E-10
ENSG00000114107	CEP70	-1.20E+00	1.42E-11	1.20E-10
ENSG00000184992	BRI3BP	-1.03E+00	1.50E-11	1.26E-10

ENSG00000143507	DUSP10	-2.40E+00	1.55E-11	1.31E-10
ENSG00000111247	RAD51AP1	-1.04E+00	1.57E-11	1.32E-10
ENSG00000071655	MBD3	-1.04E+00	1.59E-11	1.34E-10
ENSG00000137337	MDC1	-1.32E+00	1.70E-11	1.43E-10
ENSG00000114054	PCCB	-1.12E+00	1.77E-11	1.48E-10
ENSG00000196968	FUT11	-1.33E+00	1.86E-11	1.56E-10
ENSG00000149150	SLC43A1	-2.98E+00	1.86E-11	1.56E-10
ENSG00000105926	MPP6	-1.34E+00	1.87E-11	1.56E-10
ENSG00000093010	COMT	-1.29E+00	1.94E-11	1.62E-10
ENSG00000107798	LIPA	-1.30E+00	1.98E-11	1.65E-10
ENSG00000104472	CHRAC1	-1.08E+00	1.99E-11	1.65E-10
ENSG00000115364	MRPL19	-1.01E+00	2.01E-11	1.67E-10
ENSG00000149089	APIP	-1.56E+00	2.06E-11	1.71E-10
ENSG00000154122	ANKH	-1.13E+00	2.09E-11	1.73E-10
ENSG00000167118	URM1	-1.69E+00	2.09E-11	1.74E-10
ENSG00000170264	FAM161A	-1.56E+00	2.16E-11	1.79E-10
ENSG00000132846	ZBED3	-3.49E+00	2.26E-11	1.87E-10
ENSG00000111196	MAGOHB	-1.20E+00	2.28E-11	1.89E-10
ENSG00000125821	DTD1	-1.56E+00	2.33E-11	1.92E-10
ENSG00000139637	C12orf10	-1.72E+00	2.35E-11	1.94E-10
ENSG00000135124	P2RX4	-2.80E+00	2.63E-11	2.16E-10
ENSG00000143179	UCK2	-1.27E+00	2.73E-11	2.24E-10
ENSG00000139083	ETV6	-1.34E+00	2.99E-11	2.45E-10
ENSG00000026950	BTN3A1	-2.23E+00	3.00E-11	2.45E-10
ENSG00000153714	LURAP1L	-2.10E+00	3.03E-11	2.48E-10
ENSG00000113360	DROSHA	-1.35E+00	3.12E-11	2.54E-10
ENSG00000072571	HMMR	-1.28E+00	3.13E-11	2.55E-10
ENSG00000120837	NFYB	-1.08E+00	3.16E-11	2.57E-10
ENSG00000138698	RAP1GDS1	-1.86E+00	3.32E-11	2.70E-10
ENSG00000116793	PHTF1	-1.21E+00	3.33E-11	2.70E-10
ENSG00000065989	PDE4A	-1.79E+00	3.35E-11	2.72E-10
ENSG00000148288	GBGT1	-4.89E+00	3.55E-11	2.88E-10
ENSG00000135111	TBX3	-1.18E+00	3.59E-11	2.91E-10
ENSG00000175183	CSRP2	-1.59E+00	3.71E-11	3.00E-10
ENSG00000181924	COA4	-1.79E+00	3.81E-11	3.08E-10
ENSG00000185630	PBX1	-1.76E+00	3.97E-11	3.21E-10
ENSG00000137168	PPIL1	-1.01E+00	4.02E-11	3.25E-10
ENSG00000106638	TBL2	-1.25E+00	4.10E-11	3.31E-10
ENSG00000182010	RTKN2	-2.00E+00	4.36E-11	3.51E-10
ENSG00000164167	LSM6	-1.36E+00	4.50E-11	3.62E-10

ENSG00000027847	B4GALT7	-1.52E+00	4.55E-11	3.65E-10
ENSG00000185917	SETD4	-1.81E+00	4.59E-11	3.68E-10
ENSG00000143390	RFX5	-1.59E+00	4.60E-11	3.69E-10
ENSG00000091483	FH	-1.07E+00	4.70E-11	3.76E-10
ENSG00000008283	CYB561	-1.57E+00	4.78E-11	3.82E-10
ENSG00000123213	NLN	-2.38E+00	4.78E-11	3.82E-10
ENSG00000140006	WDR89	-1.40E+00	4.86E-11	3.88E-10
ENSG00000005448	WDR54	-1.30E+00	5.00E-11	3.99E-10
ENSG00000118193	KIF14	-1.24E+00	5.11E-11	4.08E-10
ENSG00000129347	KRI1	-1.03E+00	5.87E-11	4.66E-10
ENSG00000145592	RPL37	-1.95E+00	5.99E-11	4.75E-10
ENSG00000108406	DHX40	-1.19E+00	6.08E-11	4.82E-10
ENSG00000163818	LZTFL1	-1.50E+00	6.09E-11	4.82E-10
ENSG00000135372	NAT10	-1.16E+00	6.12E-11	4.85E-10
ENSG00000185745	IFIT1	-3.90E+00	6.14E-11	4.86E-10
ENSG00000169019	COMMD8	-1.40E+00	6.21E-11	4.91E-10
ENSG00000101160	CTSZ	-2.58E+00	6.25E-11	4.94E-10
ENSG00000106366	SERPINE1	-1.36E+00	6.34E-11	5.00E-10
ENSG00000162458	FBLIM1	-1.25E+00	6.41E-11	5.05E-10
ENSG00000105792	CFAP69	-4.75E+00	6.85E-11	5.37E-10
ENSG00000179431	FJX1	-2.97E+00	7.01E-11	5.50E-10
ENSG00000130713	EXOSC2	-1.33E+00	7.31E-11	5.72E-10
ENSG00000121621	KIF18A	-1.34E+00	7.48E-11	5.84E-10
ENSG00000186469	GNG2	-4.04E+00	7.93E-11	6.18E-10
ENSG00000163584	RPL22L1	-2.40E+00	8.50E-11	6.60E-10
ENSG00000136425	CIB2	-1.69E+00	8.64E-11	6.71E-10
ENSG00000077684	JADE1	-1.28E+00	9.03E-11	7.00E-10
ENSG00000101811	CSTF2	-1.27E+00	9.07E-11	7.03E-10
ENSG00000126790	L3HYPDH	-1.85E+00	9.50E-11	7.35E-10
ENSG00000171204	TMEM126B	-1.28E+00	9.63E-11	7.45E-10
ENSG00000225439	BOLA3-AS1	-3.25E+00	9.95E-11	7.69E-10
ENSG00000166441	RPL27A	-1.78E+00	1.01E-10	7.78E-10
ENSG00000118894	EEF2KMT	-2.61E+00	1.08E-10	8.36E-10
ENSG00000144061	NPHP1	-2.19E+00	1.12E-10	8.58E-10
ENSG00000174099	MSRB3	-1.17E+00	1.12E-10	8.58E-10
ENSG00000086189	DIMT1	-1.55E+00	1.12E-10	8.59E-10
ENSG00000187240	DYNC2H1	-1.68E+00	1.13E-10	8.69E-10
ENSG00000283498	MIR1244-2	-2.83E+00	1.16E-10	8.92E-10
ENSG00000240065	PSMB9	-1.89E+00	1.17E-10	8.92E-10
ENSG00000119705	SLIRP	-2.08E+00	1.24E-10	9.46E-10

ENSG00000259807	AC009093.1	-3.50E+00	1.26E-10	9.63E-10
ENSG00000113966	ARL6	-1.96E+00	1.28E-10	9.77E-10
ENSG00000114739	ACVR2B	-2.46E+00	1.31E-10	9.95E-10
ENSG00000242259	C22orf39	-1.45E+00	1.31E-10	9.98E-10
ENSG00000133935	ERG28	-1.45E+00	1.32E-10	1.01E-09
ENSG00000131788	PIAS3	-1.57E+00	1.33E-10	1.01E-09
ENSG0000024526	DEPDC1	-1.29E+00	1.34E-10	1.02E-09
ENSG00000127920	GNG11	-3.10E+00	1.36E-10	1.03E-09
ENSG0000010803	SCMH1	-2.01E+00	1.36E-10	1.03E-09
ENSG00000257093	DENND11	-3.14E+00	1.39E-10	1.05E-09
ENSG00000079150	FKBP7	-3.27E+00	1.45E-10	1.10E-09
ENSG00000142731	PLK4	-1.34E+00	1.48E-10	1.12E-09
ENSG00000137745	MMP13	-2.00E+00	1.48E-10	1.12E-09
ENSG00000162244	RPL29	-1.76E+00	1.48E-10	1.12E-09
ENSG00000174748	RPL15	-1.57E+00	1.50E-10	1.13E-09
ENSG00000116857	TMEM9	-1.30E+00	1.50E-10	1.14E-09
ENSG00000162733	DDR2	-1.22E+00	1.51E-10	1.14E-09
ENSG00000169604	ANTXR1	-1.26E+00	1.53E-10	1.16E-09
ENSG00000241399	CD302	-3.55E+00	1.68E-10	1.27E-09
ENSG00000128656	CHN1	-1.76E+00	1.73E-10	1.30E-09
ENSG00000103319	EEF2K	-1.44E+00	1.82E-10	1.36E-09
ENSG00000262919	CCNQ	-1.80E+00	1.83E-10	1.37E-09
ENSG00000151612	ZNF827	-1.28E+00	1.91E-10	1.42E-09
ENSG00000250321	AC079140.2	-1.69E+00	1.96E-10	1.46E-09
ENSG00000159167	STC1	-2.01E+00	2.30E-10	1.71E-09
ENSG00000047932	GOPC	-1.23E+00	2.34E-10	1.74E-09
ENSG00000134419	RPS15A	-1.40E+00	2.37E-10	1.76E-09
ENSG00000124508	BTN2A2	-2.18E+00	2.41E-10	1.78E-09
ENSG00000134744	TUT4	-1.37E+00	2.41E-10	1.78E-09
ENSG00000137054	POLR1E	-1.04E+00	2.42E-10	1.79E-09
ENSG00000164953	TMEM67	-1.69E+00	2.42E-10	1.79E-09
ENSG00000064042	LIMCH1	-1.44E+00	2.43E-10	1.79E-09
ENSG00000138443	ABI2	-1.13E+00	2.44E-10	1.80E-09
ENSG00000154839	SKA1	-1.20E+00	2.48E-10	1.82E-09
ENSG00000138160	KIF11	-1.36E+00	2.53E-10	1.86E-09
ENSG00000187837	HIST1H1C	-1.45E+00	2.54E-10	1.87E-09
ENSG00000086712	TXLNG	-1.03E+00	2.62E-10	1.92E-09
ENSG00000176273	SLC35G1	-1.63E+00	2.63E-10	1.93E-09
ENSG00000196083	IL1RAP	-1.03E+00	2.66E-10	1.95E-09
ENSG00000099385	BCL7C	-1.93E+00	2.67E-10	1.95E-09



ENSG00000140451	PIF1	-1.30E+00	2.69E-10	1.97E-09
ENSG00000100767	PAPLN	-2.60E+00	2.88E-10	2.10E-09
ENSG00000115318	LOXL3	-2.63E+00	2.88E-10	2.10E-09
ENSG00000083845	RPS5	-1.40E+00	2.93E-10	2.14E-09
ENSG00000112096	SOD2	-1.56E+00	2.95E-10	2.15E-09
ENSG00000240771	ARHGGEF25	-2.85E+00	3.02E-10	2.20E-09
ENSG00000154743	TSEN2	-1.91E+00	3.08E-10	2.24E-09
ENSG00000115368	WDR75	-1.35E+00	3.17E-10	2.30E-09
ENSG00000172638	EFEMP2	-1.40E+00	3.22E-10	2.34E-09
ENSG00000176720	BOK	-1.54E+00	3.27E-10	2.37E-09
ENSG00000237976	AL391069.2	-5.85E+00	3.30E-10	2.39E-09
ENSG00000124006	OBSL1	-1.60E+00	3.44E-10	2.48E-09
ENSG00000185432	METTL7A	-4.91E+00	3.51E-10	2.54E-09
ENSG00000104660	LEPROTL1	-1.03E+00	3.58E-10	2.58E-09
ENSG00000134222	PSRC1	-2.18E+00	3.70E-10	2.66E-09
ENSG00000151414	NEK7	-1.31E+00	3.88E-10	2.79E-09
ENSG00000152804	HHEX	-2.71E+00	3.88E-10	2.79E-09
ENSG00000100911	PSME2	-1.07E+00	4.08E-10	2.93E-09
ENSG00000164898	FMC1	-2.23E+00	4.24E-10	3.04E-09
ENSG00000070018	LRP6	-1.19E+00	4.30E-10	3.08E-09
ENSG00000111912	NCOA7	-1.10E+00	4.48E-10	3.20E-09
ENSG00000169255	B3GALNT1	-1.57E+00	4.50E-10	3.21E-09
ENSG00000197442	MAP3K5	-2.46E+00	4.54E-10	3.24E-09
ENSG00000135390	ATP5MC2	-2.00E+00	4.66E-10	3.32E-09
ENSG00000169599	NFU1	-1.42E+00	5.17E-10	3.68E-09
ENSG00000185359	HGS	-1.06E+00	5.41E-10	3.84E-09
ENSG00000118181	RPS25	-1.30E+00	5.55E-10	3.95E-09
ENSG00000163214	DHX57	-1.53E+00	5.56E-10	3.95E-09
ENSG00000168310	IRF2	-1.32E+00	5.73E-10	4.06E-09
ENSG00000189046	ALKBH2	-1.48E+00	5.74E-10	4.07E-09
ENSG00000137124	ALDH1B1	-1.57E+00	5.79E-10	4.10E-09
ENSG00000198918	RPL39	-2.07E+00	5.86E-10	4.15E-09
ENSG00000138035	PNPT1	-1.28E+00	5.91E-10	4.18E-09
ENSG00000151338	MIPOL1	-1.40E+00	6.30E-10	4.44E-09
ENSG00000115825	PRKD3	-1.19E+00	6.98E-10	4.90E-09
ENSG00000172156	CCL11	-5.16E+00	7.17E-10	5.03E-09
ENSG00000135596	MICAL1	-1.61E+00	7.20E-10	5.05E-09
ENSG00000184005	ST6GALNAC3	-4.20E+00	7.56E-10	5.29E-09
ENSG00000143157	POGK	-2.41E+00	7.59E-10	5.31E-09
ENSG00000165996	HACD1	-2.45E+00	8.47E-10	5.91E-09

ENSG00000102390	PBDC1	-1.03E+00	9.13E-10	6.37E-09
ENSG00000198042	MAK16	-1.27E+00	9.37E-10	6.52E-09
ENSG00000140263	SORD	-2.86E+00	9.43E-10	6.56E-09
ENSG00000110811	P3H3	-1.38E+00	9.55E-10	6.64E-09
ENSG00000161888	SPC24	-1.46E+00	9.71E-10	6.75E-09
ENSG00000239672	NME1	-1.49E+00	1.03E-09	7.11E-09
ENSG00000186918	ZNF395	-1.64E+00	1.05E-09	7.25E-09
ENSG00000168303	MPLKIP	-1.04E+00	1.06E-09	7.31E-09
ENSG00000109189	USP46	-1.47E+00	1.06E-09	7.31E-09
ENSG00000102271	KLHL4	-3.68E+00	1.14E-09	7.83E-09
ENSG00000158042	MRPL17	-1.41E+00	1.16E-09	8.02E-09
ENSG00000047230	CTPS2	-1.85E+00	1.18E-09	8.13E-09
ENSG00000152413	HOMER1	-1.64E+00	1.20E-09	8.23E-09
ENSG00000140945	CDH13	-1.05E+00	1.22E-09	8.37E-09
ENSG00000182195	LDOC1	-1.45E+00	1.22E-09	8.37E-09
ENSG00000124074	ENKD1	-1.33E+00	1.22E-09	8.41E-09
ENSG00000170584	NUDCD2	-1.34E+00	1.26E-09	8.65E-09
ENSG00000122034	GTF3A	-1.25E+00	1.27E-09	8.68E-09
ENSG00000138796	HADH	-1.01E+00	1.28E-09	8.74E-09
ENSG00000137726	FXVD6	-2.48E+00	1.32E-09	9.01E-09
ENSG00000236609	ZNF853	-3.75E+00	1.38E-09	9.39E-09
ENSG00000197958	RPL12	-1.41E+00	1.39E-09	9.47E-09
ENSG00000056050	HPF1	-1.01E+00	1.43E-09	9.70E-09
ENSG00000188158	NHS	-2.37E+00	1.44E-09	9.76E-09
ENSG00000136205	TNS3	-1.86E+00	1.45E-09	9.82E-09
ENSG00000197728	RPS26	-1.81E+00	1.46E-09	9.88E-09
ENSG00000116649	SRM	-1.01E+00	1.59E-09	1.08E-08
ENSG00000213445	SIPA1	-1.18E+00	1.61E-09	1.08E-08
ENSG00000066855	MTFR1	-1.06E+00	1.62E-09	1.09E-08
ENSG00000122952	ZWINT	-1.40E+00	1.66E-09	1.12E-08
ENSG00000145681	HAPLN1	-2.11E+00	1.67E-09	1.13E-08
ENSG00000138286	FAM149B1	-3.65E+00	1.75E-09	1.18E-08
ENSG00000150636	CCDC102B	-2.90E+00	1.82E-09	1.22E-08
ENSG00000071994	PDCD2	-1.14E+00	1.87E-09	1.25E-08
ENSG00000111850	SMIM8	-2.10E+00	1.88E-09	1.26E-08
ENSG00000126088	UROD	-1.46E+00	1.90E-09	1.27E-08
ENSG00000138002	IFT172	-3.43E+00	1.91E-09	1.28E-08
ENSG00000165716	DIPK1B	-1.67E+00	1.94E-09	1.30E-08
ENSG00000104356	POP1	-1.06E+00	2.15E-09	1.43E-08
ENSG00000138382	METTL5	-1.29E+00	2.15E-09	1.43E-08

ENSG00000146540	C7orf50	-1.35E+00	2.17E-09	1.44E-08
ENSG00000112578	BYSL	-1.03E+00	2.18E-09	1.45E-08
ENSG00000102309	PIN4	-1.78E+00	2.35E-09	1.56E-08
ENSG00000120158	RCL1	-1.23E+00	2.73E-09	1.80E-08
ENSG00000172965	MIR4435-2HG	-1.31E+00	2.78E-09	1.83E-08
ENSG00000156469	MTERF3	-1.39E+00	2.81E-09	1.85E-08
ENSG00000066926	FECH	-1.67E+00	2.82E-09	1.86E-08
ENSG00000224578	HNRNPA1P48	-1.72E+00	2.97E-09	1.95E-08
ENSG00000239900	ADSL	-2.01E+00	2.98E-09	1.96E-08
ENSG00000228594	FNDC10	-1.75E+00	3.09E-09	2.02E-08
ENSG00000148803	FUOM	-2.98E+00	3.14E-09	2.05E-08
ENSG00000134987	WDR36	-1.13E+00	3.21E-09	2.10E-08
ENSG00000104219	ZDHHC2	-1.96E+00	3.25E-09	2.12E-08
ENSG00000162851	TFB2M	-1.61E+00	3.44E-09	2.24E-08
ENSG00000256537	SMIM10L1	-1.07E+00	3.60E-09	2.35E-08
ENSG00000173145	NOC3L	-1.05E+00	3.67E-09	2.39E-08
ENSG00000184887	BTBD6	-1.22E+00	3.74E-09	2.43E-08
ENSG00000148082	SHC3	-3.06E+00	3.83E-09	2.49E-08
ENSG00000174842	GLMN	-1.33E+00	3.85E-09	2.50E-08
ENSG00000147889	CDKN2A	-1.83E+00	3.89E-09	2.53E-08
ENSG00000121210	TMEM131L	-1.65E+00	3.92E-09	2.54E-08
ENSG00000175426	PCSK1	-4.37E+00	4.05E-09	2.62E-08
ENSG00000196497	IPO4	-2.37E+00	4.12E-09	2.67E-08
ENSG00000105948	TTC26	-1.42E+00	4.15E-09	2.68E-08
ENSG00000188352	FOCAD	-1.96E+00	4.23E-09	2.73E-08
ENSG00000185480	PARPBP	-1.36E+00	4.51E-09	2.91E-08
ENSG00000180739	S1PR5	-2.02E+00	4.70E-09	3.02E-08
ENSG00000152253	SPC25	-1.51E+00	4.79E-09	3.07E-08
ENSG00000163002	NUP35	-1.21E+00	5.03E-09	3.22E-08
ENSG00000164687	FABP5	-3.18E+00	5.21E-09	3.33E-08
ENSG00000115073	ACTR1B	-1.28E+00	5.26E-09	3.36E-08
ENSG00000156787	TBC1D31	-1.12E+00	5.28E-09	3.38E-08
ENSG00000112414	ADGRG6	-1.17E+00	5.73E-09	3.65E-08
ENSG00000198467	TPM2	-1.37E+00	6.04E-09	3.84E-08
ENSG00000156970	BUB1B	-1.28E+00	6.15E-09	3.91E-08
ENSG00000162688	AGL	-1.37E+00	6.19E-09	3.93E-08
ENSG00000138778	CENPE	-1.29E+00	6.26E-09	3.97E-08
ENSG00000044090	CUL7	-1.44E+00	6.39E-09	4.05E-08
ENSG00000143156	NME7	-1.53E+00	6.40E-09	4.06E-08
ENSG00000145536	ADAMTS16	-2.03E+00	6.42E-09	4.07E-08

ENSG00000232774	AL355916.1	-4.28E+00	6.74E-09	4.26E-08
ENSG00000166923	GREM1	-2.17E+00	7.16E-09	4.52E-08
ENSG00000155850	SLC26A2	-1.23E+00	7.54E-09	4.75E-08
ENSG00000287151	C2orf27A	-2.47E+00	7.91E-09	4.97E-08
ENSG00000165259	HDX	-3.16E+00	7.92E-09	4.98E-08
ENSG00000229659	RPL26P6	-1.40E+00	8.07E-09	5.06E-08
ENSG00000139269	INHBE	-4.90E+00	8.28E-09	5.19E-08
ENSG00000120647	CCDC77	-1.34E+00	8.39E-09	5.25E-08
ENSG00000151287	TEX30	-1.09E+00	8.39E-09	5.25E-08
ENSG00000116212	LRRC42	-1.04E+00	9.04E-09	5.65E-08
ENSG00000172716	SLFN11	-2.05E+00	9.18E-09	5.73E-08
ENSG00000092208	GEMIN2	-1.23E+00	9.24E-09	5.77E-08
ENSG00000135622	SEMA4F	-2.46E+00	9.37E-09	5.84E-08
ENSG00000139197	PEX5	-1.03E+00	9.41E-09	5.87E-08
ENSG00000115325	DOK1	-1.74E+00	1.01E-08	6.26E-08
ENSG00000204264	PSMB8	-1.21E+00	1.03E-08	6.37E-08
ENSG00000126970	ZC4H2	-4.01E+00	1.04E-08	6.45E-08
ENSG00000163682	RPL9	-1.44E+00	1.06E-08	6.59E-08
ENSG00000137038	DMAC1	-1.52E+00	1.10E-08	6.78E-08
ENSG00000124575	HIST1H1D	-1.31E+00	1.11E-08	6.85E-08
ENSG00000100462	PRMT5	-1.05E+00	1.14E-08	7.05E-08
ENSG00000109775	UFSP2	-1.19E+00	1.14E-08	7.05E-08
ENSG00000147164	SNX12	-1.09E+00	1.16E-08	7.17E-08
ENSG00000084774	CAD	-1.54E+00	1.22E-08	7.48E-08
ENSG00000115526	CHST10	-1.45E+00	1.24E-08	7.61E-08
ENSG00000185201	IFITM2	-1.24E+00	1.27E-08	7.80E-08
ENSG00000173141	MRPL57	-1.54E+00	1.30E-08	7.94E-08
ENSG00000164182	NDUFAF2	-1.77E+00	1.35E-08	8.25E-08
ENSG00000185404	SP140L	-1.22E+00	1.41E-08	8.58E-08
ENSG00000096092	TMEM14A	-1.11E+00	1.42E-08	8.64E-08
ENSG00000131374	TBC1D5	-1.54E+00	1.43E-08	8.71E-08
ENSG00000152256	PDK1	-1.43E+00	1.46E-08	8.89E-08
ENSG00000132563	REEP2	-1.92E+00	1.47E-08	8.96E-08
ENSG00000163516	ANKZF1	-1.41E+00	1.47E-08	8.96E-08
ENSG00000198707	CEP290	-1.06E+00	1.50E-08	9.12E-08
ENSG00000103356	EARS2	-1.20E+00	1.55E-08	9.44E-08
ENSG00000213516	RBMXL1	-1.29E+00	1.61E-08	9.78E-08
ENSG00000015532	XYLT2	-1.27E+00	1.64E-08	9.95E-08
ENSG00000198331	HYLS1	-1.98E+00	1.75E-08	1.06E-07
ENSG00000124191	TOX2	-1.17E+00	1.84E-08	1.11E-07

ENSG00000154864	PIEZO2	-1.09E+00	1.85E-08	1.11E-07
ENSG00000177697	CD151	-1.30E+00	1.89E-08	1.14E-07
ENSG00000121775	TMEM39B	-1.41E+00	1.90E-08	1.14E-07
ENSG00000142534	RPS11	-1.64E+00	1.97E-08	1.18E-07
ENSG00000105393	BABAM1	-1.19E+00	1.97E-08	1.19E-07
ENSG00000100426	ZBED4	-1.68E+00	1.98E-08	1.19E-07
ENSG00000173821	RNF213	-1.10E+00	2.02E-08	1.21E-07
ENSG00000158985	CDC42SE2	-1.28E+00	2.05E-08	1.23E-07
ENSG00000100216	TOMM22	-1.40E+00	2.08E-08	1.25E-07
ENSG00000122707	RECK	-1.36E+00	2.11E-08	1.26E-07
ENSG00000131373	HACL1	-1.11E+00	2.14E-08	1.28E-07
ENSG00000101115	SALL4	-1.62E+00	2.17E-08	1.30E-07
ENSG00000107438	PDLIM1	-1.10E+00	2.18E-08	1.30E-07
ENSG00000158122	PRXL2C	-2.08E+00	2.18E-08	1.30E-07
ENSG00000164024	METAP1	-1.01E+00	2.22E-08	1.32E-07
ENSG00000116918	TSNAX	-1.24E+00	2.25E-08	1.34E-07
ENSG00000163872	YEATS2	-1.54E+00	2.30E-08	1.36E-07
ENSG00000151413	NUBPL	-1.25E+00	2.31E-08	1.37E-07
ENSG00000125354	SEPTIN6	-1.43E+00	2.34E-08	1.39E-07
ENSG00000106399	RPA3	-1.11E+00	2.39E-08	1.42E-07
ENSG00000102882	MAPK3	-1.32E+00	2.42E-08	1.43E-07
ENSG00000131368	MRPS25	-1.25E+00	2.51E-08	1.49E-07
ENSG00000140280	LYSMD2	-2.28E+00	2.61E-08	1.54E-07
ENSG00000138613	APH1B	-2.38E+00	2.65E-08	1.56E-07
ENSG00000160050	CCDC28B	-1.75E+00	2.65E-08	1.56E-07
ENSG00000171155	C1GALT1C1	-1.15E+00	2.73E-08	1.61E-07
ENSG00000164683	HEY1	-2.08E+00	2.73E-08	1.61E-07
ENSG00000132589	FLOT2	-1.02E+00	2.75E-08	1.61E-07
ENSG00000141510	TP53	-1.03E+00	2.76E-08	1.62E-07
ENSG00000138346	DNA2	-1.36E+00	2.81E-08	1.65E-07
ENSG00000116641	DOCK7	-1.26E+00	2.86E-08	1.67E-07
ENSG00000172500	FIBP	-1.14E+00	2.88E-08	1.68E-07
ENSG00000078401	EDN1	-2.13E+00	2.93E-08	1.71E-07
ENSG00000132661	NXT1	-1.33E+00	2.94E-08	1.72E-07
ENSG00000004779	NDUFAB1	-1.27E+00	3.03E-08	1.77E-07
ENSG00000101132	PFDN4	-1.81E+00	3.06E-08	1.79E-07
ENSG00000151790	TDO2	-3.72E+00	3.07E-08	1.79E-07
ENSG00000172809	RPL38	-1.56E+00	3.14E-08	1.83E-07
ENSG00000074319	TSG101	-1.03E+00	3.20E-08	1.86E-07
ENSG00000158402	CDC25C	-1.67E+00	3.29E-08	1.91E-07

ENSG00000075188	NUP37	-1.10E+00	3.31E-08	1.92E-07
ENSG00000156482	RPL30	-1.65E+00	3.38E-08	1.96E-07
ENSG00000122870	BICC1	-1.80E+00	3.45E-08	2.00E-07
ENSG00000267534	S1PR2	-1.84E+00	3.49E-08	2.02E-07
ENSG00000124608	AARS2	-1.07E+00	3.54E-08	2.04E-07
ENSG00000108688	CCL7	-5.44E+00	3.56E-08	2.06E-07
ENSG00000163138	PACRGL	-1.57E+00	3.69E-08	2.13E-07
ENSG00000205060	SLC35B4	-1.50E+00	3.74E-08	2.16E-07
ENSG00000134851	TMEM165	-1.02E+00	3.77E-08	2.17E-07
ENSG00000173207	CKS1B	-1.28E+00	3.92E-08	2.26E-07
ENSG00000165915	SLC39A13	-1.36E+00	4.12E-08	2.37E-07
ENSG00000100228	RAB36	-2.65E+00	4.20E-08	2.41E-07
ENSG00000267002	AC060780.1	-1.53E+00	4.30E-08	2.47E-07
ENSG00000082512	TRAF5	-1.86E+00	4.72E-08	2.70E-07
ENSG00000147145	LPAR4	-5.67E+00	4.81E-08	2.75E-07
ENSG00000037897	METTL1	-1.86E+00	5.14E-08	2.93E-07
ENSG00000111880	RNGTT	-1.00E+00	5.17E-08	2.94E-07
ENSG00000135083	CCNJL	-2.29E+00	5.19E-08	2.95E-07
ENSG00000141480	ARRB2	-1.13E+00	5.26E-08	2.99E-07
ENSG00000151500	THYN1	-1.04E+00	5.26E-08	2.99E-07
ENSG00000106355	LSM5	-1.16E+00	5.53E-08	3.13E-07
ENSG00000100583	SAMD15	-2.88E+00	5.73E-08	3.24E-07
ENSG00000140044	JDP2	-1.81E+00	6.07E-08	3.42E-07
ENSG00000165480	SKA3	-1.31E+00	6.13E-08	3.45E-07
ENSG00000143977	SNRPG	-1.89E+00	6.17E-08	3.48E-07
ENSG00000205871	RPS3AP47	-1.09E+00	6.27E-08	3.53E-07
ENSG00000229117	RPL41	-1.30E+00	6.35E-08	3.57E-07
ENSG00000168899	VAMP5	-1.74E+00	6.56E-08	3.68E-07
ENSG00000134480	CCNH	-1.23E+00	6.73E-08	3.77E-07
ENSG00000140386	SCAPER	-1.45E+00	6.82E-08	3.82E-07
ENSG00000119636	BBOF1	-1.84E+00	6.94E-08	3.88E-07
ENSG00000120800	UTP20	-1.28E+00	7.04E-08	3.93E-07
ENSG00000154511	DIPK1A	-1.61E+00	7.63E-08	4.25E-07
ENSG00000133315	MACROD1	-1.56E+00	7.76E-08	4.31E-07
ENSG00000162836	ACP6	-2.86E+00	7.79E-08	4.33E-07
ENSG00000143545	RAB13	-1.30E+00	7.92E-08	4.39E-07
ENSG00000175061	SNHG29	-1.08E+00	7.94E-08	4.41E-07
ENSG00000116830	TTF2	-1.35E+00	8.49E-08	4.69E-07
ENSG00000007080	CCDC124	-1.08E+00	8.59E-08	4.75E-07
ENSG00000102743	SLC25A15	-2.04E+00	8.64E-08	4.77E-07

ENSG00000172123	SLFN12	-1.69E+00	8.68E-08	4.79E-07
ENSG00000043514	TRIT1	-1.59E+00	8.74E-08	4.82E-07
ENSG00000140382	HMG20A	-1.52E+00	8.96E-08	4.93E-07
ENSG00000139146	SINHCAF	-1.17E+00	9.05E-08	4.98E-07
ENSG00000112144	ICK	-1.39E+00	9.30E-08	5.12E-07
ENSG00000133641	C12orf29	-1.09E+00	9.69E-08	5.32E-07
ENSG00000088812	ATRN	-1.06E+00	9.94E-08	5.45E-07
ENSG00000273888	FRMD6-AS1	-2.49E+00	1.01E-07	5.53E-07
ENSG00000157214	STEAP2	-4.66E+00	1.01E-07	5.55E-07
ENSG00000144713	RPL32	-1.87E+00	1.01E-07	5.55E-07
ENSG00000132749	TESMIN	-5.51E+00	1.03E-07	5.63E-07
ENSG00000189007	ADAT2	-2.54E+00	1.04E-07	5.70E-07
ENSG00000188130	MAPK12	-1.68E+00	1.04E-07	5.71E-07
ENSG00000148297	MED22	-1.39E+00	1.06E-07	5.80E-07
ENSG00000106785	TRIM14	-1.32E+00	1.08E-07	5.88E-07
ENSG00000150977	RILPL2	-1.41E+00	1.10E-07	6.01E-07
ENSG00000198938	MT-CO3	-1.02E+00	1.13E-07	6.15E-07
ENSG00000119979	DENND10	-1.42E+00	1.13E-07	6.17E-07
ENSG00000099284	H2AFY2	-1.15E+00	1.14E-07	6.18E-07
ENSG00000106266	SNX8	-1.38E+00	1.14E-07	6.21E-07
ENSG00000133393	FOPNL	-1.03E+00	1.21E-07	6.53E-07
ENSG00000184986	TMEM121	-1.93E+00	1.21E-07	6.57E-07
ENSG00000119280	C1orf198	-1.07E+00	1.23E-07	6.65E-07
ENSG00000234664	HMG2N2P5	-2.33E+00	1.26E-07	6.83E-07
ENSG00000162980	ARL5A	-1.63E+00	1.29E-07	6.96E-07
ENSG00000165533	TTC8	-1.85E+00	1.30E-07	7.00E-07
ENSG00000006282	SPATA20	-1.13E+00	1.35E-07	7.25E-07
ENSG00000182752	PAPPA	-1.73E+00	1.43E-07	7.70E-07
ENSG00000124784	RIOK1	-1.02E+00	1.46E-07	7.87E-07
ENSG00000168393	DTYMK	-1.12E+00	1.50E-07	8.03E-07
ENSG00000243335	KCTD7	-1.75E+00	1.51E-07	8.09E-07
ENSG00000185305	ARL15	-1.83E+00	1.53E-07	8.22E-07
ENSG00000144034	TPRKB	-1.17E+00	1.54E-07	8.27E-07
ENSG00000135446	CDK4	-1.09E+00	1.56E-07	8.38E-07
ENSG00000092847	AGO1	-1.43E+00	1.58E-07	8.43E-07
ENSG00000119927	GPAM	-1.89E+00	1.58E-07	8.44E-07
ENSG00000138640	FAM13A	-1.74E+00	1.58E-07	8.45E-07
ENSG00000124875	CXCL6	-4.26E+00	1.58E-07	8.46E-07
ENSG00000070540	WIPI1	-1.97E+00	1.63E-07	8.70E-07
ENSG00000071246	VASH1	-1.40E+00	1.70E-07	9.07E-07

ENSG00000247809	NR2F2-AS1	-4.31E+00	1.74E-07	9.27E-07
ENSG00000188343	FAM92A	-1.07E+00	1.81E-07	9.59E-07
ENSG00000173272	MZT2A	-1.58E+00	1.81E-07	9.61E-07
ENSG00000177868	SVBP	-1.40E+00	1.89E-07	1.00E-06
ENSG00000240024	LINC00888	-1.37E+00	1.92E-07	1.01E-06
ENSG00000187049	TMEM216	-1.63E+00	1.94E-07	1.03E-06
ENSG00000006015	REX1BD	-1.71E+00	1.94E-07	1.03E-06
ENSG00000104524	PYCR3	-1.62E+00	2.03E-07	1.07E-06
ENSG00000162430	SELENON	-1.40E+00	2.06E-07	1.09E-06
ENSG00000138604	GLCE	-1.08E+00	2.08E-07	1.10E-06
ENSG00000111906	HDDC2	-1.06E+00	2.10E-07	1.11E-06
ENSG00000105193	RPS16	-1.24E+00	2.16E-07	1.14E-06
ENSG00000149932	TMEM219	-1.39E+00	2.27E-07	1.20E-06
ENSG00000173705	SUSD5	-1.00E+00	2.34E-07	1.23E-06
ENSG00000145912	NHP2	-1.51E+00	2.38E-07	1.25E-06
ENSG00000198931	APRT	-1.89E+00	2.40E-07	1.26E-06
ENSG00000177613	CSTF2T	-1.13E+00	2.40E-07	1.26E-06
ENSG00000181634	TNFSF15	-4.59E+00	2.48E-07	1.30E-06
ENSG00000143801	PSEN2	-2.30E+00	2.50E-07	1.31E-06
ENSG00000164330	EBF1	-2.31E+00	2.51E-07	1.31E-06
ENSG00000147955	SIGMAR1	-1.07E+00	2.55E-07	1.33E-06
ENSG00000235106	BRD3OS	-1.43E+00	2.58E-07	1.35E-06
ENSG00000272763	AC103702.2	-1.87E+00	2.59E-07	1.35E-06
ENSG00000235109	ZSCAN31	-2.71E+00	2.68E-07	1.39E-06
ENSG00000146425	DYNLT1	-1.13E+00	2.76E-07	1.44E-06
ENSG00000167994	RAB3IL1	-2.06E+00	2.91E-07	1.51E-06
ENSG00000204381	LAYN	-1.62E+00	2.94E-07	1.52E-06
ENSG00000118507	AKAP7	-2.01E+00	2.98E-07	1.54E-06
ENSG00000173588	CEP83	-1.14E+00	3.03E-07	1.56E-06
ENSG00000175198	PCCA	-1.26E+00	3.04E-07	1.57E-06
ENSG00000138376	BARD1	-1.23E+00	3.12E-07	1.61E-06
ENSG00000185420	SMYD3	-1.17E+00	3.17E-07	1.64E-06
ENSG00000051825	MPHOSPH9	-1.24E+00	3.18E-07	1.64E-06
ENSG00000115363	EVA1A	-2.48E+00	3.21E-07	1.66E-06
ENSG00000106080	FKBP14	-1.02E+00	3.22E-07	1.66E-06
ENSG00000169230	PRELID1	-1.23E+00	3.24E-07	1.67E-06
ENSG00000132763	MMACHC	-2.72E+00	3.28E-07	1.69E-06
ENSG00000089057	SLC23A2	-1.17E+00	3.31E-07	1.70E-06
ENSG00000245694	CRNDE	-1.11E+00	3.31E-07	1.70E-06
ENSG00000173660	UQCRH	-1.22E+00	3.51E-07	1.80E-06



ENSG00000169992	NLGN2	-1.14E+00	3.53E-07	1.81E-06
ENSG00000172889	EGFL7	-1.39E+00	3.64E-07	1.86E-06
ENSG00000198130	HIBCH	-1.18E+00	3.68E-07	1.88E-06
ENSG00000170293	CMTM8	-2.46E+00	3.75E-07	1.91E-06
ENSG00000134809	TIMM10	-2.14E+00	3.77E-07	1.92E-06
ENSG00000148143	ZNF462	-1.19E+00	3.87E-07	1.97E-06
ENSG00000159199	ATP5MC1	-1.63E+00	3.88E-07	1.98E-06
ENSG00000110104	CCDC86	-1.15E+00	3.93E-07	2.00E-06
ENSG00000104047	DTWD1	-1.07E+00	4.07E-07	2.07E-06
ENSG00000165617	DACT1	-2.03E+00	4.09E-07	2.07E-06
ENSG00000053372	MRTO4	-1.03E+00	4.23E-07	2.14E-06
ENSG00000164338	UTP15	-1.16E+00	4.34E-07	2.19E-06
ENSG00000272047	GTF2H5	-1.04E+00	4.46E-07	2.25E-06
ENSG00000162998	FRZB	-2.18E+00	4.52E-07	2.28E-06
ENSG00000242299	AC073861.1	-1.30E+00	4.53E-07	2.29E-06
ENSG00000184260	HIST2H2AC	-1.83E+00	4.56E-07	2.30E-06
ENSG00000102359	SRPX2	-2.97E+00	4.66E-07	2.35E-06
ENSG00000077713	SLC25A43	-2.81E+00	4.71E-07	2.37E-06
ENSG00000103254	ANTKMT	-1.60E+00	4.73E-07	2.38E-06
ENSG00000213347	MXD3	-1.55E+00	4.83E-07	2.43E-06
ENSG00000115946	PNO1	-1.10E+00	4.85E-07	2.44E-06
ENSG00000169129	AFAP1L2	-2.07E+00	4.93E-07	2.47E-06
ENSG00000176894	PXMP2	-1.50E+00	5.01E-07	2.51E-06
ENSG00000275835	TUBGCP5	-1.16E+00	5.04E-07	2.53E-06
ENSG00000150627	WDR17	-4.65E+00	5.11E-07	2.56E-06
ENSG00000227992	AC108463.1	-2.94E+00	5.17E-07	2.59E-06
ENSG00000166450	PRTG	-1.16E+00	5.30E-07	2.65E-06
ENSG00000144320	LNPK	-1.17E+00	5.40E-07	2.70E-06
ENSG00000224032	EPB41L4A-AS1	-1.10E+00	5.40E-07	2.70E-06
ENSG00000132432	SEC61G	-1.16E+00	5.42E-07	2.70E-06
ENSG00000254004	ZNF260	-1.09E+00	5.42E-07	2.71E-06
ENSG00000140988	RPS2	-1.06E+00	5.43E-07	2.71E-06
ENSG00000182518	FAM104B	-1.95E+00	5.65E-07	2.82E-06
ENSG00000050438	SLC4A8	-1.85E+00	5.97E-07	2.96E-06
ENSG00000165060	FXN	-1.62E+00	6.08E-07	3.01E-06
ENSG00000101546	RBFA	-1.16E+00	6.14E-07	3.04E-06
ENSG00000111731	C2CD5	-1.25E+00	6.21E-07	3.07E-06
ENSG00000100116	GCAT	-1.42E+00	6.26E-07	3.09E-06
ENSG00000149483	TMEM138	-1.39E+00	6.45E-07	3.18E-06
ENSG00000158863	FAM160B2	-1.41E+00	6.49E-07	3.20E-06

ENSG0000006327	TNFRSF12A	-1.34E+00	6.67E-07	3.29E-06
ENSG00000182154	MRPL41	-1.74E+00	6.82E-07	3.36E-06
ENSG00000165124	SVEP1	-1.83E+00	6.84E-07	3.37E-06
ENSG00000138190	EXOC6	-1.23E+00	6.86E-07	3.37E-06
ENSG00000151835	SACS	-1.00E+00	6.92E-07	3.40E-06
ENSG00000153814	JAZF1	-1.73E+00	6.94E-07	3.41E-06
ENSG00000064933	PMS1	-1.12E+00	7.03E-07	3.45E-06
ENSG00000174547	MRPL11	-1.33E+00	7.20E-07	3.53E-06
ENSG00000135912	TTLL4	-1.17E+00	7.29E-07	3.57E-06
ENSG00000184384	MAML2	-2.79E+00	7.75E-07	3.78E-06
ENSG00000250742	LINC02381	-1.12E+00	7.75E-07	3.78E-06
ENSG00000146267	FAXC	-2.17E+00	8.06E-07	3.92E-06
ENSG00000155100	OTUD6B	-1.07E+00	8.13E-07	3.95E-06
ENSG00000170846	AC093323.1	-1.08E+00	8.21E-07	3.99E-06
ENSG00000196632	WNK3	-1.63E+00	8.56E-07	4.15E-06
ENSG00000244313	AC024293.1	-1.56E+00	8.61E-07	4.17E-06
ENSG00000067445	TRO	-2.75E+00	8.86E-07	4.28E-06
ENSG00000072840	EVC	-1.17E+00	8.90E-07	4.30E-06
ENSG00000154328	NEIL2	-2.17E+00	8.93E-07	4.32E-06
ENSG00000125703	ATG4C	-1.70E+00	9.10E-07	4.39E-06
ENSG00000116791	CRYZ	-1.60E+00	9.13E-07	4.41E-06
ENSG00000173218	VANGL1	-1.11E+00	9.17E-07	4.42E-06
ENSG00000276368	HIST1H2AJ	-3.22E+00	9.50E-07	4.58E-06
ENSG00000119285	HEATR1	-1.20E+00	9.51E-07	4.58E-06
ENSG00000239559	RPL37P2	-1.50E+00	9.59E-07	4.61E-06
ENSG00000065268	WDR18	-1.18E+00	9.60E-07	4.61E-06
ENSG00000154237	LRRK1	-1.66E+00	9.59E-07	4.61E-06
ENSG00000205544	TMEM256	-1.74E+00	9.60E-07	4.61E-06
ENSG00000247095	MIR210HG	-3.59E+00	9.80E-07	4.70E-06
ENSG00000232759	AC002480.1	-4.47E+00	9.99E-07	4.79E-06
ENSG00000124802	EEF1E1	-1.09E+00	1.01E-06	4.85E-06
ENSG00000143494	VASH2	-2.36E+00	1.02E-06	4.91E-06
ENSG00000274565	AC080038.1	-3.84E+00	1.03E-06	4.96E-06
ENSG00000166582	CENPV	-1.24E+00	1.13E-06	5.40E-06
ENSG00000250317	SMIM20	-1.14E+00	1.14E-06	5.43E-06
ENSG00000205208	C4orf46	-1.12E+00	1.15E-06	5.47E-06
ENSG00000184602	SNN	-1.10E+00	1.17E-06	5.56E-06
ENSG00000144362	PHOSPHO2	-3.00E+00	1.19E-06	5.67E-06
ENSG00000174886	NDUFA11	-1.96E+00	1.20E-06	5.72E-06
ENSG00000169598	DFFB	-3.00E+00	1.23E-06	5.83E-06

ENSG00000139998	RAB15	-1.91E+00	1.23E-06	5.84E-06
ENSG00000137502	RAB30	-1.33E+00	1.30E-06	6.13E-06
ENSG00000113448	PDE4D	-1.19E+00	1.31E-06	6.17E-06
ENSG00000056998	GYG2	-4.36E+00	1.31E-06	6.19E-06
ENSG00000105483	CARD8	-1.04E+00	1.36E-06	6.40E-06
ENSG00000056277	ZNF280C	-2.00E+00	1.36E-06	6.41E-06
ENSG00000164758	MED30	-1.29E+00	1.41E-06	6.63E-06
ENSG00000064199	SPA17	-1.24E+00	1.42E-06	6.68E-06
ENSG00000117411	B4GALT2	-1.10E+00	1.50E-06	7.03E-06
ENSG00000156990	RPUSD3	-1.16E+00	1.51E-06	7.09E-06
ENSG00000164603	BMT2	-1.48E+00	1.52E-06	7.13E-06
ENSG00000055147	FAM114A2	-1.39E+00	1.66E-06	7.77E-06
ENSG00000163517	HDAC11	-2.64E+00	1.76E-06	8.21E-06
ENSG00000113272	THG1L	-1.48E+00	1.79E-06	8.32E-06
ENSG00000129195	PIMREG	-1.13E+00	1.79E-06	8.32E-06
ENSG00000180998	GPR137C	-1.39E+00	1.79E-06	8.33E-06
ENSG00000176182	MYPOP	-1.02E+00	1.81E-06	8.43E-06
ENSG00000144199	FAHD2B	-2.62E+00	1.83E-06	8.48E-06
ENSG00000172336	POP7	-1.17E+00	1.84E-06	8.55E-06
ENSG00000163006	CCDC138	-1.24E+00	1.85E-06	8.56E-06
ENSG00000059588	TARBP1	-1.27E+00	1.86E-06	8.62E-06
ENSG00000033122	LRRC7	-3.63E+00	1.87E-06	8.67E-06
ENSG00000263266	RPS7P1	-1.26E+00	1.88E-06	8.71E-06
ENSG00000133704	IPO8	-1.32E+00	1.89E-06	8.76E-06
ENSG00000102078	SLC25A14	-1.23E+00	1.90E-06	8.77E-06
ENSG00000136783	NIPSNAP3A	-1.50E+00	1.90E-06	8.77E-06
ENSG00000117602	RCAN3	-2.01E+00	1.98E-06	9.15E-06
ENSG00000086827	ZW10	-1.06E+00	1.99E-06	9.20E-06
ENSG00000164306	PRIMPOL	-1.90E+00	2.07E-06	9.52E-06
ENSG00000073150	PANX2	-1.70E+00	2.09E-06	9.63E-06
ENSG00000213741	RPS29	-1.96E+00	2.10E-06	9.66E-06
ENSG00000101850	GPR143	-4.52E+00	2.12E-06	9.76E-06
ENSG00000163378	EOGT	-1.28E+00	2.13E-06	9.82E-06
ENSG00000136942	RPL35	-2.20E+00	2.14E-06	9.85E-06
ENSG00000174516	PELI3	-2.05E+00	2.15E-06	9.89E-06
ENSG00000129480	DTD2	-1.38E+00	2.25E-06	1.03E-05
ENSG00000165775	FUNDC2	-1.03E+00	2.29E-06	1.05E-05
ENSG00000134461	ANKRD16	-2.44E+00	2.34E-06	1.07E-05
ENSG00000138085	ATRAID	-1.31E+00	2.35E-06	1.07E-05
ENSG00000153976	HS3ST3A1	-2.67E+00	2.41E-06	1.10E-05

ENSG0000058600	POLR3E	-1.00E+00	2.42E-06	1.10E-05
ENSG00000169131	ZNF354A	-1.22E+00	2.44E-06	1.11E-05
ENSG00000117069	ST6GALNAC5	-3.67E+00	2.44E-06	1.11E-05
ENSG00000196368	NUDT11	-2.30E+00	2.45E-06	1.12E-05
ENSG00000100578	KIAA0586	-1.11E+00	2.51E-06	1.14E-05
ENSG00000107951	MTPAP	-1.13E+00	2.57E-06	1.17E-05
ENSG00000140987	ZSCAN32	-1.01E+00	2.65E-06	1.21E-05
ENSG00000119408	NEK6	-1.42E+00	2.71E-06	1.23E-05
ENSG00000171051	FPR1	-5.08E+00	2.77E-06	1.26E-05
ENSG00000240972	MIF	-1.69E+00	2.80E-06	1.27E-05
ENSG00000138336	TET1	-2.07E+00	2.81E-06	1.28E-05
ENSG00000269293	ZSCAN16-AS1	-1.60E+00	2.85E-06	1.29E-05
ENSG00000165730	STOX1	-1.96E+00	2.89E-06	1.31E-05
ENSG00000178033	CALHM5	-2.73E+00	2.91E-06	1.32E-05
ENSG00000082516	GEMIN5	-1.04E+00	2.93E-06	1.33E-05
ENSG00000166444	ST5	-1.21E+00	2.95E-06	1.33E-05
ENSG00000237550	AC243919.1	-1.22E+00	2.97E-06	1.34E-05
ENSG00000050344	NFE2L3	-1.40E+00	2.97E-06	1.34E-05
ENSG00000074582	BCS1L	-1.20E+00	2.98E-06	1.35E-05
ENSG00000127995	CASD1	-1.58E+00	3.00E-06	1.35E-05
ENSG00000114923	SLC4A3	-1.59E+00	3.13E-06	1.41E-05
ENSG00000104213	PDGFRL	-3.18E+00	3.16E-06	1.42E-05
ENSG00000137970	RPL7P9	-1.01E+00	3.20E-06	1.44E-05
ENSG00000145819	ARHGAP26	-1.14E+00	3.22E-06	1.45E-05
ENSG00000063177	RPL18	-1.50E+00	3.40E-06	1.52E-05
ENSG00000136732	GYPC	-1.87E+00	3.41E-06	1.53E-05
ENSG00000137404	NRM	-1.20E+00	3.45E-06	1.54E-05
ENSG00000188641	DPYD	-1.57E+00	3.47E-06	1.55E-05
ENSG00000180822	PSMG4	-1.75E+00	3.53E-06	1.58E-05
ENSG00000263001	GTF2I	-1.07E+00	3.61E-06	1.61E-05
ENSG00000167535	CACNB3	-1.30E+00	3.71E-06	1.65E-05
ENSG00000172379	ARNT2	-1.19E+00	3.87E-06	1.72E-05
ENSG00000167526	RPL13	-1.39E+00	3.90E-06	1.73E-05
ENSG00000170464	DNAJC18	-1.18E+00	3.97E-06	1.76E-05
ENSG00000178802	MPI	-1.12E+00	4.00E-06	1.78E-05
ENSG00000136213	CHST12	-1.30E+00	4.05E-06	1.79E-05
ENSG00000183723	CMTM4	-1.31E+00	4.09E-06	1.81E-05
ENSG00000066379	ZNRD1	-1.19E+00	4.21E-06	1.86E-05
ENSG00000151366	NDUFC2	-1.16E+00	4.26E-06	1.88E-05
ENSG00000173163	COMMD1	-1.70E+00	4.26E-06	1.88E-05

ENSG00000133740	E2F5	-2.69E+00	4.30E-06	1.89E-05
ENSG00000262814	MRPL12	-1.69E+00	4.37E-06	1.92E-05
ENSG00000214293	APTR	-1.41E+00	4.56E-06	2.00E-05
ENSG00000108176	DNAJC12	-2.13E+00	4.60E-06	2.02E-05
ENSG00000105552	BCAT2	-1.03E+00	4.79E-06	2.10E-05
ENSG00000148824	MTG1	-1.08E+00	4.86E-06	2.13E-05
ENSG00000176731	RBIS	-1.15E+00	5.07E-06	2.21E-05
ENSG00000253250	C8orf88	-1.37E+00	5.17E-06	2.25E-05
ENSG00000149380	P4HA3	-2.71E+00	5.17E-06	2.25E-05
ENSG00000134470	IL15RA	-1.73E+00	5.22E-06	2.27E-05
ENSG00000180035	ZNF48	-1.56E+00	5.28E-06	2.30E-05
ENSG00000170049	KCNAB3	-2.30E+00	5.55E-06	2.41E-05
ENSG00000150551	LYPD1	-1.75E+00	5.72E-06	2.47E-05
ENSG00000152078	TLCD4	-2.12E+00	5.87E-06	2.54E-05
ENSG00000117153	KLHL12	-1.16E+00	5.89E-06	2.54E-05
ENSG00000103707	MTFMT	-1.26E+00	5.97E-06	2.58E-05
ENSG00000274015	AL136038.5	-2.61E+00	6.46E-06	2.78E-05
ENSG00000114993	RTKN	-2.02E+00	6.72E-06	2.88E-05
ENSG00000277972	CISD3	-1.43E+00	6.73E-06	2.89E-05
ENSG00000198585	NUDT16	-1.06E+00	6.87E-06	2.95E-05
ENSG00000008394	MGST1	-1.13E+00	6.97E-06	2.99E-05
ENSG00000164220	F2RL2	-3.40E+00	7.07E-06	3.03E-05
ENSG00000163257	DCAF16	-1.16E+00	7.16E-06	3.06E-05
ENSG00000180628	PCGF5	-1.05E+00	7.26E-06	3.10E-05
ENSG00000175414	ARL10	-1.64E+00	7.36E-06	3.14E-05
ENSG00000269893	SNHG8	-1.60E+00	7.43E-06	3.17E-05
ENSG00000143314	MRPL24	-1.23E+00	7.44E-06	3.17E-05
ENSG00000163710	PCOLCE2	-1.07E+00	7.45E-06	3.18E-05
ENSG00000100167	SEPTIN3	-1.92E+00	7.58E-06	3.23E-05
ENSG00000106683	LIMK1	-1.19E+00	7.72E-06	3.28E-05
ENSG00000091656	ZFHX4	-1.14E+00	7.72E-06	3.28E-05
ENSG00000241945	PWP2	-1.97E+00	7.84E-06	3.33E-05
ENSG00000163093	BBS5	-2.03E+00	7.92E-06	3.36E-05
ENSG00000137274	BPHL	-1.35E+00	7.95E-06	3.37E-05
ENSG00000064547	LPAR2	-1.18E+00	7.96E-06	3.38E-05
ENSG00000112365	ZBTB24	-1.05E+00	8.03E-06	3.40E-05
ENSG00000153404	PLEKHG4B	-2.08E+00	8.04E-06	3.41E-05
ENSG00000107882	SUFU	-1.59E+00	8.14E-06	3.45E-05
ENSG00000226532	AL022718.1	-1.74E+00	8.18E-06	3.47E-05
ENSG00000136630	HLX	-2.29E+00	8.49E-06	3.59E-05

ENSG00000135931	ARMC9	-1.13E+00	8.90E-06	3.75E-05
ENSG00000281398	SNHG4	-2.36E+00	8.94E-06	3.77E-05
ENSG00000138835	RGS3	-1.32E+00	9.35E-06	3.93E-05
ENSG00000185641	AC034236.1	-1.29E+00	9.42E-06	3.96E-05
ENSG00000116906	GNPAT	-1.01E+00	9.47E-06	3.98E-05
ENSG00000135245	HILPDA	-1.16E+00	9.54E-06	4.01E-05
ENSG00000236682	MAP3K2-DT	-2.16E+00	9.67E-06	4.06E-05
ENSG00000277149	TYW1B	-1.72E+00	9.69E-06	4.07E-05
ENSG00000165629	ATP5F1C	-1.05E+00	1.01E-05	4.22E-05
ENSG00000139514	SLC7A1	-1.01E+00	1.01E-05	4.24E-05
ENSG00000137818	RPLP1	-1.75E+00	1.03E-05	4.30E-05
ENSG00000152082	MZT2B	-1.72E+00	1.05E-05	4.36E-05
ENSG00000203875	SNHG5	-1.09E+00	1.08E-05	4.48E-05
ENSG00000257596	SCAT2	-5.40E+00	1.08E-05	4.49E-05
ENSG00000222041	CYTOR	-1.23E+00	1.09E-05	4.53E-05
ENSG00000196636	SDHAF3	-1.91E+00	1.11E-05	4.63E-05
ENSG00000090924	PLEKHG2	-1.03E+00	1.12E-05	4.67E-05
ENSG00000136122	BORA	-1.47E+00	1.15E-05	4.78E-05
ENSG00000163888	CAMK2N2	-1.78E+00	1.16E-05	4.80E-05
ENSG00000241494	AL355032.1	-1.65E+00	1.18E-05	4.91E-05
ENSG00000143341	HMCN1	-2.34E+00	1.19E-05	4.93E-05
ENSG00000171530	TBCA	-1.16E+00	1.20E-05	4.96E-05
ENSG00000127540	UQCR11	-1.58E+00	1.20E-05	4.96E-05
ENSG00000224459	SLC25A34-AS1	-5.81E+00	1.21E-05	4.99E-05
ENSG00000074181	NOTCH3	-1.33E+00	1.21E-05	5.01E-05
ENSG00000157557	ETS2	-1.02E+00	1.22E-05	5.04E-05
ENSG00000019485	PRDM11	-2.13E+00	1.22E-05	5.05E-05
ENSG00000205542	TMSB4X	-1.45E+00	1.23E-05	5.07E-05
ENSG00000129472	RAB2B	-1.01E+00	1.23E-05	5.08E-05
ENSG00000111752	PHC1	-1.80E+00	1.23E-05	5.09E-05
ENSG00000114790	ARHGEF26	-1.20E+00	1.24E-05	5.10E-05
ENSG00000196917	HCAR1	-4.95E+00	1.24E-05	5.12E-05
ENSG00000159110	IFNAR2	-1.11E+00	1.28E-05	5.25E-05
ENSG00000169621	APLF	-2.10E+00	1.29E-05	5.29E-05
ENSG00000276345	AC004556.3	-1.53E+00	1.29E-05	5.29E-05
ENSG00000170915	PAQR8	-3.47E+00	1.30E-05	5.32E-05
ENSG00000186792	HYAL3	-2.18E+00	1.32E-05	5.40E-05
ENSG00000042088	TDP1	-1.36E+00	1.37E-05	5.60E-05
ENSG00000185869	ZNF829	-1.13E+00	1.37E-05	5.61E-05
ENSG00000166886	NAB2	-1.23E+00	1.39E-05	5.68E-05

ENSG00000137513	NARS2	-1.29E+00	1.39E-05	5.69E-05
ENSG00000108984	MAP2K6	-3.45E+00	1.41E-05	5.74E-05
ENSG00000100626	GALNT16	-1.92E+00	1.41E-05	5.75E-05
ENSG00000182899	RPL35A	-1.30E+00	1.43E-05	5.81E-05
ENSG00000117016	RIMS3	-3.09E+00	1.44E-05	5.88E-05
ENSG00000151458	ANKRD50	-1.15E+00	1.45E-05	5.91E-05
ENSG00000183763	TRAIP	-1.25E+00	1.46E-05	5.93E-05
ENSG00000137312	FLOT1	-1.04E+00	1.48E-05	6.02E-05
ENSG00000114125	RNF7	-1.02E+00	1.53E-05	6.22E-05
ENSG00000126953	TIMM8A	-1.22E+00	1.53E-05	6.22E-05
ENSG00000123545	NDUFAF4	-1.22E+00	1.57E-05	6.35E-05
ENSG00000213058	AL365357.1	-1.33E+00	1.57E-05	6.36E-05
ENSG00000172469	MANEA	-1.22E+00	1.58E-05	6.40E-05
ENSG00000183828	NUDT14	-1.93E+00	1.58E-05	6.41E-05
ENSG00000104299	INTS9	-1.10E+00	1.61E-05	6.49E-05
ENSG00000186416	NKRF	-1.06E+00	1.64E-05	6.61E-05
ENSG00000115425	PECR	-1.50E+00	1.64E-05	6.63E-05
ENSG00000167397	VKORC1	-1.41E+00	1.66E-05	6.68E-05
ENSG00000251348	HSPD1P11	-4.27E+00	1.67E-05	6.73E-05
ENSG00000099330	OCEL1	-1.48E+00	1.67E-05	6.75E-05
ENSG00000105640	RPL18A	-1.64E+00	1.69E-05	6.82E-05
ENSG00000272599	AC016394.2	-2.02E+00	1.75E-05	7.04E-05
ENSG00000048342	CC2D2A	-1.97E+00	1.75E-05	7.06E-05
ENSG00000082515	MRPL22	-1.02E+00	1.76E-05	7.07E-05
ENSG00000112294	ALDH5A1	-2.20E+00	1.79E-05	7.20E-05
ENSG00000129354	AP1M2	-1.80E+00	1.81E-05	7.28E-05
ENSG00000226674	TEX41	-4.06E+00	1.82E-05	7.31E-05
ENSG00000128872	TMOD2	-2.97E+00	1.84E-05	7.37E-05
ENSG00000115840	SLC25A12	-1.48E+00	1.86E-05	7.43E-05
ENSG00000185842	DNAH14	-1.38E+00	1.86E-05	7.43E-05
ENSG00000126453	BCL2L12	-1.04E+00	1.86E-05	7.43E-05
ENSG00000150456	EEF1AKMT1	-1.52E+00	1.91E-05	7.63E-05
ENSG00000157870	PRXL2B	-1.24E+00	1.93E-05	7.72E-05
ENSG00000162650	ATXN7L2	-1.47E+00	1.94E-05	7.74E-05
ENSG00000099999	RNF215	-1.80E+00	1.97E-05	7.87E-05
ENSG00000003509	NDUFAF7	-1.18E+00	1.98E-05	7.89E-05
ENSG00000172878	METAP1D	-1.99E+00	2.00E-05	7.95E-05
ENSG00000114544	SLC41A3	-1.23E+00	2.01E-05	8.01E-05
ENSG00000188321	ZNF559	-1.51E+00	2.03E-05	8.07E-05
ENSG00000107249	GLIS3	-1.10E+00	2.12E-05	8.39E-05

ENSG00000077092	RARB	-5.48E+00	2.15E-05	8.51E-05
ENSG00000135338	LCA5	-1.83E+00	2.16E-05	8.57E-05
ENSG00000232445	AC006329.1	-1.47E+00	2.19E-05	8.65E-05
ENSG00000262185	AC005736.1	-4.09E+00	2.21E-05	8.73E-05
ENSG00000137288	UQCC2	-1.09E+00	2.22E-05	8.78E-05
ENSG00000198468	FLVCR1-DT	-1.31E+00	2.23E-05	8.82E-05
ENSG00000107562	CXCL12	-2.33E+00	2.25E-05	8.86E-05
ENSG00000131495	NDUFA2	-1.20E+00	2.29E-05	9.01E-05
ENSG00000081041	CXCL2	-3.45E+00	2.35E-05	9.24E-05
ENSG00000242498	ARPIN	-2.10E+00	2.45E-05	9.61E-05
ENSG00000141569	TRIM65	-1.09E+00	2.47E-05	9.67E-05
ENSG00000162437	RAVER2	-1.30E+00	2.48E-05	9.71E-05
ENSG00000107186	MPDZ	-1.08E+00	2.50E-05	9.81E-05
ENSG00000126785	RHOJ	-4.42E+00	2.51E-05	9.84E-05
ENSG00000010361	FUZ	-1.44E+00	2.63E-05	1.03E-04
ENSG00000179841	AKAP5	-2.23E+00	2.64E-05	1.03E-04
ENSG00000226445	BX322234.1	-1.78E+00	2.69E-05	1.05E-04
ENSG00000237190	CDKN2AIPNL	-1.09E+00	2.77E-05	1.08E-04
ENSG00000203805	PLPP4	-2.59E+00	2.84E-05	1.10E-04
ENSG00000117569	PTBP2	-1.40E+00	2.87E-05	1.11E-04
ENSG00000172922	RNASEH2C	-1.32E+00	2.91E-05	1.13E-04
ENSG00000177556	ATOX1	-1.19E+00	2.92E-05	1.13E-04
ENSG00000251602	AL928654.1	-2.84E+00	2.96E-05	1.15E-04
ENSG00000139266	MARCH9	-1.18E+00	3.04E-05	1.18E-04
ENSG00000072422	RHOBTB1	-1.84E+00	3.08E-05	1.19E-04
ENSG00000175768	TOMM5	-1.63E+00	3.10E-05	1.19E-04
ENSG00000204852	TCTN1	-1.07E+00	3.12E-05	1.20E-04
ENSG00000217555	CKLF	-1.29E+00	3.15E-05	1.21E-04
ENSG00000185634	SHC4	-2.37E+00	3.16E-05	1.22E-04
ENSG00000137218	FRS3	-3.11E+00	3.23E-05	1.24E-04
ENSG00000249867	LINC02742	-4.79E+00	3.28E-05	1.26E-04
ENSG00000167695	TLCD3A	-1.17E+00	3.34E-05	1.28E-04
ENSG00000215030	RPL13P12	-1.04E+00	3.35E-05	1.29E-04
ENSG00000109390	NDUFC1	-1.02E+00	3.40E-05	1.31E-04
ENSG00000265972	TXNIP	-1.77E+00	3.43E-05	1.32E-04
ENSG00000250562	RPL38P4	-2.60E+00	3.48E-05	1.33E-04
ENSG00000143224	PPOX	-1.22E+00	3.52E-05	1.35E-04
ENSG00000132953	XPO4	-1.25E+00	3.64E-05	1.39E-04
ENSG00000133640	LRRIQ1	-2.25E+00	3.67E-05	1.40E-04
ENSG00000102384	CENPI	-1.11E+00	3.69E-05	1.41E-04



ENSG00000163453	IGFBP7	-1.56E+00	3.70E-05	1.41E-04
ENSG00000144120	TMEM177	-1.40E+00	3.71E-05	1.42E-04
ENSG00000169976	SF3B5	-1.46E+00	3.79E-05	1.45E-04
ENSG00000180228	PRKRA	-1.10E+00	3.87E-05	1.48E-04
ENSG00000147123	NDUFB11	-1.39E+00	3.89E-05	1.48E-04
ENSG00000129521	EGLN3	-3.00E+00	3.92E-05	1.50E-04
ENSG00000213280	AC090114.1	-1.38E+00	3.96E-05	1.51E-04
ENSG00000121851	POLR3GL	-1.37E+00	4.02E-05	1.53E-04
ENSG00000121104	FAM117A	-1.95E+00	4.03E-05	1.53E-04
ENSG00000157399	ARSE	-2.49E+00	4.04E-05	1.54E-04
ENSG00000110536	PTPMT1	-1.66E+00	4.07E-05	1.55E-04
ENSG00000070501	POLB	-1.03E+00	4.07E-05	1.55E-04
ENSG00000183617	MRPL54	-1.47E+00	4.08E-05	1.55E-04
ENSG00000263272	AC004148.1	-1.46E+00	4.15E-05	1.57E-04
ENSG00000137959	IFI44L	-2.71E+00	4.22E-05	1.60E-04
ENSG00000184903	IMMP2L	-3.33E+00	4.27E-05	1.62E-04
ENSG00000218510	LINC00339	-1.17E+00	4.28E-05	1.62E-04
ENSG00000188763	FZD9	-3.38E+00	4.35E-05	1.65E-04
ENSG00000137941	TTLL7	-1.34E+00	4.55E-05	1.72E-04
ENSG00000133937	GSC	-4.09E+00	4.59E-05	1.73E-04
ENSG00000126351	THRA	-1.54E+00	4.61E-05	1.74E-04
ENSG00000044446	PHKA2	-1.11E+00	4.67E-05	1.76E-04
ENSG00000170689	HOXB9	-1.44E+00	4.68E-05	1.76E-04
ENSG00000130844	ZNF331	-1.04E+00	4.71E-05	1.77E-04
ENSG00000107719	PALD1	-2.11E+00	4.77E-05	1.80E-04
ENSG00000248275	TRIM52-AS1	-1.58E+00	4.85E-05	1.82E-04
ENSG00000137944	KYAT3	-1.50E+00	4.90E-05	1.84E-04
ENSG00000146677	AC004453.1	-1.46E+00	5.07E-05	1.90E-04
ENSG00000173221	GLRX	-1.47E+00	5.14E-05	1.92E-04
ENSG00000128185	DGCR6L	-1.26E+00	5.19E-05	1.94E-04
ENSG00000113273	ARSB	-1.04E+00	5.27E-05	1.97E-04
ENSG00000102984	ZNF821	-1.48E+00	5.33E-05	1.99E-04
ENSG00000168758	SEMA4C	-1.17E+00	5.35E-05	2.00E-04
ENSG00000215417	MIR17HG	-3.62E+00	5.39E-05	2.01E-04
ENSG00000109738	GLRB	-1.92E+00	5.40E-05	2.01E-04
ENSG00000233927	RPS28	-1.30E+00	5.43E-05	2.02E-04
ENSG00000196323	ZBTB44	-1.03E+00	5.45E-05	2.03E-04
ENSG00000196793	ZNF239	-3.78E+00	5.49E-05	2.04E-04
ENSG00000100162	CENPM	-1.14E+00	5.63E-05	2.09E-04
ENSG00000248927	AC114284.1	-4.60E+00	5.72E-05	2.12E-04

ENSG00000243147	MRPL33	-1.11E+00	5.81E-05	2.15E-04
ENSG0000038295	TLL1	-2.44E+00	5.87E-05	2.17E-04
ENSG0000005073	HOXA11	-2.73E+00	5.99E-05	2.22E-04
ENSG00000189298	ZKSCAN3	-1.85E+00	6.05E-05	2.23E-04
ENSG00000271503	CCL5	-4.57E+00	6.12E-05	2.26E-04
ENSG00000149503	INCENP	-1.25E+00	6.19E-05	2.28E-04
ENSG00000141576	RNF157	-1.79E+00	6.25E-05	2.30E-04
ENSG0000004139	SARM1	-1.04E+00	6.27E-05	2.31E-04
ENSG00000135776	ABCB10	-1.06E+00	6.39E-05	2.35E-04
ENSG00000173540	GMPPB	-1.03E+00	6.57E-05	2.42E-04
ENSG00000164056	SPRY1	-2.17E+00	6.64E-05	2.44E-04
ENSG00000111670	GNPTAB	-1.17E+00	6.67E-05	2.45E-04
ENSG00000197646	PDCD1LG2	-3.03E+00	6.79E-05	2.49E-04
ENSG00000112159	MDN1	-1.12E+00	7.14E-05	2.61E-04
ENSG00000151388	ADAMTS12	-1.00E+00	7.15E-05	2.61E-04
ENSG00000244165	P2RY11	-1.16E+00	7.15E-05	2.62E-04
ENSG00000158966	CACHD1	-1.77E+00	7.23E-05	2.64E-04
ENSG00000167528	ZNF641	-3.19E+00	7.23E-05	2.64E-04
ENSG00000008277	ADAM22	-2.58E+00	7.32E-05	2.67E-04
ENSG00000219928	AL161787.1	-2.69E+00	7.37E-05	2.69E-04
ENSG00000268895	A1BG-AS1	-1.79E+00	7.53E-05	2.74E-04
ENSG00000127311	HELB	-2.23E+00	7.63E-05	2.77E-04
ENSG00000178498	DTX3	-1.56E+00	7.63E-05	2.77E-04
ENSG00000171843	MLLT3	-1.21E+00	7.71E-05	2.80E-04
ENSG00000166831	RBPMS2	-1.19E+00	7.75E-05	2.82E-04
ENSG00000156509	FBXO43	-2.36E+00	7.88E-05	2.86E-04
ENSG00000126243	LRFN3	-2.28E+00	7.92E-05	2.87E-04
ENSG00000198429	ZNF69	-4.18E+00	7.93E-05	2.87E-04
ENSG00000125246	CLYBL	-3.68E+00	7.95E-05	2.88E-04
ENSG00000280744	LINC01173	-5.08E+00	8.02E-05	2.90E-04
ENSG00000119711	ALDH6A1	-1.36E+00	8.02E-05	2.90E-04
ENSG00000166173	LARP6	-1.14E+00	8.07E-05	2.92E-04
ENSG00000234171	RNASEH1-AS1	-1.56E+00	8.12E-05	2.93E-04
ENSG00000119699	TGFB3	-1.29E+00	8.13E-05	2.93E-04
ENSG00000129946	SHC2	-1.70E+00	8.20E-05	2.96E-04
ENSG00000182013	PNMA8A	-1.26E+00	8.21E-05	2.96E-04
ENSG00000150995	ITPR1	-1.82E+00	8.24E-05	2.97E-04
ENSG00000128626	MRPS12	-1.11E+00	8.29E-05	2.98E-04
ENSG00000175054	ATR	-1.28E+00	8.29E-05	2.98E-04
ENSG00000214357	NEURL1B	-1.66E+00	8.37E-05	3.01E-04

ENSG00000151917	BEND6	-1.71E+00	8.49E-05	3.05E-04
ENSG00000108387	SEPTIN4	-1.41E+00	8.64E-05	3.10E-04
ENSG00000167283	ATP5MG	-1.35E+00	8.65E-05	3.10E-04
ENSG00000132423	COQ3	-1.09E+00	8.72E-05	3.13E-04
ENSG00000253982	AC100810.1	-1.57E+00	8.78E-05	3.15E-04
ENSG00000123080	CDKN2C	-1.07E+00	8.79E-05	3.15E-04
ENSG00000105136	ZNF419	-1.19E+00	8.87E-05	3.18E-04
ENSG00000214226	C17orf67	-1.96E+00	8.88E-05	3.18E-04
ENSG00000133597	ADCK2	-1.18E+00	8.93E-05	3.19E-04
ENSG00000065325	GLP2R	-3.61E+00	8.98E-05	3.21E-04
ENSG00000147862	NFIB	-1.10E+00	8.99E-05	3.21E-04
ENSG00000133107	TRPC4	-1.22E+00	9.23E-05	3.29E-04
ENSG00000165288	BRWD3	-1.16E+00	9.26E-05	3.30E-04
ENSG00000111913	RIPOR2	-2.20E+00	9.27E-05	3.31E-04
ENSG00000186666	BCDIN3D	-1.59E+00	9.30E-05	3.31E-04
ENSG00000159884	CCDC107	-1.49E+00	9.34E-05	3.33E-04
ENSG00000203778	FAM229B	-1.49E+00	9.50E-05	3.38E-04
ENSG00000123609	NMI	-1.11E+00	9.66E-05	3.44E-04
ENSG00000115970	THADA	-1.12E+00	9.83E-05	3.49E-04
ENSG00000124279	FASTKD3	-1.21E+00	9.90E-05	3.51E-04
ENSG00000173915	ATP5MD	-1.31E+00	9.99E-05	3.54E-04
ENSG00000117791	MARC2	-4.11E+00	1.00E-04	3.56E-04
ENSG00000177954	RPS27	-1.25E+00	1.00E-04	3.56E-04
ENSG00000176907	TCIM	-3.95E+00	1.00E-04	3.56E-04
ENSG00000089091	DZANK1	-1.11E+00	1.01E-04	3.58E-04
ENSG00000125965	GDF5	-2.99E+00	1.04E-04	3.67E-04
ENSG00000106415	GLCC11	-1.76E+00	1.04E-04	3.68E-04
ENSG00000171103	TRMT61B	-1.28E+00	1.06E-04	3.73E-04
ENSG00000205133	TRIQQ	-1.31E+00	1.06E-04	3.75E-04
ENSG00000228630	HOTAIR	-1.81E+00	1.08E-04	3.81E-04
ENSG00000259953	AL138756.1	-2.05E+00	1.08E-04	3.81E-04
ENSG00000197444	OGDHL	-1.95E+00	1.10E-04	3.88E-04
ENSG00000100865	CINP	-1.05E+00	1.11E-04	3.90E-04
ENSG00000080823	MOK	-1.16E+00	1.11E-04	3.91E-04
ENSG00000175279	CENPS	-1.04E+00	1.14E-04	4.02E-04
ENSG00000233117	LINC00702	-2.87E+00	1.15E-04	4.02E-04
ENSG00000229994	RPL5P4	-1.25E+00	1.19E-04	4.16E-04
ENSG00000198056	PRIM1	-1.09E+00	1.19E-04	4.16E-04
ENSG00000155760	FZD7	-1.01E+00	1.19E-04	4.18E-04
ENSG00000126458	RRAS	-1.10E+00	1.21E-04	4.22E-04

ENSG00000160207	HSF2BP	-1.73E+00	1.22E-04	4.26E-04
ENSG00000132768	DPH2	-1.46E+00	1.23E-04	4.30E-04
ENSG00000179943	FIZ1	-1.13E+00	1.24E-04	4.32E-04
ENSG00000235453	SMIM27	-1.76E+00	1.24E-04	4.33E-04
ENSG00000198624	CCDC69	-1.98E+00	1.25E-04	4.36E-04
ENSG00000233836	AC139769.1	-2.93E+00	1.27E-04	4.43E-04
ENSG00000164647	STEAP1	-1.87E+00	1.35E-04	4.69E-04
ENSG00000197951	ZNF71	-1.29E+00	1.36E-04	4.70E-04
ENSG00000167925	GHDC	-1.80E+00	1.36E-04	4.71E-04
ENSG00000163050	COQ8A	-1.06E+00	1.37E-04	4.75E-04
ENSG00000284783	AC091057.4	-3.24E+00	1.38E-04	4.78E-04
ENSG00000145375	SPATA5	-1.12E+00	1.40E-04	4.85E-04
ENSG00000145982	FARS2	-1.07E+00	1.40E-04	4.85E-04
ENSG00000224063	AC007319.1	-2.78E+00	1.40E-04	4.85E-04
ENSG00000278535	DHRS11	-1.48E+00	1.42E-04	4.91E-04
ENSG00000100908	EMC9	-1.04E+00	1.43E-04	4.94E-04
ENSG00000227081	AC005912.1	-1.33E+00	1.45E-04	4.98E-04
ENSG00000120658	ENOX1	-1.70E+00	1.45E-04	4.99E-04
ENSG00000181817	LSM10	-1.16E+00	1.47E-04	5.06E-04
ENSG00000166261	ZNF202	-1.02E+00	1.48E-04	5.09E-04
ENSG00000237943	PRKCQ-AS1	-1.73E+00	1.49E-04	5.12E-04
ENSG00000199753	SNORD104	-1.47E+00	1.54E-04	5.27E-04
ENSG00000223749	MIR503HG	-1.80E+00	1.55E-04	5.33E-04
ENSG00000138686	BBS7	-1.00E+00	1.56E-04	5.34E-04
ENSG00000138738	PRDM5	-1.84E+00	1.56E-04	5.34E-04
ENSG00000254510	AP001107.5	-2.80E+00	1.57E-04	5.39E-04
ENSG00000175445	LPL	-1.05E+00	1.59E-04	5.46E-04
ENSG00000130158	DOCK6	-1.18E+00	1.65E-04	5.64E-04
ENSG00000078098	FAP	-4.28E+00	1.69E-04	5.78E-04
ENSG00000196381	ZNF781	-4.33E+00	1.72E-04	5.87E-04
ENSG00000136149	RPL13AP25	-1.17E+00	1.74E-04	5.93E-04
ENSG00000170458	CD14	-1.94E+00	1.75E-04	5.97E-04
ENSG00000115350	POLE4	-1.22E+00	1.75E-04	5.97E-04
ENSG00000164929	BAALC	-2.91E+00	1.83E-04	6.21E-04
ENSG00000141391	PRELID3A	-1.99E+00	1.85E-04	6.28E-04
ENSG00000088727	KIF9	-1.16E+00	1.86E-04	6.30E-04
ENSG00000163170	BOLA3	-1.11E+00	1.86E-04	6.31E-04
ENSG00000164066	INTU	-1.15E+00	1.87E-04	6.35E-04
ENSG00000174705	SH3PXD2B	-1.36E+00	1.88E-04	6.36E-04
ENSG00000124459	ZNF45	-1.37E+00	1.89E-04	6.40E-04

ENSG00000233954	UQCRHL	-1.40E+00	1.90E-04	6.42E-04
ENSG00000132330	SCLY	-1.68E+00	1.91E-04	6.46E-04
ENSG00000067840	PDZD4	-1.01E+00	1.92E-04	6.49E-04
ENSG00000140600	SH3GL3	-2.24E+00	1.93E-04	6.51E-04
ENSG00000150667	FSIP1	-1.65E+00	1.94E-04	6.54E-04
ENSG00000160993	ALKBH4	-1.15E+00	1.98E-04	6.67E-04
ENSG00000253958	CLDN23	-2.25E+00	1.99E-04	6.70E-04
ENSG00000127124	HIVEP3	-1.02E+00	2.07E-04	6.94E-04
ENSG00000170430	MGMT	-2.11E+00	2.08E-04	6.96E-04
ENSG00000267152	AC093227.1	-2.91E+00	2.08E-04	6.97E-04
ENSG00000171858	RPS21	-1.42E+00	2.11E-04	7.07E-04
ENSG00000241127	YAE1	-1.05E+00	2.13E-04	7.12E-04
ENSG00000137752	CASP1	-2.62E+00	2.13E-04	7.13E-04
ENSG00000096654	ZNF184	-1.16E+00	2.13E-04	7.13E-04
ENSG00000174917	MICOS13	-1.52E+00	2.14E-04	7.16E-04
ENSG00000225200	AC246787.1	-1.29E+00	2.19E-04	7.33E-04
ENSG00000172167	MTBP	-1.15E+00	2.19E-04	7.33E-04
ENSG00000203930	LINC00632	-1.65E+00	2.23E-04	7.43E-04
ENSG00000174871	CNIH2	-1.67E+00	2.24E-04	7.45E-04
ENSG00000279673	AC092919.2	-4.50E+00	2.26E-04	7.54E-04
ENSG00000271590	AC108463.3	-1.80E+00	2.34E-04	7.77E-04
ENSG00000151617	EDNRA	-4.04E+00	2.34E-04	7.78E-04
ENSG00000147912	FBXO10	-1.55E+00	2.35E-04	7.80E-04
ENSG00000074935	TUBE1	-1.27E+00	2.36E-04	7.84E-04
ENSG00000205559	CHKB-DT	-1.63E+00	2.40E-04	7.96E-04
ENSG00000079215	SLC1A3	-2.70E+00	2.41E-04	7.97E-04
ENSG00000146414	SHPRH	-1.06E+00	2.41E-04	7.98E-04
ENSG00000170390	DCLK2	-1.85E+00	2.41E-04	8.00E-04
ENSG00000226781	TBCAP1	-6.03E+00	2.44E-04	8.07E-04
ENSG00000250634	LINC01182	-3.19E+00	2.50E-04	8.27E-04
ENSG00000166770	ZNF667-AS1	-1.19E+00	2.50E-04	8.27E-04
ENSG00000184635	ZNF93	-1.03E+00	2.54E-04	8.38E-04
ENSG00000226314	ZNF192P1	-3.10E+00	2.61E-04	8.59E-04
ENSG00000226985	LINC01203	-4.77E+00	2.65E-04	8.73E-04
ENSG00000163449	TMEM169	-3.46E+00	2.71E-04	8.90E-04
ENSG00000119227	PIGZ	-3.39E+00	2.72E-04	8.93E-04
ENSG00000102904	TSNAXIP1	-2.91E+00	2.72E-04	8.94E-04
ENSG00000279369	AC046185.3	-2.42E+00	2.74E-04	9.00E-04
ENSG00000214944	ARHGEF28	-1.29E+00	2.77E-04	9.09E-04
ENSG00000197763	TXNRD3	-1.81E+00	2.82E-04	9.23E-04

ENSG00000165185	KIAA1958	-1.23E+00	2.82E-04	9.24E-04
ENSG00000163040	CCDC74A	-1.91E+00	2.83E-04	9.26E-04
ENSG00000218175	AC016739.1	-1.66E+00	2.88E-04	9.43E-04
ENSG00000168234	TTC39C	-1.08E+00	2.91E-04	9.49E-04
ENSG00000105889	STEAP1B	-2.92E+00	2.92E-04	9.53E-04
ENSG00000001084	GCLC	-1.01E+00	2.94E-04	9.58E-04
ENSG00000244586	WNT5A-AS1	-4.49E+00	2.97E-04	9.67E-04
ENSG00000123739	PLA2G12A	-1.26E+00	3.02E-04	9.85E-04
ENSG00000150764	DIXDC1	-1.17E+00	3.09E-04	1.00E-03
ENSG00000277806	AC006213.4	-2.79E+00	3.28E-04	1.06E-03
ENSG00000136371	MTHFS	-1.51E+00	3.37E-04	1.09E-03
ENSG00000255857	PXN-AS1	-1.63E+00	3.38E-04	1.09E-03
ENSG00000153107	ANAPC1	-1.08E+00	3.44E-04	1.11E-03
ENSG00000234779	BNC2-AS1	-3.41E+00	3.48E-04	1.12E-03
ENSG00000223865	HLA-DPB1	-1.08E+00	3.48E-04	1.12E-03
ENSG00000168237	GLYCTK	-1.43E+00	3.54E-04	1.14E-03
ENSG00000197056	ZMYM1	-1.26E+00	3.53E-04	1.14E-03
ENSG00000171462	DLK2	-1.30E+00	3.54E-04	1.14E-03
ENSG00000136010	ALDH1L2	-1.44E+00	3.59E-04	1.15E-03
ENSG00000170917	NUDT6	-1.44E+00	3.65E-04	1.17E-03
ENSG00000227372	TP73-AS1	-1.22E+00	3.65E-04	1.17E-03
ENSG00000197782	ZNF780A	-1.41E+00	3.70E-04	1.18E-03
ENSG00000234883	MIR155HG	-2.26E+00	3.74E-04	1.20E-03
ENSG00000163322	ABRAXAS1	-1.30E+00	3.79E-04	1.21E-03
ENSG00000170889	RPS9	-1.31E+00	3.82E-04	1.22E-03
ENSG00000170417	TMEM182	-2.58E+00	3.83E-04	1.22E-03
ENSG00000140398	NEIL1	-4.50E+00	3.83E-04	1.22E-03
ENSG00000132530	XAF1	-2.74E+00	3.88E-04	1.24E-03
ENSG00000152495	CAMK4	-1.56E+00	3.97E-04	1.26E-03
ENSG00000279191	AC068491.4	-1.61E+00	3.97E-04	1.26E-03
ENSG00000212802	RPL15P3	-1.14E+00	3.98E-04	1.27E-03
ENSG00000267041	ZNF850	-1.55E+00	3.98E-04	1.27E-03
ENSG00000227906	SNAP25-AS1	-4.35E+00	4.01E-04	1.27E-03
ENSG00000185340	GAS2L1	-1.14E+00	4.07E-04	1.29E-03
ENSG00000151468	CCDC3	-1.44E+00	4.10E-04	1.30E-03
ENSG00000144857	BOC	-1.35E+00	4.18E-04	1.33E-03
ENSG00000092036	HAUS4	-2.15E+00	4.21E-04	1.33E-03
ENSG00000175395	ZNF25	-2.28E+00	4.25E-04	1.35E-03
ENSG00000223485	LINC01615	-1.69E+00	4.26E-04	1.35E-03
ENSG00000132031	MATN3	-1.80E+00	4.35E-04	1.37E-03

ENSG00000178026	LRRRC75B	-2.10E+00	4.43E-04	1.40E-03
ENSG00000267508	ZNF285	-2.03E+00	4.44E-04	1.40E-03
ENSG00000260442	ATP2A1-AS1	-1.37E+00	4.45E-04	1.40E-03
ENSG00000186625	KATNA1	-1.03E+00	4.47E-04	1.41E-03
ENSG00000148680	HTR7	-1.79E+00	4.56E-04	1.43E-03
ENSG00000198874	TYW1	-1.03E+00	4.69E-04	1.47E-03
ENSG00000204052	LRRRC73	-2.42E+00	4.74E-04	1.48E-03
ENSG00000230615	AL139220.2	-2.56E+00	4.76E-04	1.49E-03
ENSG00000179542	SLITRK4	-2.66E+00	4.76E-04	1.49E-03
ENSG00000061918	GUCY1B1	-2.69E+00	4.79E-04	1.50E-03
ENSG00000166321	NUDT13	-2.38E+00	4.79E-04	1.50E-03
ENSG00000175573	C11orf68	-1.15E+00	4.79E-04	1.50E-03
ENSG00000167550	RHEBL1	-1.76E+00	4.82E-04	1.51E-03
ENSG00000226419	SLC16A1-AS1	-1.08E+00	4.84E-04	1.51E-03
ENSG00000168386	FILIP1L	-1.09E+00	4.87E-04	1.52E-03
ENSG00000204271	SPIN3	-1.65E+00	4.95E-04	1.54E-03
ENSG00000269837	IPO5P1	-2.21E+00	4.96E-04	1.54E-03
ENSG00000088881	EBF4	-1.88E+00	5.01E-04	1.56E-03
ENSG00000159958	TNFRSF13C	-3.61E+00	5.12E-04	1.59E-03
ENSG00000250786	SNHG18	-1.39E+00	5.13E-04	1.59E-03
ENSG00000141295	SCRN2	-1.26E+00	5.14E-04	1.60E-03
ENSG00000287097	AL590550.1	-4.15E+00	5.19E-04	1.61E-03
ENSG00000169855	ROBO1	-1.35E+00	5.40E-04	1.67E-03
ENSG00000235363	SNRPGP10	-2.26E+00	5.45E-04	1.68E-03
ENSG00000185442	FAM174B	-2.27E+00	5.53E-04	1.71E-03
ENSG00000205707	ETFRF1	-1.08E+00	5.58E-04	1.72E-03
ENSG00000140848	CPNE2	-1.02E+00	5.71E-04	1.76E-03
ENSG00000266967	AARSD1	-2.42E+00	5.78E-04	1.78E-03
ENSG00000133863	TEX15	-2.16E+00	5.78E-04	1.78E-03
ENSG00000102048	ASB9	-3.71E+00	5.88E-04	1.81E-03
ENSG00000150779	TIMM8B	-1.14E+00	5.89E-04	1.81E-03
ENSG00000120217	CD274	-1.93E+00	5.89E-04	1.81E-03
ENSG00000139428	MMAB	-1.01E+00	5.91E-04	1.82E-03
ENSG00000219481	NBPF1	-1.10E+00	5.99E-04	1.84E-03
ENSG00000248487	ABHD14A	-1.13E+00	6.07E-04	1.86E-03
ENSG00000116117	PARD3B	-3.48E+00	6.11E-04	1.87E-03
ENSG00000178096	BOLA1	-1.84E+00	6.12E-04	1.87E-03
ENSG00000176371	ZSCAN2	-1.56E+00	6.13E-04	1.88E-03
ENSG00000134297	PLEKHA8P1	-2.33E+00	6.22E-04	1.90E-03
ENSG00000079263	SP140	-3.75E+00	6.26E-04	1.91E-03

ENSG00000169499	PLEKHA2	-1.06E+00	6.26E-04	1.91E-03
ENSG00000123689	G0S2	-2.93E+00	6.30E-04	1.92E-03
ENSG00000100147	CCDC134	-1.85E+00	6.35E-04	1.94E-03
ENSG00000169020	ATP5ME	-1.18E+00	6.52E-04	1.98E-03
ENSG00000184785	SMIM10	-1.93E+00	6.53E-04	1.99E-03
ENSG00000023445	BIRC3	-1.18E+00	6.59E-04	2.00E-03
ENSG00000107614	TRDMT1	-1.53E+00	6.62E-04	2.01E-03
ENSG00000104177	MYEF2	-2.20E+00	6.63E-04	2.01E-03
ENSG00000279170	TSTD3	-1.22E+00	6.65E-04	2.02E-03
ENSG00000103021	CCDC113	-2.20E+00	6.66E-04	2.02E-03
ENSG00000201998	SNORA23	-3.41E+00	6.69E-04	2.03E-03
ENSG00000134330	IAH1	-1.36E+00	6.75E-04	2.05E-03
ENSG00000157911	PEX10	-1.14E+00	6.77E-04	2.05E-03
ENSG00000280721	LINC01943	-3.62E+00	6.87E-04	2.08E-03
ENSG00000164949	GEM	-1.47E+00	6.99E-04	2.11E-03
ENSG00000116852	KIF21B	-1.89E+00	7.04E-04	2.13E-03
ENSG00000154736	ADAMTS5	-2.07E+00	7.05E-04	2.13E-03
ENSG00000248008	NRAV	-1.30E+00	7.06E-04	2.13E-03
ENSG00000199331	Y_RNA	-3.93E+00	7.36E-04	2.22E-03
ENSG00000275713	HIST1H2BH	-2.00E+00	7.38E-04	2.22E-03
ENSG00000232346	Z74021.1	-1.97E+00	7.41E-04	2.23E-03
ENSG00000162745	OLFML2B	-2.12E+00	7.70E-04	2.31E-03
ENSG00000196976	LAGE3	-1.10E+00	7.74E-04	2.32E-03
ENSG00000135953	MFSD9	-1.15E+00	7.75E-04	2.32E-03
ENSG00000126756	UXT	-1.02E+00	7.82E-04	2.34E-03
ENSG00000183186	C2CD4C	-1.61E+00	7.90E-04	2.36E-03
ENSG00000164849	GPR146	-1.60E+00	7.96E-04	2.38E-03
ENSG00000143995	MEIS1	-1.85E+00	8.01E-04	2.39E-03
ENSG00000260862	AC099506.1	-3.39E+00	8.05E-04	2.40E-03
ENSG00000061337	LZTS1	-1.52E+00	8.17E-04	2.44E-03
ENSG00000100711	ZFYVE21	-1.04E+00	8.24E-04	2.45E-03
ENSG00000183605	SFXN4	-1.21E+00	8.27E-04	2.46E-03
ENSG00000064763	FAR2	-1.41E+00	8.34E-04	2.48E-03
ENSG00000197647	ZNF433	-1.41E+00	8.42E-04	2.50E-03
ENSG00000162066	AMDHD2	-1.20E+00	8.46E-04	2.51E-03
ENSG00000267102	AC060766.1	-2.57E+00	8.51E-04	2.53E-03
ENSG00000203724	C1orf53	-2.01E+00	8.57E-04	2.54E-03
ENSG00000051523	CYBA	-1.21E+00	8.78E-04	2.60E-03
ENSG00000245248	USP2-AS1	-3.05E+00	8.83E-04	2.62E-03
ENSG00000111348	ARHGDI1B	-2.60E+00	8.96E-04	2.65E-03



ENSG00000169429	CXCL8	-1.92E+00	9.24E-04	2.73E-03
ENSG00000174576	NPAS4	-3.89E+00	9.24E-04	2.73E-03
ENSG00000264350	SNRPGP2	-1.63E+00	9.35E-04	2.76E-03
ENSG00000163734	CXCL3	-2.31E+00	9.38E-04	2.77E-03
ENSG00000104324	CPQ	-1.40E+00	9.40E-04	2.77E-03
ENSG00000145779	TNFAIP8	-1.04E+00	9.40E-04	2.77E-03
ENSG00000161179	YDJC	-1.00E+00	9.45E-04	2.78E-03
ENSG00000278709	NKILA	-1.97E+00	9.50E-04	2.80E-03
ENSG00000113838	TBCCD1	-1.70E+00	9.53E-04	2.80E-03
ENSG00000110446	SLC15A3	-1.61E+00	9.58E-04	2.82E-03
ENSG00000161692	DBF4B	-1.38E+00	9.83E-04	2.89E-03
ENSG00000242779	ZNF702P	-1.31E+00	9.86E-04	2.89E-03
ENSG00000185730	ZNF696	-1.39E+00	9.93E-04	2.91E-03
ENSG00000143951	WDPCP	-1.35E+00	1.01E-03	2.95E-03
ENSG00000189227	C15orf61	-1.02E+00	1.01E-03	2.96E-03
ENSG00000204301	NOTCH4	-1.68E+00	1.02E-03	3.00E-03
ENSG00000157426	AASDH	-1.16E+00	1.06E-03	3.11E-03
ENSG00000083535	PIBF1	-1.09E+00	1.06E-03	3.11E-03
ENSG00000274605	PCCA-DT	-1.41E+00	1.07E-03	3.12E-03
ENSG00000206535	LNP1	-1.71E+00	1.07E-03	3.13E-03
ENSG00000179240	GVQW3	-2.23E+00	1.08E-03	3.16E-03
ENSG00000274825	AL023803.2	-2.63E+00	1.09E-03	3.18E-03
ENSG00000003989	SLC7A2	-1.23E+00	1.11E-03	3.23E-03
ENSG00000158164	TMSB15A	-1.67E+00	1.13E-03	3.28E-03
ENSG00000150540	HNMT	-1.41E+00	1.14E-03	3.32E-03
ENSG00000134259	NGF	-1.58E+00	1.14E-03	3.32E-03
ENSG00000213315	AL122020.1	-1.00E+00	1.15E-03	3.32E-03
ENSG00000267060	PTGES3L	-2.88E+00	1.20E-03	3.48E-03
ENSG00000134698	AGO4	-1.06E+00	1.22E-03	3.52E-03
ENSG00000181619	GPR135	-1.90E+00	1.22E-03	3.53E-03
ENSG00000266962	AC067852.2	-1.37E+00	1.23E-03	3.55E-03
ENSG00000196456	ZNF775	-1.29E+00	1.23E-03	3.55E-03
ENSG00000132967	HMGB1P5	-1.13E+00	1.23E-03	3.56E-03
ENSG00000164418	GRIK2	-4.83E+00	1.25E-03	3.59E-03
ENSG00000132122	SPATA6	-1.83E+00	1.26E-03	3.64E-03
ENSG00000087903	RFX2	-1.24E+00	1.28E-03	3.67E-03
ENSG00000276107	AC037198.1	-1.82E+00	1.28E-03	3.67E-03
ENSG00000130005	GAMT	-1.01E+00	1.28E-03	3.67E-03
ENSG00000160094	ZNF362	-1.26E+00	1.28E-03	3.68E-03
ENSG00000261188	Z95115.1	-2.14E+00	1.29E-03	3.71E-03

ENSG00000173715	C11orf80	-2.69E+00	1.31E-03	3.75E-03
ENSG00000143942	CHAC2	-1.28E+00	1.33E-03	3.82E-03
ENSG00000267745	AC060766.7	-2.10E+00	1.35E-03	3.86E-03
ENSG00000177352	CCDC71	-1.79E+00	1.36E-03	3.88E-03
ENSG00000221886	ZBED8	-1.21E+00	1.36E-03	3.89E-03
ENSG00000146776	ATXN7L1	-1.18E+00	1.39E-03	3.97E-03
ENSG00000272870	AC097534.2	-1.63E+00	1.40E-03	4.00E-03
ENSG00000081177	EXD2	-1.13E+00	1.45E-03	4.13E-03
ENSG00000166823	MESP1	-1.49E+00	1.46E-03	4.14E-03
ENSG00000079101	CLUL1	-4.34E+00	1.49E-03	4.23E-03
ENSG00000132535	DLG4	-1.21E+00	1.51E-03	4.29E-03
ENSG00000169371	SNUPN	-1.06E+00	1.52E-03	4.29E-03
ENSG00000243943	ZNF512	-1.12E+00	1.52E-03	4.30E-03
ENSG00000126106	TMEM53	-1.36E+00	1.54E-03	4.36E-03
ENSG00000155636	RBM45	-1.14E+00	1.57E-03	4.41E-03
ENSG00000152580	IGSF10	-3.14E+00	1.57E-03	4.43E-03
ENSG00000275180	AC048341.2	-1.19E+00	1.62E-03	4.54E-03
ENSG00000150281	CTF1	-4.30E+00	1.64E-03	4.61E-03
ENSG00000134253	TRIM45	-2.04E+00	1.66E-03	4.67E-03
ENSG00000164403	SHROOM1	-1.06E+00	1.67E-03	4.68E-03
ENSG00000286873	AC012306.3	-3.19E+00	1.68E-03	4.72E-03
ENSG00000159433	STARD9	-1.34E+00	1.69E-03	4.73E-03
ENSG00000198947	DMD	-1.34E+00	1.74E-03	4.87E-03
ENSG00000144843	ADPRH	-2.60E+00	1.74E-03	4.87E-03
ENSG00000169570	DTWD2	-1.47E+00	1.75E-03	4.90E-03
ENSG00000198556	ZNF789	-1.29E+00	1.77E-03	4.96E-03
ENSG00000170522	ELOVL6	-1.33E+00	1.79E-03	4.99E-03
ENSG00000072195	SPEG	-1.03E+00	1.86E-03	5.17E-03
ENSG00000241756	RN7SL83P	-3.72E+00	1.90E-03	5.27E-03
ENSG00000177854	TMEM187	-1.82E+00	1.91E-03	5.29E-03
ENSG00000241942	RPS20P20	-3.69E+00	1.92E-03	5.33E-03
ENSG00000196876	SCN8A	-1.02E+00	1.92E-03	5.33E-03
ENSG00000285943	AC112128.1	-4.04E+00	1.93E-03	5.34E-03
ENSG00000167912	AC090152.1	-3.83E+00	1.93E-03	5.35E-03
ENSG00000135587	SMPD2	-1.09E+00	1.93E-03	5.35E-03
ENSG00000175322	ZNF519	-1.14E+00	1.94E-03	5.37E-03
ENSG00000142686	C1orf216	-1.70E+00	1.95E-03	5.39E-03
ENSG00000062370	ZNF112	-1.37E+00	1.99E-03	5.49E-03
ENSG00000102409	BEX4	-1.56E+00	1.99E-03	5.50E-03
ENSG00000137720	C11orf1	-1.06E+00	2.04E-03	5.63E-03

ENSG00000244187	TMEM141	-1.30E+00	2.04E-03	5.63E-03
ENSG00000234692	AL355601.1	-3.61E+00	2.12E-03	5.82E-03
ENSG00000168273	SMIM4	-1.16E+00	2.16E-03	5.91E-03
ENSG00000198890	PRMT6	-1.03E+00	2.16E-03	5.92E-03
ENSG00000063587	ZNF275	-1.10E+00	2.17E-03	5.96E-03
ENSG00000254337	AC083967.1	-3.96E+00	2.23E-03	6.11E-03
ENSG00000241852	C8orf58	-1.07E+00	2.24E-03	6.13E-03
ENSG00000120832	MTERF2	-1.21E+00	2.26E-03	6.18E-03
ENSG00000091844	RGS17	-1.62E+00	2.28E-03	6.23E-03
ENSG00000049883	PTCD2	-1.08E+00	2.29E-03	6.27E-03
ENSG00000120093	HOXB3	-1.00E+00	2.31E-03	6.30E-03
ENSG00000137142	IGFBPL1	-1.79E+00	2.31E-03	6.30E-03
ENSG00000202337	RNU6-8	-2.74E+00	2.38E-03	6.48E-03
ENSG00000152926	ZNF117	-1.56E+00	2.40E-03	6.54E-03
ENSG00000260136	AC008915.2	-1.48E+00	2.42E-03	6.58E-03
ENSG00000264107	AC138207.2	-2.22E+00	2.49E-03	6.76E-03
ENSG00000143786	CNIH3	-2.62E+00	2.52E-03	6.83E-03
ENSG00000250222	AC008443.5	-2.49E+00	2.53E-03	6.86E-03
ENSG00000247081	BAALC-AS1	-1.67E+00	2.56E-03	6.92E-03
ENSG00000261575	AC005829.1	-2.83E+00	2.60E-03	7.02E-03
ENSG00000162757	C1orf74	-1.19E+00	2.60E-03	7.02E-03
ENSG00000153790	C7orf31	-2.07E+00	2.62E-03	7.07E-03
ENSG00000204291	COL15A1	-1.23E+00	2.62E-03	7.08E-03
ENSG00000062822	POLD1	-1.15E+00	2.65E-03	7.15E-03
ENSG00000227462	PSME2P6	-1.25E+00	2.66E-03	7.18E-03
ENSG00000149582	TMEM25	-1.62E+00	2.67E-03	7.20E-03
ENSG00000259659	AC009996.1	-3.18E+00	2.68E-03	7.21E-03
ENSG00000159885	ZNF222	-1.32E+00	2.70E-03	7.27E-03
ENSG00000249306	LINC01411	-2.21E+00	2.74E-03	7.38E-03
ENSG00000128039	SRD5A3	-1.31E+00	2.77E-03	7.44E-03
ENSG00000266709	AC005224.3	-1.60E+00	2.81E-03	7.54E-03
ENSG00000213442	RPL18AP3	-1.43E+00	2.81E-03	7.54E-03
ENSG00000186615	KTN1-AS1	-2.01E+00	2.83E-03	7.59E-03
ENSG00000235919	ASH1L-AS1	-1.86E+00	2.84E-03	7.61E-03
ENSG00000163590	PPM1L	-1.11E+00	2.94E-03	7.85E-03
ENSG00000278126	AC139768.1	-1.70E+00	3.03E-03	8.07E-03
ENSG00000166529	ZSCAN21	-1.62E+00	3.08E-03	8.18E-03
ENSG00000105514	RAB3D	-1.18E+00	3.10E-03	8.24E-03
ENSG00000187955	COL14A1	-2.89E+00	3.13E-03	8.31E-03
ENSG00000166821	PEX11A	-1.10E+00	3.16E-03	8.38E-03

ENSG00000275464	FP565260.1	-1.39E+00	3.17E-03	8.40E-03
ENSG00000238390	AP000254.1	-2.09E+00	3.21E-03	8.49E-03
ENSG00000267890	AC010624.2	-3.53E+00	3.22E-03	8.51E-03
ENSG00000146950	SHROOM2	-1.33E+00	3.24E-03	8.56E-03
ENSG00000163462	TRIM46	-2.01E+00	3.26E-03	8.61E-03
ENSG00000125995	ROMO1	-1.03E+00	3.27E-03	8.63E-03
ENSG00000250091	DNAH10OS	-3.47E+00	3.32E-03	8.75E-03
ENSG00000166707	ZCCHC18	-2.93E+00	3.35E-03	8.81E-03
ENSG00000148655	LRMDA	-2.19E+00	3.35E-03	8.83E-03
ENSG00000183668	PSG9	-4.17E+00	3.37E-03	8.88E-03
ENSG00000187808	SOWAHD	-3.37E+00	3.41E-03	8.95E-03
ENSG00000287825	AL035587.2	-2.67E+00	3.44E-03	9.03E-03
ENSG00000135736	CCDC102A	-1.15E+00	3.48E-03	9.15E-03
ENSG00000198551	ZNF627	-1.15E+00	3.60E-03	9.43E-03
ENSG00000261008	LINC01572	-1.70E+00	3.62E-03	9.46E-03
ENSG00000020181	ADGRA2	-1.37E+00	3.65E-03	9.54E-03
ENSG00000159184	HOXB13	-1.24E+00	3.70E-03	9.66E-03
ENSG00000256043	CTSO	-2.07E+00	3.80E-03	9.88E-03
ENSG00000108797	CNTNAP1	-1.09E+00	3.81E-03	9.90E-03
ENSG00000213462	ERV3-1	-1.33E+00	3.82E-03	9.91E-03
ENSG00000273568	AC131009.3	-1.66E+00	3.86E-03	1.00E-02
ENSG00000123388	HOXC11	-1.12E+00	3.89E-03	1.01E-02
ENSG00000178971	CTC1	-1.45E+00	3.89E-03	1.01E-02
ENSG00000149926	TLCD3B	-1.32E+00	3.94E-03	1.02E-02
ENSG00000171357	LURAP1	-1.60E+00	3.95E-03	1.02E-02
ENSG00000181638	ZFP41	-1.09E+00	3.98E-03	1.03E-02
ENSG00000196611	MMP1	-2.59E+00	4.20E-03	1.08E-02
ENSG00000206195	DUXAP8	-1.54E+00	4.24E-03	1.09E-02
ENSG00000128000	ZNF780B	-1.15E+00	4.25E-03	1.09E-02
ENSG00000276778	LINC02227	-2.69E+00	4.29E-03	1.10E-02
ENSG00000233268	AL691449.1	-4.01E+00	4.34E-03	1.11E-02
ENSG00000224114	AL591846.1	-1.19E+00	4.36E-03	1.12E-02
ENSG00000148450	MSRB2	-1.14E+00	4.48E-03	1.15E-02
ENSG00000244026	FAM86DP	-1.00E+00	4.48E-03	1.15E-02
ENSG00000254598	CSNK2A3	-2.04E+00	4.51E-03	1.15E-02
ENSG00000283563	AC098650.1	-4.43E+00	4.53E-03	1.16E-02
ENSG00000115226	FNDC4	-1.86E+00	4.55E-03	1.16E-02
ENSG00000165959	CLMN	-1.19E+00	4.55E-03	1.16E-02
ENSG00000121964	GTDC1	-1.03E+00	4.59E-03	1.17E-02
ENSG00000106631	MYL7	-1.58E+00	4.63E-03	1.18E-02

ENSG00000205213	LGR4	-1.56E+00	4.63E-03	1.18E-02
ENSG00000126860	EVI2A	-4.32E+00	4.71E-03	1.20E-02
ENSG00000273247	AC097376.3	-1.26E+00	4.74E-03	1.20E-02
ENSG00000099795	NDUFB7	-1.17E+00	4.76E-03	1.21E-02
ENSG00000207175	RNU1-67P	-3.25E+00	4.81E-03	1.22E-02
ENSG00000158457	TSPAN33	-1.17E+00	4.85E-03	1.23E-02
ENSG00000261051	AC107021.2	-2.45E+00	4.85E-03	1.23E-02
ENSG00000197142	ACSL5	-2.26E+00	4.88E-03	1.24E-02
ENSG00000227525	RPL7P6	-1.54E+00	4.97E-03	1.26E-02
ENSG00000104863	LIN7B	-1.23E+00	4.98E-03	1.26E-02
ENSG00000241886	AC112496.1	-3.07E+00	5.00E-03	1.26E-02
ENSG00000137700	SLC37A4	-1.11E+00	5.07E-03	1.28E-02
ENSG00000139874	SSTR1	-4.86E+00	5.07E-03	1.28E-02
ENSG00000164405	UQCRQ	-1.04E+00	5.09E-03	1.28E-02
ENSG00000213654	GPSM3	-1.72E+00	5.09E-03	1.28E-02
ENSG00000267270	PARD6G-AS1	-2.07E+00	5.11E-03	1.29E-02
ENSG00000136682	CBWD2	-1.55E+00	5.14E-03	1.30E-02
ENSG00000139973	SYT16	-2.51E+00	5.17E-03	1.30E-02
ENSG00000189144	ZNF573	-1.97E+00	5.18E-03	1.30E-02
ENSG00000164304	CAGE1	-3.07E+00	5.19E-03	1.31E-02
ENSG00000272447	AL135925.1	-1.36E+00	5.21E-03	1.31E-02
ENSG00000234912	SNHG20	-1.44E+00	5.25E-03	1.32E-02
ENSG00000269927	AC004817.3	-3.79E+00	5.28E-03	1.33E-02
ENSG00000179750	APOBEC3B	-1.51E+00	5.30E-03	1.33E-02
ENSG00000160172	FAM86C2P	-3.15E+00	5.33E-03	1.34E-02
ENSG00000276007	AC079414.3	-1.67E+00	5.39E-03	1.35E-02
ENSG00000188060	RAB42	-2.19E+00	5.61E-03	1.40E-02
ENSG00000138769	CDKL2	-2.01E+00	5.67E-03	1.41E-02
ENSG00000136014	USP44	-2.58E+00	5.75E-03	1.43E-02
ENSG00000180354	MTURN	-1.21E+00	5.76E-03	1.44E-02
ENSG00000134668	SPOCD1	-1.17E+00	5.80E-03	1.44E-02
ENSG00000183474	GTF2H2C	-1.65E+00	5.80E-03	1.44E-02
ENSG00000100802	C14orf93	-1.16E+00	5.91E-03	1.47E-02
ENSG00000184178	SCFD2	-1.30E+00	5.93E-03	1.47E-02
ENSG00000128011	LRFN1	-1.34E+00	5.94E-03	1.48E-02
ENSG00000242852	ZNF709	-3.34E+00	5.96E-03	1.48E-02
ENSG00000287966	AL590062.1	-1.94E+00	5.98E-03	1.48E-02
ENSG00000250320	AC113383.1	-1.06E+00	6.08E-03	1.51E-02
ENSG00000280161	AC022413.1	-2.68E+00	6.15E-03	1.52E-02
ENSG00000213598	AL049873.1	-2.49E+00	6.17E-03	1.53E-02

ENSG00000248890	HHIP-AS1	-1.69E+00	6.20E-03	1.53E-02
ENSG00000260025	CRIM1-DT	-1.83E+00	6.29E-03	1.55E-02
ENSG00000173432	SAA1	-3.37E+00	6.35E-03	1.57E-02
ENSG00000178752	ERFE	-1.10E+00	6.35E-03	1.57E-02
ENSG00000133134	BEX2	-1.39E+00	6.39E-03	1.57E-02
ENSG00000180346	TIGD2	-1.16E+00	6.42E-03	1.58E-02
ENSG00000198298	ZNF485	-1.55E+00	6.53E-03	1.60E-02
ENSG00000279739	AC011369.2	-3.18E+00	6.58E-03	1.62E-02
ENSG00000238000	AC116347.1	-3.15E+00	6.58E-03	1.62E-02
ENSG00000172728	FUT10	-1.22E+00	6.59E-03	1.62E-02
ENSG00000197358	BNIP3P1	-1.99E+00	6.66E-03	1.63E-02
ENSG00000144730	IL17RD	-1.74E+00	6.66E-03	1.63E-02
ENSG00000131668	BARX1	-1.38E+00	6.71E-03	1.64E-02
ENSG00000106701	FSD1L	-1.07E+00	6.74E-03	1.65E-02
ENSG00000153237	CCDC148	-2.36E+00	6.76E-03	1.65E-02
ENSG00000133111	RFXAP	-1.23E+00	6.79E-03	1.66E-02
ENSG00000278931	CR381670.1	-3.27E+00	6.81E-03	1.66E-02
ENSG00000198732	SMOC1	-3.22E+00	6.84E-03	1.67E-02
ENSG00000145723	GIN1	-1.24E+00	6.87E-03	1.68E-02
ENSG00000164038	SLC9B2	-1.14E+00	6.95E-03	1.70E-02
ENSG00000280734	LINC01232	-1.62E+00	7.18E-03	1.75E-02
ENSG00000153832	FBXO36	-2.92E+00	7.21E-03	1.76E-02
ENSG00000162976	SLC66A3	-1.57E+00	7.28E-03	1.77E-02
ENSG00000101265	RASSF2	-1.39E+00	7.36E-03	1.79E-02
ENSG00000166971	AKTIP	-1.19E+00	7.45E-03	1.81E-02
ENSG00000198795	ZNF521	-2.25E+00	7.51E-03	1.82E-02
ENSG00000233328	PFN1P1	-1.13E+00	7.55E-03	1.83E-02
ENSG00000070371	CLTCL1	-1.15E+00	7.58E-03	1.84E-02
ENSG00000234753	FOXP4-AS1	-2.12E+00	7.66E-03	1.85E-02
ENSG00000212232	SNORD17	-2.43E+00	7.67E-03	1.85E-02
ENSG00000243181	AC087343.1	-2.78E+00	7.75E-03	1.87E-02
ENSG00000111801	BTN3A3	-1.35E+00	7.77E-03	1.88E-02
ENSG00000027075	PRKCH	-1.13E+00	7.78E-03	1.88E-02
ENSG00000169083	AR	-1.31E+00	7.90E-03	1.91E-02
ENSG00000146411	SLC2A12	-2.59E+00	7.93E-03	1.91E-02
ENSG00000242960	FTH1P23	-3.17E+00	7.96E-03	1.92E-02
ENSG00000163611	SPICE1	-1.05E+00	8.03E-03	1.93E-02
ENSG00000267919	AC009955.2	-3.61E+00	8.10E-03	1.95E-02
ENSG00000155016	CYP2U1	-1.33E+00	8.20E-03	1.97E-02
ENSG00000215190	LINC00680	-1.10E+00	8.47E-03	2.03E-02

ENSG00000164616	FBXL21P	-3.19E+00	8.54E-03	2.04E-02
ENSG00000240509	RPL34P18	-2.87E+00	8.54E-03	2.04E-02
ENSG00000228519	AC097263.1	-1.48E+00	8.61E-03	2.06E-02
ENSG00000280219	AC093908.1	-3.41E+00	8.62E-03	2.06E-02
ENSG00000277901	AL390037.1	-4.64E+00	8.74E-03	2.08E-02
ENSG00000121690	DEPDC7	-1.18E+00	9.04E-03	2.15E-02
ENSG00000271334	LINC02104	-1.37E+00	9.11E-03	2.16E-02
ENSG00000125538	IL1B	-2.48E+00	9.12E-03	2.17E-02
ENSG00000243964	RPL23AP65	-1.27E+00	9.22E-03	2.19E-02
ENSG00000272808	AC015712.6	-3.11E+00	9.27E-03	2.20E-02
ENSG00000202222	Y_RNA	-3.24E+00	9.30E-03	2.20E-02
ENSG00000163704	PRRT3	-1.20E+00	9.40E-03	2.23E-02
ENSG00000247595	SPTY2D1OS	-1.29E+00	9.51E-03	2.25E-02
ENSG00000225573	RPL35P5	-2.39E+00	9.57E-03	2.26E-02
ENSG00000232533	AC093673.1	-1.01E+00	9.64E-03	2.28E-02
ENSG00000224616	RTCA-AS1	-1.54E+00	9.74E-03	2.30E-02
ENSG00000138400	MDH1B	-2.96E+00	9.85E-03	2.32E-02
ENSG00000225880	LINC00115	-2.79E+00	9.97E-03	2.35E-02
ENSG00000259583	AC015712.2	-1.44E+00	9.98E-03	2.35E-02
ENSG00000138028	CGREF1	-1.90E+00	1.01E-02	2.38E-02
ENSG00000260774	AC021087.3	-3.30E+00	1.02E-02	2.40E-02
ENSG00000163431	LMOD1	-3.54E+00	1.03E-02	2.41E-02
ENSG00000254363	AC011379.2	-2.96E+00	1.03E-02	2.43E-02
ENSG00000137571	SLCO5A1	-4.34E+00	1.05E-02	2.46E-02
ENSG00000166136	NDUFB8	-1.16E+00	1.06E-02	2.48E-02
ENSG00000169193	CCDC126	-1.17E+00	1.06E-02	2.48E-02
ENSG00000113119	TMCO6	-1.14E+00	1.08E-02	2.53E-02
ENSG0000016391	CHDH	-2.90E+00	1.09E-02	2.53E-02
ENSG00000133121	STARD13	-1.05E+00	1.09E-02	2.53E-02
ENSG00000169126	ARMC4	-3.12E+00	1.09E-02	2.54E-02
ENSG00000225163	LINC00618	-1.91E+00	1.10E-02	2.57E-02
ENSG00000178878	APOLD1	-1.15E+00	1.12E-02	2.60E-02
ENSG00000259209	AC004943.1	-4.77E+00	1.13E-02	2.63E-02
ENSG00000242094	FOXP1-IT1	-1.61E+00	1.16E-02	2.69E-02
ENSG00000047648	ARHGAP6	-1.05E+00	1.17E-02	2.71E-02
ENSG00000259518	LINC01583	-2.80E+00	1.17E-02	2.72E-02
ENSG00000137965	IFI44	-1.04E+00	1.17E-02	2.72E-02
ENSG00000285077	AC091057.6	-1.85E+00	1.18E-02	2.73E-02
ENSG00000145703	IQGAP2	-2.04E+00	1.20E-02	2.77E-02
ENSG00000275457	AL117332.1	-1.13E+00	1.21E-02	2.78E-02

ENSG00000276174	AC087683.2	-2.84E+00	1.22E-02	2.80E-02
ENSG00000255874	LINC00346	-1.15E+00	1.22E-02	2.82E-02
ENSG00000224287	MSL3P1	-2.89E+00	1.27E-02	2.90E-02
ENSG00000139329	LUM	-3.00E+00	1.27E-02	2.91E-02
ENSG00000163637	PRICKLE2	-1.08E+00	1.27E-02	2.91E-02
ENSG00000188227	ZNF793	-1.19E+00	1.28E-02	2.92E-02
ENSG00000260563	AC132872.1	-1.75E+00	1.29E-02	2.94E-02
ENSG00000105072	C19orf44	-1.00E+00	1.29E-02	2.94E-02
ENSG00000214029	ZNF891	-1.18E+00	1.31E-02	2.98E-02
ENSG00000212567	AC008810.1	-3.68E+00	1.31E-02	2.99E-02
ENSG00000258704	SRP54-AS1	-1.28E+00	1.32E-02	3.00E-02
ENSG00000146350	TBC1D32	-1.04E+00	1.32E-02	3.02E-02
ENSG00000101298	SNPH	-1.59E+00	1.34E-02	3.04E-02
ENSG00000254469	AP002495.1	-1.62E+00	1.36E-02	3.08E-02
ENSG00000173077	DEC1	-1.70E+00	1.37E-02	3.11E-02
ENSG00000186132	C2orf76	-1.14E+00	1.37E-02	3.12E-02
ENSG00000151743	AMN1	-1.17E+00	1.38E-02	3.14E-02
ENSG00000256061	DNAAF4	-1.62E+00	1.39E-02	3.15E-02
ENSG00000277342	AC048344.4	-1.89E+00	1.40E-02	3.17E-02
ENSG00000271576	AL359504.2	-2.28E+00	1.41E-02	3.19E-02
ENSG00000116885	OSCP1	-1.11E+00	1.41E-02	3.19E-02
ENSG00000086300	SNX10	-1.31E+00	1.42E-02	3.21E-02
ENSG00000154678	PDE1C	-1.77E+00	1.43E-02	3.22E-02
ENSG00000242060	RPS3AP49	-1.71E+00	1.44E-02	3.25E-02
ENSG00000165028	NIPSNAP3B	-2.94E+00	1.45E-02	3.28E-02
ENSG00000180777	ANKRD30B	-1.22E+00	1.46E-02	3.29E-02
ENSG00000129675	ARHGEF6	-2.15E+00	1.46E-02	3.29E-02
ENSG00000233461	AL445524.1	-1.34E+00	1.46E-02	3.30E-02
ENSG00000120937	NPPB	-2.33E+00	1.48E-02	3.32E-02
ENSG00000242242	NECTIN3-AS1	-3.15E+00	1.48E-02	3.32E-02
ENSG00000272121	AC006058.3	-1.65E+00	1.48E-02	3.32E-02
ENSG00000225131	PSME2P2	-1.83E+00	1.48E-02	3.33E-02
ENSG00000248830	ZNF807	-3.45E+00	1.51E-02	3.39E-02
ENSG00000272707	AC046143.2	-3.11E+00	1.51E-02	3.39E-02
ENSG00000169067	ACTBL2	-1.10E+00	1.52E-02	3.42E-02
ENSG00000110455	ACCS	-2.60E+00	1.53E-02	3.43E-02
ENSG00000286874	AC072054.1	-3.52E+00	1.53E-02	3.43E-02
ENSG00000273270	AC090114.2	-1.26E+00	1.54E-02	3.45E-02
ENSG00000169515	CCDC8	-1.38E+00	1.55E-02	3.46E-02
ENSG00000230092	AL669831.4	-4.11E+00	1.55E-02	3.47E-02



ENSG00000225953	SATB2-AS1	-1.22E+00	1.57E-02	3.50E-02
ENSG00000267280	TBX2-AS1	-1.43E+00	1.58E-02	3.52E-02
ENSG00000147894	C9orf72	-2.32E+00	1.58E-02	3.52E-02
ENSG00000250654	AC023794.4	-1.37E+00	1.58E-02	3.53E-02
ENSG00000231903	AC079354.2	-2.13E+00	1.59E-02	3.55E-02
ENSG00000135469	COQ10A	-1.24E+00	1.61E-02	3.58E-02
ENSG00000225616	AL138785.1	-1.36E+00	1.61E-02	3.58E-02
ENSG00000164010	ERMAP	-1.23E+00	1.63E-02	3.62E-02
ENSG00000129295	LRRC6	-1.47E+00	1.63E-02	3.63E-02
ENSG00000135744	AGT	-1.45E+00	1.65E-02	3.65E-02
ENSG00000172137	CALB2	-2.51E+00	1.65E-02	3.65E-02
ENSG00000107902	LHPP	-1.18E+00	1.67E-02	3.70E-02
ENSG00000147041	SYTL5	-1.68E+00	1.68E-02	3.72E-02
ENSG00000259426	AC027237.3	-1.54E+00	1.68E-02	3.73E-02
ENSG00000174586	ZNF497	-2.77E+00	1.70E-02	3.77E-02
ENSG00000174343	CHRNA9	-3.71E+00	1.71E-02	3.78E-02
ENSG00000227805	RPL21P90	-2.69E+00	1.74E-02	3.84E-02
ENSG00000156689	GLYATL2	-1.74E+00	1.75E-02	3.86E-02
ENSG00000102230	PCYT1B	-1.65E+00	1.75E-02	3.86E-02
ENSG00000100271	TTLL1	-1.29E+00	1.76E-02	3.88E-02
ENSG00000235501	AC105942.1	-2.24E+00	1.79E-02	3.94E-02
ENSG00000247626	MARS2	-1.16E+00	1.79E-02	3.95E-02
ENSG00000260400	AL513534.2	-2.47E+00	1.80E-02	3.95E-02
ENSG00000246090	AP002026.1	-2.79E+00	1.81E-02	3.98E-02
ENSG00000175711	B3GNTL1	-1.28E+00	1.81E-02	3.98E-02
ENSG00000273374	AC069222.1	-3.23E+00	1.85E-02	4.05E-02
ENSG00000271936	AC012073.1	-1.34E+00	1.86E-02	4.07E-02
ENSG00000162595	DIRAS3	-1.60E+00	1.87E-02	4.09E-02
ENSG00000154548	SRSF12	-1.48E+00	1.91E-02	4.17E-02
ENSG00000270419	CAHM	-1.83E+00	1.92E-02	4.18E-02
ENSG00000267334	AC015936.1	-5.79E+00	1.93E-02	4.20E-02
ENSG00000251595	ABCA11P	-1.42E+00	1.93E-02	4.21E-02
ENSG00000204623	ZNRD1ASP	-1.15E+00	1.94E-02	4.23E-02
ENSG00000278463	HIST1H2AB	-3.03E+00	1.95E-02	4.25E-02
ENSG00000212588	SNORA26	-2.98E+00	1.96E-02	4.26E-02
ENSG00000222043	AC079305.1	-3.63E+00	1.96E-02	4.26E-02
ENSG00000165905	LARGE2	-1.52E+00	1.96E-02	4.27E-02
ENSG00000237821	AC083873.1	-2.38E+00	1.97E-02	4.28E-02
ENSG00000151490	PTPRO	-2.56E+00	1.98E-02	4.29E-02
ENSG00000171121	KCNMB3	-1.43E+00	1.99E-02	4.32E-02

ENSG00000197557	TTC30A	-1.26E+00	1.99E-02	4.32E-02
ENSG00000234684	SDCBP2-AS1	-1.48E+00	2.00E-02	4.35E-02
ENSG00000013297	CLDN11	-1.52E+00	2.01E-02	4.36E-02
ENSG00000159761	C16orf86	-2.27E+00	2.02E-02	4.39E-02
ENSG00000224167	LINC01357	-1.64E+00	2.04E-02	4.42E-02
ENSG00000144227	NXPH2	-1.78E+00	2.04E-02	4.42E-02
ENSG00000247572	CKMT2-AS1	-1.06E+00	2.07E-02	4.49E-02
ENSG00000261732	AL031708.1	-1.80E+00	2.08E-02	4.50E-02
ENSG00000172671	ZFAND4	-1.19E+00	2.12E-02	4.57E-02
ENSG00000286132	AC022415.2	-2.55E+00	2.14E-02	4.60E-02
ENSG00000250471	GMPSP1	-1.22E+00	2.14E-02	4.61E-02
ENSG00000180425	C11orf71	-1.29E+00	2.15E-02	4.64E-02
ENSG00000135766	EGLN1	-2.25E+00	2.18E-02	4.68E-02
ENSG00000079435	LIPE	-1.06E+00	2.19E-02	4.70E-02
ENSG00000242358	RPS21P4	-1.01E+00	2.19E-02	4.71E-02
ENSG00000243680	RPL37P23	-1.10E+00	2.20E-02	4.73E-02
ENSG00000099957	P2RX6	-2.69E+00	2.22E-02	4.76E-02
ENSG00000054983	GALC	-1.28E+00	2.23E-02	4.79E-02
ENSG00000280099	AL603750.1	-2.86E+00	2.25E-02	4.81E-02
ENSG00000227615	AP001324.1	-1.08E+00	2.25E-02	4.82E-02
ENSG00000269894	AC018809.1	-1.83E+00	2.29E-02	4.89E-02
ENSG00000230001	AL359095.1	-3.32E+00	2.30E-02	4.91E-02
ENSG00000232949	AC002480.2	-2.35E+00	2.30E-02	4.92E-02
ENSG00000227694	RPL23AP74	-2.95E+00	2.33E-02	4.97E-02
ENSG00000133083	DCLK1	-1.40E+00	2.33E-02	4.98E-02

**Supplementary table 9. Significant URGs in Ad-KLF4 versus Ad-EGFP transduced samples on IL-1 $\beta$  stimulation.**

Gene ID	Gene name	Log2(FC)	P value	FDR
ENSG00000110651	CD81	2.92E+00	0.00E+00	0.00E+00
ENSG00000128422	KRT17	7.70E+00	0.00E+00	0.00E+00
ENSG00000143320	CRABP2	5.56E+00	0.00E+00	0.00E+00
ENSG00000143369	ECM1	4.08E+00	0.00E+00	0.00E+00
ENSG00000170801	HTRA3	5.76E+00	0.00E+00	0.00E+00
ENSG00000167779	IGFBP6	7.59E+00	6.03E-276	1.85E-272
ENSG00000168140	VASN	2.93E+00	7.00E-260	1.84E-256
ENSG00000101311	FERMT1	6.95E+00	2.22E-246	5.10E-243
ENSG00000186832	KRT16	9.67E+00	8.71E-240	1.78E-236
ENSG00000006016	CRLF1	5.87E+00	6.35E-228	1.17E-224
ENSG00000172831	CES2	3.52E+00	1.01E-221	1.68E-218
ENSG00000136826	KLF4	1.08E+01	1.96E-220	3.00E-217
ENSG00000124102	PI3	5.44E+00	5.23E-208	7.38E-205
ENSG00000197324	LRP10	2.25E+00	2.04E-207	2.68E-204
ENSG00000058668	ATP2B4	4.55E+00	2.77E-207	3.39E-204
ENSG00000064300	NGFR	5.43E+00	1.94E-190	2.23E-187
ENSG00000169093	ASMTL	3.29E+00	4.18E-189	4.52E-186
ENSG00000064195	DLX3	6.88E+00	2.14E-187	2.19E-184
ENSG00000026297	RNASET2	5.21E+00	4.33E-185	4.18E-182
ENSG00000149679	CABLES2	3.15E+00	2.91E-183	2.68E-180
ENSG00000173801	JUP	4.87E+00	2.72E-182	2.38E-179
ENSG00000102996	MMP15	4.13E+00	9.37E-176	7.82E-173
ENSG00000197746	PSAP	1.53E+00	1.15E-174	9.20E-172
ENSG00000171246	NPTX1	5.93E+00	3.36E-172	2.57E-169
ENSG00000168824	NSG1	7.72E+00	2.74E-170	2.02E-167
ENSG00000109062	SLC9A3R1	2.73E+00	3.27E-168	2.31E-165
ENSG00000181790	ADGRB1	6.89E+00	4.67E-167	3.06E-164
ENSG00000139725	RHOF	5.94E+00	7.06E-165	4.32E-162
ENSG00000063245	EPN1	2.60E+00	2.21E-164	1.31E-161
ENSG00000105397	TYK2	3.16E+00	8.75E-160	4.87E-157
ENSG00000035862	TIMP2	2.52E+00	6.51E-158	3.52E-155
ENSG00000173546	CSPG4	3.52E+00	6.01E-155	3.07E-152
ENSG00000135723	FHOD1	3.43E+00	2.86E-153	1.42E-150
ENSG00000184185	KCNJ12	6.61E+00	5.50E-153	2.66E-150
ENSG00000179403	VWA1	3.99E+00	4.29E-152	2.02E-149
ENSG00000168487	BMP1	2.17E+00	3.81E-145	1.71E-142
ENSG00000140961	OSGIN1	4.42E+00	3.78E-144	1.65E-141
ENSG00000133466	C1QTNF6	4.30E+00	2.94E-135	1.23E-132
ENSG00000178053	MLF1	3.48E+00	1.03E-133	4.20E-131
ENSG00000102265	TIMP1	4.29E+00	4.35E-133	1.74E-130
ENSG00000063660	GPC1	2.61E+00	1.24E-129	4.73E-127
ENSG00000175866	BAIAP2	2.73E+00	2.91E-129	1.09E-126
ENSG00000075618	FSCN1	3.23E+00	1.83E-128	6.74E-126

ENSG00000151176	PLBD2	2.93E+00	6.06E-128	2.18E-125
ENSG00000177666	PNPLA2	3.28E+00	5.06E-127	1.79E-124
ENSG00000092295	TGM1	6.84E+00	8.35E-126	2.90E-123
ENSG00000148180	GSN	3.46E+00	1.60E-124	5.45E-122
ENSG00000089060	SLC8B1	4.54E+00	1.01E-120	3.21E-118
ENSG00000172270	BSG	2.94E+00	2.74E-119	8.54E-117
ENSG00000124831	LRRFIP1	2.59E+00	6.47E-118	1.98E-115
ENSG00000111684	LPCAT3	2.91E+00	1.86E-115	5.60E-113
ENSG00000070404	FSTL3	3.57E+00	4.36E-114	1.29E-111
ENSG00000197457	STMN3	3.74E+00	8.22E-114	2.40E-111
ENSG00000169783	LINGO1	6.48E+00	1.96E-113	5.63E-111
ENSG00000166165	CKB	3.57E+00	2.69E-108	7.50E-106
ENSG00000112378	PERP	3.03E+00	3.82E-107	1.05E-104
ENSG00000110090	CPT1A	3.16E+00	9.12E-106	2.46E-103
ENSG00000061938	TNK2	3.65E+00	1.18E-105	3.15E-103
ENSG00000221988	PPT2	2.56E+00	3.86E-104	9.86E-102
ENSG00000204248	COL11A2	6.72E+00	3.78E-103	9.52E-101
ENSG00000092068	SLC7A8	7.30E+00	3.09E-102	7.48E-100
ENSG00000100036	SLC35E4	3.02E+00	3.19E-102	7.62E-100
ENSG00000167157	PRRX2	5.59E+00	1.66E-101	3.91E-99
ENSG00000130821	SLC6A8	2.64E+00	3.00E-100	6.97E-98
ENSG00000188643	S100A16	5.77E+00	1.42E-98	3.23E-96
ENSG00000104783	KCNN4	6.27E+00	1.23E-97	2.68E-95
ENSG00000179348	GATA2	3.28E+00	1.57E-96	3.40E-94
ENSG00000165272	AQP3	6.26E+00	4.08E-96	8.72E-94
ENSG00000092758	COL9A3	5.09E+00	9.19E-95	1.94E-92
ENSG00000117984	CTSD	3.12E+00	1.02E-94	2.14E-92
ENSG00000169583	CLIC3	5.83E+00	2.12E-93	4.37E-91
ENSG00000129757	CDKN1C	6.52E+00	4.34E-93	8.87E-91
ENSG00000159720	ATP6V0D1	1.88E+00	5.62E-92	1.14E-89
ENSG00000148120	AOPEP	3.11E+00	8.33E-92	1.66E-89
ENSG00000105427	CNFN	4.44E+00	3.70E-91	7.31E-89
ENSG00000105355	PLIN3	3.00E+00	5.30E-91	1.04E-88
ENSG00000008710	PKD1	2.53E+00	1.86E-90	3.59E-88
ENSG00000130702	LAMA5	3.19E+00	1.93E-89	3.66E-87
ENSG00000198768	APCDD1L	2.47E+00	2.02E-88	3.74E-86
ENSG00000008513	ST3GAL1	3.16E+00	3.02E-88	5.55E-86
ENSG00000204103	MAFB	3.93E+00	1.49E-87	2.71E-85
ENSG00000099875	MKNK2	2.15E+00	4.14E-87	7.46E-85
ENSG00000205420	KRT6A	1.52E+01	9.98E-86	1.75E-83
ENSG00000155090	KLF10	2.37E+00	1.36E-83	2.34E-81
ENSG00000110400	NECTIN1	3.66E+00	1.97E-83	3.35E-81
ENSG00000105287	PRKD2	2.47E+00	2.68E-83	4.52E-81
ENSG00000167470	MIDN	2.19E+00	2.94E-83	4.91E-81
ENSG00000272398	CD24	5.52E+00	4.24E-83	7.01E-81

ENSG00000167600	CYP2S1	4.02E+00	5.19E-83	8.51E-81
ENSG00000187954	CYHR1	2.19E+00	5.71E-83	9.29E-81
ENSG00000143162	CREG1	2.78E+00	6.00E-83	9.66E-81
ENSG00000116260	QSOX1	2.13E+00	1.71E-82	2.73E-80
ENSG00000100994	PYGB	1.84E+00	2.63E-82	4.17E-80
ENSG00000185000	DGAT1	3.06E+00	6.42E-82	1.00E-79
ENSG00000010278	CD9	3.37E+00	1.38E-81	2.11E-79
ENSG00000188338	SLC38A3	3.99E+00	2.01E-81	3.05E-79
ENSG00000168056	LTBP3	3.16E+00	6.31E-81	9.43E-79
ENSG00000225968	ELFN1	4.34E+00	1.17E-80	1.74E-78
ENSG00000184489	PTP4A3	7.93E+00	1.55E-80	2.28E-78
ENSG00000130513	GDF15	3.59E+00	2.33E-80	3.39E-78
ENSG00000125730	C3	4.74E+00	1.12E-79	1.60E-77
ENSG00000120675	DNAJC15	4.80E+00	1.71E-79	2.41E-77
ENSG00000135926	TMBIM1	2.97E+00	2.66E-79	3.73E-77
ENSG00000100504	PYGL	1.96E+00	3.55E-78	4.87E-76
ENSG00000173442	EHBP1L1	3.52E+00	9.34E-78	1.27E-75
ENSG00000131069	ACSS2	3.53E+00	1.23E-77	1.65E-75
ENSG00000109787	KLF3	3.70E+00	1.41E-77	1.89E-75
ENSG00000104805	NUCB1	2.86E+00	2.33E-76	3.08E-74
ENSG00000013588	GPRC5A	2.03E+00	2.92E-76	3.84E-74
ENSG00000101187	SLCO4A1	3.79E+00	4.96E-76	6.41E-74
ENSG00000055118	KCNH2	7.31E+00	1.19E-75	1.52E-73
ENSG00000176531	PHLDB3	3.98E+00	1.42E-75	1.80E-73
ENSG00000042445	RETSAT	2.48E+00	3.73E-75	4.69E-73
ENSG00000140941	MAP1LC3B	1.75E+00	5.81E-75	7.26E-73
ENSG00000185507	IRF7	3.49E+00	2.65E-74	3.29E-72
ENSG00000079385	CEACAM1	6.12E+00	1.23E-73	1.51E-71
ENSG00000173327	MAP3K11	2.08E+00	1.89E-73	2.31E-71
ENSG00000167778	SPRYD3	3.50E+00	1.25E-72	1.51E-70
ENSG00000185896	LAMP1	1.24E+00	1.39E-72	1.67E-70
ENSG00000030582	GRN	2.02E+00	1.63E-72	1.94E-70
ENSG00000134531	EMP1	4.20E+00	3.55E-72	4.20E-70
ENSG00000104888	SLC17A7	5.35E+00	5.71E-72	6.72E-70
ENSG00000143375	CGN	6.28E+00	6.48E-72	7.58E-70
ENSG00000175084	DES	9.32E+00	1.42E-71	1.65E-69
ENSG00000109089	CDR2L	1.97E+00	1.46E-71	1.69E-69
ENSG00000158769	F11R	3.59E+00	2.03E-71	2.33E-69
ENSG00000206172	HBA1	1.31E+01	2.78E-70	3.13E-68
ENSG00000065618	COL17A1	9.31E+00	3.52E-70	3.94E-68
ENSG00000116661	FBXO2	4.20E+00	4.99E-70	5.56E-68
ENSG00000090776	EFNB1	3.05E+00	2.58E-69	2.84E-67
ENSG00000085741	WNT11	6.09E+00	2.68E-69	2.93E-67
ENSG00000154370	TRIM11	2.44E+00	3.62E-69	3.93E-67
ENSG00000148344	PTGES	5.86E+00	5.67E-69	6.13E-67

ENSG0000001617	SEMA3F	4.64E+00	2.97E-68	3.13E-66
ENSG00000148671	ADIRF	7.91E+00	1.12E-67	1.18E-65
ENSG00000124216	SNAI1	1.76E+00	1.99E-67	2.08E-65
ENSG00000157227	MMP14	2.62E+00	4.07E-67	4.23E-65
ENSG00000085978	ATG16L1	2.50E+00	7.30E-67	7.49E-65
ENSG00000178209	PLEC	2.92E+00	8.16E-67	8.33E-65
ENSG00000076356	PLXNA2	4.32E+00	9.39E-67	9.53E-65
ENSG00000088836	SLC4A11	2.98E+00	1.01E-66	1.02E-64
ENSG00000128274	A4GALT	3.82E+00	1.37E-66	1.38E-64
ENSG00000066248	NGEF	8.33E+00	1.61E-66	1.61E-64
ENSG00000112139	MDGA1	4.64E+00	8.03E-66	7.97E-64
ENSG00000071553	ATP6AP1	1.84E+00	1.69E-65	1.67E-63
ENSG00000116701	NCF2	8.49E+00	2.61E-65	2.55E-63
ENSG00000196154	S100A4	5.79E+00	6.91E-65	6.68E-63
ENSG00000204539	CDSN	1.33E+01	8.47E-65	8.14E-63
ENSG00000123992	DNPEP	2.41E+00	1.05E-63	1.00E-61
ENSG00000131037	EPS8L1	4.33E+00	1.20E-63	1.15E-61
ENSG00000142627	EPHA2	2.58E+00	1.66E-63	1.57E-61
ENSG00000006712	PAF1	1.62E+00	6.45E-63	6.00E-61
ENSG00000186806	VSIG10L	5.76E+00	8.68E-63	8.01E-61
ENSG00000032444	PNPLA6	1.83E+00	1.52E-62	1.39E-60
ENSG00000148346	LCN2	9.44E+00	3.42E-62	3.11E-60
ENSG00000124570	SERPINB6	2.08E+00	5.58E-62	5.02E-60
ENSG00000107731	UNC5B	4.57E+00	5.82E-62	5.22E-60
ENSG00000213722	DDAH2	3.03E+00	6.53E-62	5.83E-60
ENSG00000196352	CD55	3.88E+00	1.34E-61	1.19E-59
ENSG00000139433	GLTP	2.30E+00	1.52E-61	1.34E-59
ENSG00000260458	KCNJ18	1.30E+01	5.28E-61	4.64E-59
ENSG00000130707	ASS1	2.68E+00	5.62E-61	4.92E-59
ENSG00000105048	TNNT1	3.68E+00	2.24E-60	1.95E-58
ENSG00000158555	GDPD5	3.86E+00	8.08E-60	6.94E-58
ENSG00000140545	MFGE8	2.42E+00	8.76E-60	7.48E-58
ENSG00000143631	FLG	1.27E+01	1.49E-59	1.27E-57
ENSG00000147676	MAL2	6.50E+00	2.01E-59	1.71E-57
ENSG00000171159	C9orf16	3.93E+00	2.90E-59	2.44E-57
ENSG00000107819	SFXN3	2.92E+00	3.13E-59	2.63E-57
ENSG00000162040	HS3ST6	8.43E+00	5.34E-59	4.46E-57
ENSG00000178951	ZBTB7A	2.03E+00	6.19E-59	5.15E-57
ENSG00000188536	HBA2	1.26E+01	9.92E-59	8.17E-57
ENSG00000168918	INPP5D	5.54E+00	1.55E-58	1.26E-56
ENSG00000141524	TMC6	3.81E+00	1.58E-58	1.28E-56
ENSG00000101210	EEF1A2	3.02E+00	3.98E-58	3.23E-56
ENSG00000197976	AKAP17A	1.94E+00	4.95E-58	3.99E-56
ENSG00000176046	NUPR1	3.87E+00	5.26E-58	4.22E-56
ENSG00000124107	SLPI	6.46E+00	2.31E-57	1.84E-55

ENSG00000141503	MINK1	2.25E+00	4.20E-57	3.31E-55
ENSG00000164530	PI16	1.28E+01	4.31E-57	3.38E-55
ENSG00000240583	AQP1	1.03E+01	5.19E-57	4.06E-55
ENSG00000122756	CNTFR	4.23E+00	5.50E-57	4.28E-55
ENSG00000119862	LGALS1	4.42E+00	6.58E-57	5.10E-55
ENSG00000065054	SLC9A3R2	2.96E+00	7.28E-57	5.62E-55
ENSG00000100092	SH3BP1	3.43E+00	2.16E-56	1.64E-54
ENSG00000166925	TSC22D4	1.99E+00	3.97E-56	2.99E-54
ENSG00000138944	SHISAL1	4.33E+00	1.31E-55	9.72E-54
ENSG00000021355	SERPINB1	3.24E+00	1.61E-55	1.19E-53
ENSG00000010438	PRSS3	5.25E+00	3.40E-55	2.50E-53
ENSG00000112576	CCND3	1.87E+00	3.79E-55	2.77E-53
ENSG00000124942	AHNAK	2.51E+00	6.39E-55	4.64E-53
ENSG00000143590	EFNA3	3.86E+00	1.36E-54	9.78E-53
ENSG00000111341	MGP	7.82E+00	2.77E-54	1.98E-52
ENSG00000182759	MAFA	3.94E+00	3.12E-54	2.22E-52
ENSG00000068305	MEF2A	2.09E+00	4.17E-54	2.95E-52
ENSG00000114859	CLCN2	3.57E+00	4.80E-54	3.38E-52
ENSG00000163993	S100P	1.22E+01	6.92E-54	4.86E-52
ENSG00000149782	PLCB3	2.61E+00	8.11E-54	5.62E-52
ENSG00000188064	WNT7B	4.81E+00	9.84E-54	6.80E-52
ENSG00000116017	ARID3A	2.88E+00	1.76E-53	1.21E-51
ENSG00000123384	LRP1	3.28E+00	1.90E-53	1.31E-51
ENSG00000100605	ITPK1	3.79E+00	2.17E-53	1.48E-51
ENSG00000012171	SEMA3B	4.35E+00	2.74E-53	1.85E-51
ENSG00000166619	BLCAP	1.75E+00	2.91E-53	1.96E-51
ENSG00000175793	SFN	5.77E+00	3.53E-53	2.36E-51
ENSG00000141232	TOB1	1.85E+00	4.13E-53	2.75E-51
ENSG00000128591	FLNC	1.85E+00	6.61E-53	4.37E-51
ENSG00000160789	LMNA	1.91E+00	7.52E-53	4.95E-51
ENSG00000074370	ATP2A3	5.61E+00	2.51E-52	1.65E-50
ENSG00000167106	FAM102A	2.62E+00	2.82E-52	1.84E-50
ENSG00000185567	AHNAK2	6.39E+00	3.15E-52	2.05E-50
ENSG00000099204	ABLIM1	2.81E+00	5.84E-52	3.78E-50
ENSG00000142798	HSPG2	3.93E+00	8.47E-52	5.46E-50
ENSG00000148426	PROSER2	3.97E+00	1.11E-51	7.11E-50
ENSG00000162545	CAMK2N1	2.35E+00	3.12E-51	1.99E-49
ENSG00000104879	CKM	1.13E+01	3.35E-51	2.13E-49
ENSG00000205336	ADGRG1	2.92E+00	3.41E-51	2.16E-49
ENSG00000134504	KCTD1	2.44E+00	4.11E-51	2.60E-49
ENSG00000133612	AGAP3	1.99E+00	5.00E-51	3.15E-49
ENSG00000160685	ZBTB7B	3.02E+00	8.04E-51	5.04E-49
ENSG00000083454	P2RX5	2.69E+00	9.31E-51	5.82E-49
ENSG00000148331	ASB6	2.40E+00	1.28E-50	7.95E-49
ENSG00000099337	KCNK6	3.09E+00	1.40E-50	8.63E-49

ENSG00000076826	CAMSAP3	7.23E+00	1.61E-50	9.89E-49
ENSG00000148411	NACC2	2.05E+00	1.62E-50	9.94E-49
ENSG00000169442	CD52	8.18E+00	8.07E-50	4.89E-48
ENSG00000085552	IGSF9	5.84E+00	8.59E-50	5.19E-48
ENSG00000182492	BGN	2.92E+00	1.49E-49	8.92E-48
ENSG00000130589	HELZ2	2.41E+00	2.30E-49	1.38E-47
ENSG00000253368	TRNP1	3.51E+00	2.50E-49	1.49E-47
ENSG00000100242	SUN2	1.42E+00	2.76E-49	1.64E-47
ENSG00000149260	CAPN5	2.54E+00	2.87E-49	1.70E-47
ENSG00000143217	NECTIN4	4.39E+00	3.23E-49	1.89E-47
ENSG00000171604	CXXC5	1.60E+00	6.93E-49	4.04E-47
ENSG00000079308	TNS1	3.50E+00	2.75E-48	1.58E-46
ENSG00000076351	SLC46A1	3.75E+00	4.76E-48	2.72E-46
ENSG00000038427	VCAN	3.53E+00	4.86E-48	2.77E-46
ENSG00000173868	PHOSPHO1	8.10E+00	7.55E-48	4.30E-46
ENSG00000225783	MIAT	8.32E+00	8.17E-48	4.63E-46
ENSG00000105443	CYTH2	1.76E+00	1.61E-47	9.11E-46
ENSG00000167642	SPINT2	6.68E+00	1.78E-47	1.00E-45
ENSG00000007372	PAX6	3.41E+00	2.84E-47	1.59E-45
ENSG000000093167	LRRFIP2	1.94E+00	3.35E-47	1.86E-45
ENSG00000177335	C8orf31	7.32E+00	7.11E-47	3.93E-45
ENSG00000159314	ARHGAP27	3.68E+00	1.12E-46	6.20E-45
ENSG00000176903	PNMA1	1.72E+00	1.44E-46	7.91E-45
ENSG00000196878	LAMB3	2.99E+00	2.62E-46	1.42E-44
ENSG00000158050	DUSP2	4.63E+00	2.93E-46	1.59E-44
ENSG00000198576	ARC	7.38E+00	9.84E-46	5.32E-44
ENSG00000174640	SLCO2A1	2.98E+00	1.23E-45	6.65E-44
ENSG00000114854	TNNC1	8.41E+00	1.62E-45	8.73E-44
ENSG00000130203	APOE	3.70E+00	2.24E-45	1.20E-43
ENSG00000143793	C1orf35	1.91E+00	2.35E-45	1.25E-43
ENSG00000129437	KLK14	1.02E+01	2.84E-45	1.51E-43
ENSG00000107738	VSIR	3.70E+00	5.36E-45	2.81E-43
ENSG00000176845	METRNL	2.14E+00	7.79E-45	4.06E-43
ENSG00000130766	SESN2	2.25E+00	8.54E-45	4.44E-43
ENSG00000186854	TRABD2A	3.04E+00	1.38E-44	7.15E-43
ENSG00000145782	ATG12	1.59E+00	4.94E-44	2.55E-42
ENSG00000172667	ZMAT3	1.91E+00	5.23E-44	2.69E-42
ENSG00000136802	LRRC8A	1.65E+00	6.33E-44	3.25E-42
ENSG00000167656	LY6D	1.10E+01	7.95E-44	4.07E-42
ENSG00000103089	FA2H	9.96E+00	1.22E-43	6.20E-42
ENSG00000065357	DGKA	3.55E+00	1.29E-43	6.54E-42
ENSG00000167702	KIFC2	3.36E+00	1.56E-43	7.92E-42
ENSG00000186635	ARAP1	2.72E+00	1.77E-43	8.96E-42
ENSG00000149218	ENDOD1	3.46E+00	2.54E-43	1.28E-41
ENSG00000131584	ACAP3	2.36E+00	3.65E-43	1.83E-41



ENSG00000110628	SLC22A18	4.12E+00	4.04E-43	2.02E-41
ENSG00000196576	PLXNB2	1.87E+00	4.87E-43	2.43E-41
ENSG00000100867	DHRS2	4.14E+00	6.13E-43	3.04E-41
ENSG00000162552	WNT4	5.41E+00	6.87E-43	3.40E-41
ENSG00000069011	PITX1	1.84E+00	7.19E-43	3.55E-41
ENSG00000092820	EZR	1.31E+00	9.59E-43	4.70E-41
ENSG00000059728	MXD1	3.06E+00	9.65E-43	4.72E-41
ENSG00000146054	TRIM7	3.34E+00	1.12E-42	5.46E-41
ENSG00000245532	NEAT1	1.35E+00	1.12E-42	5.47E-41
ENSG00000169710	FASN	2.34E+00	1.31E-42	6.36E-41
ENSG00000092929	UNC13D	6.03E+00	1.57E-42	7.57E-41
ENSG00000160691	SHC1	1.14E+00	1.72E-42	8.26E-41
ENSG00000075043	KCNQ2	4.46E+00	1.96E-42	9.41E-41
ENSG00000160293	VAV2	1.91E+00	4.15E-42	1.97E-40
ENSG00000129451	KLK10	1.07E+01	4.76E-42	2.25E-40
ENSG00000140937	CDH11	2.08E+00	4.80E-42	2.26E-40
ENSG00000162413	KLHL21	2.05E+00	6.22E-42	2.93E-40
ENSG00000180190	TDRP	3.50E+00	6.53E-42	3.07E-40
ENSG00000080503	SMARCA2	2.66E+00	9.22E-42	4.31E-40
ENSG00000147804	SLC39A4	1.05E+01	1.12E-41	5.23E-40
ENSG00000105519	CAPS	6.98E+00	1.14E-41	5.31E-40
ENSG00000144476	ACKR3	1.06E+01	1.46E-41	6.77E-40
ENSG00000188112	C6orf132	4.39E+00	1.48E-41	6.84E-40
ENSG00000182580	EPHB3	3.63E+00	1.51E-41	6.96E-40
ENSG00000011347	SYT7	3.70E+00	1.85E-41	8.50E-40
ENSG00000101421	CHMP4B	1.19E+00	2.35E-41	1.08E-39
ENSG00000063322	MED29	1.92E+00	3.28E-41	1.50E-39
ENSG00000164221	CCDC112	2.59E+00	6.74E-41	3.06E-39
ENSG00000164889	SLC4A2	1.12E+00	1.09E-40	4.93E-39
ENSG00000203485	INF2	2.06E+00	1.10E-40	4.95E-39
ENSG00000131620	ANO1	6.76E+00	1.16E-40	5.20E-39
ENSG00000163961	RNF168	1.67E+00	1.30E-40	5.82E-39
ENSG00000179604	CDC42EP4	1.79E+00	1.32E-40	5.89E-39
ENSG00000101782	RIOK3	1.82E+00	1.34E-40	5.96E-39
ENSG00000115738	ID2	4.62E+00	1.41E-40	6.27E-39
ENSG00000197766	CFD	7.79E+00	1.64E-40	7.28E-39
ENSG00000129991	TNNI3	7.27E+00	1.86E-40	8.22E-39
ENSG00000171401	KRT13	1.05E+01	2.64E-40	1.16E-38
ENSG00000078902	TOLLIP	1.48E+00	3.10E-40	1.36E-38
ENSG00000137699	TRIM29	9.92E+00	3.43E-40	1.50E-38
ENSG00000184502	GAST	1.04E+01	3.87E-40	1.69E-38
ENSG00000130402	ACTN4	1.44E+00	6.71E-40	2.91E-38
ENSG00000176393	RNPEP	1.96E+00	7.00E-40	3.03E-38
ENSG00000102901	CENPT	1.70E+00	9.06E-40	3.92E-38
ENSG00000115762	PLEKHB2	1.52E+00	9.51E-40	4.10E-38

ENSG00000185112	FAM43A	2.43E+00	1.06E-39	4.55E-38
ENSG00000119801	YPEL5	2.06E+00	1.07E-39	4.59E-38
ENSG00000117868	ESYT2	1.59E+00	1.84E-39	7.85E-38
ENSG00000104892	KLC3	3.11E+00	1.95E-39	8.28E-38
ENSG00000155158	TTC39B	3.71E+00	2.00E-39	8.50E-38
ENSG00000126822	PLEKHG3	2.25E+00	2.09E-39	8.87E-38
ENSG00000095203	EPB41L4B	3.79E+00	2.27E-39	9.59E-38
ENSG00000225190	PLEKHM1	2.67E+00	3.45E-39	1.44E-37
ENSG00000274180	NATD1	4.37E+00	3.94E-39	1.64E-37
ENSG00000167487	KLHL26	3.37E+00	4.43E-39	1.85E-37
ENSG00000068383	INPP5A	2.15E+00	7.40E-39	3.07E-37
ENSG00000197386	HTT	1.92E+00	7.55E-39	3.13E-37
ENSG00000182606	TRAK1	2.66E+00	8.85E-39	3.65E-37
ENSG00000103056	SMPD3	5.75E+00	9.60E-39	3.95E-37
ENSG00000188910	GJB3	7.49E+00	1.73E-38	7.09E-37
ENSG00000187531	SIRT7	2.08E+00	1.82E-38	7.43E-37
ENSG00000178381	ZFAND2A	2.83E+00	1.89E-38	7.72E-37
ENSG00000174307	PHLDA3	2.54E+00	2.31E-38	9.36E-37
ENSG00000196361	ELAVL3	4.75E+00	2.91E-38	1.18E-36
ENSG00000124201	ZNFX1	1.64E+00	2.94E-38	1.19E-36
ENSG00000134308	YWHAQ	1.12E+00	4.76E-38	1.91E-36
ENSG00000161642	ZNF385A	2.75E+00	9.84E-38	3.94E-36
ENSG00000141577	CEP131	2.49E+00	9.98E-38	3.99E-36
ENSG00000139410	SDSL	2.97E+00	1.02E-37	4.06E-36
ENSG00000140368	PSTPIP1	1.05E+01	1.04E-37	4.13E-36
ENSG00000198736	MSRB1	2.41E+00	1.14E-37	4.51E-36
ENSG00000169403	PTAFR	4.32E+00	1.17E-37	4.63E-36
ENSG00000110076	NRXN2	5.94E+00	1.51E-37	5.92E-36
ENSG00000183255	PTTG1IP	1.40E+00	1.57E-37	6.13E-36
ENSG00000130656	HBZ	1.05E+01	1.71E-37	6.68E-36
ENSG00000197943	PLCG2	4.78E+00	1.71E-37	6.68E-36
ENSG00000096696	DSP	2.97E+00	1.84E-37	7.16E-36
ENSG00000123989	CHPF	1.65E+00	2.07E-37	8.04E-36
ENSG00000131389	SLC6A6	1.91E+00	2.07E-37	8.04E-36
ENSG00000159788	RGS12	2.15E+00	2.38E-37	9.17E-36
ENSG00000167757	KLK11	9.98E+00	2.90E-37	1.11E-35
ENSG00000114473	IQCG	2.99E+00	3.05E-37	1.17E-35
ENSG00000183044	ABAT	4.26E+00	3.27E-37	1.25E-35
ENSG00000186529	CYP4F3	8.03E+00	3.57E-37	1.35E-35
ENSG00000131196	NFATC1	3.31E+00	4.79E-37	1.81E-35
ENSG00000015413	DPEP1	1.01E+01	4.91E-37	1.85E-35
ENSG00000034152	MAP2K3	1.27E+00	6.06E-37	2.28E-35
ENSG00000161249	DMKN	5.22E+00	1.03E-36	3.84E-35
ENSG00000172005	MAL	1.01E+01	1.30E-36	4.84E-35
ENSG00000118640	VAMP8	8.36E+00	1.38E-36	5.13E-35

ENSG00000134317	GRHL1	4.25E+00	1.44E-36	5.32E-35
ENSG00000147689	FAM83A	6.35E+00	1.52E-36	5.63E-35
ENSG00000119630	PGF	2.10E+00	1.58E-36	5.81E-35
ENSG00000188015	S100A3	3.59E+00	1.62E-36	5.95E-35
ENSG00000078804	TP53INP2	2.05E+00	1.96E-36	7.16E-35
ENSG00000156671	SAMD8	2.15E+00	2.13E-36	7.78E-35
ENSG00000156453	PCDH1	9.84E+00	2.25E-36	8.18E-35
ENSG00000130703	OSBPL2	1.76E+00	2.48E-36	8.99E-35
ENSG00000174791	RIN1	3.84E+00	2.55E-36	9.22E-35
ENSG00000172613	RAD9A	2.33E+00	2.62E-36	9.47E-35
ENSG00000160753	RUSC1	1.92E+00	3.23E-36	1.16E-34
ENSG00000167114	SLC27A4	1.57E+00	3.42E-36	1.22E-34
ENSG00000157483	MYO1E	1.90E+00	4.43E-36	1.58E-34
ENSG00000136830	NIBAN2	2.05E+00	4.95E-36	1.76E-34
ENSG00000168993	CPLX1	7.24E+00	4.96E-36	1.76E-34
ENSG00000164236	ANKRD33B	2.35E+00	5.09E-36	1.80E-34
ENSG00000204866	IGFL2	7.35E+00	6.53E-36	2.31E-34
ENSG00000108819	PPP1R9B	1.71E+00	8.50E-36	2.99E-34
ENSG00000108433	GOSR2	1.42E+00	9.14E-36	3.20E-34
ENSG00000197461	PDGFA	1.94E+00	9.19E-36	3.22E-34
ENSG00000179292	TMEM151A	4.86E+00	9.81E-36	3.43E-34
ENSG00000205413	SAMD9	2.56E+00	1.07E-35	3.72E-34
ENSG00000104976	SNAPC2	2.04E+00	1.09E-35	3.79E-34
ENSG00000172478	MAB21L4	9.97E+00	1.11E-35	3.86E-34
ENSG00000124104	SNX21	1.94E+00	1.20E-35	4.17E-34
ENSG00000161714	PLCD3	2.10E+00	1.31E-35	4.54E-34
ENSG00000133985	TTC9	5.47E+00	1.33E-35	4.58E-34
ENSG00000135636	DYSF	3.03E+00	1.39E-35	4.78E-34
ENSG00000182325	FBXL6	2.89E+00	3.12E-35	1.07E-33
ENSG00000084234	APLP2	1.56E+00	3.34E-35	1.15E-33
ENSG00000182378	PLCXD1	2.74E+00	3.74E-35	1.28E-33
ENSG00000111981	ULBP1	3.12E+00	4.05E-35	1.38E-33
ENSG00000064961	HMG20B	1.70E+00	4.06E-35	1.39E-33
ENSG00000139626	ITGB7	9.57E+00	4.38E-35	1.49E-33
ENSG00000171368	TPPP	6.37E+00	4.69E-35	1.59E-33
ENSG00000179148	ALOXE3	9.75E+00	5.70E-35	1.93E-33
ENSG00000167748	KLK1	9.74E+00	6.41E-35	2.16E-33
ENSG00000014216	CAPN1	2.02E+00	7.98E-35	2.68E-33
ENSG00000167759	KLK13	9.73E+00	1.51E-34	5.06E-33
ENSG00000140320	BAHD1	1.99E+00	1.57E-34	5.23E-33
ENSG00000140832	MARVELD3	1.02E+01	1.75E-34	5.85E-33
ENSG00000142156	COL6A1	1.63E+00	1.91E-34	6.36E-33
ENSG00000196535	MYO18A	2.49E+00	2.13E-34	7.04E-33
ENSG00000178726	THBD	3.19E+00	3.14E-34	1.04E-32
ENSG00000013364	MVP	3.14E+00	4.11E-34	1.35E-32

ENSG00000224259	LINC01133	7.58E+00	7.44E-34	2.44E-32
ENSG00000184640	SEPTIN9	1.27E+00	7.90E-34	2.58E-32
ENSG00000100592	DAAM1	1.60E+00	8.50E-34	2.77E-32
ENSG00000164877	MICALL2	1.57E+00	1.03E-33	3.34E-32
ENSG00000180900	SCRIB	2.13E+00	1.04E-33	3.36E-32
ENSG00000197380	DACT3	3.74E+00	1.16E-33	3.75E-32
ENSG00000177542	SLC25A22	2.50E+00	1.26E-33	4.08E-32
ENSG00000167110	GOLGA2	1.80E+00	1.34E-33	4.33E-32
ENSG00000111725	PRKAB1	1.89E+00	1.49E-33	4.80E-32
ENSG00000163286	ALPG	9.36E+00	1.60E-33	5.15E-32
ENSG00000261678	SCRT1	9.58E+00	1.86E-33	5.94E-32
ENSG00000130558	OLFM1	5.52E+00	2.11E-33	6.72E-32
ENSG00000130396	AFDN	2.02E+00	2.22E-33	7.06E-32
ENSG00000152377	SPOCK1	2.71E+00	2.42E-33	7.68E-32
ENSG00000275832	ARHGAP23	1.86E+00	3.29E-33	1.04E-31
ENSG00000163956	LRPAP1	1.39E+00	4.64E-33	1.46E-31
ENSG00000107736	CDH23	5.01E+00	5.05E-33	1.58E-31
ENSG00000160111	CPAMD8	8.68E+00	5.42E-33	1.69E-31
ENSG00000189319	FAM53B	2.21E+00	5.46E-33	1.70E-31
ENSG00000244509	APOBEC3C	1.94E+00	7.86E-33	2.43E-31
ENSG00000172354	GNB2	1.34E+00	8.02E-33	2.48E-31
ENSG00000095383	TBC1D2	4.99E+00	8.86E-33	2.73E-31
ENSG00000130720	FIBCD1	5.33E+00	8.85E-33	2.73E-31
ENSG00000076685	NT5C2	1.77E+00	9.87E-33	3.03E-31
ENSG00000183671	GPR1	5.73E+00	9.92E-33	3.04E-31
ENSG00000182326	C1S	2.20E+00	1.13E-32	3.47E-31
ENSG00000241839	PLEKHO2	2.00E+00	1.15E-32	3.50E-31
ENSG00000168528	SERINC2	2.97E+00	1.15E-32	3.52E-31
ENSG00000125775	SDCBP2	3.58E+00	1.52E-32	4.62E-31
ENSG00000101057	MYBL2	1.32E+00	1.52E-32	4.62E-31
ENSG00000138623	SEMA7A	2.90E+00	2.20E-32	6.66E-31
ENSG00000158106	RHPN1	4.54E+00	2.35E-32	7.11E-31
ENSG00000168792	ABHD15	2.84E+00	2.44E-32	7.36E-31
ENSG00000158246	TENT5B	3.20E+00	3.24E-32	9.73E-31
ENSG00000158747	NBL1	2.40E+00	3.81E-32	1.14E-30
ENSG00000136854	STXBP1	2.51E+00	3.84E-32	1.15E-30
ENSG00000139624	CERS5	2.11E+00	4.21E-32	1.25E-30
ENSG00000167771	RCOR2	4.61E+00	6.11E-32	1.81E-30
ENSG00000116213	WRAP73	1.86E+00	6.31E-32	1.87E-30
ENSG00000198719	DLL1	4.80E+00	7.27E-32	2.15E-30
ENSG00000162772	ATF3	2.39E+00	7.79E-32	2.30E-30
ENSG00000095932	SMIM24	7.44E+00	8.27E-32	2.44E-30
ENSG00000158089	GALNT14	3.39E+00	8.99E-32	2.64E-30
ENSG00000099804	CDC34	2.36E+00	9.13E-32	2.68E-30
ENSG00000134830	C5AR2	9.33E+00	1.22E-31	3.56E-30

ENSG00000135679	MDM2	1.78E+00	1.38E-31	4.02E-30
ENSG00000168394	TAP1	1.65E+00	1.89E-31	5.50E-30
ENSG00000161835	GRASP	4.62E+00	2.16E-31	6.28E-30
ENSG00000204839	MROH6	3.39E+00	2.69E-31	7.79E-30
ENSG00000130052	STARD8	4.68E+00	2.71E-31	7.82E-30
ENSG00000126233	SLURP1	1.01E+01	4.16E-31	1.20E-29
ENSG00000101076	HNF4A	9.14E+00	5.32E-31	1.53E-29
ENSG00000114796	KLHL24	2.71E+00	6.78E-31	1.94E-29
ENSG00000148339	SLC25A25	1.68E+00	8.14E-31	2.32E-29
ENSG00000070081	NUCB2	1.09E+00	8.33E-31	2.37E-29
ENSG00000158825	CDA	4.54E+00	8.44E-31	2.40E-29
ENSG00000099849	RASSF7	2.87E+00	9.04E-31	2.56E-29
ENSG00000130724	CHMP2A	2.01E+00	9.33E-31	2.64E-29
ENSG00000081059	TCF7	1.95E+00	9.72E-31	2.75E-29
ENSG00000158792	SPATA2L	2.42E+00	1.08E-30	3.05E-29
ENSG00000133328	PLAAT2	9.49E+00	1.16E-30	3.27E-29
ENSG00000109079	TNFAIP1	1.65E+00	1.23E-30	3.47E-29
ENSG00000119782	FKBP1B	4.25E+00	1.31E-30	3.68E-29
ENSG00000184828	ZBTB7C	8.85E+00	1.33E-30	3.72E-29
ENSG00000188783	PRELP	9.12E+00	1.48E-30	4.14E-29
ENSG00000162729	IGSF8	2.67E+00	1.52E-30	4.22E-29
ENSG00000180176	TH	9.14E+00	1.80E-30	5.02E-29
ENSG00000138594	TMOD3	1.14E+00	2.32E-30	6.44E-29
ENSG00000237330	RNF223	9.16E+00	2.52E-30	6.97E-29
ENSG00000130669	PAK4	1.25E+00	2.86E-30	7.89E-29
ENSG00000167653	PSCA	6.26E+00	3.22E-30	8.87E-29
ENSG00000268621	IGFL2-AS1	5.01E+00	3.58E-30	9.82E-29
ENSG00000124762	CDKN1A	1.54E+00	3.59E-30	9.85E-29
ENSG00000095539	SEMA4G	3.84E+00	3.82E-30	1.05E-28
ENSG00000168994	PXDC1	1.96E+00	4.06E-30	1.11E-28
ENSG00000144485	HES6	2.29E+00	4.12E-30	1.12E-28
ENSG00000178882	RFLNA	5.76E+00	4.13E-30	1.13E-28
ENSG00000185963	BICD2	1.33E+00	4.45E-30	1.21E-28
ENSG00000179477	ALOX12B	8.96E+00	4.61E-30	1.25E-28
ENSG00000171551	ECEL1	8.15E+00	4.99E-30	1.35E-28
ENSG00000165684	SNAPC4	1.37E+00	5.08E-30	1.37E-28
ENSG00000118046	STK11	1.76E+00	6.83E-30	1.84E-28
ENSG00000131759	RARA	1.59E+00	8.83E-30	2.37E-28
ENSG00000183963	SMTN	2.00E+00	8.92E-30	2.39E-28
ENSG00000154930	ACSS1	3.82E+00	8.94E-30	2.39E-28
ENSG00000162572	SCNN1D	4.14E+00	8.99E-30	2.40E-28
ENSG00000271447	MMP28	9.33E+00	9.00E-30	2.40E-28
ENSG00000142319	SLC6A3	9.06E+00	9.52E-30	2.54E-28
ENSG00000066322	ELOVL1	2.77E+00	1.09E-29	2.91E-28
ENSG00000175416	CLTB	2.92E+00	1.12E-29	2.97E-28

ENSG00000103175	WFDC1	8.56E+00	1.21E-29	3.22E-28
ENSG00000135127	BICDL1	4.56E+00	1.28E-29	3.39E-28
ENSG00000144452	ABCA12	7.16E+00	1.28E-29	3.40E-28
ENSG00000169635	HIC2	2.34E+00	1.34E-29	3.55E-28
ENSG00000139219	COL2A1	6.07E+00	1.49E-29	3.93E-28
ENSG00000088367	EPB41L1	2.29E+00	1.53E-29	4.02E-28
ENSG00000100311	PDGFB	3.47E+00	1.91E-29	5.00E-28
ENSG00000134574	DDB2	2.28E+00	2.16E-29	5.66E-28
ENSG00000183077	AFMID	2.14E+00	2.70E-29	7.05E-28
ENSG00000072163	LIMS2	3.39E+00	3.26E-29	8.50E-28
ENSG00000117676	RPS6KA1	2.27E+00	4.30E-29	1.12E-27
ENSG00000179335	CLK3	1.38E+00	4.88E-29	1.26E-27
ENSG00000188522	FAM83G	2.29E+00	5.19E-29	1.34E-27
ENSG00000101439	CST3	2.14E+00	5.30E-29	1.36E-27
ENSG00000184584	TMEM173	2.94E+00	7.58E-29	1.94E-27
ENSG00000136068	FLNB	1.63E+00	8.62E-29	2.19E-27
ENSG00000109846	CRYAB	8.30E+00	9.11E-29	2.31E-27
ENSG00000124882	EREG	5.92E+00	9.30E-29	2.36E-27
ENSG00000159733	ZFYVE28	8.43E+00	9.49E-29	2.40E-27
ENSG00000100784	RPS6KA5	2.37E+00	9.76E-29	2.46E-27
ENSG00000136842	TMOD1	5.03E+00	1.02E-28	2.56E-27
ENSG00000186895	FGF3	8.90E+00	1.09E-28	2.73E-27
ENSG00000186111	PIP5K1C	2.07E+00	1.12E-28	2.80E-27
ENSG00000189433	GJB4	9.02E+00	1.17E-28	2.92E-27
ENSG00000187446	CHP1	1.98E+00	1.23E-28	3.07E-27
ENSG00000161243	FBXO27	3.01E+00	1.24E-28	3.09E-27
ENSG00000171954	CYP4F22	8.74E+00	1.26E-28	3.14E-27
ENSG00000187730	GABRD	4.67E+00	1.26E-28	3.14E-27
ENSG00000187800	PEAR1	8.94E+00	1.28E-28	3.18E-27
ENSG00000143537	ADAM15	2.77E+00	1.30E-28	3.23E-27
ENSG00000116690	PRG4	9.10E+00	1.56E-28	3.84E-27
ENSG00000074416	MGLL	3.05E+00	1.65E-28	4.06E-27
ENSG00000185988	PLK5	8.78E+00	1.70E-28	4.17E-27
ENSG00000167302	TEPSIN	2.04E+00	1.76E-28	4.32E-27
ENSG00000204538	PSORS1C2	8.84E+00	2.08E-28	5.10E-27
ENSG00000109321	AREG	3.68E+00	2.26E-28	5.54E-27
ENSG00000108669	CYTH1	1.46E+00	2.49E-28	6.08E-27
ENSG00000196116	TDRD7	2.89E+00	2.52E-28	6.15E-27
ENSG00000180155	LYNX1	3.66E+00	2.89E-28	7.01E-27
ENSG00000167646	DNAAF3	5.13E+00	3.37E-28	8.16E-27
ENSG00000066735	KIF26A	3.16E+00	3.48E-28	8.38E-27
ENSG00000164402	SEPTIN8	1.57E+00	3.48E-28	8.38E-27
ENSG00000198892	SHISA4	2.77E+00	3.50E-28	8.41E-27
ENSG00000101188	NTSR1	6.29E+00	3.51E-28	8.42E-27
ENSG00000001461	NIPAL3	2.76E+00	3.76E-28	9.00E-27

ENSG00000176454	LPCAT4	2.59E+00	4.05E-28	9.68E-27
ENSG00000215712	TMEM242	1.73E+00	4.09E-28	9.75E-27
ENSG00000013288	MAN2B2	2.30E+00	4.09E-28	9.76E-27
ENSG00000104267	CA2	7.49E+00	4.73E-28	1.13E-26
ENSG00000058404	CAMK2B	5.47E+00	5.48E-28	1.30E-26
ENSG00000148357	HMCN2	9.01E+00	5.54E-28	1.31E-26
ENSG00000182220	ATP6AP2	1.16E+00	5.89E-28	1.40E-26
ENSG00000223802	CERS1	2.09E+00	5.91E-28	1.40E-26
ENSG00000197077	KIAA1671	2.65E+00	6.21E-28	1.47E-26
ENSG00000106789	CORO2A	3.57E+00	8.25E-28	1.94E-26
ENSG00000130529	TRPM4	2.97E+00	9.13E-28	2.15E-26
ENSG00000131019	ULBP3	1.78E+00	1.03E-27	2.41E-26
ENSG00000158186	MRAS	2.49E+00	1.08E-27	2.54E-26
ENSG00000181652	ATG9B	8.71E+00	1.12E-27	2.61E-26
ENSG00000116198	CEP104	1.44E+00	1.18E-27	2.75E-26
ENSG00000176092	CRYBG2	4.14E+00	1.25E-27	2.90E-26
ENSG00000161682	FAM171A2	2.77E+00	1.34E-27	3.12E-26
ENSG00000099617	EFNA2	4.21E+00	1.67E-27	3.86E-26
ENSG00000160213	CSTB	2.47E+00	1.66E-27	3.86E-26
ENSG00000181191	PJA1	2.06E+00	1.66E-27	3.86E-26
ENSG00000206075	SERPINB5	8.81E+00	2.28E-27	5.24E-26
ENSG00000197353	LYPD2	8.93E+00	2.28E-27	5.25E-26
ENSG00000136717	BIN1	1.79E+00	2.31E-27	5.31E-26
ENSG00000196415	PRTN3	8.80E+00	2.35E-27	5.39E-26
ENSG00000137474	MYO7A	8.86E+00	2.78E-27	6.35E-26
ENSG00000074964	ARHGEF10L	3.08E+00	2.94E-27	6.70E-26
ENSG00000125378	BMP4	3.16E+00	3.19E-27	7.25E-26
ENSG00000143367	TUFT1	2.31E+00	3.46E-27	7.86E-26
ENSG00000165949	IFI27	5.35E+00	3.49E-27	7.92E-26
ENSG00000060656	PTPRU	4.04E+00	3.56E-27	8.07E-26
ENSG00000167705	RILP	3.03E+00	3.57E-27	8.07E-26
ENSG00000130635	COL5A1	1.80E+00	4.24E-27	9.56E-26
ENSG00000170100	ZNF778	1.81E+00	5.21E-27	1.17E-25
ENSG00000138496	PARP9	2.43E+00	5.28E-27	1.19E-25
ENSG00000131149	GSE1	1.83E+00	5.48E-27	1.23E-25
ENSG00000080644	CHRNA3	8.32E+00	5.74E-27	1.29E-25
ENSG00000198959	TGM2	3.20E+00	6.20E-27	1.39E-25
ENSG00000181045	SLC26A11	2.80E+00	7.32E-27	1.64E-25
ENSG00000164237	CMBL	2.27E+00	7.61E-27	1.70E-25
ENSG00000087253	LPCAT2	2.59E+00	7.86E-27	1.75E-25
ENSG00000175130	MARCKSL1	1.35E+00	9.10E-27	2.02E-25
ENSG00000129194	SOX15	6.78E+00	9.72E-27	2.16E-25
ENSG00000102034	ELF4	1.47E+00	1.01E-26	2.25E-25
ENSG00000196557	CACNA1H	5.74E+00	1.02E-26	2.27E-25
ENSG00000186081	KRT5	8.89E+00	1.10E-26	2.44E-25

ENSG00000167962	ZNF598	1.14E+00	1.17E-26	2.57E-25
ENSG00000137843	PAK6	6.12E+00	1.35E-26	2.98E-25
ENSG00000163083	INHBB	3.54E+00	1.38E-26	3.03E-25
ENSG00000206077	ZDHHC11B	8.77E+00	1.43E-26	3.14E-25
ENSG00000141750	STAC2	3.35E+00	1.48E-26	3.25E-25
ENSG00000189001	SBSN	7.56E+00	1.61E-26	3.52E-25
ENSG00000176953	NFATC2IP	1.30E+00	1.63E-26	3.57E-25
ENSG00000107140	TESK1	1.88E+00	1.66E-26	3.64E-25
ENSG00000197119	SLC25A29	2.10E+00	1.95E-26	4.24E-25
ENSG00000106992	AK1	2.24E+00	1.96E-26	4.25E-25
ENSG00000166311	SMPD1	1.94E+00	1.99E-26	4.31E-25
ENSG00000160570	DEDD2	1.64E+00	2.32E-26	5.03E-25
ENSG00000204421	LY6G6C	6.99E+00	2.73E-26	5.91E-25
ENSG00000006125	AP2B1	1.42E+00	2.87E-26	6.21E-25
ENSG00000166908	PIP4K2C	1.91E+00	2.92E-26	6.31E-25
ENSG00000013563	DNASE1L1	3.44E+00	2.98E-26	6.43E-25
ENSG00000268041	ERFL	4.81E+00	3.26E-26	7.02E-25
ENSG00000161992	PRR35	8.56E+00	3.82E-26	8.22E-25
ENSG00000173762	CD7	6.29E+00	4.03E-26	8.64E-25
ENSG00000189334	S100A14	8.18E+00	5.13E-26	1.10E-24
ENSG00000031698	SARS	1.07E+00	5.66E-26	1.21E-24
ENSG00000171403	KRT9	8.66E+00	5.68E-26	1.21E-24
ENSG00000196208	GREB1	4.87E+00	6.55E-26	1.39E-24
ENSG00000115685	PPP1R7	1.55E+00	8.79E-26	1.86E-24
ENSG00000184371	CSF1	1.80E+00	9.90E-26	2.09E-24
ENSG00000064687	ABCA7	3.67E+00	1.04E-25	2.19E-24
ENSG00000130940	CASZ1	3.67E+00	1.05E-25	2.21E-24
ENSG00000145107	TM4SF19	6.82E+00	1.10E-25	2.32E-24
ENSG00000085185	BCORL1	2.52E+00	1.16E-25	2.44E-24
ENSG00000138814	PPP3CA	1.09E+00	1.35E-25	2.83E-24
ENSG00000161533	ACOX1	1.60E+00	1.39E-25	2.91E-24
ENSG00000138069	RAB1A	1.10E+00	1.82E-25	3.78E-24
ENSG00000161513	FDXR	1.82E+00	2.23E-25	4.59E-24
ENSG00000080546	SESN1	2.33E+00	2.36E-25	4.85E-24
ENSG00000101000	PROCR	2.65E+00	2.86E-25	5.88E-24
ENSG00000136950	ARPC5L	1.09E+00	2.94E-25	6.03E-24
ENSG00000080854	IGSF9B	4.54E+00	3.16E-25	6.48E-24
ENSG00000117472	TSPAN1	8.94E+00	3.17E-25	6.48E-24
ENSG00000105370	LIM2	8.43E+00	3.25E-25	6.63E-24
ENSG00000185955	C7orf61	4.58E+00	3.64E-25	7.41E-24
ENSG00000177303	CASKIN2	2.26E+00	4.09E-25	8.30E-24
ENSG00000186474	KLK12	8.46E+00	4.86E-25	9.85E-24
ENSG00000151348	EXT2	1.17E+00	4.89E-25	9.90E-24
ENSG00000189120	SP6	3.47E+00	4.95E-25	9.99E-24
ENSG00000010319	SEMA3G	7.15E+00	5.24E-25	1.06E-23



ENSG00000130592	LSP1	7.65E+00	5.77E-25	1.16E-23
ENSG00000125734	GPR108	1.88E+00	7.21E-25	1.45E-23
ENSG00000109099	PMP22	1.39E+00	7.58E-25	1.52E-23
ENSG00000116688	MFN2	1.09E+00	7.95E-25	1.59E-23
ENSG00000132000	PODNL1	3.43E+00	9.67E-25	1.93E-23
ENSG00000155363	MOV10	1.19E+00	9.76E-25	1.95E-23
ENSG00000137171	KLC4	2.27E+00	1.16E-24	2.30E-23
ENSG00000082996	RNF13	1.90E+00	1.24E-24	2.46E-23
ENSG00000065361	ERBB3	4.40E+00	1.30E-24	2.58E-23
ENSG00000127585	FBXL16	6.48E+00	1.42E-24	2.82E-23
ENSG00000067606	PRKCZ	2.00E+00	1.57E-24	3.10E-23
ENSG00000096433	ITPR3	1.89E+00	1.58E-24	3.11E-23
ENSG00000183196	CHST6	3.52E+00	1.58E-24	3.11E-23
ENSG00000076928	ARHGEF1	1.39E+00	1.71E-24	3.36E-23
ENSG00000213047	DENND1B	2.60E+00	1.73E-24	3.40E-23
ENSG00000128923	MINDY2	1.85E+00	1.80E-24	3.53E-23
ENSG00000135916	ITM2C	1.17E+00	1.81E-24	3.55E-23
ENSG00000160932	LY6E	2.46E+00	2.14E-24	4.18E-23
ENSG00000100439	ABHD4	1.97E+00	2.31E-24	4.50E-23
ENSG00000180758	GPR157	2.40E+00	2.63E-24	5.10E-23
ENSG00000170893	TRH	9.19E+00	2.67E-24	5.18E-23
ENSG00000175264	CHST1	3.64E+00	2.90E-24	5.62E-23
ENSG00000136153	LMO7	1.57E+00	2.92E-24	5.65E-23
ENSG00000109670	FBXW7	1.23E+00	2.98E-24	5.76E-23
ENSG00000173846	PLK3	1.97E+00	3.45E-24	6.65E-23
ENSG00000159388	BTG2	2.10E+00	3.68E-24	7.07E-23
ENSG00000141644	MBD1	1.24E+00	3.99E-24	7.65E-23
ENSG00000157637	SLC38A10	1.40E+00	4.08E-24	7.82E-23
ENSG00000010310	GIPR	8.09E+00	4.15E-24	7.94E-23
ENSG00000189114	BLOC1S3	1.99E+00	4.43E-24	8.46E-23
ENSG00000117266	CDK18	4.30E+00	4.61E-24	8.79E-23
ENSG00000189280	GJB5	8.31E+00	4.63E-24	8.81E-23
ENSG00000124493	GRM4	7.79E+00	4.77E-24	9.08E-23
ENSG00000164300	SERINC5	2.86E+00	5.06E-24	9.61E-23
ENSG00000196586	MYO6	1.85E+00	6.01E-24	1.14E-22
ENSG00000131042	LILRB2	8.40E+00	6.96E-24	1.31E-22
ENSG00000122507	BBS9	3.06E+00	7.59E-24	1.43E-22
ENSG00000128564	VGF	2.54E+00	7.77E-24	1.46E-22
ENSG00000257704	INAFM1	1.50E+00	8.86E-24	1.66E-22
ENSG00000068078	FGFR3	2.04E+00	9.27E-24	1.73E-22
ENSG00000139116	KIF21A	1.97E+00	9.83E-24	1.84E-22
ENSG00000107679	PLEKHA1	1.62E+00	9.98E-24	1.86E-22
ENSG00000128335	APOL2	1.64E+00	1.04E-23	1.94E-22
ENSG00000163283	ALPP	8.02E+00	1.12E-23	2.09E-22
ENSG00000168389	MFSD2A	1.44E+00	1.15E-23	2.13E-22

ENSG00000157216	SSBP3	1.58E+00	1.42E-23	2.62E-22
ENSG00000166592	RRAD	1.64E+00	1.44E-23	2.66E-22
ENSG00000131873	CHSY1	1.60E+00	1.49E-23	2.75E-22
ENSG00000077463	SIRT6	2.32E+00	1.55E-23	2.85E-22
ENSG00000124920	MYRF	3.27E+00	1.61E-23	2.97E-22
ENSG00000167699	GLOD4	1.03E+00	1.62E-23	2.97E-22
ENSG00000130193	THEM6	2.48E+00	1.66E-23	3.05E-22
ENSG00000221890	NPTXR	2.12E+00	1.82E-23	3.33E-22
ENSG00000137440	FGFBP1	8.08E+00	1.85E-23	3.39E-22
ENSG00000121552	CSTA	4.73E+00	1.97E-23	3.60E-22
ENSG00000159674	SPON2	8.95E+00	2.00E-23	3.65E-22
ENSG00000140470	ADAMTS17	5.22E+00	2.11E-23	3.84E-22
ENSG00000181218	HIST3H2A	2.56E+00	2.12E-23	3.86E-22
ENSG00000100744	GSKIP	2.15E+00	2.57E-23	4.67E-22
ENSG00000184164	CRELD2	1.01E+00	2.65E-23	4.80E-22
ENSG00000140297	GCNT3	8.23E+00	3.11E-23	5.62E-22
ENSG00000156026	MCU	1.45E+00	3.24E-23	5.85E-22
ENSG00000112305	SMAP1	1.27E+00	3.25E-23	5.86E-22
ENSG00000164266	SPINK1	8.56E+00	3.46E-23	6.23E-22
ENSG00000234465	PINLYP	5.67E+00	3.74E-23	6.72E-22
ENSG00000162104	ADCY9	2.31E+00	4.16E-23	7.47E-22
ENSG00000126705	AHDC1	1.76E+00	4.53E-23	8.12E-22
ENSG00000162344	FGF19	8.08E+00	4.82E-23	8.63E-22
ENSG00000168556	ING2	1.23E+00	4.90E-23	8.76E-22
ENSG00000165632	TAF3	1.55E+00	5.05E-23	9.02E-22
ENSG00000105664	COMP	6.67E+00	5.18E-23	9.25E-22
ENSG00000189143	CLDN4	5.42E+00	5.26E-23	9.38E-22
ENSG00000136003	ISCU	1.55E+00	5.57E-23	9.93E-22
ENSG00000163191	S100A11	1.97E+00	5.71E-23	1.02E-21
ENSG00000006611	USH1C	7.73E+00	6.55E-23	1.16E-21
ENSG00000186517	ARHGAP30	6.23E+00	7.02E-23	1.25E-21
ENSG00000161011	SQSTM1	1.20E+00	7.05E-23	1.25E-21
ENSG00000149485	FADS1	1.18E+00	7.30E-23	1.29E-21
ENSG00000170421	KRT8	2.37E+00	8.10E-23	1.43E-21
ENSG00000091592	NLRP1	3.35E+00	8.33E-23	1.47E-21
ENSG00000087245	MMP2	1.98E+00	8.89E-23	1.56E-21
ENSG00000142669	SH3BGRL3	1.62E+00	9.18E-23	1.61E-21
ENSG00000144711	IQSEC1	1.85E+00	1.05E-22	1.84E-21
ENSG00000178950	GAK	1.48E+00	1.14E-22	1.99E-21
ENSG00000188070	C11orf95	2.20E+00	1.26E-22	2.18E-21
ENSG00000171813	PWWP2B	2.57E+00	1.27E-22	2.21E-21
ENSG00000188811	NHLRC3	2.58E+00	1.30E-22	2.25E-21
ENSG00000135047	CTSL	1.17E+00	1.32E-22	2.28E-21
ENSG00000204542	C6orf15	8.34E+00	1.32E-22	2.29E-21
ENSG00000129538	RNASE1	8.07E+00	1.34E-22	2.32E-21

ENSG00000050165	DKK3	1.55E+00	1.36E-22	2.36E-21
ENSG00000048392	RRM2B	1.87E+00	1.48E-22	2.54E-21
ENSG00000068697	LAPTM4A	1.32E+00	1.64E-22	2.82E-21
ENSG00000132561	MATN2	1.92E+00	1.97E-22	3.37E-21
ENSG00000196975	ANXA4	1.55E+00	1.97E-22	3.38E-21
ENSG00000116014	KISS1R	7.93E+00	2.00E-22	3.43E-21
ENSG00000131018	SYNE1	2.44E+00	2.05E-22	3.50E-21
ENSG00000164086	DUSP7	1.20E+00	2.16E-22	3.68E-21
ENSG00000143850	PLEKHA6	7.41E+00	2.25E-22	3.82E-21
ENSG00000100523	DDHD1	2.01E+00	2.33E-22	3.96E-21
ENSG00000105376	ICAM5	3.54E+00	3.49E-22	5.90E-21
ENSG00000163501	IHH	6.54E+00	3.51E-22	5.92E-21
ENSG00000135924	DNAJB2	1.34E+00	3.55E-22	5.98E-21
ENSG00000100647	SUSD6	1.68E+00	3.63E-22	6.11E-21
ENSG00000171747	LGALS4	8.11E+00	3.70E-22	6.23E-21
ENSG00000012223	LTF	8.08E+00	4.06E-22	6.81E-21
ENSG00000123983	ACSL3	1.09E+00	4.17E-22	6.99E-21
ENSG00000180914	OXTR	2.17E+00	4.60E-22	7.69E-21
ENSG00000184160	ADRA2C	4.74E+00	4.77E-22	7.97E-21
ENSG00000130294	KIF1A	8.03E+00	5.26E-22	8.78E-21
ENSG00000132470	ITGB4	5.27E+00	6.06E-22	1.01E-20
ENSG00000099834	CDHR5	8.00E+00	6.29E-22	1.05E-20
ENSG00000175938	ORAI3	3.40E+00	6.54E-22	1.09E-20
ENSG00000100427	MLC1	7.91E+00	7.93E-22	1.32E-20
ENSG00000120885	CLU	1.36E+00	7.96E-22	1.32E-20
ENSG00000213672	NCKIPSD	1.58E+00	8.43E-22	1.39E-20
ENSG00000170734	POLH	1.83E+00	8.50E-22	1.41E-20
ENSG00000185950	IRS2	2.34E+00	8.54E-22	1.41E-20
ENSG00000112659	CUL9	2.76E+00	8.77E-22	1.45E-20
ENSG00000182173	TSEN54	1.33E+00	9.40E-22	1.55E-20
ENSG00000128016	ZFP36	2.77E+00	9.74E-22	1.60E-20
ENSG00000139722	VPS37B	1.25E+00	1.12E-21	1.84E-20
ENSG00000237512	UNC5B-AS1	5.49E+00	1.23E-21	2.02E-20
ENSG00000100596	SPTLC2	1.39E+00	1.26E-21	2.06E-20
ENSG00000103066	PLA2G15	1.67E+00	1.33E-21	2.18E-20
ENSG00000168938	PPIC	1.54E+00	1.36E-21	2.21E-20
ENSG00000186350	RXRA	1.83E+00	1.36E-21	2.22E-20
ENSG00000151693	ASAP2	1.61E+00	1.41E-21	2.30E-20
ENSG00000115266	APC2	4.91E+00	1.48E-21	2.41E-20
ENSG00000140199	SLC12A6	2.45E+00	1.51E-21	2.46E-20
ENSG00000065613	SLK	1.40E+00	1.53E-21	2.48E-20
ENSG00000163499	CRYBA2	5.28E+00	1.53E-21	2.49E-20
ENSG00000108511	HOXB6	2.07E+00	1.83E-21	2.96E-20
ENSG00000176153	GPX2	7.95E+00	1.84E-21	2.98E-20
ENSG00000177508	IRX3	1.89E+00	1.92E-21	3.11E-20

ENSG00000101096	NFATC2	3.09E+00	1.95E-21	3.15E-20
ENSG00000175155	YPEL2	3.58E+00	1.97E-21	3.18E-20
ENSG00000172890	NADSYN1	2.17E+00	1.98E-21	3.19E-20
ENSG00000141580	WDR45B	1.25E+00	2.04E-21	3.29E-20
ENSG00000160209	PDXK	1.44E+00	2.16E-21	3.48E-20
ENSG00000131746	TNS4	8.19E+00	2.26E-21	3.63E-20
ENSG00000122359	ANXA11	1.48E+00	2.40E-21	3.86E-20
ENSG00000109107	ALDOC	5.41E+00	2.41E-21	3.87E-20
ENSG00000137975	CLCA2	4.72E+00	2.43E-21	3.90E-20
ENSG00000142765	SYTL1	4.98E+00	2.85E-21	4.56E-20
ENSG00000005700	IBTK	1.31E+00	2.94E-21	4.71E-20
ENSG00000091409	ITGA6	2.36E+00	3.05E-21	4.89E-20
ENSG00000158373	HIST1H2BD	2.04E+00	3.36E-21	5.37E-20
ENSG00000179833	SERTAD2	1.51E+00	3.53E-21	5.63E-20
ENSG00000141574	SECTM1	4.54E+00	3.59E-21	5.73E-20
ENSG00000114771	AADAC	2.49E+00	3.60E-21	5.73E-20
ENSG00000185479	KRT6B	7.99E+00	3.84E-21	6.11E-20
ENSG00000068903	SIRT2	1.75E+00	3.91E-21	6.22E-20
ENSG00000005238	FAM214B	3.33E+00	4.35E-21	6.91E-20
ENSG00000197063	MAFG	1.25E+00	4.40E-21	6.99E-20
ENSG00000134108	ARL8B	1.00E+00	4.55E-21	7.20E-20
ENSG00000101204	CHRNA4	7.78E+00	4.62E-21	7.30E-20
ENSG00000136867	SLC31A2	2.27E+00	5.25E-21	8.28E-20
ENSG00000140323	DISP2	5.47E+00	5.67E-21	8.94E-20
ENSG00000124313	IQSEC2	2.71E+00	6.38E-21	1.00E-19
ENSG00000130762	ARHGEF16	3.21E+00	6.60E-21	1.04E-19
ENSG00000167306	MYO5B	4.00E+00	7.16E-21	1.12E-19
ENSG00000177374	HIC1	2.35E+00	8.05E-21	1.26E-19
ENSG00000077009	NMRK2	8.12E+00	8.64E-21	1.35E-19
ENSG00000085063	CD59	1.07E+00	8.87E-21	1.39E-19
ENSG00000158055	GRHL3	7.16E+00	9.26E-21	1.45E-19
ENSG00000005513	SOX8	7.95E+00	9.61E-21	1.50E-19
ENSG00000182795	C1orf116	7.67E+00	9.61E-21	1.50E-19
ENSG00000170855	TRIAP1	1.35E+00	9.84E-21	1.53E-19
ENSG00000205277	MUC12	5.41E+00	1.05E-20	1.63E-19
ENSG00000151689	INPP1	1.72E+00	1.08E-20	1.67E-19
ENSG00000175121	WFDC5	8.01E+00	1.24E-20	1.93E-19
ENSG00000105559	PLEKHA4	2.14E+00	1.25E-20	1.93E-19
ENSG00000162909	CAPN2	1.19E+00	1.30E-20	2.00E-19
ENSG00000138271	GPR87	4.19E+00	1.58E-20	2.43E-19
ENSG00000105281	SLC1A5	1.20E+00	1.60E-20	2.45E-19
ENSG00000155744	FAM126B	2.02E+00	1.85E-20	2.83E-19
ENSG00000186810	CXCR3	7.83E+00	1.86E-20	2.85E-19
ENSG00000107821	KAZALD1	3.21E+00	1.96E-20	2.99E-19
ENSG00000197747	S100A10	1.24E+00	2.15E-20	3.28E-19

ENSG00000083937	CHMP2B	1.18E+00	2.31E-20	3.52E-19
ENSG00000132879	FBXO44	2.26E+00	2.41E-20	3.68E-19
ENSG00000135046	ANXA1	1.76E+00	2.83E-20	4.29E-19
ENSG00000160360	GPSM1	1.63E+00	2.83E-20	4.29E-19
ENSG00000092964	DPYSL2	1.05E+00	2.89E-20	4.39E-19
ENSG00000110697	PITPNM1	1.76E+00	2.94E-20	4.45E-19
ENSG00000130560	UBAC1	1.55E+00	3.41E-20	5.16E-19
ENSG00000168300	PCMTD1	1.80E+00	3.62E-20	5.46E-19
ENSG00000166558	SLC38A8	7.35E+00	3.71E-20	5.58E-19
ENSG00000110092	CCND1	1.62E+00	3.79E-20	5.70E-19
ENSG00000101134	DOK5	7.67E+00	3.85E-20	5.79E-19
ENSG00000110619	CARS	1.23E+00	3.94E-20	5.92E-19
ENSG00000173404	INSM1	7.55E+00	3.97E-20	5.96E-19
ENSG00000164853	UNCX	8.01E+00	4.00E-20	6.00E-19
ENSG00000100346	CACNA1I	7.72E+00	4.01E-20	6.01E-19
ENSG00000159363	ATP13A2	2.07E+00	4.27E-20	6.38E-19
ENSG00000133056	PIK3C2B	3.16E+00	4.51E-20	6.74E-19
ENSG00000104228	TRIM35	1.92E+00	4.88E-20	7.28E-19
ENSG00000198715	GLMP	1.90E+00	5.42E-20	8.05E-19
ENSG00000161638	ITGA5	1.55E+00	6.03E-20	8.95E-19
ENSG00000171552	BCL2L1	1.38E+00	6.05E-20	8.98E-19
ENSG00000135932	CAB39	1.09E+00	6.68E-20	9.88E-19
ENSG00000172818	OVOL1	7.77E+00	7.03E-20	1.04E-18
ENSG00000182087	TMEM259	1.14E+00	7.72E-20	1.14E-18
ENSG00000153395	LPCAT1	2.07E+00	7.91E-20	1.17E-18
ENSG00000160888	IER2	1.33E+00	8.43E-20	1.24E-18
ENSG00000099822	HCN2	2.94E+00	8.61E-20	1.27E-18
ENSG00000184113	CLDN5	8.37E+00	8.74E-20	1.29E-18
ENSG00000099917	MED15	1.27E+00	8.84E-20	1.30E-18
ENSG00000138193	PLCE1	2.38E+00	1.01E-19	1.48E-18
ENSG00000004399	PLXND1	1.36E+00	1.02E-19	1.49E-18
ENSG00000198246	SLC29A3	3.15E+00	1.10E-19	1.60E-18
ENSG00000231290	APCDD1L-DT	2.76E+00	1.12E-19	1.63E-18
ENSG00000177169	ULK1	1.82E+00	1.24E-19	1.80E-18
ENSG00000172731	LRRC20	3.72E+00	1.27E-19	1.84E-18
ENSG00000153303	FRMD1	7.59E+00	1.30E-19	1.89E-18
ENSG00000130595	TNNT3	6.50E+00	1.39E-19	2.01E-18
ENSG00000166086	JAM3	1.26E+00	1.40E-19	2.02E-18
ENSG00000156931	VPS8	1.51E+00	1.41E-19	2.04E-18
ENSG00000128340	RAC2	8.18E+00	1.48E-19	2.13E-18
ENSG00000119844	AFTPH	1.45E+00	1.51E-19	2.19E-18
ENSG00000260027	HOXB7	1.91E+00	1.62E-19	2.34E-18
ENSG00000078808	SDF4	1.01E+00	1.65E-19	2.38E-18
ENSG00000173530	TNFRSF10D	1.39E+00	1.70E-19	2.45E-18
ENSG00000038532	CLEC16A	1.97E+00	1.73E-19	2.48E-18

ENSG00000215788	TNFRSF25	4.06E+00	1.75E-19	2.52E-18
ENSG00000148672	GLUD1	1.03E+00	1.79E-19	2.56E-18
ENSG00000124466	LYPD3	4.23E+00	1.85E-19	2.65E-18
ENSG00000166446	CDYL2	2.16E+00	2.00E-19	2.86E-18
ENSG00000164331	ANKRA2	1.89E+00	2.07E-19	2.96E-18
ENSG00000158859	ADAMTS4	5.54E+00	2.15E-19	3.08E-18
ENSG00000137831	UACA	1.39E+00	2.20E-19	3.14E-18
ENSG00000250510	GPR162	2.74E+00	2.28E-19	3.25E-18
ENSG00000171223	JUNB	1.48E+00	2.37E-19	3.37E-18
ENSG00000258791	LINC00520	7.30E+00	2.54E-19	3.61E-18
ENSG00000132359	RAP1GAP2	2.87E+00	2.59E-19	3.68E-18
ENSG00000197562	RAB40C	1.96E+00	2.64E-19	3.75E-18
ENSG00000167754	KLK5	7.89E+00	2.73E-19	3.88E-18
ENSG00000104055	TGM5	7.01E+00	2.76E-19	3.92E-18
ENSG00000186193	SAPCD2	1.39E+00	2.90E-19	4.10E-18
ENSG00000036448	MYOM2	2.54E+00	3.02E-19	4.28E-18
ENSG00000171206	TRIM8	1.17E+00	3.28E-19	4.64E-18
ENSG00000040608	RTN4R	2.57E+00	3.31E-19	4.68E-18
ENSG00000167508	MVD	1.56E+00	3.33E-19	4.69E-18
ENSG00000168453	HR	2.59E+00	3.33E-19	4.70E-18
ENSG00000135114	OASL	4.48E+00	3.66E-19	5.15E-18
ENSG00000188883	KLRG2	7.15E+00	3.79E-19	5.34E-18
ENSG00000164574	GALNT10	1.30E+00	4.02E-19	5.65E-18
ENSG00000099622	CIRBP	1.11E+00	4.18E-19	5.87E-18
ENSG00000151748	SAV1	1.17E+00	4.24E-19	5.94E-18
ENSG00000089177	KIF16B	1.43E+00	4.42E-19	6.17E-18
ENSG00000100234	TIMP3	1.44E+00	4.49E-19	6.27E-18
ENSG00000186847	KRT14	1.20E+01	4.72E-19	6.59E-18
ENSG00000092054	MYH7	7.51E+00	4.88E-19	6.80E-18
ENSG00000154040	CABYR	2.93E+00	4.98E-19	6.93E-18
ENSG00000278195	SSTR3	7.48E+00	5.10E-19	7.10E-18
ENSG00000122863	CHST3	1.86E+00	5.20E-19	7.23E-18
ENSG00000073578	SDHA	1.17E+00	5.25E-19	7.30E-18
ENSG00000176973	FAM89B	2.31E+00	5.32E-19	7.39E-18
ENSG00000153162	BMP6	5.06E+00	5.65E-19	7.84E-18
ENSG00000186642	PDE2A	7.20E+00	5.93E-19	8.22E-18
ENSG00000158828	PINK1	1.79E+00	6.04E-19	8.35E-18
ENSG00000244300	GATA2-AS1	3.01E+00	6.08E-19	8.40E-18
ENSG00000240194	CYMP	7.67E+00	6.46E-19	8.91E-18
ENSG00000108639	SYNGR2	1.35E+00	6.47E-19	8.93E-18
ENSG00000092330	TINF2	1.80E+00	6.50E-19	8.95E-18
ENSG00000141744	PNMT	5.10E+00	6.50E-19	8.95E-18
ENSG00000169994	MYO7B	6.53E+00	6.81E-19	9.36E-18
ENSG00000128298	BAIAP2L2	6.91E+00	6.83E-19	9.38E-18
ENSG00000177494	ZBED2	7.55E+00	6.85E-19	9.40E-18

ENSG0000005882	PDK2	2.06E+00	7.05E-19	9.65E-18
ENSG00000182919	C11orf54	2.24E+00	7.28E-19	9.97E-18
ENSG00000114353	GNAI2	1.11E+00	7.87E-19	1.08E-17
ENSG00000106976	DNM1	2.44E+00	7.89E-19	1.08E-17
ENSG00000119686	FLVCR2	3.77E+00	7.88E-19	1.08E-17
ENSG00000168961	LGALS9	3.47E+00	9.35E-19	1.27E-17
ENSG00000108309	RUNDC3A	7.49E+00	9.50E-19	1.29E-17
ENSG00000105388	CEACAM5	7.63E+00	1.05E-18	1.43E-17
ENSG00000012822	CALCOCO1	2.20E+00	1.14E-18	1.55E-17
ENSG00000099625	CBARP	2.93E+00	1.18E-18	1.59E-17
ENSG00000055609	KMT2C	1.83E+00	1.19E-18	1.60E-17
ENSG00000115596	WNT6	3.01E+00	1.30E-18	1.75E-17
ENSG00000213918	DNASE1	2.07E+00	1.31E-18	1.76E-17
ENSG00000100979	PLTP	1.35E+00	1.41E-18	1.90E-17
ENSG00000125089	SH3TC1	3.27E+00	1.52E-18	2.04E-17
ENSG00000214193	SH3D21	2.74E+00	1.55E-18	2.08E-17
ENSG00000154153	RETREG1	4.96E+00	1.56E-18	2.09E-17
ENSG00000118689	FOXO3	1.39E+00	1.59E-18	2.13E-17
ENSG00000214688	C10orf105	7.39E+00	1.63E-18	2.18E-17
ENSG00000215182	MUC5AC	7.01E+00	1.66E-18	2.22E-17
ENSG00000143867	OSR1	4.73E+00	1.82E-18	2.42E-17
ENSG00000162706	CADM3	4.57E+00	1.87E-18	2.49E-17
ENSG00000156535	CD109	1.39E+00	1.87E-18	2.49E-17
ENSG00000197183	NOL4L	1.70E+00	1.96E-18	2.61E-17
ENSG00000182372	CLN8	1.43E+00	1.99E-18	2.64E-17
ENSG00000173153	ESRRA	1.44E+00	2.02E-18	2.68E-17
ENSG00000114541	FRMD4B	4.11E+00	2.14E-18	2.85E-17
ENSG00000116663	FBXO6	3.14E+00	2.17E-18	2.88E-17
ENSG00000136856	SLC2A8	2.30E+00	2.18E-18	2.89E-17
ENSG00000079805	DNM2	1.38E+00	2.32E-18	3.06E-17
ENSG00000100997	ABHD12	1.52E+00	2.32E-18	3.07E-17
ENSG00000071894	CPSF1	1.27E+00	2.40E-18	3.17E-17
ENSG00000011600	TYROBP	7.60E+00	2.53E-18	3.34E-17
ENSG00000076864	RAP1GAP	3.29E+00	2.73E-18	3.59E-17
ENSG00000127663	KDM4B	1.62E+00	2.81E-18	3.69E-17
ENSG00000105325	FZR1	1.02E+00	2.85E-18	3.74E-17
ENSG00000059122	FLYWCH1	1.45E+00	2.87E-18	3.76E-17
ENSG00000234127	TRIM26	1.43E+00	2.96E-18	3.87E-17
ENSG00000214135	AC132008.2	2.23E+00	3.21E-18	4.20E-17
ENSG00000131242	RAB11FIP4	2.08E+00	3.44E-18	4.50E-17
ENSG00000135631	RAB11FIP5	1.67E+00	3.56E-18	4.66E-17
ENSG00000260912	AL158206.1	3.04E+00	3.57E-18	4.67E-17
ENSG00000251322	SHANK3	2.47E+00	3.83E-18	5.00E-17
ENSG00000164867	NOS3	7.36E+00	4.02E-18	5.24E-17
ENSG00000130477	UNC13A	4.76E+00	4.35E-18	5.67E-17

ENSG00000052344	PRSS8	5.70E+00	4.63E-18	6.02E-17
ENSG00000198853	RUSC2	1.75E+00	4.70E-18	6.11E-17
ENSG00000138207	RBP4	4.74E+00	4.82E-18	6.26E-17
ENSG00000124222	STX16	1.42E+00	5.08E-18	6.59E-17
ENSG00000185633	NDUFA4L2	6.80E+00	5.86E-18	7.58E-17
ENSG00000159625	DRC7	7.53E+00	6.02E-18	7.79E-17
ENSG00000183114	FAM43B	2.77E+00	6.20E-18	8.01E-17
ENSG00000153487	ING1	1.13E+00	6.38E-18	8.24E-17
ENSG00000166183	ASPG	7.38E+00	6.69E-18	8.63E-17
ENSG00000177427	MIEF2	2.49E+00	6.95E-18	8.96E-17
ENSG00000219607	PPP1R3G	4.15E+00	7.08E-18	9.13E-17
ENSG00000103335	PIEZO1	1.01E+00	7.37E-18	9.49E-17
ENSG00000011243	AKAP8L	1.13E+00	7.80E-18	1.00E-16
ENSG00000159871	LYPD5	3.15E+00	8.27E-18	1.06E-16
ENSG00000048740	CELF2	7.55E+00	9.10E-18	1.17E-16
ENSG00000196562	SULF2	1.40E+00	9.30E-18	1.19E-16
ENSG00000225697	SLC26A6	1.45E+00	9.31E-18	1.19E-16
ENSG00000130055	GDPD2	7.28E+00	9.33E-18	1.19E-16
ENSG00000141971	MVB12A	1.97E+00	9.68E-18	1.24E-16
ENSG00000053747	LAMA3	4.13E+00	9.96E-18	1.27E-16
ENSG00000260916	CCPG1	1.78E+00	9.98E-18	1.27E-16
ENSG00000154217	PITPNC1	2.46E+00	1.07E-17	1.37E-16
ENSG00000121769	FABP3	7.85E+00	1.08E-17	1.37E-16
ENSG00000066468	FGFR2	2.94E+00	1.16E-17	1.47E-16
ENSG00000080031	PTPRH	4.94E+00	1.16E-17	1.48E-16
ENSG00000056972	TRAF3IP2	2.19E+00	1.17E-17	1.48E-16
ENSG00000166377	ATP9B	2.94E+00	1.25E-17	1.59E-16
ENSG00000161896	IP6K3	5.15E+00	1.28E-17	1.63E-16
ENSG00000131408	NR1H2	1.41E+00	1.43E-17	1.80E-16
ENSG00000177042	TMEM80	2.33E+00	1.58E-17	1.99E-16
ENSG00000215915	ATAD3C	6.99E+00	1.58E-17	2.00E-16
ENSG00000135750	KCNK1	4.09E+00	1.67E-17	2.10E-16
ENSG00000149115	TNKS1BP1	1.27E+00	1.68E-17	2.12E-16
ENSG00000178597	PSAPL1	7.03E+00	1.69E-17	2.13E-16
ENSG00000166340	TPP1	1.25E+00	1.71E-17	2.15E-16
ENSG00000131771	PPP1R1B	7.24E+00	1.81E-17	2.27E-16
ENSG00000243279	PRAF2	1.57E+00	1.82E-17	2.28E-16
ENSG00000196155	PLEKHG4	4.78E+00	1.83E-17	2.29E-16
ENSG00000121316	PLBD1	5.48E+00	1.90E-17	2.38E-16
ENSG00000069020	MAST4	3.23E+00	2.00E-17	2.50E-16
ENSG00000101180	HRH3	7.52E+00	2.07E-17	2.58E-16
ENSG00000136378	ADAMTS7	3.02E+00	2.14E-17	2.67E-16
ENSG00000187024	PTRH1	2.10E+00	2.15E-17	2.68E-16
ENSG00000111344	RASAL1	7.12E+00	2.27E-17	2.82E-16
ENSG00000105058	FAM32A	1.18E+00	2.31E-17	2.87E-16



ENSG00000178297	TMPRSS9	6.94E+00	2.34E-17	2.91E-16
ENSG00000262152	LINC00514	6.67E+00	2.41E-17	2.99E-16
ENSG00000103034	NDRG4	3.66E+00	2.43E-17	3.01E-16
ENSG00000204060	FOXO6	5.67E+00	2.50E-17	3.10E-16
ENSG00000167281	RBFOX3	6.66E+00	2.67E-17	3.30E-16
ENSG00000130511	SSBP4	1.35E+00	2.72E-17	3.35E-16
ENSG00000166863	TAC3	7.56E+00	2.72E-17	3.35E-16
ENSG00000184350	MRGPRE	7.14E+00	2.75E-17	3.39E-16
ENSG00000135423	GLS2	3.23E+00	2.78E-17	3.42E-16
ENSG00000090539	CHRD	4.88E+00	2.81E-17	3.46E-16
ENSG00000213889	PPM1N	2.83E+00	3.12E-17	3.83E-16
ENSG00000116032	GRIN3B	5.42E+00	3.23E-17	3.96E-16
ENSG00000113555	PCDH12	7.39E+00	3.25E-17	3.99E-16
ENSG00000100290	BIK	5.02E+00	3.34E-17	4.08E-16
ENSG00000167676	PLIN4	6.74E+00	3.42E-17	4.17E-16
ENSG00000154118	JPH3	3.66E+00	3.42E-17	4.18E-16
ENSG00000127578	WFIKKN1	5.47E+00	3.50E-17	4.27E-16
ENSG00000226332	AL354836.1	3.85E+00	3.84E-17	4.68E-16
ENSG00000133961	NUMB	1.19E+00	4.05E-17	4.93E-16
ENSG00000130222	GADD45G	6.10E+00	4.11E-17	5.00E-16
ENSG00000129910	CDH15	7.29E+00	4.24E-17	5.15E-16
ENSG00000064932	SBNO2	1.00E+00	4.27E-17	5.18E-16
ENSG00000168447	SCNN1B	7.15E+00	4.34E-17	5.26E-16
ENSG00000187634	SAMD11	2.39E+00	4.50E-17	5.45E-16
ENSG00000166839	ANKDD1A	2.65E+00	4.52E-17	5.47E-16
ENSG00000178038	ALS2CL	5.70E+00	5.16E-17	6.23E-16
ENSG00000184897	H1FX	1.11E+00	5.71E-17	6.90E-16
ENSG00000130244	FAM98C	1.92E+00	5.92E-17	7.14E-16
ENSG00000007264	MATK	4.59E+00	5.99E-17	7.22E-16
ENSG00000148341	SH3GLB2	1.32E+00	6.11E-17	7.36E-16
ENSG00000171794	UTF1	7.37E+00	6.71E-17	8.06E-16
ENSG00000100884	CPNE6	7.36E+00	7.53E-17	9.01E-16
ENSG00000083812	ZNF324	1.29E+00	7.55E-17	9.04E-16
ENSG00000167941	SOST	7.14E+00	7.57E-17	9.06E-16
ENSG00000198074	AKR1B10	3.42E+00	7.63E-17	9.12E-16
ENSG00000179111	HES7	4.89E+00	7.78E-17	9.30E-16
ENSG00000007516	BAIAP3	3.28E+00	7.96E-17	9.49E-16
ENSG00000000938	FGR	7.21E+00	8.09E-17	9.64E-16
ENSG00000107745	MICU1	1.13E+00	8.30E-17	9.88E-16
ENSG00000181381	DDX60L	2.56E+00	8.30E-17	9.88E-16
ENSG00000160410	SHKBP1	1.26E+00	8.39E-17	9.97E-16
ENSG00000075891	PAX2	6.76E+00	8.41E-17	1.00E-15
ENSG00000144040	SFXN5	1.26E+00	9.01E-17	1.07E-15
ENSG00000127129	EDN2	7.48E+00	9.24E-17	1.09E-15
ENSG00000087116	ADAMTS2	4.36E+00	9.52E-17	1.13E-15

ENSG00000095637	SORBS1	2.86E+00	1.04E-16	1.22E-15
ENSG00000011198	ABHD5	1.34E+00	1.05E-16	1.24E-15
ENSG00000164379	FOXQ1	6.06E+00	1.09E-16	1.28E-15
ENSG00000175984	DENND2C	4.17E+00	1.10E-16	1.30E-15
ENSG00000087510	TFAP2C	1.68E+00	1.12E-16	1.32E-15
ENSG00000196998	WDR45	1.38E+00	1.13E-16	1.33E-15
ENSG00000182831	C16orf72	1.17E+00	1.14E-16	1.34E-15
ENSG00000015592	STMN4	7.29E+00	1.25E-16	1.46E-15
ENSG00000106018	VIPR2	7.13E+00	1.30E-16	1.52E-15
ENSG00000108370	RGS9	3.67E+00	1.35E-16	1.58E-15
ENSG00000007306	CEACAM7	7.06E+00	1.46E-16	1.70E-15
ENSG00000130475	FCHO1	6.80E+00	1.51E-16	1.76E-15
ENSG00000105409	ATP1A3	3.95E+00	1.57E-16	1.83E-15
ENSG00000127452	FBXL12	1.16E+00	1.64E-16	1.91E-15
ENSG00000140511	HAPLN3	1.83E+00	1.69E-16	1.96E-15
ENSG00000102854	MSLN	6.76E+00	1.70E-16	1.97E-15
ENSG00000114573	ATP6V1A	1.17E+00	1.70E-16	1.97E-15
ENSG00000108523	RNF167	1.57E+00	1.74E-16	2.02E-15
ENSG00000116574	RHOU	4.51E+00	1.75E-16	2.03E-15
ENSG00000238266	LINC00707	6.53E+00	1.77E-16	2.04E-15
ENSG00000128567	PODXL	1.50E+00	1.79E-16	2.06E-15
ENSG00000179862	CITED4	2.93E+00	1.82E-16	2.10E-15
ENSG00000153029	MR1	2.41E+00	1.93E-16	2.22E-15
ENSG00000105053	VRK3	1.36E+00	1.99E-16	2.30E-15
ENSG00000153531	ADPRHL1	3.44E+00	2.12E-16	2.44E-15
ENSG00000105856	HBP1	1.57E+00	2.13E-16	2.45E-15
ENSG00000054598	FOXC1	1.57E+00	2.17E-16	2.48E-15
ENSG00000166016	ABTB2	1.92E+00	2.24E-16	2.56E-15
ENSG00000127125	PPCS	1.20E+00	2.24E-16	2.57E-15
ENSG00000105419	MEIS3	1.41E+00	2.26E-16	2.59E-15
ENSG00000213853	EMP2	1.00E+00	2.27E-16	2.60E-15
ENSG00000117525	F3	1.46E+00	2.35E-16	2.69E-15
ENSG00000137177	KIF13A	1.47E+00	2.74E-16	3.12E-15
ENSG00000159069	FBXW5	1.17E+00	3.00E-16	3.41E-15
ENSG00000160862	AZGP1	7.58E+00	3.06E-16	3.47E-15
ENSG00000173706	HEG1	1.52E+00	3.14E-16	3.55E-15
ENSG00000100077	GRK3	2.00E+00	3.21E-16	3.63E-15
ENSG00000169181	GSG1L	6.64E+00	3.32E-16	3.75E-15
ENSG00000257122	RRN3P3	1.80E+00	3.35E-16	3.78E-15
ENSG00000089159	PXN	1.28E+00	3.42E-16	3.85E-15
ENSG00000179981	TSHZ1	1.75E+00	3.56E-16	4.01E-15
ENSG00000169035	KLK7	7.48E+00	3.84E-16	4.32E-15
ENSG00000114737	CISH	2.15E+00	3.91E-16	4.39E-15
ENSG00000057657	PRDM1	3.03E+00	3.94E-16	4.42E-15
ENSG00000261150	EPPK1	2.15E+00	4.02E-16	4.49E-15

ENSG00000211445	GPX3	1.19E+00	4.34E-16	4.86E-15
ENSG00000197558	SSPO	7.33E+00	4.38E-16	4.90E-15
ENSG00000276758	AC245884.12	7.45E+00	4.54E-16	5.06E-15
ENSG00000006432	MAP3K9	1.93E+00	4.74E-16	5.29E-15
ENSG00000100292	HMOX1	2.50E+00	4.85E-16	5.41E-15
ENSG00000126214	KLC1	1.28E+00	5.10E-16	5.67E-15
ENSG00000123159	GIPC1	1.71E+00	5.16E-16	5.73E-15
ENSG00000169991	IFFO2	1.40E+00	5.18E-16	5.76E-15
ENSG00000135655	USP15	1.16E+00	5.82E-16	6.46E-15
ENSG00000149328	GLB1L2	2.82E+00	5.90E-16	6.54E-15
ENSG00000140836	ZFHX3	1.36E+00	6.09E-16	6.74E-15
ENSG00000167173	C15orf39	1.30E+00	6.25E-16	6.92E-15
ENSG00000100151	PICK1	1.83E+00	6.27E-16	6.93E-15
ENSG00000112837	TBX18	1.53E+00	6.48E-16	7.16E-15
ENSG00000130643	CALY	6.63E+00	6.62E-16	7.30E-15
ENSG00000071282	LMCD1	2.36E+00	6.69E-16	7.37E-15
ENSG00000188483	IER5L	1.77E+00	6.75E-16	7.43E-15
ENSG00000166167	BTRC	1.81E+00	7.03E-16	7.73E-15
ENSG00000072786	STK10	1.46E+00	7.10E-16	7.81E-15
ENSG00000242086	MUC20-OT1	1.89E+00	7.18E-16	7.88E-15
ENSG00000151640	DPYSL4	1.76E+00	7.58E-16	8.31E-15
ENSG00000187017	ESPN	5.62E+00	7.64E-16	8.38E-15
ENSG00000164082	GRM2	3.72E+00	8.02E-16	8.77E-15
ENSG00000137857	DUOX1	7.32E+00	9.34E-16	1.02E-14
ENSG00000197273	GUCA2A	7.21E+00	9.68E-16	1.06E-14
ENSG00000262714	AC007342.5	5.65E+00	9.73E-16	1.06E-14
ENSG00000008323	PLEKHG6	7.11E+00	9.87E-16	1.07E-14
ENSG00000148826	NKX6-2	6.87E+00	1.01E-15	1.10E-14
ENSG00000168913	ENHO	2.44E+00	1.03E-15	1.12E-14
ENSG00000173156	RHOD	4.22E+00	1.05E-15	1.14E-14
ENSG00000119522	DENND1A	1.38E+00	1.19E-15	1.29E-14
ENSG00000157107	FCHO2	1.84E+00	1.22E-15	1.32E-14
ENSG00000089639	GMIP	1.39E+00	1.26E-15	1.36E-14
ENSG00000205978	NYNRIN	6.67E+00	1.30E-15	1.40E-14
ENSG00000169155	ZBTB43	1.62E+00	1.33E-15	1.43E-14
ENSG00000164050	PLXNB1	1.78E+00	1.38E-15	1.49E-14
ENSG00000099331	MYO9B	1.27E+00	1.41E-15	1.52E-14
ENSG00000250385	AC106772.2	7.24E+00	1.44E-15	1.55E-14
ENSG00000170836	PPM1D	1.62E+00	1.46E-15	1.57E-14
ENSG00000197696	NMB	2.14E+00	1.55E-15	1.66E-14
ENSG00000067836	ROGDI	1.91E+00	1.56E-15	1.67E-14
ENSG00000162522	KIAA1522	1.46E+00	1.57E-15	1.69E-14
ENSG00000161082	CELF5	4.15E+00	1.63E-15	1.75E-14
ENSG00000105127	AKAP8	1.10E+00	1.69E-15	1.81E-14
ENSG00000242265	PEG10	1.85E+00	1.72E-15	1.84E-14

ENSG00000136943	CTSV	1.26E+00	1.80E-15	1.92E-14
ENSG00000105298	CACTIN	1.61E+00	1.88E-15	2.01E-14
ENSG00000023892	DEF6	2.52E+00	1.90E-15	2.02E-14
ENSG00000135956	TMEM127	1.21E+00	2.02E-15	2.14E-14
ENSG00000160271	RALGDS	2.06E+00	2.30E-15	2.44E-14
ENSG00000142235	LMTK3	3.66E+00	2.42E-15	2.56E-14
ENSG00000135638	EMX1	5.57E+00	2.46E-15	2.60E-14
ENSG00000151117	TMEM86A	3.95E+00	2.47E-15	2.61E-14
ENSG00000154358	OBSCN	3.24E+00	2.48E-15	2.62E-14
ENSG00000175832	ETV4	1.50E+00	2.53E-15	2.68E-14
ENSG00000178301	AQP11	3.42E+00	2.54E-15	2.68E-14
ENSG00000112559	MDFI	6.01E+00	2.62E-15	2.76E-14
ENSG00000121039	RDH10	1.83E+00	2.70E-15	2.84E-14
ENSG00000171970	ZNF57	3.03E+00	2.81E-15	2.95E-14
ENSG00000165757	JCAD	2.52E+00	3.19E-15	3.35E-14
ENSG00000260001	TGFBR3L	2.58E+00	3.86E-15	4.04E-14
ENSG00000071205	ARHGAP10	1.47E+00	3.94E-15	4.12E-14
ENSG00000163435	ELF3	4.25E+00	4.22E-15	4.40E-14
ENSG00000141741	MIEN1	1.67E+00	4.36E-15	4.54E-14
ENSG00000105699	LSR	1.39E+00	4.44E-15	4.62E-14
ENSG00000006606	CCL26	4.95E+00	4.95E-15	5.13E-14
ENSG00000254827	SLC22A18AS	7.57E+00	4.96E-15	5.13E-14
ENSG00000135002	RFK	1.31E+00	5.47E-15	5.66E-14
ENSG00000196220	SRGAP3	4.64E+00	5.50E-15	5.68E-14
ENSG00000156299	TIAM1	2.34E+00	5.84E-15	6.02E-14
ENSG00000132481	TRIM47	1.53E+00	5.85E-15	6.03E-14
ENSG00000242802	AP5Z1	1.26E+00	5.84E-15	6.03E-14
ENSG00000126432	PRDX5	2.02E+00	6.09E-15	6.27E-14
ENSG00000163827	LRRC2	4.30E+00	6.33E-15	6.50E-14
ENSG00000197150	ABCB8	1.30E+00	6.33E-15	6.50E-14
ENSG00000102891	MT4	7.78E+00	6.63E-15	6.80E-14
ENSG00000092051	JPH4	6.68E+00	7.01E-15	7.19E-14
ENSG00000060069	CTDP1	1.64E+00	7.03E-15	7.20E-14
ENSG00000157978	LDLRAP1	1.49E+00	7.26E-15	7.43E-14
ENSG00000197694	SPTAN1	1.74E+00	7.72E-15	7.89E-14
ENSG00000105643	ARRDC2	1.32E+00	7.83E-15	7.99E-14
ENSG00000103051	COG4	1.28E+00	7.94E-15	8.09E-14
ENSG00000102897	LYRM1	1.46E+00	8.10E-15	8.24E-14
ENSG00000170373	CST1	8.09E+00	8.59E-15	8.72E-14
ENSG00000167434	CA4	6.86E+00	8.70E-15	8.83E-14
ENSG00000129250	KIF1C	1.04E+00	8.81E-15	8.94E-14
ENSG00000135740	SLC9A5	2.36E+00	8.89E-15	9.01E-14
ENSG00000021762	OSBPL5	3.01E+00	9.00E-15	9.12E-14
ENSG00000164855	TMEM184A	1.95E+00	9.02E-15	9.12E-14
ENSG00000174564	IL20RB	3.74E+00	9.01E-15	9.12E-14

ENSG00000156232	WHAMM	1.26E+00	9.42E-15	9.52E-14
ENSG00000275329	AL138781.1	6.48E+00	9.89E-15	9.97E-14
ENSG00000119655	NPC2	1.56E+00	1.03E-14	1.04E-13
ENSG00000130584	ZBTB46	2.25E+00	1.04E-14	1.04E-13
ENSG00000136720	HS6ST1	1.73E+00	1.05E-14	1.06E-13
ENSG00000089327	FXD5	1.09E+00	1.06E-14	1.06E-13
ENSG00000122694	GLIPR2	1.26E+00	1.07E-14	1.07E-13
ENSG00000198873	GRK5	1.67E+00	1.07E-14	1.08E-13
ENSG00000143344	RGL1	1.63E+00	1.09E-14	1.09E-13
ENSG00000224940	PRRT4	4.65E+00	1.10E-14	1.10E-13
ENSG00000068137	PLEKHH3	1.80E+00	1.11E-14	1.11E-13
ENSG00000115457	IGFBP2	2.65E+00	1.13E-14	1.13E-13
ENSG00000173714	WFIKN2	7.29E+00	1.17E-14	1.16E-13
ENSG00000176387	HSD11B2	4.51E+00	1.17E-14	1.17E-13
ENSG00000158292	GPR153	2.26E+00	1.20E-14	1.19E-13
ENSG00000128849	CGNL1	3.25E+00	1.29E-14	1.28E-13
ENSG00000179242	CDH4	3.79E+00	1.30E-14	1.29E-13
ENSG00000107187	LHX3	5.78E+00	1.32E-14	1.31E-13
ENSG00000176058	TPRN	1.27E+00	1.37E-14	1.36E-13
ENSG00000173120	KDM2A	1.18E+00	1.46E-14	1.45E-13
ENSG00000101842	VSIG1	7.17E+00	1.59E-14	1.58E-13
ENSG00000104419	NDRG1	1.14E+00	1.60E-14	1.58E-13
ENSG00000174915	PTDSS2	1.20E+00	1.60E-14	1.58E-13
ENSG00000169217	CD2BP2	1.08E+00	1.61E-14	1.59E-13
ENSG00000256982	AC135782.1	4.85E+00	1.62E-14	1.59E-13
ENSG00000146674	IGFBP3	1.58E+00	1.64E-14	1.62E-13
ENSG00000080815	PSEN1	1.15E+00	1.66E-14	1.64E-13
ENSG00000286389	AL731702.1	7.06E+00	1.76E-14	1.74E-13
ENSG00000106211	HSPB1	1.26E+00	1.81E-14	1.77E-13
ENSG00000180098	TRNAU1AP	1.38E+00	1.81E-14	1.78E-13
ENSG00000132376	INPP5K	1.65E+00	1.81E-14	1.78E-13
ENSG00000177694	NAALADL2	6.53E+00	1.97E-14	1.93E-13
ENSG00000167100	SAMD14	2.34E+00	1.97E-14	1.93E-13
ENSG00000088298	EDEM2	1.32E+00	1.98E-14	1.93E-13
ENSG00000143842	SOX13	1.86E+00	2.01E-14	1.97E-13
ENSG00000100280	AP1B1	1.00E+00	2.03E-14	1.98E-13
ENSG00000206140	TMEM191C	5.67E+00	2.06E-14	2.01E-13
ENSG00000106003	LFNG	1.66E+00	2.06E-14	2.01E-13
ENSG00000158220	ESYT3	3.87E+00	2.10E-14	2.05E-13
ENSG00000125968	ID1	1.33E+00	2.12E-14	2.06E-13
ENSG00000141968	VAV1	6.59E+00	2.12E-14	2.07E-13
ENSG00000131748	STARD3	1.06E+00	2.21E-14	2.15E-13
ENSG00000237289	CKMT1B	4.21E+00	2.30E-14	2.24E-13
ENSG00000099821	POLRMT	1.08E+00	2.32E-14	2.25E-13
ENSG00000169733	RFNG	1.46E+00	2.35E-14	2.28E-13

ENSG00000157445	CACNA2D3	3.89E+00	2.40E-14	2.33E-13
ENSG00000183018	SPNS2	6.71E+00	2.43E-14	2.36E-13
ENSG00000127666	TICAM1	1.55E+00	2.47E-14	2.39E-13
ENSG00000108262	GIT1	1.20E+00	2.74E-14	2.65E-13
ENSG00000172830	SSH3	1.80E+00	2.80E-14	2.70E-13
ENSG00000072832	CRMP1	2.50E+00	2.82E-14	2.72E-13
ENSG00000121350	PYROXD1	1.76E+00	2.86E-14	2.76E-13
ENSG00000196743	GM2A	1.79E+00	2.90E-14	2.79E-13
ENSG00000178184	PARD6G	1.79E+00	2.92E-14	2.81E-13
ENSG00000078237	TIGAR	1.92E+00	2.93E-14	2.82E-13
ENSG00000167065	DUSP18	1.90E+00	3.02E-14	2.90E-13
ENSG00000168884	TNIP2	1.02E+00	3.03E-14	2.91E-13
ENSG00000085433	WDR47	1.65E+00	3.06E-14	2.94E-13
ENSG00000182866	LCK	6.20E+00	3.27E-14	3.13E-13
ENSG00000111961	SASH1	1.81E+00	3.33E-14	3.19E-13
ENSG00000238045	AC009133.1	6.23E+00	3.34E-14	3.20E-13
ENSG00000163683	SMIM14	1.69E+00	3.62E-14	3.46E-13
ENSG00000130363	RSPH3	1.72E+00	3.68E-14	3.52E-13
ENSG00000129450	SIGLEC9	6.87E+00	3.73E-14	3.56E-13
ENSG00000164125	GASK1B	2.32E+00	3.87E-14	3.69E-13
ENSG00000131015	ULBP2	2.19E+00	3.90E-14	3.71E-13
ENSG00000115884	SDC1	1.85E+00	3.91E-14	3.73E-13
ENSG00000118898	PPL	6.40E+00	3.95E-14	3.76E-13
ENSG00000177380	PPFIA3	1.99E+00	4.09E-14	3.89E-13
ENSG00000196730	DAPK1	3.15E+00	4.19E-14	3.98E-13
ENSG00000204389	HSPA1A	1.03E+00	4.29E-14	4.07E-13
ENSG00000167797	CDK2AP2	1.40E+00	4.34E-14	4.12E-13
ENSG00000167549	CORO6	4.09E+00	4.44E-14	4.21E-13
ENSG00000065000	AP3D1	1.31E+00	4.56E-14	4.32E-13
ENSG00000245146	MALINC1	3.83E+00	4.75E-14	4.49E-13
ENSG00000138083	SIX3	7.08E+00	5.00E-14	4.72E-13
ENSG00000136274	NACAD	1.88E+00	5.14E-14	4.85E-13
ENSG00000181222	POLR2A	1.17E+00	5.16E-14	4.87E-13
ENSG00000186648	CARMIL3	6.06E+00	5.30E-14	5.00E-13
ENSG00000169696	ASPSCR1	1.84E+00	6.10E-14	5.73E-13
ENSG00000066027	PPP2R5A	1.47E+00	6.13E-14	5.76E-13
ENSG00000104881	PPP1R13L	1.33E+00	6.14E-14	5.77E-13
ENSG00000167861	HID1	6.69E+00	6.26E-14	5.87E-13
ENSG00000087494	PTHLH	3.31E+00	6.41E-14	6.01E-13
ENSG00000054179	ENTPD2	4.05E+00	6.48E-14	6.08E-13
ENSG00000186204	CYP4F12	6.85E+00	7.55E-14	7.05E-13
ENSG00000166473	PKD1L2	5.60E+00	8.11E-14	7.56E-13
ENSG00000175470	PPP2R2D	1.08E+00	8.11E-14	7.56E-13
ENSG00000178934	LGALS7B	6.74E+00	8.40E-14	7.81E-13
ENSG00000160712	IL6R	2.36E+00	8.55E-14	7.95E-13

ENSG00000124212	PTGIS	6.12E+00	8.92E-14	8.29E-13
ENSG00000066629	EML1	6.66E+00	8.94E-14	8.31E-13
ENSG00000197774	EME2	2.25E+00	9.16E-14	8.50E-13
ENSG00000163132	MSX1	1.47E+00	9.19E-14	8.52E-13
ENSG00000159224	GIP	5.23E+00	9.71E-14	8.99E-13
ENSG00000162723	SLAMF9	6.94E+00	9.88E-14	9.13E-13
ENSG00000229314	ORM1	6.54E+00	1.04E-13	9.60E-13
ENSG00000101470	TNNC2	3.91E+00	1.05E-13	9.73E-13
ENSG00000125144	MT1G	7.03E+00	1.20E-13	1.11E-12
ENSG00000129990	SYT5	6.59E+00	1.23E-13	1.13E-12
ENSG00000160703	NLRX1	2.13E+00	1.25E-13	1.15E-12
ENSG00000163694	RBM47	1.78E+00	1.26E-13	1.16E-12
ENSG00000149577	SIDT2	1.78E+00	1.36E-13	1.24E-12
ENSG00000220201	ZGLP1	2.26E+00	1.36E-13	1.25E-12
ENSG00000126603	GLIS2	1.95E+00	1.44E-13	1.32E-12
ENSG00000081277	PKP1	7.17E+00	1.46E-13	1.33E-12
ENSG00000170271	FAXDC2	4.87E+00	1.47E-13	1.34E-12
ENSG00000108849	PPY	6.16E+00	1.48E-13	1.35E-12
ENSG00000247596	TWF2	1.45E+00	1.53E-13	1.40E-12
ENSG00000104413	ESRP1	4.49E+00	1.58E-13	1.43E-12
ENSG00000141736	ERBB2	1.26E+00	1.58E-13	1.43E-12
ENSG00000172819	RARG	1.70E+00	1.59E-13	1.45E-12
ENSG00000155066	PROM2	6.46E+00	1.60E-13	1.45E-12
ENSG00000164463	CREBRF	1.77E+00	1.61E-13	1.46E-12
ENSG00000154133	ROBO4	3.34E+00	1.62E-13	1.47E-12
ENSG00000188897	AC099489.1	6.49E+00	1.67E-13	1.51E-12
ENSG00000104497	SNX16	1.03E+00	1.68E-13	1.52E-12
ENSG00000178773	CPNE7	2.85E+00	1.73E-13	1.56E-12
ENSG00000132517	SLC52A1	3.99E+00	1.73E-13	1.57E-12
ENSG00000162783	IER5	1.22E+00	1.77E-13	1.60E-12
ENSG00000117983	MUC5B	6.59E+00	1.98E-13	1.79E-12
ENSG00000107147	KCNT1	6.81E+00	2.20E-13	1.99E-12
ENSG00000125850	OVOL2	6.61E+00	2.22E-13	2.00E-12
ENSG00000162511	LAPTM5	4.08E+00	2.29E-13	2.07E-12
ENSG00000120899	PTK2B	2.36E+00	2.31E-13	2.08E-12
ENSG00000177106	EPS8L2	1.24E+00	2.42E-13	2.18E-12
ENSG00000182858	ALG12	1.21E+00	2.52E-13	2.26E-12
ENSG00000283632	EXOC3L2	6.11E+00	2.57E-13	2.31E-12
ENSG00000107175	CREB3	1.38E+00	2.61E-13	2.34E-12
ENSG00000105085	MED26	1.19E+00	2.62E-13	2.34E-12
ENSG00000124302	CHST8	6.39E+00	2.65E-13	2.38E-12
ENSG00000168546	GFRA2	7.20E+00	2.76E-13	2.47E-12
ENSG00000173083	HPSE	2.83E+00	2.79E-13	2.49E-12
ENSG00000188770	OPTC	6.79E+00	2.83E-13	2.53E-12
ENSG00000112782	CLIC5	6.72E+00	2.90E-13	2.59E-12

ENSG00000168591	TMUB2	1.14E+00	3.06E-13	2.72E-12
ENSG00000100109	TFIP11	1.20E+00	3.11E-13	2.77E-12
ENSG00000188760	TMEM198	3.06E+00	3.34E-13	2.96E-12
ENSG00000116525	TRIM62	1.40E+00	3.49E-13	3.09E-12
ENSG00000074211	PPP2R2C	5.24E+00	3.62E-13	3.21E-12
ENSG00000002726	AOC1	6.04E+00	3.64E-13	3.22E-12
ENSG00000122490	SLC66A2	1.30E+00	3.67E-13	3.24E-12
ENSG00000134955	SLC37A2	3.46E+00	3.77E-13	3.33E-12
ENSG00000101276	SLC52A3	6.87E+00	3.80E-13	3.35E-12
ENSG00000039068	CDH1	5.46E+00	3.87E-13	3.41E-12
ENSG00000205076	LGALS7	7.31E+00	4.10E-13	3.61E-12
ENSG00000136928	GABBR2	4.85E+00	4.41E-13	3.88E-12
ENSG00000108828	VAT1	1.07E+00	4.51E-13	3.97E-12
ENSG00000159023	EPB41	1.57E+00	4.56E-13	4.01E-12
ENSG00000054116	TRAPPC3	1.26E+00	4.63E-13	4.07E-12
ENSG00000178685	PARP10	1.99E+00	4.72E-13	4.14E-12
ENSG00000006453	BAIAP2L1	1.02E+00	4.79E-13	4.20E-12
ENSG00000156427	FGF18	3.39E+00	4.93E-13	4.32E-12
ENSG00000117139	KDM5B	1.51E+00	5.36E-13	4.69E-12
ENSG00000142327	RNPEPL1	2.11E+00	5.53E-13	4.83E-12
ENSG00000145349	CAMK2D	1.85E+00	5.75E-13	5.02E-12
ENSG00000185024	BRF1	1.49E+00	5.86E-13	5.12E-12
ENSG00000231826	LINC01819	6.66E+00	5.89E-13	5.14E-12
ENSG00000182175	RGMA	5.15E+00	5.92E-13	5.16E-12
ENSG00000266714	MYO15B	4.81E+00	6.24E-13	5.43E-12
ENSG00000143858	SYT2	6.88E+00	6.30E-13	5.48E-12
ENSG00000144230	GPR17	6.80E+00	6.71E-13	5.82E-12
ENSG00000184792	OSBP2	1.81E+00	6.72E-13	5.83E-12
ENSG00000160801	PTH1R	6.60E+00	7.39E-13	6.40E-12
ENSG00000149548	CCDC15	1.18E+00	7.41E-13	6.42E-12
ENSG00000103042	SLC38A7	1.03E+00	7.42E-13	6.43E-12
ENSG00000183087	GAS6	1.15E+00	7.59E-13	6.56E-12
ENSG00000132740	IGHMBP2	1.26E+00	7.68E-13	6.64E-12
ENSG00000105251	SHD	6.89E+00	7.77E-13	6.71E-12
ENSG00000270765	GAS2L2	7.23E+00	7.93E-13	6.84E-12
ENSG00000162496	DHRS3	1.56E+00	8.20E-13	7.07E-12
ENSG00000086666	ZFAND6	1.02E+00	8.22E-13	7.09E-12
ENSG00000169926	KLF13	2.21E+00	8.31E-13	7.15E-12
ENSG00000135253	KCP	5.99E+00	8.40E-13	7.23E-12
ENSG00000141458	NPC1	1.13E+00	8.54E-13	7.35E-12
ENSG00000133131	MORC4	1.41E+00	8.60E-13	7.39E-12
ENSG00000072954	TMEM38A	2.86E+00	8.61E-13	7.40E-12
ENSG00000128928	IVD	1.14E+00	8.85E-13	7.59E-12
ENSG00000183049	CAMK1D	1.91E+00	9.41E-13	8.04E-12
ENSG00000137166	FOXP4	1.40E+00	9.48E-13	8.09E-12



ENSG00000198156	NPIPB6	6.38E+00	9.61E-13	8.19E-12
ENSG00000104825	NFKBIB	1.43E+00	9.71E-13	8.27E-12
ENSG00000115155	OTOF	6.35E+00	9.94E-13	8.46E-12
ENSG00000175854	SWI5	1.39E+00	1.00E-12	8.50E-12
ENSG00000100314	CABP7	4.96E+00	1.02E-12	8.69E-12
ENSG00000125746	EML2	4.36E+00	1.02E-12	8.69E-12
ENSG00000181626	ANKRD62	6.31E+00	1.11E-12	9.41E-12
ENSG00000185291	IL3RA	6.58E+00	1.13E-12	9.54E-12
ENSG00000150967	ABCB9	2.07E+00	1.15E-12	9.70E-12
ENSG00000175265	GOLGA8A	1.22E+00	1.17E-12	9.90E-12
ENSG00000137942	FBNP1L	1.13E+00	1.18E-12	9.97E-12
ENSG00000099785	MARCH2	2.54E+00	1.20E-12	1.01E-11
ENSG00000106991	ENG	1.73E+00	1.20E-12	1.02E-11
ENSG00000136848	DAB2IP	1.39E+00	1.23E-12	1.04E-11
ENSG00000173621	LRFN4	1.06E+00	1.24E-12	1.05E-11
ENSG00000167191	GPRC5B	1.74E+00	1.25E-12	1.05E-11
ENSG00000126391	FRMD8	1.48E+00	1.25E-12	1.05E-11
ENSG00000118292	C1orf54	4.01E+00	1.27E-12	1.07E-11
ENSG00000167785	ZNF558	1.87E+00	1.28E-12	1.08E-11
ENSG00000183578	TNFAIP8L3	4.32E+00	1.30E-12	1.09E-11
ENSG00000224051	CPTP	1.77E+00	1.34E-12	1.13E-11
ENSG00000167723	TRPV3	6.44E+00	1.34E-12	1.13E-11
ENSG00000105499	PLA2G4C	3.14E+00	1.35E-12	1.13E-11
ENSG00000154429	CCSAP	1.07E+00	1.43E-12	1.19E-11
ENSG00000063241	ISOC2	1.90E+00	1.44E-12	1.20E-11
ENSG00000119541	VPS4B	1.07E+00	1.49E-12	1.24E-11
ENSG00000155366	RHOC	1.92E+00	1.56E-12	1.30E-11
ENSG00000157514	TSC22D3	2.22E+00	1.61E-12	1.34E-11
ENSG00000104808	DHDH	3.70E+00	1.62E-12	1.35E-11
ENSG00000006283	CACNA1G	3.51E+00	1.81E-12	1.50E-11
ENSG00000116035	VAX2	5.48E+00	1.82E-12	1.52E-11
ENSG00000032219	ARID4A	1.11E+00	1.84E-12	1.53E-11
ENSG00000141854	MISP3	4.65E+00	1.85E-12	1.53E-11
ENSG00000070413	DGCR2	1.32E+00	1.92E-12	1.59E-11
ENSG00000130270	ATP8B3	2.72E+00	1.93E-12	1.60E-11
ENSG00000125898	FAM110A	1.58E+00	1.95E-12	1.62E-11
ENSG00000197608	ZNF841	2.41E+00	2.08E-12	1.72E-11
ENSG00000156050	FAM161B	2.03E+00	2.15E-12	1.77E-11
ENSG00000167972	ABCA3	3.50E+00	2.16E-12	1.78E-11
ENSG00000154822	PLCL2	3.27E+00	2.40E-12	1.98E-11
ENSG00000187094	CCK	6.68E+00	2.42E-12	1.99E-11
ENSG00000273604	EPOP	1.43E+00	2.46E-12	2.02E-11
ENSG00000131100	ATP6V1E1	1.26E+00	2.47E-12	2.03E-11
ENSG00000140279	DUOX2	6.79E+00	2.50E-12	2.05E-11
ENSG00000163293	NIPAL1	1.51E+00	2.52E-12	2.07E-11

ENSG00000244242	IFITM10	6.25E+00	2.54E-12	2.09E-11
ENSG00000169896	ITGAM	3.85E+00	2.57E-12	2.11E-11
ENSG00000170835	CEL	4.63E+00	2.62E-12	2.14E-11
ENSG00000180448	ARHGAP45	3.53E+00	2.93E-12	2.40E-11
ENSG00000103528	SYT17	6.42E+00	2.96E-12	2.42E-11
ENSG00000187608	ISG15	2.28E+00	2.97E-12	2.43E-11
ENSG00000224614	TNK2-AS1	6.62E+00	3.05E-12	2.49E-11
ENSG00000108823	SGCA	5.56E+00	3.14E-12	2.57E-11
ENSG00000109472	CPE	1.13E+00	3.18E-12	2.60E-11
ENSG00000129219	PLD2	1.65E+00	3.19E-12	2.61E-11
ENSG00000072134	EPN2	1.73E+00	3.21E-12	2.62E-11
ENSG00000169877	AHSP	6.89E+00	3.26E-12	2.66E-11
ENSG00000103249	CLCN7	1.08E+00	3.31E-12	2.70E-11
ENSG00000226287	TMEM191A	3.77E+00	3.34E-12	2.72E-11
ENSG00000226812	AL117382.1	6.24E+00	3.38E-12	2.75E-11
ENSG00000071242	RPS6KA2	2.33E+00	3.50E-12	2.84E-11
ENSG00000047346	FAM214A	2.16E+00	3.60E-12	2.92E-11
ENSG00000162910	MRPL55	1.80E+00	3.74E-12	3.04E-11
ENSG00000171443	ZNF524	2.61E+00	4.12E-12	3.33E-11
ENSG00000197122	SRC	1.06E+00	4.17E-12	3.37E-11
ENSG00000170385	SLC30A1	1.46E+00	4.43E-12	3.58E-11
ENSG00000103264	FBXO31	1.15E+00	4.51E-12	3.63E-11
ENSG00000135363	LMO2	5.33E+00	4.85E-12	3.90E-11
ENSG00000103496	STX4	1.17E+00	4.86E-12	3.90E-11
ENSG00000164081	TEX264	1.74E+00	4.92E-12	3.95E-11
ENSG00000134996	OSTF1	1.43E+00	5.04E-12	4.05E-11
ENSG00000221986	MYBPHL	6.24E+00	5.09E-12	4.08E-11
ENSG00000109501	WFS1	1.53E+00	5.12E-12	4.10E-11
ENSG00000211584	SLC48A1	2.61E+00	5.12E-12	4.10E-11
ENSG00000162591	MEGF6	1.51E+00	5.21E-12	4.17E-11
ENSG00000228705	LINC00659	6.77E+00	5.49E-12	4.38E-11
ENSG00000049089	COL9A2	3.67E+00	5.55E-12	4.43E-11
ENSG00000198513	ATL1	2.65E+00	5.68E-12	4.52E-11
ENSG00000055163	CYFIP2	2.17E+00	5.75E-12	4.58E-11
ENSG00000187091	PLCD1	2.10E+00	5.75E-12	4.58E-11
ENSG00000287431	AC027601.6	2.76E+00	5.84E-12	4.64E-11
ENSG00000166147	FBN1	1.27E+00	6.06E-12	4.82E-11
ENSG00000226490	AC138647.1	6.37E+00	6.28E-12	4.98E-11
ENSG00000066056	TIE1	4.37E+00	6.47E-12	5.13E-11
ENSG00000090661	CERS4	2.09E+00	6.48E-12	5.13E-11
ENSG00000026103	FAS	2.25E+00	6.49E-12	5.14E-11
ENSG00000100241	SBF1	1.46E+00	6.75E-12	5.34E-11
ENSG00000159307	SCUBE1	6.70E+00	7.22E-12	5.70E-11
ENSG00000109686	SH3D19	1.75E+00	7.74E-12	6.10E-11
ENSG00000261804	AC007342.4	6.51E+00	7.80E-12	6.14E-11

ENSG00000143816	WNT9A	2.92E+00	7.95E-12	6.26E-11
ENSG00000175315	CST6	6.68E+00	7.99E-12	6.28E-11
ENSG00000130054	FAM155B	3.67E+00	8.17E-12	6.42E-11
ENSG00000158552	ZFAND2B	1.49E+00	8.64E-12	6.78E-11
ENSG00000167740	CYB5D2	1.67E+00	8.70E-12	6.83E-11
ENSG00000182687	GALR2	3.71E+00	8.83E-12	6.92E-11
ENSG00000169118	CSNK1G1	1.21E+00	8.88E-12	6.95E-11
ENSG00000169972	PUSL1	1.75E+00	8.96E-12	7.01E-11
ENSG00000196502	SULT1A1	3.03E+00	9.00E-12	7.04E-11
ENSG00000103150	MLYCD	1.84E+00	9.03E-12	7.05E-11
ENSG00000100604	CHGA	6.50E+00	9.37E-12	7.31E-11
ENSG00000204882	GPR20	6.57E+00	9.39E-12	7.32E-11
ENSG00000184574	LPAR5	5.49E+00	9.63E-12	7.50E-11
ENSG00000116299	KIAA1324	2.91E+00	1.01E-11	7.87E-11
ENSG00000109927	TECTA	7.07E+00	1.02E-11	7.94E-11
ENSG00000115839	RAB3GAP1	1.03E+00	1.04E-11	8.06E-11
ENSG00000160972	PPP1R16A	1.19E+00	1.04E-11	8.07E-11
ENSG00000245848	CEBPA	3.39E+00	1.04E-11	8.08E-11
ENSG00000163273	NPPC	4.05E+00	1.10E-11	8.53E-11
ENSG00000213904	LIPE-AS1	3.30E+00	1.10E-11	8.55E-11
ENSG00000107331	ABCA2	1.58E+00	1.11E-11	8.62E-11
ENSG00000143147	GPR161	1.18E+00	1.11E-11	8.63E-11
ENSG00000277363	SRCIN1	2.72E+00	1.17E-11	9.04E-11
ENSG00000186115	CYP4F2	5.38E+00	1.17E-11	9.10E-11
ENSG00000099812	MISP	4.59E+00	1.18E-11	9.10E-11
ENSG00000148158	SNX30	1.57E+00	1.47E-11	1.13E-10
ENSG00000117308	GALE	1.76E+00	1.47E-11	1.13E-10
ENSG00000139044	B4GALNT3	3.19E+00	1.47E-11	1.13E-10
ENSG00000142733	MAP3K6	1.64E+00	1.50E-11	1.15E-10
ENSG00000120278	PLEKHG1	4.28E+00	1.53E-11	1.18E-10
ENSG00000172458	IL17D	4.13E+00	1.55E-11	1.19E-10
ENSG00000196498	NCOR2	1.15E+00	1.58E-11	1.21E-10
ENSG00000092067	CEBPE	6.78E+00	1.63E-11	1.25E-10
ENSG00000145113	MUC4	6.52E+00	1.65E-11	1.26E-10
ENSG00000132906	CASP9	2.27E+00	1.68E-11	1.28E-10
ENSG00000156675	RAB11FIP1	1.23E+00	1.77E-11	1.35E-10
ENSG00000116786	PLEKHM2	1.02E+00	1.78E-11	1.35E-10
ENSG00000275395	FCGBP	6.29E+00	1.82E-11	1.38E-10
ENSG00000135439	AGAP2	6.85E+00	1.89E-11	1.43E-10
ENSG00000267440	LINC02594	6.90E+00	1.94E-11	1.47E-10
ENSG00000273619	AL121832.2	2.63E+00	1.95E-11	1.48E-10
ENSG00000165105	RASEF	2.00E+00	1.97E-11	1.50E-10
ENSG00000171446	KRT27	6.39E+00	2.00E-11	1.52E-10
ENSG00000124159	MATN4	3.72E+00	2.01E-11	1.52E-10
ENSG00000174684	B4GAT1	1.55E+00	2.09E-11	1.58E-10

ENSG00000105612	DNASE2	1.25E+00	2.11E-11	1.59E-10
ENSG00000150782	IL18	4.56E+00	2.11E-11	1.59E-10
ENSG00000250934	AC016924.1	6.25E+00	2.11E-11	1.59E-10
ENSG00000105464	GRIN2D	6.30E+00	2.15E-11	1.62E-10
ENSG00000160741	CRTC2	1.04E+00	2.18E-11	1.64E-10
ENSG00000197296	FITM2	1.07E+00	2.21E-11	1.67E-10
ENSG00000158109	TPRG1L	1.62E+00	2.23E-11	1.68E-10
ENSG00000196734	LCE1B	5.56E+00	2.25E-11	1.69E-10
ENSG00000204516	MICB	1.40E+00	2.28E-11	1.71E-10
ENSG00000007866	TEAD3	1.45E+00	2.28E-11	1.72E-10
ENSG00000160471	COX6B2	5.16E+00	2.30E-11	1.73E-10
ENSG00000198780	FAM169A	2.19E+00	2.31E-11	1.73E-10
ENSG00000148925	BTBD10	1.28E+00	2.32E-11	1.74E-10
ENSG00000116667	C1orf21	2.47E+00	2.39E-11	1.79E-10
ENSG00000169242	EFNA1	1.26E+00	2.39E-11	1.79E-10
ENSG00000105289	TJP3	6.35E+00	2.43E-11	1.82E-10
ENSG00000197177	ADGRA1	6.25E+00	2.48E-11	1.85E-10
ENSG00000159579	RSPRY1	1.16E+00	2.51E-11	1.88E-10
ENSG00000165474	GJB2	4.97E+00	2.57E-11	1.92E-10
ENSG00000163975	MELTF	1.16E+00	2.67E-11	1.99E-10
ENSG00000091490	SEL1L3	1.61E+00	2.73E-11	2.04E-10
ENSG00000189077	TMEM120A	1.93E+00	2.81E-11	2.09E-10
ENSG00000243225	AC007686.1	2.13E+00	2.87E-11	2.14E-10
ENSG00000198805	PNP	1.01E+00	2.90E-11	2.16E-10
ENSG00000167536	DHRS13	2.16E+00	2.98E-11	2.21E-10
ENSG00000141753	IGFBP4	1.09E+00	3.02E-11	2.24E-10
ENSG00000130508	PXDN	1.20E+00	3.08E-11	2.28E-10
ENSG00000166589	CDH16	5.81E+00	3.08E-11	2.28E-10
ENSG00000104237	RP1	6.06E+00	3.17E-11	2.35E-10
ENSG00000109586	GALNT7	1.17E+00	3.17E-11	2.35E-10
ENSG00000163220	S100A9	6.04E+00	3.21E-11	2.38E-10
ENSG00000106617	PRKAG2	1.41E+00	3.22E-11	2.39E-10
ENSG00000189337	KAZN	2.00E+00	3.31E-11	2.44E-10
ENSG00000172977	KAT5	1.25E+00	3.33E-11	2.46E-10
ENSG00000151929	BAG3	1.15E+00	3.33E-11	2.46E-10
ENSG00000040487	SLC66A1	1.37E+00	3.37E-11	2.48E-10
ENSG00000171503	ETFDH	1.35E+00	3.43E-11	2.53E-10
ENSG00000130706	ADRM1	1.35E+00	3.63E-11	2.68E-10
ENSG00000170369	CST2	6.68E+00	3.64E-11	2.68E-10
ENSG00000156983	BRPF1	1.18E+00	3.78E-11	2.78E-10
ENSG00000133142	TCEAL4	1.10E+00	3.85E-11	2.83E-10
ENSG00000078687	TNRC6C	1.34E+00	3.86E-11	2.83E-10
ENSG00000188177	ZC3H6	1.94E+00	3.96E-11	2.91E-10
ENSG00000250920	AC105460.1	6.26E+00	4.06E-11	2.98E-10
ENSG00000261143	ADAMTS7P3	6.59E+00	4.06E-11	2.98E-10

ENSG00000104866	PPP1R37	1.52E+00	4.07E-11	2.99E-10
ENSG00000079691	CARMIL1	1.34E+00	4.36E-11	3.19E-10
ENSG00000059804	SLC2A3	1.09E+00	4.40E-11	3.22E-10
ENSG00000068615	REEP1	2.48E+00	4.45E-11	3.26E-10
ENSG00000170426	SDR9C7	6.72E+00	4.51E-11	3.30E-10
ENSG00000130600	H19	6.09E+00	4.54E-11	3.32E-10
ENSG00000223729	LINC02247	6.39E+00	4.68E-11	3.41E-10
ENSG00000169692	AGPAT2	1.07E+00	4.73E-11	3.45E-10
ENSG00000178623	GPR35	6.28E+00	4.82E-11	3.51E-10
ENSG00000251095	AC093866.1	4.33E+00	4.85E-11	3.53E-10
ENSG00000090339	ICAM1	1.11E+00	5.04E-11	3.67E-10
ENSG00000122592	HOXA7	1.55E+00	5.17E-11	3.76E-10
ENSG00000156475	PPP2R2B	6.37E+00	5.18E-11	3.77E-10
ENSG00000168907	PLA2G4F	6.20E+00	5.42E-11	3.94E-10
ENSG00000136286	MYO1G	6.72E+00	5.45E-11	3.96E-10
ENSG00000156574	NODAL	5.98E+00	5.45E-11	3.96E-10
ENSG00000213977	TAX1BP3	1.28E+00	5.60E-11	4.06E-10
ENSG00000126016	AMOT	4.69E+00	5.77E-11	4.18E-10
ENSG00000140678	ITGAX	3.61E+00	5.83E-11	4.22E-10
ENSG00000185909	KLHDC8B	1.24E+00	6.17E-11	4.46E-10
ENSG00000198382	UVRAG	1.13E+00	6.28E-11	4.54E-10
ENSG00000148290	SURF1	1.01E+00	6.40E-11	4.62E-10
ENSG00000166484	MAPK7	1.48E+00	6.47E-11	4.67E-10
ENSG00000152953	STK32B	1.20E+00	6.51E-11	4.70E-10
ENSG00000105696	TMEM59L	3.25E+00	6.58E-11	4.74E-10
ENSG00000112033	PPARD	1.04E+00	6.70E-11	4.83E-10
ENSG00000138834	MAPK8IP3	1.64E+00	6.72E-11	4.84E-10
ENSG00000248690	HAS2-AS1	3.10E+00	6.86E-11	4.94E-10
ENSG00000162444	RBP7	2.57E+00	6.86E-11	4.94E-10
ENSG00000140332	TLE3	1.00E+00	7.04E-11	5.06E-10
ENSG00000132854	KANK4	3.47E+00	7.20E-11	5.17E-10
ENSG00000028277	POU2F2	1.43E+00	7.27E-11	5.22E-10
ENSG00000188505	NCCRP1	6.08E+00	7.29E-11	5.23E-10
ENSG00000182796	TMEM198B	2.43E+00	7.35E-11	5.27E-10
ENSG00000113742	CPEB4	1.05E+00	7.46E-11	5.35E-10
ENSG00000104833	TUBB4A	4.13E+00	7.53E-11	5.39E-10
ENSG00000123243	ITIH5	4.86E+00	7.61E-11	5.45E-10
ENSG00000267248	AC025048.2	3.82E+00	7.69E-11	5.50E-10
ENSG00000008300	CELSR3	2.53E+00	8.02E-11	5.73E-10
ENSG00000182612	TSPAN10	3.40E+00	8.07E-11	5.76E-10
ENSG00000154710	RABGEF1	2.52E+00	8.10E-11	5.78E-10
ENSG00000110274	CEP164	1.42E+00	8.20E-11	5.85E-10
ENSG00000157601	MX1	3.45E+00	8.40E-11	5.99E-10
ENSG00000133460	SLC2A11	1.54E+00	8.41E-11	5.99E-10
ENSG00000120860	WASHC3	1.42E+00	8.43E-11	6.00E-10

ENSG00000099994	SUSD2	4.13E+00	8.67E-11	6.17E-10
ENSG00000173805	HAP1	2.98E+00	8.95E-11	6.36E-10
ENSG00000101280	ANGPT4	6.05E+00	8.97E-11	6.37E-10
ENSG00000145990	GFOD1	1.56E+00	9.25E-11	6.56E-10
ENSG00000088726	TMEM40	3.32E+00	9.88E-11	7.00E-10
ENSG00000173175	ADCY5	6.51E+00	9.89E-11	7.01E-10
ENSG00000205356	TECPR1	2.28E+00	1.00E-10	7.08E-10
ENSG00000184232	OAF	1.26E+00	1.00E-10	7.09E-10
ENSG00000186481	ANKRD20A5P	2.16E+00	1.02E-10	7.20E-10
ENSG00000227234	SPANXB1	6.44E+00	1.04E-10	7.33E-10
ENSG00000154099	DNAAF1	7.28E+00	1.04E-10	7.34E-10
ENSG00000131941	RHPN2	1.27E+00	1.04E-10	7.35E-10
ENSG00000081913	PHLPP1	1.40E+00	1.07E-10	7.53E-10
ENSG00000125966	MMP24	2.47E+00	1.11E-10	7.82E-10
ENSG00000174788	PCP2	6.11E+00	1.11E-10	7.82E-10
ENSG00000158062	UBXN11	1.17E+00	1.20E-10	8.45E-10
ENSG00000184811	TRARG1	6.27E+00	1.24E-10	8.72E-10
ENSG00000116977	LGALS8	1.40E+00	1.34E-10	9.42E-10
ENSG00000171310	CHST11	1.59E+00	1.37E-10	9.63E-10
ENSG00000165695	AK8	4.05E+00	1.41E-10	9.87E-10
ENSG00000105369	CD79A	4.49E+00	1.43E-10	1.00E-09
ENSG00000185485	SDHAP1	1.65E+00	1.51E-10	1.06E-09
ENSG00000180644	PRF1	5.97E+00	1.52E-10	1.06E-09
ENSG00000160284	SPATC1L	1.57E+00	1.52E-10	1.06E-09
ENSG00000167105	TMEM92	5.59E+00	1.53E-10	1.07E-09
ENSG00000196754	S100A2	2.83E+00	1.56E-10	1.09E-09
ENSG00000062524	LTK	5.98E+00	1.59E-10	1.11E-09
ENSG00000114738	MAPKAPK3	1.56E+00	1.60E-10	1.11E-09
ENSG00000168309	FAM107A	6.73E+00	1.61E-10	1.12E-09
ENSG00000164142	FAM160A1	2.81E+00	1.61E-10	1.12E-09
ENSG00000244734	HBB	6.39E+00	1.69E-10	1.17E-09
ENSG00000197355	UAP1L1	1.85E+00	1.77E-10	1.23E-09
ENSG00000125657	TNFSF9	1.82E+00	1.82E-10	1.26E-09
ENSG00000137478	FCHSD2	1.36E+00	1.84E-10	1.27E-09
ENSG00000099864	PALM	2.13E+00	1.90E-10	1.31E-09
ENSG00000161381	PLXDC1	4.24E+00	2.06E-10	1.42E-09
ENSG00000261371	PECAM1	4.47E+00	2.14E-10	1.48E-09
ENSG00000177984	LCN15	5.81E+00	2.21E-10	1.52E-09
ENSG00000085831	TTC39A	4.91E+00	2.26E-10	1.55E-09
ENSG00000171540	OTP	5.22E+00	2.28E-10	1.57E-09
ENSG00000011332	DPF1	1.46E+00	2.41E-10	1.66E-09
ENSG00000173702	MUC13	5.98E+00	2.49E-10	1.71E-09
ENSG00000088826	SMOX	1.19E+00	2.49E-10	1.71E-09
ENSG00000132274	TRIM22	2.67E+00	2.58E-10	1.77E-09
ENSG00000090061	CCNK	1.37E+00	2.74E-10	1.87E-09

ENSG00000185818	NAT8L	1.65E+00	2.75E-10	1.88E-09
ENSG00000184261	KCNK12	6.16E+00	2.76E-10	1.88E-09
ENSG00000110047	EHD1	1.06E+00	2.79E-10	1.90E-09
ENSG00000182472	CAPN12	6.07E+00	2.80E-10	1.91E-09
ENSG00000103888	CEMIP	1.46E+00	2.81E-10	1.91E-09
ENSG00000116761	CTH	2.45E+00	2.97E-10	2.02E-09
ENSG00000131634	TMEM204	5.90E+00	3.00E-10	2.04E-09
ENSG00000030110	BAK1	1.57E+00	3.06E-10	2.08E-09
ENSG00000166689	PLEKHA7	4.36E+00	3.24E-10	2.19E-09
ENSG00000263465	SRSF8	1.83E+00	3.26E-10	2.21E-09
ENSG00000204282	TNRC6C-AS1	5.62E+00	3.27E-10	2.21E-09
ENSG00000119986	AVP11	1.91E+00	3.36E-10	2.27E-09
ENSG00000214655	ZSWIM8	1.10E+00	3.42E-10	2.31E-09
ENSG00000143061	IGSF3	1.88E+00	3.56E-10	2.40E-09
ENSG00000161267	BDH1	1.52E+00	3.60E-10	2.42E-09
ENSG00000185033	SEMA4B	1.46E+00	3.60E-10	2.43E-09
ENSG00000039987	BEST2	6.50E+00	3.65E-10	2.46E-09
ENSG00000116668	SWT1	2.44E+00	3.66E-10	2.46E-09
ENSG00000179562	GCC1	1.56E+00	3.66E-10	2.46E-09
ENSG00000187764	SEMA4D	1.88E+00	3.69E-10	2.48E-09
ENSG00000137216	TMEM63B	1.02E+00	3.73E-10	2.50E-09
ENSG00000105516	DBP	2.26E+00	3.77E-10	2.53E-09
ENSG00000189190	ZNF600	1.54E+00	3.82E-10	2.56E-09
ENSG00000186564	FOXD2	2.73E+00	3.82E-10	2.56E-09
ENSG00000143669	LYST	1.43E+00	3.88E-10	2.60E-09
ENSG00000147206	NXF3	6.75E+00	3.91E-10	2.62E-09
ENSG00000198408	OGA	1.17E+00	3.92E-10	2.63E-09
ENSG00000177663	IL17RA	1.11E+00	4.06E-10	2.72E-09
ENSG00000154832	CXXC1	1.20E+00	4.07E-10	2.73E-09
ENSG00000171316	CHD7	1.34E+00	4.07E-10	2.73E-09
ENSG00000135116	HRK	4.60E+00	4.14E-10	2.77E-09
ENSG00000180769	WDFY3-AS2	3.23E+00	4.16E-10	2.78E-09
ENSG00000083838	ZNF446	1.47E+00	4.18E-10	2.80E-09
ENSG00000177432	NAP1L5	2.46E+00	4.21E-10	2.81E-09
ENSG00000197302	ZNF720	1.30E+00	4.33E-10	2.89E-09
ENSG00000123178	SPRYD7	1.25E+00	4.75E-10	3.16E-09
ENSG00000115459	ELMOD3	1.87E+00	4.77E-10	3.18E-09
ENSG00000103671	TRIP4	1.16E+00	4.80E-10	3.19E-09
ENSG00000100078	PLA2G3	6.49E+00	4.86E-10	3.23E-09
ENSG00000178928	TPRX1	5.98E+00	4.99E-10	3.32E-09
ENSG00000167693	NXN	1.25E+00	5.05E-10	3.35E-09
ENSG00000076944	STXBP2	1.27E+00	5.09E-10	3.38E-09
ENSG00000178078	STAP2	2.33E+00	5.22E-10	3.46E-09
ENSG00000167311	ART5	3.45E+00	5.33E-10	3.53E-09
ENSG00000136859	ANGPTL2	1.73E+00	5.44E-10	3.60E-09

ENSG00000131969	ABHD12B	6.09E+00	5.50E-10	3.64E-09
ENSG00000116983	HPCAL4	2.93E+00	5.79E-10	3.82E-09
ENSG00000105339	DENND3	4.05E+00	5.87E-10	3.87E-09
ENSG00000134824	FADS2	1.09E+00	5.99E-10	3.95E-09
ENSG00000234949	AC104667.2	6.34E+00	6.03E-10	3.97E-09
ENSG00000100055	CYTH4	6.47E+00	6.06E-10	3.99E-09
ENSG00000128159	TUBGCP6	1.83E+00	6.14E-10	4.04E-09
ENSG00000170577	SIX2	1.46E+00	6.25E-10	4.10E-09
ENSG00000100796	PPP4R3A	1.02E+00	6.64E-10	4.35E-09
ENSG00000174562	KLK15	6.25E+00	6.80E-10	4.45E-09
ENSG00000178821	TMEM52	2.60E+00	6.86E-10	4.49E-09
ENSG00000143553	SNAPIN	1.36E+00	6.90E-10	4.52E-09
ENSG00000214087	ARL16	1.31E+00	7.00E-10	4.58E-09
ENSG00000175048	ZDHHC14	1.11E+00	7.01E-10	4.59E-09
ENSG00000205362	MT1A	6.50E+00	7.07E-10	4.62E-09
ENSG00000266094	RASSF5	2.79E+00	7.13E-10	4.66E-09
ENSG00000204577	LILRB3	5.31E+00	7.26E-10	4.74E-09
ENSG00000251230	MIR3945HG	6.67E+00	7.26E-10	4.74E-09
ENSG00000262246	CORO7	1.81E+00	7.32E-10	4.77E-09
ENSG00000160588	MPZL3	2.32E+00	7.50E-10	4.89E-09
ENSG00000171603	CLSTN1	1.13E+00	7.66E-10	4.99E-09
ENSG00000172828	CES3	6.32E+00	7.71E-10	5.01E-09
ENSG00000185561	TLCD2	1.70E+00	7.73E-10	5.02E-09
ENSG00000163295	ALPI	6.28E+00	8.03E-10	5.22E-09
ENSG00000178372	CALML5	6.82E+00	8.24E-10	5.35E-09
ENSG00000168071	CCDC88B	4.15E+00	8.38E-10	5.43E-09
ENSG00000104880	ARHGEF18	1.28E+00	8.44E-10	5.47E-09
ENSG00000139990	DCAF5	1.16E+00	8.89E-10	5.76E-09
ENSG00000090013	BLVRB	1.47E+00	8.97E-10	5.81E-09
ENSG00000183734	ASCL2	5.63E+00	8.99E-10	5.82E-09
ENSG00000102349	KLF8	6.31E+00	9.03E-10	5.84E-09
ENSG00000198752	CDC42BPB	1.02E+00	9.04E-10	5.84E-09
ENSG00000007384	RHBDF1	1.82E+00	9.08E-10	5.87E-09
ENSG00000197852	INKA2	1.80E+00	9.17E-10	5.92E-09
ENSG00000051128	HOMER3	1.25E+00	9.32E-10	6.02E-09
ENSG00000010030	ETV7	2.90E+00	9.45E-10	6.10E-09
ENSG00000167880	EVPL	5.46E+00	9.55E-10	6.16E-09
ENSG00000154639	CXADR	2.23E+00	9.75E-10	6.28E-09
ENSG00000100815	TRIP11	1.02E+00	9.77E-10	6.30E-09
ENSG00000104381	GDAP1	1.32E+00	9.78E-10	6.30E-09
ENSG00000121905	HPCA	4.59E+00	1.02E-09	6.56E-09
ENSG00000090581	GNPTG	1.03E+00	1.04E-09	6.66E-09
ENSG00000100987	VSX1	6.54E+00	1.05E-09	6.76E-09
ENSG00000167968	DNASE1L2	2.50E+00	1.08E-09	6.96E-09
ENSG00000250067	YJEFN3	1.90E+00	1.09E-09	7.00E-09



ENSG00000116191	RALGPS2	1.25E+00	1.09E-09	7.00E-09
ENSG00000121454	LHX4	6.18E+00	1.12E-09	7.20E-09
ENSG00000178573	MAF	2.54E+00	1.12E-09	7.22E-09
ENSG00000092931	MFSD11	1.01E+00	1.13E-09	7.22E-09
ENSG00000104081	BMF	2.32E+00	1.13E-09	7.26E-09
ENSG00000170684	ZNF296	2.46E+00	1.16E-09	7.43E-09
ENSG00000160746	ANO10	1.08E+00	1.18E-09	7.53E-09
ENSG00000186594	MIR22HG	1.02E+00	1.21E-09	7.72E-09
ENSG00000157625	TAB3	1.31E+00	1.26E-09	8.02E-09
ENSG00000272768	AC004854.2	1.65E+00	1.29E-09	8.26E-09
ENSG00000203499	IQANK1	5.10E+00	1.31E-09	8.38E-09
ENSG00000214021	TTL3	2.32E+00	1.32E-09	8.40E-09
ENSG00000171045	TSNARE1	3.05E+00	1.34E-09	8.53E-09
ENSG00000189221	MAOA	2.56E+00	1.35E-09	8.57E-09
ENSG00000185022	MAFF	1.14E+00	1.36E-09	8.64E-09
ENSG00000164051	CCDC51	1.16E+00	1.36E-09	8.68E-09
ENSG00000114378	HYAL1	5.90E+00	1.41E-09	8.94E-09
ENSG00000169184	MN1	2.47E+00	1.41E-09	8.99E-09
ENSG00000160460	SPTBN4	4.68E+00	1.42E-09	9.03E-09
ENSG00000054611	TBC1D22A	1.20E+00	1.43E-09	9.05E-09
ENSG00000158201	ABHD3	1.06E+00	1.47E-09	9.33E-09
ENSG00000128917	DLL4	2.87E+00	1.48E-09	9.35E-09
ENSG00000175920	DOK7	6.00E+00	1.49E-09	9.42E-09
ENSG00000086548	CEACAM6	6.34E+00	1.50E-09	9.46E-09
ENSG00000176842	IRX5	2.27E+00	1.50E-09	9.48E-09
ENSG00000102302	FGD1	1.45E+00	1.50E-09	9.50E-09
ENSG00000110046	ATG2A	1.46E+00	1.51E-09	9.52E-09
ENSG00000085871	MGST2	2.00E+00	1.53E-09	9.65E-09
ENSG00000109610	SOD3	6.05E+00	1.58E-09	9.96E-09
ENSG00000171056	SOX7	2.40E+00	1.59E-09	1.00E-08
ENSG00000166106	ADAMTS15	2.50E+00	1.60E-09	1.01E-08
ENSG00000250337	PURPL	3.14E+00	1.62E-09	1.02E-08
ENSG00000131650	KREMEN2	1.15E+00	1.69E-09	1.06E-08
ENSG00000100276	RASL10A	3.55E+00	1.71E-09	1.07E-08
ENSG00000256481	AP006333.2	6.12E+00	1.71E-09	1.07E-08
ENSG00000234965	SHISA8	2.04E+00	1.73E-09	1.09E-08
ENSG00000255501	CARD18	6.09E+00	1.78E-09	1.12E-08
ENSG00000171606	ZNF274	1.10E+00	1.88E-09	1.18E-08
ENSG00000130287	NCAN	6.24E+00	1.88E-09	1.18E-08
ENSG00000110203	FOLR3	6.36E+00	1.92E-09	1.20E-08
ENSG00000272293	AC083964.1	3.54E+00	1.98E-09	1.23E-08
ENSG00000068650	ATP11A	1.26E+00	2.04E-09	1.27E-08
ENSG00000175197	DDIT3	1.19E+00	2.16E-09	1.35E-08
ENSG00000108239	TBC1D12	1.28E+00	2.28E-09	1.41E-08
ENSG00000197019	SERTAD1	1.32E+00	2.28E-09	1.42E-08

ENSG00000101445	PPP1R16B	4.69E+00	2.51E-09	1.55E-08
ENSG00000126878	AIF1L	1.26E+00	2.57E-09	1.59E-08
ENSG00000183979	NPB	4.98E+00	2.67E-09	1.65E-08
ENSG00000181885	CLDN7	5.91E+00	2.70E-09	1.67E-08
ENSG00000104361	NIPAL2	2.47E+00	2.72E-09	1.68E-08
ENSG00000172663	TMEM134	1.69E+00	2.75E-09	1.70E-08
ENSG00000137266	SLC22A23	2.09E+00	2.76E-09	1.70E-08
ENSG00000165804	ZNF219	1.34E+00	3.00E-09	1.85E-08
ENSG00000196517	SLC6A9	2.10E+00	3.00E-09	1.85E-08
ENSG00000130779	CLIP1	1.03E+00	3.05E-09	1.88E-08
ENSG00000261609	GAN	1.55E+00	3.08E-09	1.89E-08
ENSG00000161091	MFSD12	1.10E+00	3.14E-09	1.93E-08
ENSG00000198125	MB	4.10E+00	3.19E-09	1.96E-08
ENSG00000181378	CFAP65	5.97E+00	3.22E-09	1.98E-08
ENSG00000187244	BCAM	1.44E+00	3.28E-09	2.01E-08
ENSG00000101098	RIMS4	6.05E+00	3.28E-09	2.01E-08
ENSG00000183092	BEGAIN	3.32E+00	3.33E-09	2.04E-08
ENSG00000184343	SRPK3	6.43E+00	3.35E-09	2.05E-08
ENSG00000102683	SGCG	6.38E+00	3.38E-09	2.07E-08
ENSG00000099377	HSD3B7	2.41E+00	3.42E-09	2.09E-08
ENSG00000185522	LMNTD2	4.58E+00	3.46E-09	2.12E-08
ENSG00000158815	FGF17	5.86E+00	3.48E-09	2.13E-08
ENSG00000196378	ZNF34	3.14E+00	3.63E-09	2.21E-08
ENSG00000184730	APOBR	6.24E+00	3.75E-09	2.28E-08
ENSG00000138111	MFSD13A	2.91E+00	3.79E-09	2.31E-08
ENSG00000225978	HAR1A	4.86E+00	3.82E-09	2.33E-08
ENSG00000197191	CYSRT1	3.01E+00	3.87E-09	2.35E-08
ENSG00000068831	RASGRP2	5.26E+00	3.99E-09	2.42E-08
ENSG00000145920	CPLX2	6.24E+00	4.01E-09	2.43E-08
ENSG00000102879	CORO1A	1.85E+00	4.03E-09	2.45E-08
ENSG00000125531	FNDC11	5.81E+00	4.10E-09	2.48E-08
ENSG00000105472	CLEC11A	2.05E+00	4.17E-09	2.52E-08
ENSG00000175294	CATSPER1	4.15E+00	4.20E-09	2.54E-08
ENSG00000162298	SYVN1	1.05E+00	4.23E-09	2.56E-08
ENSG00000158955	WNT9B	5.78E+00	4.24E-09	2.56E-08
ENSG00000147509	RGS20	1.54E+00	4.31E-09	2.60E-08
ENSG00000160326	SLC2A6	1.07E+00	4.31E-09	2.60E-08
ENSG00000182165	TP53TG1	1.82E+00	4.42E-09	2.67E-08
ENSG00000196689	TRPV1	3.25E+00	4.45E-09	2.68E-08
ENSG00000175591	P2RY2	6.07E+00	4.51E-09	2.72E-08
ENSG00000197180	AC244090.1	2.52E+00	4.56E-09	2.74E-08
ENSG00000215769	ARHGAP27P1-	5.57E+00	4.79E-09	2.88E-08
ENSG00000280693	SH3PXD2A-AS	6.38E+00	4.79E-09	2.88E-08
ENSG00000215156	AC138409.1	6.17E+00	4.80E-09	2.88E-08
ENSG00000128294	TPST2	1.16E+00	4.83E-09	2.90E-08

ENSG00000078114	NEBL	4.61E+00	4.89E-09	2.93E-08
ENSG00000110497	AMBRA1	1.12E+00	4.93E-09	2.96E-08
ENSG00000260428	SCX	2.99E+00	5.09E-09	3.05E-08
ENSG00000139323	POC1B	1.61E+00	5.11E-09	3.06E-08
ENSG00000099814	CEP170B	1.53E+00	5.16E-09	3.09E-08
ENSG00000147799	ARHGAP39	1.50E+00	5.16E-09	3.09E-08
ENSG00000198133	TMEM229B	3.20E+00	5.20E-09	3.11E-08
ENSG00000162643	WDR63	3.61E+00	5.21E-09	3.11E-08
ENSG00000137265	IRF4	5.73E+00	5.27E-09	3.15E-08
ENSG00000171365	CLCN5	1.75E+00	5.28E-09	3.15E-08
ENSG00000124126	PREX1	1.57E+00	5.30E-09	3.16E-08
ENSG00000183337	BCOR	1.31E+00	5.30E-09	3.16E-08
ENSG00000141579	ZNF750	6.26E+00	5.35E-09	3.19E-08
ENSG00000157766	ACAN	3.24E+00	5.37E-09	3.20E-08
ENSG00000172936	MYD88	1.16E+00	5.38E-09	3.21E-08
ENSG00000044012	GUCA2B	6.22E+00	5.64E-09	3.36E-08
ENSG00000261359	PYCARD-AS1	3.66E+00	5.71E-09	3.40E-08
ENSG00000154025	SLC5A10	5.83E+00	5.91E-09	3.51E-08
ENSG00000263343	AC009088.4	1.50E+00	5.95E-09	3.53E-08
ENSG00000179163	FUCA1	1.07E+00	6.24E-09	3.70E-08
ENSG00000223573	TINCR	2.85E+00	6.24E-09	3.70E-08
ENSG00000260196	AC124798.1	2.65E+00	6.26E-09	3.70E-08
ENSG00000254986	DPP3	1.05E+00	6.40E-09	3.79E-08
ENSG00000275880	AL139385.1	3.91E+00	6.43E-09	3.81E-08
ENSG00000204323	SMIM5	4.99E+00	6.61E-09	3.91E-08
ENSG00000198142	SOWAHC	1.04E+00	6.85E-09	4.05E-08
ENSG00000221866	PLXNA4	6.23E+00	6.85E-09	4.05E-08
ENSG00000075388	FGF4	5.93E+00	7.19E-09	4.24E-08
ENSG00000197415	VEPH1	4.78E+00	7.19E-09	4.24E-08
ENSG00000162032	SPSB3	1.30E+00	7.28E-09	4.29E-08
ENSG00000213930	GALT	2.04E+00	7.28E-09	4.29E-08
ENSG00000102760	RGCC	4.37E+00	7.92E-09	4.65E-08
ENSG00000022567	SLC45A4	1.46E+00	7.93E-09	4.66E-08
ENSG00000164850	GPER1	5.97E+00	7.98E-09	4.68E-08
ENSG00000068724	TTC7A	1.54E+00	8.01E-09	4.70E-08
ENSG00000111057	KRT18	1.15E+00	8.03E-09	4.71E-08
ENSG00000101745	ANKRD12	1.02E+00	8.05E-09	4.72E-08
ENSG00000184916	JAG2	2.63E+00	8.27E-09	4.85E-08
ENSG00000101695	RNF125	3.50E+00	8.31E-09	4.87E-08
ENSG00000163485	ADORA1	3.40E+00	8.39E-09	4.92E-08
ENSG00000229723	LINC01054	5.67E+00	8.40E-09	4.92E-08
ENSG00000144591	GMPPA	1.17E+00	8.54E-09	5.00E-08
ENSG00000181035	SLC25A42	2.04E+00	8.56E-09	5.00E-08
ENSG00000176912	TYMSOS	1.97E+00	8.68E-09	5.07E-08
ENSG00000275437	AL121832.3	3.32E+00	8.71E-09	5.08E-08

ENSG00000221963	APOL6	1.12E+00	8.75E-09	5.11E-08
ENSG00000152939	MARVELD2	1.29E+00	8.88E-09	5.18E-08
ENSG00000072310	SREBF1	1.06E+00	8.94E-09	5.21E-08
ENSG00000106948	AKNA	2.15E+00	9.00E-09	5.25E-08
ENSG00000164124	TMEM144	2.87E+00	9.03E-09	5.26E-08
ENSG00000107521	HPS1	1.21E+00	9.12E-09	5.31E-08
ENSG00000105875	WDR91	1.81E+00	9.43E-09	5.49E-08
ENSG00000124299	PEPD	1.21E+00	9.65E-09	5.60E-08
ENSG00000167614	TTYH1	6.31E+00	1.05E-08	6.07E-08
ENSG00000197329	PELI1	1.99E+00	1.06E-08	6.13E-08
ENSG00000172661	WASHC2C	1.31E+00	1.06E-08	6.13E-08
ENSG00000087303	NID2	1.19E+00	1.07E-08	6.20E-08
ENSG00000089902	RCOR1	1.18E+00	1.08E-08	6.23E-08
ENSG00000180263	FGD6	1.21E+00	1.12E-08	6.46E-08
ENSG00000167780	SOAT2	5.70E+00	1.12E-08	6.50E-08
ENSG00000188833	ENTPD8	5.36E+00	1.14E-08	6.61E-08
ENSG00000187867	PALM3	2.84E+00	1.14E-08	6.61E-08
ENSG00000095397	WHRN	1.70E+00	1.20E-08	6.94E-08
ENSG00000141664	ZCCHC2	1.75E+00	1.25E-08	7.20E-08
ENSG00000178695	KCTD12	1.06E+00	1.25E-08	7.21E-08
ENSG00000100284	TOM1	1.14E+00	1.29E-08	7.44E-08
ENSG00000107872	FBXL15	1.16E+00	1.30E-08	7.46E-08
ENSG00000177595	PIDD1	1.34E+00	1.31E-08	7.53E-08
ENSG00000197084	LCE1C	4.60E+00	1.34E-08	7.70E-08
ENSG00000120690	ELF1	1.05E+00	1.34E-08	7.70E-08
ENSG00000160439	RDH13	1.50E+00	1.35E-08	7.76E-08
ENSG00000274602	PI4KAP1	1.71E+00	1.37E-08	7.87E-08
ENSG00000237523	LINC00857	2.73E+00	1.39E-08	7.96E-08
ENSG00000263934	SNORD3A	3.52E+00	1.40E-08	8.00E-08
ENSG00000157353	FCSK	2.12E+00	1.40E-08	8.00E-08
ENSG00000147383	NSDHL	1.06E+00	1.46E-08	8.32E-08
ENSG00000088808	PPP1R13B	1.57E+00	1.49E-08	8.48E-08
ENSG00000155629	PIK3AP1	3.52E+00	1.53E-08	8.68E-08
ENSG00000131797	CLUHP3	2.90E+00	1.54E-08	8.77E-08
ENSG00000106927	AMBP	4.28E+00	1.57E-08	8.94E-08
ENSG00000204604	ZNF468	1.49E+00	1.65E-08	9.33E-08
ENSG00000164715	LMTK2	1.33E+00	1.66E-08	9.39E-08
ENSG00000181404	WASHC1	1.53E+00	1.67E-08	9.44E-08
ENSG00000125998	FAM83C	5.79E+00	1.74E-08	9.83E-08
ENSG00000174007	CEP19	1.55E+00	1.74E-08	9.86E-08
ENSG00000015520	NPC1L1	5.86E+00	1.76E-08	9.94E-08
ENSG00000154889	MPPE1	1.74E+00	1.77E-08	9.98E-08
ENSG00000215853	RPTN	6.11E+00	1.83E-08	1.03E-07
ENSG00000127824	TUBA4A	1.70E+00	1.85E-08	1.04E-07
ENSG00000177570	SAMD12	4.59E+00	1.86E-08	1.05E-07

ENSG00000130734	ATG4D	1.06E+00	1.87E-08	1.05E-07
ENSG00000172113	NME6	1.10E+00	1.88E-08	1.06E-07
ENSG00000118369	USP35	2.40E+00	1.93E-08	1.09E-07
ENSG00000182272	B4GALNT4	1.11E+00	1.96E-08	1.10E-07
ENSG00000143515	ATP8B2	1.39E+00	1.99E-08	1.12E-07
ENSG00000167562	ZNF701	1.48E+00	2.00E-08	1.12E-07
ENSG00000112297	CRYBG1	1.25E+00	2.00E-08	1.13E-07
ENSG00000090989	EXOC1	1.15E+00	2.04E-08	1.15E-07
ENSG00000163071	SPATA18	4.91E+00	2.06E-08	1.15E-07
ENSG00000155465	SLC7A7	2.66E+00	2.08E-08	1.17E-07
ENSG00000144550	CPNE9	4.76E+00	2.12E-08	1.19E-07
ENSG00000144488	ESPNL	6.16E+00	2.13E-08	1.19E-07
ENSG00000101198	NKAIN4	2.89E+00	2.14E-08	1.20E-07
ENSG00000168067	MAP4K2	1.28E+00	2.15E-08	1.20E-07
ENSG00000170075	GPR37L1	4.57E+00	2.16E-08	1.21E-07
ENSG00000151651	ADAM8	3.65E+00	2.16E-08	1.21E-07
ENSG00000204618	RNF39	6.08E+00	2.18E-08	1.22E-07
ENSG00000099338	CATSPERG	6.32E+00	2.20E-08	1.23E-07
ENSG00000167543	TP53I13	1.52E+00	2.20E-08	1.23E-07
ENSG00000177409	SAMD9L	2.89E+00	2.21E-08	1.23E-07
ENSG00000126583	PRKCG	4.70E+00	2.23E-08	1.24E-07
ENSG00000164070	HSPA4L	1.13E+00	2.24E-08	1.25E-07
ENSG00000120055	C10orf95	5.08E+00	2.24E-08	1.25E-07
ENSG00000174939	ASPHD1	1.43E+00	2.29E-08	1.28E-07
ENSG00000135452	TSPAN31	2.12E+00	2.30E-08	1.28E-07
ENSG00000166562	SEC11C	1.19E+00	2.30E-08	1.28E-07
ENSG00000287356	AL590822.3	3.04E+00	2.33E-08	1.30E-07
ENSG00000105146	AURKC	2.94E+00	2.34E-08	1.30E-07
ENSG00000064270	ATP2C2	5.47E+00	2.37E-08	1.31E-07
ENSG00000138166	DUSP5	1.06E+00	2.40E-08	1.33E-07
ENSG00000189350	TOGARAM2	4.76E+00	2.40E-08	1.33E-07
ENSG00000204084	INPP5B	1.74E+00	2.44E-08	1.36E-07
ENSG00000158296	SLC13A3	5.53E+00	2.45E-08	1.36E-07
ENSG00000182261	NLRP10	5.72E+00	2.46E-08	1.36E-07
ENSG00000162738	VANGL2	1.45E+00	2.46E-08	1.36E-07
ENSG00000151240	DIP2C	1.30E+00	2.51E-08	1.39E-07
ENSG00000164047	CAMP	5.96E+00	2.54E-08	1.40E-07
ENSG00000121753	ADGRB2	1.45E+00	2.55E-08	1.41E-07
ENSG00000229967	MAGEA4-AS1	6.03E+00	2.57E-08	1.42E-07
ENSG00000130598	TNNI2	5.70E+00	2.60E-08	1.44E-07
ENSG00000005206	SPPL2B	1.12E+00	2.61E-08	1.44E-07
ENSG00000168754	FAM178B	5.69E+00	2.62E-08	1.45E-07
ENSG00000170537	TMC7	3.60E+00	2.63E-08	1.45E-07
ENSG00000205352	PRR13	1.18E+00	2.70E-08	1.49E-07
ENSG00000058085	LAMC2	3.01E+00	2.73E-08	1.51E-07

ENSG00000118137	APOA1	4.29E+00	2.77E-08	1.52E-07
ENSG00000101336	HCK	4.30E+00	2.82E-08	1.55E-07
ENSG00000163623	NKX6-1	5.27E+00	2.84E-08	1.56E-07
ENSG00000184863	RBM33	1.03E+00	2.85E-08	1.57E-07
ENSG00000198729	PPP1R14C	2.03E+00	2.88E-08	1.58E-07
ENSG00000197847	SLC22A20P	6.16E+00	2.96E-08	1.62E-07
ENSG00000049283	EPN3	5.70E+00	3.10E-08	1.69E-07
ENSG00000228526	MIR34AHG	2.04E+00	3.10E-08	1.69E-07
ENSG00000261713	SSTR5-AS1	5.86E+00	3.11E-08	1.70E-07
ENSG00000136044	APPL2	1.08E+00	3.18E-08	1.74E-07
ENSG00000149451	ADAM33	5.08E+00	3.20E-08	1.75E-07
ENSG00000011422	PLAUR	1.40E+00	3.24E-08	1.76E-07
ENSG00000105755	ETHE1	1.63E+00	3.24E-08	1.76E-07
ENSG00000112039	FANCE	1.59E+00	3.26E-08	1.78E-07
ENSG00000184985	SORCS2	2.79E+00	3.30E-08	1.79E-07
ENSG00000186222	BLOC1S4	1.07E+00	3.38E-08	1.84E-07
ENSG00000111087	GLI1	4.90E+00	3.39E-08	1.84E-07
ENSG00000184500	PROS1	1.30E+00	3.41E-08	1.85E-07
ENSG00000115145	STAM2	1.00E+00	3.44E-08	1.87E-07
ENSG00000283294	AP005212.4	2.64E+00	3.45E-08	1.87E-07
ENSG00000186994	KANK3	2.70E+00	3.51E-08	1.91E-07
ENSG00000128268	MGAT3	1.73E+00	3.62E-08	1.96E-07
ENSG00000164778	EN2	5.92E+00	3.75E-08	2.03E-07
ENSG00000235098	ANKRD65	5.89E+00	3.78E-08	2.04E-07
ENSG00000103154	NECAB2	3.98E+00	3.91E-08	2.11E-07
ENSG00000007402	CACNA2D2	2.59E+00	3.98E-08	2.15E-07
ENSG00000143674	MAP3K21	1.94E+00	4.02E-08	2.16E-07
ENSG00000082397	EPB41L3	2.64E+00	4.23E-08	2.28E-07
ENSG00000179152	TCAIM	1.07E+00	4.34E-08	2.33E-07
ENSG00000051009	FAM160A2	1.42E+00	4.38E-08	2.35E-07
ENSG00000196152	ZNF79	1.99E+00	4.47E-08	2.40E-07
ENSG00000137393	RNF144B	3.12E+00	4.55E-08	2.45E-07
ENSG00000259439	LINC01833	5.74E+00	4.67E-08	2.51E-07
ENSG00000164976	MYORG	1.61E+00	4.77E-08	2.56E-07
ENSG00000105467	SYNGR4	6.14E+00	4.87E-08	2.61E-07
ENSG00000120875	DUSP4	1.22E+00	4.88E-08	2.62E-07
ENSG00000173237	C11orf86	3.24E+00	4.92E-08	2.63E-07
ENSG00000164690	SHH	4.00E+00	4.93E-08	2.64E-07
ENSG00000106012	IQCE	1.32E+00	4.95E-08	2.65E-07
ENSG00000186174	BCL9L	1.07E+00	5.00E-08	2.68E-07
ENSG00000167323	STIM1	1.05E+00	5.05E-08	2.70E-07
ENSG00000196296	ATP2A1	3.27E+00	5.06E-08	2.71E-07
ENSG00000197070	ARRDC1	1.80E+00	5.15E-08	2.75E-07
ENSG00000138964	PARVG	6.48E+00	5.21E-08	2.78E-07
ENSG00000102755	FLT1	1.11E+00	5.44E-08	2.90E-07

ENSG00000183647	ZNF530	1.63E+00	5.44E-08	2.90E-07
ENSG00000082458	DLG3	1.29E+00	5.48E-08	2.92E-07
ENSG00000120949	TNFRSF8	5.82E+00	5.48E-08	2.92E-07
ENSG00000112514	CUTA	1.36E+00	5.58E-08	2.97E-07
ENSG00000115112	TFCP2L1	5.59E+00	5.64E-08	3.00E-07
ENSG00000196781	TLE1	1.35E+00	5.80E-08	3.08E-07
ENSG00000182575	NXPH3	5.86E+00	5.86E-08	3.11E-07
ENSG00000198198	SZT2	1.47E+00	5.90E-08	3.13E-07
ENSG00000249673	NOP14-AS1	1.74E+00	5.90E-08	3.13E-07
ENSG00000103316	CRYM	4.86E+00	6.06E-08	3.21E-07
ENSG00000161509	GRIN2C	5.30E+00	6.29E-08	3.33E-07
ENSG00000172927	MYEOV	3.47E+00	6.33E-08	3.35E-07
ENSG00000136715	SAP130	1.04E+00	6.38E-08	3.37E-07
ENSG00000143554	SLC27A3	2.39E+00	6.38E-08	3.37E-07
ENSG00000087085	ACHE	3.81E+00	6.41E-08	3.39E-07
ENSG00000078814	MYH7B	6.47E+00	6.44E-08	3.40E-07
ENSG00000148798	INA	1.81E+00	6.50E-08	3.43E-07
ENSG00000145687	SSBP2	3.35E+00	6.54E-08	3.45E-07
ENSG00000111424	VDR	1.06E+00	6.58E-08	3.47E-07
ENSG00000180209	MYLPF	3.40E+00	6.64E-08	3.51E-07
ENSG00000122378	PRXL2A	1.71E+00	6.75E-08	3.56E-07
ENSG00000158445	KCNB1	3.74E+00	6.77E-08	3.57E-07
ENSG00000198570	RD3	5.65E+00	6.83E-08	3.60E-07
ENSG00000280027	AC007342.9	5.75E+00	6.86E-08	3.61E-07
ENSG00000095951	HIVEP1	1.26E+00	6.95E-08	3.66E-07
ENSG00000287600	AC122719.3	5.82E+00	7.08E-08	3.72E-07
ENSG00000196436	NPIP15	5.33E+00	7.23E-08	3.80E-07
ENSG00000159753	CARMIL2	2.39E+00	7.36E-08	3.86E-07
ENSG00000247317	LY6E-DT	5.37E+00	7.36E-08	3.87E-07
ENSG00000169885	CALML6	5.82E+00	7.54E-08	3.95E-07
ENSG00000278558	TMEM191B	5.18E+00	7.57E-08	3.97E-07
ENSG00000197506	SLC28A3	5.45E+00	7.67E-08	4.02E-07
ENSG00000157379	DHRS1	2.96E+00	7.85E-08	4.11E-07
ENSG00000151116	UEVLD	1.40E+00	7.96E-08	4.16E-07
ENSG00000256955	AC131009.2	5.02E+00	7.98E-08	4.17E-07
ENSG00000213676	ATF6B	2.12E+00	8.06E-08	4.21E-07
ENSG00000141699	RETREG3	1.32E+00	8.14E-08	4.25E-07
ENSG00000141977	CIB3	6.31E+00	8.24E-08	4.30E-07
ENSG00000167333	TRIM68	1.48E+00	8.81E-08	4.58E-07
ENSG00000223572	CKMT1A	3.84E+00	8.83E-08	4.59E-07
ENSG00000273174	AC108673.2	3.38E+00	8.85E-08	4.60E-07
ENSG00000197283	SYNGAP1	2.41E+00	9.02E-08	4.68E-07
ENSG00000146826	MAP11	1.57E+00	9.24E-08	4.79E-07
ENSG00000165359	INTS6L	4.11E+00	9.30E-08	4.82E-07
ENSG00000135519	KCNH3	3.09E+00	9.58E-08	4.95E-07

ENSG00000167644	C19orf33	6.29E+00	9.57E-08	4.95E-07
ENSG00000168118	RAB4A	1.33E+00	9.57E-08	4.95E-07
ENSG00000187678	SPRY4	1.27E+00	9.58E-08	4.95E-07
ENSG00000112685	EXOC2	1.25E+00	9.61E-08	4.97E-07
ENSG00000125652	ALKBH7	1.58E+00	9.67E-08	5.00E-07
ENSG00000269958	AL049840.5	1.17E+00	9.91E-08	5.12E-07
ENSG00000102935	ZNF423	2.22E+00	9.93E-08	5.12E-07
ENSG00000086102	NFX1	1.05E+00	9.95E-08	5.13E-07
ENSG00000198786	MT-ND5	1.04E+00	1.01E-07	5.22E-07
ENSG00000142784	WDTC1	1.03E+00	1.03E-07	5.29E-07
ENSG00000153902	LGI4	5.32E+00	1.10E-07	5.64E-07
ENSG00000091536	MYO15A	4.57E+00	1.12E-07	5.76E-07
ENSG00000073350	LLGL2	1.66E+00	1.15E-07	5.90E-07
ENSG00000143333	RGS16	4.53E+00	1.15E-07	5.90E-07
ENSG00000171385	KCND3	6.12E+00	1.16E-07	5.92E-07
ENSG00000090238	YPEL3	1.58E+00	1.18E-07	6.02E-07
ENSG00000233974	AC138951.1	5.97E+00	1.18E-07	6.03E-07
ENSG00000170190	SLC16A5	2.26E+00	1.19E-07	6.08E-07
ENSG00000165097	KDM1B	1.64E+00	1.20E-07	6.13E-07
ENSG00000205517	RGL3	2.12E+00	1.21E-07	6.16E-07
ENSG00000120549	KIAA1217	1.75E+00	1.21E-07	6.17E-07
ENSG00000152056	AP1S3	1.94E+00	1.24E-07	6.33E-07
ENSG00000196431	CRYBA4	6.00E+00	1.24E-07	6.33E-07
ENSG00000159713	TPPP3	4.15E+00	1.26E-07	6.40E-07
ENSG00000185847	LINC01405	5.94E+00	1.28E-07	6.52E-07
ENSG00000274993	AC254629.1	5.51E+00	1.31E-07	6.64E-07
ENSG00000214176	PLEKHM1P1	2.33E+00	1.31E-07	6.67E-07
ENSG00000102802	MEDAG	1.78E+00	1.32E-07	6.70E-07
ENSG00000185559	DLK1	5.36E+00	1.34E-07	6.78E-07
ENSG00000287725	AP003071.5	4.81E+00	1.35E-07	6.87E-07
ENSG00000197417	SHPK	1.13E+00	1.39E-07	7.04E-07
ENSG00000175147	TMEM51-AS1	4.34E+00	1.40E-07	7.10E-07
ENSG00000275902	AC139530.3	3.32E+00	1.41E-07	7.13E-07
ENSG00000066422	ZBTB11	1.09E+00	1.41E-07	7.14E-07
ENSG00000205592	MUC19	6.05E+00	1.46E-07	7.36E-07
ENSG00000177685	CRACR2B	3.79E+00	1.47E-07	7.42E-07
ENSG00000177679	SRRM3	1.95E+00	1.48E-07	7.48E-07
ENSG00000130299	GTPBP3	1.17E+00	1.48E-07	7.48E-07
ENSG00000170498	KISS1	7.51E+00	1.53E-07	7.70E-07
ENSG00000090565	RAB11FIP3	1.05E+00	1.53E-07	7.73E-07
ENSG00000099860	GADD45B	1.04E+00	1.54E-07	7.73E-07
ENSG00000141505	ASGR1	1.88E+00	1.54E-07	7.75E-07
ENSG00000196678	ERI2	1.05E+00	1.55E-07	7.80E-07
ENSG00000161055	SCGB3A1	5.98E+00	1.58E-07	7.94E-07
ENSG00000118160	SLC8A2	3.77E+00	1.59E-07	7.97E-07



ENSG00000135925	WNT10A	4.14E+00	1.59E-07	7.97E-07
ENSG00000117408	IPO13	1.12E+00	1.60E-07	8.05E-07
ENSG00000163788	SNRK	1.35E+00	1.62E-07	8.14E-07
ENSG00000067141	NEO1	1.71E+00	1.63E-07	8.17E-07
ENSG00000148219	ASTN2	2.42E+00	1.64E-07	8.21E-07
ENSG00000160606	TLCD1	2.16E+00	1.65E-07	8.25E-07
ENSG00000135272	MDFIC	1.70E+00	1.66E-07	8.32E-07
ENSG00000160179	ABCG1	3.78E+00	1.66E-07	8.32E-07
ENSG00000160224	AIRE	5.89E+00	1.67E-07	8.37E-07
ENSG00000154898	CCDC144CP	1.48E+00	1.69E-07	8.43E-07
ENSG00000236432	AC097662.1	3.69E+00	1.76E-07	8.76E-07
ENSG00000143630	HCN3	2.23E+00	1.79E-07	8.95E-07
ENSG00000204428	LY6G5C	3.03E+00	1.81E-07	9.02E-07
ENSG00000142675	CNKSR1	4.28E+00	1.82E-07	9.08E-07
ENSG00000148384	INPP5E	1.08E+00	1.84E-07	9.17E-07
ENSG00000014164	ZC3H3	1.21E+00	1.85E-07	9.21E-07
ENSG00000268518	AC020909.2	6.55E+00	1.85E-07	9.23E-07
ENSG00000140090	SLC24A4	5.49E+00	1.92E-07	9.52E-07
ENSG00000180979	LRRC57	1.10E+00	1.95E-07	9.67E-07
ENSG00000197568	HHLA3	2.17E+00	1.97E-07	9.77E-07
ENSG00000167889	MGAT5B	1.61E+00	1.97E-07	9.78E-07
ENSG00000105656	ELL	1.21E+00	2.09E-07	1.03E-06
ENSG00000086159	AQP6	6.00E+00	2.10E-07	1.04E-06
ENSG00000185133	INPP5J	2.38E+00	2.11E-07	1.04E-06
ENSG00000163898	LIPH	2.60E+00	2.15E-07	1.06E-06
ENSG00000147100	SLC16A2	1.57E+00	2.15E-07	1.06E-06
ENSG00000167799	NUDT8	2.16E+00	2.19E-07	1.08E-06
ENSG00000118162	KPTN	1.17E+00	2.24E-07	1.10E-06
ENSG00000277013	AC008556.1	5.94E+00	2.25E-07	1.11E-06
ENSG00000104133	SPG11	1.53E+00	2.32E-07	1.14E-06
ENSG00000234719	NPIP2	3.95E+00	2.38E-07	1.17E-06
ENSG00000092871	RFFL	1.16E+00	2.44E-07	1.20E-06
ENSG00000049246	PER3	1.92E+00	2.46E-07	1.21E-06
ENSG00000134575	ACP2	1.16E+00	2.61E-07	1.28E-06
ENSG00000226979	LTA	5.34E+00	2.65E-07	1.30E-06
ENSG00000170909	OSCAR	5.46E+00	2.69E-07	1.32E-06
ENSG00000061455	PRDM6	5.07E+00	2.69E-07	1.32E-06
ENSG00000215440	NPEPL1	2.31E+00	2.78E-07	1.36E-06
ENSG00000004766	VPS50	1.11E+00	2.81E-07	1.37E-06
ENSG00000140092	FBLN5	5.93E+00	2.82E-07	1.38E-06
ENSG00000108798	ABI3	5.59E+00	2.84E-07	1.39E-06
ENSG00000256980	KHDC1L	4.78E+00	2.93E-07	1.43E-06
ENSG00000005001	PRSS22	5.10E+00	2.94E-07	1.43E-06
ENSG00000134571	MYBPC3	6.01E+00	2.97E-07	1.45E-06
ENSG00000187258	NPSR1	5.73E+00	2.98E-07	1.45E-06

ENSG00000102886	GDPD3	2.53E+00	3.05E-07	1.48E-06
ENSG00000124343	XG	5.55E+00	3.07E-07	1.49E-06
ENSG00000272459	AC139795.3	2.47E+00	3.08E-07	1.50E-06
ENSG00000111863	ADTRP	3.42E+00	3.17E-07	1.54E-06
ENSG00000188293	IGFL1	5.56E+00	3.26E-07	1.58E-06
ENSG00000103490	PYCARD	3.22E+00	3.29E-07	1.59E-06
ENSG00000259153	AC004816.1	1.50E+00	3.34E-07	1.62E-06
ENSG00000083223	TUT7	1.05E+00	3.36E-07	1.63E-06
ENSG00000166289	PLEKHF1	2.07E+00	3.43E-07	1.66E-06
ENSG00000075275	CELSR1	1.21E+00	3.46E-07	1.67E-06
ENSG00000268516	AC020915.2	1.77E+00	3.47E-07	1.68E-06
ENSG00000165731	RET	5.18E+00	3.52E-07	1.70E-06
ENSG00000106404	CLDN15	1.27E+00	3.52E-07	1.70E-06
ENSG00000100065	CARD10	1.03E+00	3.53E-07	1.71E-06
ENSG00000141449	GREB1L	1.58E+00	3.60E-07	1.74E-06
ENSG00000131096	PYY	5.47E+00	3.61E-07	1.74E-06
ENSG00000169946	ZFPM2	6.01E+00	3.62E-07	1.74E-06
ENSG00000256518	AP000812.3	6.22E+00	3.71E-07	1.78E-06
ENSG00000260220	CCDC187	5.81E+00	3.77E-07	1.81E-06
ENSG00000182022	CHST15	1.76E+00	3.79E-07	1.83E-06
ENSG00000132005	RFX1	1.10E+00	3.87E-07	1.86E-06
ENSG00000166825	ANPEP	1.75E+00	4.02E-07	1.93E-06
ENSG00000137491	SLCO2B1	5.31E+00	4.07E-07	1.95E-06
ENSG00000102003	SYP	2.31E+00	4.12E-07	1.98E-06
ENSG00000105321	CCDC9	1.63E+00	4.14E-07	1.99E-06
ENSG00000248334	WHAMMP2	2.58E+00	4.20E-07	2.01E-06
ENSG00000114388	NPRL2	1.11E+00	4.21E-07	2.02E-06
ENSG00000196420	S100A5	5.52E+00	4.23E-07	2.03E-06
ENSG00000187513	GJA4	5.88E+00	4.25E-07	2.04E-06
ENSG00000139679	LPAR6	6.11E+00	4.39E-07	2.10E-06
ENSG00000182749	PAQR7	1.86E+00	4.44E-07	2.12E-06
ENSG00000104904	OAZ1	1.07E+00	4.51E-07	2.15E-06
ENSG00000108306	FBXL20	1.23E+00	4.52E-07	2.16E-06
ENSG00000158023	WDR66	3.39E+00	4.54E-07	2.17E-06
ENSG00000175662	TOM1L2	1.05E+00	4.55E-07	2.17E-06
ENSG00000261655	AC100803.3	6.32E+00	4.61E-07	2.20E-06
ENSG00000179526	SHARPIN	1.09E+00	4.65E-07	2.22E-06
ENSG00000134363	FST	1.49E+00	4.66E-07	2.22E-06
ENSG00000111911	HINT3	1.31E+00	4.72E-07	2.25E-06
ENSG00000033627	ATP6V0A1	1.03E+00	4.83E-07	2.30E-06
ENSG00000074317	SNCB	2.48E+00	5.10E-07	2.42E-06
ENSG00000271009	AC116667.1	3.01E+00	5.12E-07	2.43E-06
ENSG00000166897	ELFN2	2.06E+00	5.39E-07	2.55E-06
ENSG00000140950	MEAK7	1.29E+00	5.46E-07	2.59E-06
ENSG00000135842	NIBAN1	2.20E+00	5.47E-07	2.59E-06

ENSG00000204498	NFKBIL1	1.91E+00	5.54E-07	2.62E-06
ENSG00000124602	UNC5CL	5.50E+00	5.61E-07	2.65E-06
ENSG00000274422	AC245060.5	1.73E+00	5.66E-07	2.67E-06
ENSG00000150457	LATS2	1.18E+00	5.70E-07	2.69E-06
ENSG00000104205	SGK3	1.39E+00	5.71E-07	2.70E-06
ENSG00000160182	TFF1	5.34E+00	5.72E-07	2.70E-06
ENSG00000196605	ZNF846	2.64E+00	5.78E-07	2.72E-06
ENSG00000129159	KCNC1	4.72E+00	5.89E-07	2.77E-06
ENSG00000062038	CDH3	2.41E+00	6.05E-07	2.84E-06
ENSG00000105538	RASIP1	3.30E+00	6.08E-07	2.85E-06
ENSG00000082438	COBLL1	1.96E+00	6.10E-07	2.86E-06
ENSG00000063180	CA11	1.69E+00	6.18E-07	2.90E-06
ENSG00000073605	GSDMB	1.68E+00	6.20E-07	2.91E-06
ENSG00000103152	MPG	1.46E+00	6.27E-07	2.93E-06
ENSG00000147174	GCNA	2.19E+00	6.28E-07	2.94E-06
ENSG00000103449	SALL1	1.99E+00	6.31E-07	2.95E-06
ENSG00000142677	IL22RA1	3.63E+00	6.45E-07	3.01E-06
ENSG00000185187	SIGIRR	1.60E+00	6.56E-07	3.06E-06
ENSG00000186654	PRR5	1.92E+00	6.56E-07	3.06E-06
ENSG00000144045	DQX1	2.92E+00	6.76E-07	3.15E-06
ENSG00000151726	ACSL1	1.12E+00	6.81E-07	3.17E-06
ENSG00000185101	ANO9	4.99E+00	6.87E-07	3.20E-06
ENSG00000184545	DUSP8	1.00E+00	7.02E-07	3.27E-06
ENSG00000086544	ITPKC	1.23E+00	7.18E-07	3.34E-06
ENSG00000266074	BAHCC1	1.29E+00	7.21E-07	3.35E-06
ENSG00000110315	RNF141	1.35E+00	7.28E-07	3.38E-06
ENSG00000137842	TMEM62	1.73E+00	7.30E-07	3.39E-06
ENSG00000131831	RAI2	4.88E+00	7.31E-07	3.39E-06
ENSG00000237172	B3GNT9	1.07E+00	7.34E-07	3.41E-06
ENSG00000119917	IFIT3	1.37E+00	7.36E-07	3.41E-06
ENSG00000106078	COBL	5.24E+00	7.39E-07	3.43E-06
ENSG00000185838	GNB1L	1.41E+00	7.40E-07	3.43E-06
ENSG00000178307	TMEM11	1.34E+00	7.41E-07	3.43E-06
ENSG00000187775	DNAH17	3.52E+00	7.44E-07	3.45E-06
ENSG00000118407	FILIP1	4.14E+00	7.46E-07	3.46E-06
ENSG00000124249	KCNK15	4.96E+00	7.57E-07	3.50E-06
ENSG00000127419	TMEM175	2.30E+00	7.61E-07	3.52E-06
ENSG00000205363	INSYN1	2.50E+00	7.64E-07	3.54E-06
ENSG00000143458	GABPB2	1.21E+00	7.66E-07	3.54E-06
ENSG00000148204	CRB2	5.60E+00	7.67E-07	3.54E-06
ENSG00000196388	INCA1	3.37E+00	7.75E-07	3.58E-06
ENSG00000110799	VWF	3.74E+00	7.96E-07	3.67E-06
ENSG00000286177	AC011462.5	1.52E+00	8.06E-07	3.71E-06
ENSG00000116990	MYCL	2.38E+00	8.09E-07	3.73E-06
ENSG00000181097	AC105219.1	2.12E+00	8.12E-07	3.74E-06

ENSG00000172197	MBOAT1	2.11E+00	8.15E-07	3.75E-06
ENSG00000174951	FUT1	2.13E+00	8.20E-07	3.77E-06
ENSG00000006534	ALDH3B1	1.93E+00	8.22E-07	3.78E-06
ENSG00000196839	ADA	1.04E+00	8.29E-07	3.80E-06
ENSG00000160013	PTGIR	4.77E+00	8.29E-07	3.81E-06
ENSG00000159640	ACE	4.00E+00	8.41E-07	3.86E-06
ENSG00000003137	CYP26B1	1.88E+00	8.55E-07	3.92E-06
ENSG00000152503	TRIM36	1.81E+00	8.68E-07	3.98E-06
ENSG00000182379	NXPH4	1.39E+00	8.75E-07	4.01E-06
ENSG00000233930	KRTAP5-AS1	5.18E+00	8.78E-07	4.02E-06
ENSG00000258102	MAP1LC3B2	2.78E+00	8.83E-07	4.04E-06
ENSG00000227051	C14orf132	1.16E+00	8.89E-07	4.07E-06
ENSG00000114626	ABTB1	1.36E+00	8.97E-07	4.10E-06
ENSG00000122547	EEPDI	3.06E+00	9.03E-07	4.13E-06
ENSG00000188916	INSYN2A	2.91E+00	9.03E-07	4.13E-06
ENSG00000236548	RNF217-AS1	6.48E+00	9.17E-07	4.19E-06
ENSG00000139718	SETD1B	1.04E+00	9.53E-07	4.35E-06
ENSG00000259904	ACTG1P15	6.13E+00	9.75E-07	4.45E-06
ENSG00000005102	MEOX1	4.78E+00	9.83E-07	4.48E-06
ENSG00000100336	APOL4	5.50E+00	9.96E-07	4.54E-06
ENSG00000142082	SIRT3	1.75E+00	1.02E-06	4.65E-06
ENSG00000006459	KDM7A	1.32E+00	1.04E-06	4.74E-06
ENSG00000111679	PTPN6	3.49E+00	1.05E-06	4.76E-06
ENSG00000136935	GOLGA1	1.21E+00	1.08E-06	4.91E-06
ENSG00000196267	ZNF836	2.70E+00	1.09E-06	4.96E-06
ENSG00000152518	ZFP36L2	1.02E+00	1.10E-06	4.98E-06
ENSG00000232956	SNHG15	1.08E+00	1.11E-06	5.05E-06
ENSG00000175600	SUGCT	1.75E+00	1.12E-06	5.05E-06
ENSG00000273137	AL022328.2	5.71E+00	1.14E-06	5.15E-06
ENSG00000101665	SMAD7	1.12E+00	1.14E-06	5.15E-06
ENSG00000181135	ZNF707	1.52E+00	1.16E-06	5.25E-06
ENSG00000268601	AC115522.1	4.83E+00	1.18E-06	5.34E-06
ENSG00000198788	MUC2	5.90E+00	1.19E-06	5.36E-06
ENSG00000273066	AL355987.4	1.75E+00	1.20E-06	5.42E-06
ENSG00000119943	PYROXD2	4.21E+00	1.22E-06	5.52E-06
ENSG00000151892	GFRA1	1.31E+00	1.24E-06	5.61E-06
ENSG00000167625	ZNF526	1.09E+00	1.25E-06	5.63E-06
ENSG00000118900	UBN1	1.03E+00	1.25E-06	5.64E-06
ENSG00000164972	C9orf24	5.35E+00	1.26E-06	5.69E-06
ENSG00000182389	CACNB4	5.10E+00	1.30E-06	5.86E-06
ENSG00000205488	CALML3-AS1	5.66E+00	1.33E-06	5.98E-06
ENSG00000040531	CTNS	1.08E+00	1.34E-06	6.03E-06
ENSG00000142959	BEST4	5.53E+00	1.35E-06	6.04E-06
ENSG00000172061	LRRC15	3.32E+00	1.35E-06	6.06E-06
ENSG00000109270	LAMTOR3	1.04E+00	1.35E-06	6.07E-06

ENSG00000088538	DOCK3	2.59E+00	1.37E-06	6.14E-06
ENSG00000267106	ZNF561-AS1	1.61E+00	1.40E-06	6.27E-06
ENSG00000140538	NTRK3	4.33E+00	1.47E-06	6.56E-06
ENSG00000160404	TOR2A	1.03E+00	1.49E-06	6.64E-06
ENSG00000120868	APAF1	1.16E+00	1.49E-06	6.66E-06
ENSG00000198300	PEG3	5.20E+00	1.51E-06	6.74E-06
ENSG00000105672	ETV2	1.99E+00	1.52E-06	6.76E-06
ENSG00000104722	NEFM	5.56E+00	1.55E-06	6.91E-06
ENSG00000172006	ZNF554	2.30E+00	1.56E-06	6.93E-06
ENSG00000119950	MXI1	1.01E+00	1.56E-06	6.96E-06
ENSG00000146085	MMUT	1.06E+00	1.57E-06	6.96E-06
ENSG00000213199	ASIC3	3.16E+00	1.57E-06	6.97E-06
ENSG00000235706	DICER1-AS1	2.85E+00	1.58E-06	7.02E-06
ENSG00000260086	AC007611.1	5.27E+00	1.58E-06	7.03E-06
ENSG00000164692	COL1A2	3.25E+00	1.58E-06	7.04E-06
ENSG00000141542	RAB40B	1.28E+00	1.61E-06	7.15E-06
ENSG00000129455	KLK8	5.94E+00	1.63E-06	7.20E-06
ENSG00000160188	RSPH1	4.73E+00	1.64E-06	7.24E-06
ENSG00000197956	S100A6	2.12E+00	1.64E-06	7.26E-06
ENSG00000143126	CELSR2	1.77E+00	1.65E-06	7.31E-06
ENSG00000196118	CCDC189	1.21E+00	1.68E-06	7.43E-06
ENSG00000102312	PORCN	1.49E+00	1.69E-06	7.46E-06
ENSG00000134780	DAGLA	2.75E+00	1.69E-06	7.48E-06
ENSG00000160282	FTCD	3.68E+00	1.70E-06	7.53E-06
ENSG00000155980	KIF5A	5.24E+00	1.71E-06	7.55E-06
ENSG00000065029	ZNF76	1.24E+00	1.73E-06	7.62E-06
ENSG00000165175	MID1IP1	1.15E+00	1.73E-06	7.62E-06
ENSG00000123405	NFE2	3.07E+00	1.74E-06	7.66E-06
ENSG00000240889	NDUFB2-AS1	2.23E+00	1.74E-06	7.69E-06
ENSG00000162551	ALPL	4.61E+00	1.74E-06	7.69E-06
ENSG00000109101	FOXN1	5.89E+00	1.75E-06	7.70E-06
ENSG00000269404	SPIB	4.55E+00	1.76E-06	7.74E-06
ENSG00000129003	VPS13C	1.04E+00	1.82E-06	8.03E-06
ENSG00000233695	GAS6-AS1	3.60E+00	1.84E-06	8.12E-06
ENSG00000155265	GOLGA7B	2.80E+00	1.85E-06	8.13E-06
ENSG00000198944	SOWAHA	5.29E+00	1.85E-06	8.14E-06
ENSG00000186442	KRT3	4.59E+00	1.85E-06	8.15E-06
ENSG00000204642	HLA-F	1.09E+00	1.86E-06	8.16E-06
ENSG00000167711	SERPINF2	4.93E+00	1.87E-06	8.20E-06
ENSG00000147251	DOCK11	1.38E+00	1.99E-06	8.71E-06
ENSG00000171124	FUT3	5.61E+00	2.13E-06	9.29E-06
ENSG00000140326	CDAN1	1.12E+00	2.14E-06	9.33E-06
ENSG00000133138	TBC1D8B	3.35E+00	2.14E-06	9.37E-06
ENSG00000135205	CCDC146	2.37E+00	2.35E-06	1.02E-05
ENSG00000128965	CHAC1	1.62E+00	2.39E-06	1.04E-05

ENSG00000142609	CFAP74	4.98E+00	2.41E-06	1.05E-05
ENSG00000165898	ISCA2	1.22E+00	2.43E-06	1.06E-05
ENSG00000168016	TRANK1	2.02E+00	2.49E-06	1.08E-05
ENSG00000175105	ZNF654	1.21E+00	2.50E-06	1.09E-05
ENSG00000125637	PSD4	2.45E+00	2.51E-06	1.09E-05
ENSG00000115687	PASK	1.35E+00	2.52E-06	1.09E-05
ENSG00000173991	TCAP	2.66E+00	2.52E-06	1.09E-05
ENSG00000225611	LINC02158	4.51E+00	2.54E-06	1.10E-05
ENSG00000167083	GNGT2	5.49E+00	2.55E-06	1.10E-05
ENSG00000120156	TEK	5.09E+00	2.65E-06	1.14E-05
ENSG00000146700	SSC4D	4.39E+00	2.65E-06	1.15E-05
ENSG00000007312	CD79B	5.35E+00	2.66E-06	1.15E-05
ENSG00000176834	VSIG10	1.23E+00	2.67E-06	1.15E-05
ENSG00000070882	OSBPL3	1.47E+00	2.68E-06	1.16E-05
ENSG00000099282	TSPAN15	3.30E+00	2.71E-06	1.17E-05
ENSG00000067191	CACNB1	1.79E+00	2.72E-06	1.17E-05
ENSG00000168477	TNXB	3.90E+00	2.78E-06	1.20E-05
ENSG00000103534	TMC5	4.82E+00	2.79E-06	1.20E-05
ENSG00000104848	KCNA7	5.60E+00	2.82E-06	1.21E-05
ENSG00000135540	NHSL1	1.46E+00	2.83E-06	1.22E-05
ENSG00000178401	DNAJC22	4.78E+00	2.87E-06	1.24E-05
ENSG00000135424	ITGA7	1.83E+00	2.94E-06	1.26E-05
ENSG00000141738	GRB7	4.14E+00	2.95E-06	1.27E-05
ENSG00000048707	VPS13D	1.42E+00	2.95E-06	1.27E-05
ENSG00000196132	MYT1	4.01E+00	2.96E-06	1.27E-05
ENSG00000215458	AATBC	5.46E+00	2.97E-06	1.28E-05
ENSG00000125820	NKX2-2	5.31E+00	3.00E-06	1.29E-05
ENSG00000163464	CXCR1	5.36E+00	3.02E-06	1.29E-05
ENSG00000165810	BTNL9	4.51E+00	3.06E-06	1.31E-05
ENSG00000244459	AC147067.1	5.23E+00	3.07E-06	1.31E-05
ENSG00000197614	MFAP5	5.99E+00	3.09E-06	1.33E-05
ENSG00000188211	NCR3LG1	1.82E+00	3.14E-06	1.34E-05
ENSG00000196358	NTNG2	5.30E+00	3.19E-06	1.36E-05
ENSG00000268751	SCGB1B2P	2.41E+00	3.19E-06	1.37E-05
ENSG00000147036	LANCL3	5.42E+00	3.23E-06	1.38E-05
ENSG00000129422	MTUS1	1.03E+00	3.25E-06	1.39E-05
ENSG00000152661	GJA1	1.08E+00	3.26E-06	1.39E-05
ENSG00000224294	PINCR	2.41E+00	3.31E-06	1.41E-05
ENSG00000212864	RNF208	2.38E+00	3.32E-06	1.42E-05
ENSG00000239697	TNFSF12	2.80E+00	3.38E-06	1.44E-05
ENSG00000241935	HOGA1	4.81E+00	3.51E-06	1.49E-05
ENSG00000253669	GASAL1	1.46E+00	3.60E-06	1.53E-05
ENSG00000106852	LHX6	2.76E+00	3.60E-06	1.53E-05
ENSG00000170175	CHRN1	1.40E+00	3.62E-06	1.53E-05
ENSG00000286156	AC026273.1	1.73E+00	3.62E-06	1.53E-05

ENSG00000260260	SNHG19	1.30E+00	3.79E-06	1.60E-05
ENSG00000197471	SPN	5.43E+00	3.81E-06	1.61E-05
ENSG00000119681	LTBP2	1.01E+00	3.82E-06	1.62E-05
ENSG00000157873	TNFRSF14	3.49E+00	3.87E-06	1.64E-05
ENSG00000184363	PKP3	3.31E+00	3.88E-06	1.64E-05
ENSG00000174600	CMKLR1	2.91E+00	3.89E-06	1.65E-05
ENSG00000117115	PADI2	4.85E+00	3.90E-06	1.65E-05
ENSG00000260103	AC012435.2	4.01E+00	3.92E-06	1.66E-05
ENSG00000235954	TTC28-AS1	1.71E+00	3.94E-06	1.66E-05
ENSG00000112195	TREML2	5.31E+00	3.98E-06	1.68E-05
ENSG00000196433	ASMT	5.11E+00	4.02E-06	1.70E-05
ENSG00000104936	DMPK	1.24E+00	4.05E-06	1.71E-05
ENSG00000107317	PTGDS	4.79E+00	4.10E-06	1.73E-05
ENSG00000197406	DIO3	5.45E+00	4.12E-06	1.73E-05
ENSG00000171346	KRT15	2.94E+00	4.22E-06	1.77E-05
ENSG00000119514	GALNT12	2.99E+00	4.24E-06	1.78E-05
ENSG00000174899	SLC66A1L	5.87E+00	4.26E-06	1.79E-05
ENSG00000144130	NT5DC4	5.29E+00	4.38E-06	1.84E-05
ENSG00000185798	WDR53	1.03E+00	4.39E-06	1.84E-05
ENSG00000160447	PKN3	1.74E+00	4.39E-06	1.84E-05
ENSG00000164171	ITGA2	1.11E+00	4.39E-06	1.84E-05
ENSG00000261239	ANKRD26P1	5.31E+00	4.39E-06	1.84E-05
ENSG00000185615	PDIA2	3.09E+00	4.43E-06	1.86E-05
ENSG00000197933	ZNF823	1.59E+00	4.52E-06	1.89E-05
ENSG00000173267	SNCG	2.31E+00	4.53E-06	1.90E-05
ENSG00000082497	SERTAD4	2.20E+00	4.56E-06	1.91E-05
ENSG00000125895	TMEM74B	2.62E+00	4.57E-06	1.91E-05
ENSG00000101203	COL20A1	5.90E+00	4.71E-06	1.97E-05
ENSG00000106524	ANKMY2	1.19E+00	4.73E-06	1.97E-05
ENSG00000153234	NR4A2	3.74E+00	4.81E-06	2.01E-05
ENSG00000196218	RYR1	4.27E+00	4.81E-06	2.01E-05
ENSG00000167895	TMC8	4.49E+00	4.89E-06	2.04E-05
ENSG00000073331	ALPK1	2.33E+00	4.95E-06	2.06E-05
ENSG00000163520	FBLN2	3.40E+00	5.07E-06	2.11E-05
ENSG00000100150	DEPDC5	1.50E+00	5.24E-06	2.17E-05
ENSG00000089692	LAG3	1.83E+00	5.28E-06	2.19E-05
ENSG00000223773	CD99P1	2.92E+00	5.29E-06	2.19E-05
ENSG00000074755	ZZEF1	1.00E+00	5.38E-06	2.23E-05
ENSG00000088340	FER1L4	3.55E+00	5.44E-06	2.25E-05
ENSG00000142149	HUNK	1.41E+00	5.57E-06	2.30E-05
ENSG00000232070	TMEM253	4.23E+00	5.73E-06	2.37E-05
ENSG00000167654	ATCAY	4.64E+00	5.78E-06	2.39E-05
ENSG00000269821	KCNQ1OT1	1.33E+00	5.82E-06	2.40E-05
ENSG00000072121	ZFYVE26	1.27E+00	6.22E-06	2.56E-05
ENSG00000182704	TSKU	1.03E+00	6.23E-06	2.57E-05

ENSG00000204385	SLC44A4	5.76E+00	6.24E-06	2.57E-05
ENSG00000178404	CEP295NL	4.71E+00	6.38E-06	2.63E-05
ENSG00000287170	AC010327.8	5.38E+00	6.45E-06	2.65E-05
ENSG00000197530	MIB2	1.02E+00	6.59E-06	2.71E-05
ENSG00000104522	TSTA3	1.21E+00	6.65E-06	2.73E-05
ENSG00000198807	PAX9	5.10E+00	6.76E-06	2.77E-05
ENSG00000203883	SOX18	2.73E+00	6.83E-06	2.80E-05
ENSG00000078900	TP73	1.41E+00	6.84E-06	2.80E-05
ENSG00000198223	CSF2RA	4.64E+00	6.90E-06	2.82E-05
ENSG00000139880	CDH24	1.66E+00	7.11E-06	2.91E-05
ENSG00000137507	LRRC32	5.23E+00	7.16E-06	2.93E-05
ENSG00000100949	RABGGTA	1.02E+00	7.20E-06	2.94E-05
ENSG00000105655	ISYNA1	1.50E+00	7.20E-06	2.94E-05
ENSG00000260807	AC009041.2	5.45E+00	7.27E-06	2.97E-05
ENSG00000145214	DGKQ	1.14E+00	7.33E-06	2.99E-05
ENSG00000126368	NR1D1	1.56E+00	7.33E-06	2.99E-05
ENSG00000168490	PHYHIP	2.03E+00	7.43E-06	3.03E-05
ENSG00000233493	TMEM238	2.91E+00	7.45E-06	3.03E-05
ENSG00000060558	GNA15	2.84E+00	7.61E-06	3.10E-05
ENSG00000135144	DTX1	5.51E+00	7.63E-06	3.10E-05
ENSG00000037280	FLT4	3.26E+00	7.91E-06	3.21E-05
ENSG00000253741	LNCOC1	4.60E+00	8.02E-06	3.26E-05
ENSG00000164620	RELL2	1.40E+00	8.03E-06	3.26E-05
ENSG00000008735	MAPK8IP2	1.64E+00	8.19E-06	3.32E-05
ENSG00000161328	LRRC56	3.09E+00	8.23E-06	3.33E-05
ENSG00000116096	SPR	1.25E+00	8.25E-06	3.34E-05
ENSG00000179023	KLHDC7A	4.37E+00	8.26E-06	3.34E-05
ENSG00000276600	RAB7B	1.62E+00	8.30E-06	3.36E-05
ENSG00000105088	OLFM2	2.11E+00	8.34E-06	3.37E-05
ENSG00000166387	PPFIBP2	3.73E+00	8.38E-06	3.39E-05
ENSG00000214401	KANSL1-AS1	1.58E+00	8.40E-06	3.39E-05
ENSG00000261040	WFDC21P	1.75E+00	8.43E-06	3.41E-05
ENSG00000105143	SLC1A6	5.63E+00	8.57E-06	3.46E-05
ENSG00000253438	PCAT1	3.59E+00	8.58E-06	3.46E-05
ENSG00000143774	GUK1	1.41E+00	8.59E-06	3.46E-05
ENSG00000261308	FIGNL2	3.91E+00	8.72E-06	3.52E-05
ENSG00000177464	GPR4	3.04E+00	8.82E-06	3.55E-05
ENSG00000188599	NPIPP1	1.50E+00	8.91E-06	3.59E-05
ENSG00000188549	CCDC9B	1.46E+00	8.93E-06	3.60E-05
ENSG00000232973	CYP1B1-AS1	3.39E+00	8.97E-06	3.61E-05
ENSG00000182771	GRID1	5.30E+00	9.01E-06	3.62E-05
ENSG00000109016	DHRS7B	1.03E+00	9.11E-06	3.66E-05
ENSG00000118420	UBE3D	1.04E+00	9.25E-06	3.72E-05
ENSG00000197405	C5AR1	3.34E+00	9.37E-06	3.76E-05
ENSG00000177025	C19orf18	3.00E+00	9.42E-06	3.78E-05



ENSG00000262898	AC139099.2	5.48E+00	9.46E-06	3.79E-05
ENSG00000135441	BLOC1S1	1.31E+00	9.50E-06	3.81E-05
ENSG00000130300	PLVAP	5.29E+00	9.56E-06	3.83E-05
ENSG00000243176	AC092944.1	2.22E+00	9.64E-06	3.86E-05
ENSG00000123415	SMUG1	1.14E+00	9.67E-06	3.87E-05
ENSG00000069812	HES2	2.68E+00	9.71E-06	3.89E-05
ENSG00000068971	PPP2R5B	1.18E+00	1.02E-05	4.09E-05
ENSG00000126500	FLRT1	4.34E+00	1.03E-05	4.11E-05
ENSG00000068976	PYGM	3.73E+00	1.06E-05	4.23E-05
ENSG00000232237	ASCL5	5.53E+00	1.06E-05	4.24E-05
ENSG00000186951	PPARA	1.09E+00	1.07E-05	4.26E-05
ENSG00000241255	AL136126.1	4.63E+00	1.08E-05	4.31E-05
ENSG00000160838	LRRC71	5.97E+00	1.08E-05	4.33E-05
ENSG00000115718	PROC	3.52E+00	1.09E-05	4.34E-05
ENSG00000143198	MGST3	1.22E+00	1.10E-05	4.39E-05
ENSG00000163347	CLDN1	1.47E+00	1.10E-05	4.40E-05
ENSG00000089847	ANKRD24	4.62E+00	1.11E-05	4.43E-05
ENSG00000178585	CTNNBIP1	1.02E+00	1.14E-05	4.52E-05
ENSG00000104870	FCGRT	2.75E+00	1.14E-05	4.54E-05
ENSG00000244558	KCNK15-AS1	4.87E+00	1.15E-05	4.57E-05
ENSG00000060762	MPC1	1.08E+00	1.16E-05	4.59E-05
ENSG00000236935	AP003774.2	5.13E+00	1.17E-05	4.63E-05
ENSG00000142408	CACNG8	1.07E+00	1.18E-05	4.66E-05
ENSG00000137628	DDX60	1.37E+00	1.19E-05	4.72E-05
ENSG00000258128	MKRN9P	5.52E+00	1.20E-05	4.75E-05
ENSG00000143412	ANXA9	5.36E+00	1.21E-05	4.77E-05
ENSG00000073737	DHRS9	5.11E+00	1.21E-05	4.78E-05
ENSG00000197969	VPS13A	1.04E+00	1.21E-05	4.79E-05
ENSG00000105619	TFPT	1.12E+00	1.24E-05	4.88E-05
ENSG00000272836	AL022328.1	4.84E+00	1.25E-05	4.93E-05
ENSG00000167414	GNG8	4.87E+00	1.25E-05	4.93E-05
ENSG00000254338	MAFA-AS1	4.70E+00	1.27E-05	5.00E-05
ENSG00000008516	MMP25	2.10E+00	1.27E-05	5.00E-05
ENSG00000226742	HSBP1L1	1.72E+00	1.27E-05	5.02E-05
ENSG00000069188	SDK2	4.76E+00	1.28E-05	5.03E-05
ENSG00000276075	AC027682.6	3.25E+00	1.28E-05	5.04E-05
ENSG00000239998	LILRA2	5.53E+00	1.30E-05	5.11E-05
ENSG00000186472	PCLO	1.28E+00	1.30E-05	5.12E-05
ENSG00000179044	EXOC3L1	4.85E+00	1.32E-05	5.20E-05
ENSG00000213398	LCAT	1.52E+00	1.32E-05	5.20E-05
ENSG00000165868	HSPA12A	1.08E+00	1.33E-05	5.21E-05
ENSG00000123358	NR4A1	1.04E+00	1.35E-05	5.30E-05
ENSG00000181409	AATK	4.09E+00	1.37E-05	5.35E-05
ENSG00000248161	AC098487.1	2.11E+00	1.38E-05	5.40E-05
ENSG00000163803	PLB1	4.26E+00	1.39E-05	5.42E-05

ENSG00000197653	DNAH10	5.19E+00	1.39E-05	5.42E-05
ENSG00000166170	BAG5	1.01E+00	1.39E-05	5.43E-05
ENSG00000287396	AL592464.3	5.07E+00	1.39E-05	5.43E-05
ENSG00000203900	AL121827.1	5.25E+00	1.40E-05	5.46E-05
ENSG00000099889	ARVCF	1.33E+00	1.40E-05	5.48E-05
ENSG00000123636	BAZ2B	1.17E+00	1.44E-05	5.63E-05
ENSG00000164520	RAET1E	4.34E+00	1.46E-05	5.69E-05
ENSG00000120913	PDLIM2	1.24E+00	1.47E-05	5.74E-05
ENSG00000204681	GABBR1	1.13E+00	1.48E-05	5.75E-05
ENSG00000100968	NFATC4	5.16E+00	1.49E-05	5.81E-05
ENSG00000171345	KRT19	6.25E+00	1.50E-05	5.84E-05
ENSG00000188176	SMTNL2	3.79E+00	1.50E-05	5.85E-05
ENSG00000137648	TMPRSS4	5.56E+00	1.51E-05	5.87E-05
ENSG00000100918	REC8	2.16E+00	1.52E-05	5.92E-05
ENSG00000158856	DMTN	2.24E+00	1.52E-05	5.92E-05
ENSG00000158315	RHBDL2	4.36E+00	1.53E-05	5.95E-05
ENSG00000175206	NPPA	5.38E+00	1.54E-05	5.99E-05
ENSG00000162482	AKR7A3	4.70E+00	1.55E-05	6.02E-05
ENSG00000265190	ANXA8	2.92E+00	1.56E-05	6.06E-05
ENSG00000160145	KALRN	1.09E+00	1.60E-05	6.22E-05
ENSG00000234546	LNCTAM34A	2.99E+00	1.62E-05	6.26E-05
ENSG00000171790	SLFNL1	5.31E+00	1.64E-05	6.33E-05
ENSG00000281404	LINC01176	4.72E+00	1.64E-05	6.36E-05
ENSG00000261092	LINC02178	5.50E+00	1.66E-05	6.41E-05
ENSG00000168661	ZNF30	2.37E+00	1.70E-05	6.58E-05
ENSG00000185924	RTN4RL1	1.93E+00	1.71E-05	6.60E-05
ENSG00000125845	BMP2	3.13E+00	1.73E-05	6.67E-05
ENSG00000255642	PABPC1P4	1.77E+00	1.73E-05	6.69E-05
ENSG00000265096	C1QTNF1-AS1	2.68E+00	1.74E-05	6.71E-05
ENSG00000264148	AC138207.3	4.07E+00	1.76E-05	6.78E-05
ENSG00000166257	SCN3B	2.93E+00	1.79E-05	6.87E-05
ENSG00000254815	AP006284.1	5.55E+00	1.80E-05	6.93E-05
ENSG00000224721	AC007182.1	5.56E+00	1.83E-05	7.02E-05
ENSG00000268223	ARL14EPL	4.80E+00	1.83E-05	7.03E-05
ENSG00000180264	ADGRD2	5.39E+00	1.87E-05	7.17E-05
ENSG00000007545	CRAMP1	1.29E+00	1.87E-05	7.18E-05
ENSG00000147394	ZNF185	2.48E+00	1.88E-05	7.20E-05
ENSG00000130528	HRC	5.10E+00	1.88E-05	7.22E-05
ENSG00000122133	PAEP	5.36E+00	1.94E-05	7.44E-05
ENSG00000143512	HHIPL2	4.04E+00	1.99E-05	7.60E-05
ENSG00000163141	BNIPL	3.69E+00	2.01E-05	7.65E-05
ENSG00000198650	TAT	5.69E+00	2.03E-05	7.74E-05
ENSG00000159496	RGL4	5.31E+00	2.04E-05	7.78E-05
ENSG00000124641	MED20	1.32E+00	2.05E-05	7.82E-05
ENSG00000185269	NOTUM	5.54E+00	2.06E-05	7.85E-05

ENSG00000132196	HSD17B7	1.44E+00	2.06E-05	7.86E-05
ENSG00000148356	LRSAM1	1.35E+00	2.08E-05	7.89E-05
ENSG00000179388	EGR3	1.52E+00	2.08E-05	7.91E-05
ENSG00000174151	CYB561D1	1.11E+00	2.10E-05	7.98E-05
ENSG00000180871	CXCR2	4.96E+00	2.13E-05	8.10E-05
ENSG00000172426	RSPH9	4.72E+00	2.15E-05	8.15E-05
ENSG00000154134	ROBO3	1.24E+00	2.16E-05	8.20E-05
ENSG00000116991	SIPA1L2	1.22E+00	2.17E-05	8.23E-05
ENSG00000128654	MTX2	1.00E+00	2.17E-05	8.23E-05
ENSG00000169239	CA5B	1.29E+00	2.18E-05	8.27E-05
ENSG00000141540	TTYH2	2.10E+00	2.19E-05	8.28E-05
ENSG00000285529	AC016816.1	5.80E+00	2.19E-05	8.31E-05
ENSG00000183034	OTOP2	5.80E+00	2.21E-05	8.36E-05
ENSG00000177000	MTHFR	1.47E+00	2.24E-05	8.46E-05
ENSG00000197253	TPSB2	5.00E+00	2.24E-05	8.47E-05
ENSG00000029534	ANK1	1.39E+00	2.24E-05	8.49E-05
ENSG00000178149	DALRD3	1.27E+00	2.25E-05	8.50E-05
ENSG00000163624	CDS1	2.83E+00	2.25E-05	8.51E-05
ENSG00000170477	KRT4	5.57E+00	2.26E-05	8.56E-05
ENSG00000249042	AC008771.1	1.31E+00	2.28E-05	8.61E-05
ENSG00000120925	RNF170	1.05E+00	2.30E-05	8.69E-05
ENSG00000108381	ASPA	5.05E+00	2.32E-05	8.73E-05
ENSG00000228288	PCAT6	4.63E+00	2.37E-05	8.93E-05
ENSG00000141665	FBXO15	4.49E+00	2.37E-05	8.94E-05
ENSG00000108786	HSD17B1	2.25E+00	2.40E-05	9.03E-05
ENSG00000053918	KCNQ1	5.32E+00	2.42E-05	9.10E-05
ENSG00000131409	LRRC4B	1.23E+00	2.42E-05	9.12E-05
ENSG00000010318	PHF7	1.42E+00	2.47E-05	9.30E-05
ENSG00000090006	LTBP4	1.23E+00	2.48E-05	9.31E-05
ENSG00000135951	TSGA10	1.42E+00	2.51E-05	9.44E-05
ENSG00000188755	TBC1D3P2	5.16E+00	2.53E-05	9.48E-05
ENSG00000171914	TLN2	1.29E+00	2.54E-05	9.53E-05
ENSG00000133424	LARGE1	1.82E+00	2.55E-05	9.56E-05
ENSG00000243284	VSIG8	4.15E+00	2.56E-05	9.61E-05
ENSG00000179832	MROH1	1.65E+00	2.57E-05	9.64E-05
ENSG00000215644	GCGR	4.42E+00	2.57E-05	9.64E-05
ENSG00000012211	PRICKLE3	4.42E+00	2.60E-05	9.74E-05
ENSG00000113749	HRH2	4.36E+00	2.64E-05	9.87E-05
ENSG00000180438	TPRXL	5.78E+00	2.66E-05	9.95E-05
ENSG00000120075	HOXB5	1.52E+00	2.67E-05	9.97E-05
ENSG00000188493	C19orf54	1.50E+00	2.70E-05	1.01E-04
ENSG00000244310	AC093904.3	5.11E+00	2.70E-05	1.01E-04
ENSG00000103174	NAGPA	1.25E+00	2.71E-05	1.01E-04
ENSG00000162494	LRRC38	2.32E+00	2.72E-05	1.02E-04
ENSG00000266088	AC004585.1	5.52E+00	2.73E-05	1.02E-04

ENSG00000070729	CNGB1	5.15E+00	2.77E-05	1.03E-04
ENSG00000167741	GGT6	5.59E+00	2.80E-05	1.04E-04
ENSG00000168874	ATOH8	3.08E+00	2.81E-05	1.05E-04
ENSG00000049540	ELN	4.76E+00	2.84E-05	1.06E-04
ENSG00000100341	PNPLA5	5.54E+00	2.84E-05	1.06E-04
ENSG00000136878	USP20	2.51E+00	2.91E-05	1.08E-04
ENSG00000143556	S100A7	5.04E+00	2.94E-05	1.09E-04
ENSG00000198001	IRAK4	1.44E+00	2.96E-05	1.10E-04
ENSG00000283196	AC006453.2	1.50E+00	3.00E-05	1.11E-04
ENSG00000129595	EPB41L4A	5.43E+00	3.01E-05	1.11E-04
ENSG00000182621	PLCB1	4.96E+00	3.01E-05	1.11E-04
ENSG00000108576	SLC6A4	4.80E+00	3.04E-05	1.12E-04
ENSG00000169418	NPR1	3.96E+00	3.05E-05	1.13E-04
ENSG00000052795	FNIP2	1.13E+00	3.08E-05	1.14E-04
ENSG00000110195	FOLR1	5.11E+00	3.09E-05	1.14E-04
ENSG00000009950	MLXIPL	4.68E+00	3.13E-05	1.15E-04
ENSG00000188295	ZNF669	2.10E+00	3.13E-05	1.15E-04
ENSG00000113522	RAD50	2.16E+00	3.13E-05	1.15E-04
ENSG00000277778	PGM5P2	1.46E+00	3.13E-05	1.16E-04
ENSG00000266473	AC007448.4	4.81E+00	3.15E-05	1.16E-04
ENSG00000106633	GCK	3.28E+00	3.16E-05	1.16E-04
ENSG00000059915	PSD	1.79E+00	3.21E-05	1.18E-04
ENSG00000197487	GALP	5.79E+00	3.26E-05	1.20E-04
ENSG00000223820	CFL1P1	3.80E+00	3.27E-05	1.20E-04
ENSG00000253692	IGHEP1	5.33E+00	3.27E-05	1.20E-04
ENSG00000145247	OCIAD2	1.03E+00	3.29E-05	1.21E-04
ENSG00000182809	CRIP2	1.10E+00	3.33E-05	1.22E-04
ENSG00000262454	MIR193BHG	1.72E+00	3.33E-05	1.22E-04
ENSG00000117643	MAN1C1	2.18E+00	3.34E-05	1.22E-04
ENSG00000255860	AP000812.2	4.66E+00	3.40E-05	1.24E-04
ENSG00000287200	AC022506.2	4.53E+00	3.46E-05	1.27E-04
ENSG00000104972	LILRB1	4.78E+00	3.54E-05	1.29E-04
ENSG00000142538	PTH2	5.28E+00	3.58E-05	1.31E-04
ENSG00000167619	TMEM145	2.39E+00	3.58E-05	1.31E-04
ENSG00000277449	CEBPB-AS1	2.18E+00	3.61E-05	1.32E-04
ENSG00000110876	SELPLG	2.48E+00	3.67E-05	1.34E-04
ENSG00000261278	AC009094.1	5.20E+00	3.70E-05	1.35E-04
ENSG00000183155	RABIF	1.15E+00	3.72E-05	1.35E-04
ENSG00000214013	GANC	1.35E+00	3.81E-05	1.39E-04
ENSG00000138678	GPAT3	2.26E+00	3.81E-05	1.39E-04
ENSG00000272767	JMJD1C-AS1	3.38E+00	3.92E-05	1.43E-04
ENSG00000196188	CTSE	5.70E+00	3.95E-05	1.44E-04
ENSG00000236301	MRGPRG-AS1	5.04E+00	4.01E-05	1.46E-04
ENSG00000124496	TRERF1	1.14E+00	4.10E-05	1.49E-04
ENSG00000171219	CDC42BPG	2.56E+00	4.10E-05	1.49E-04

ENSG00000104983	CCDC61	1.72E+00	4.11E-05	1.49E-04
ENSG00000143303	RRNAD1	1.34E+00	4.11E-05	1.49E-04
ENSG00000146556	WASH2P	3.60E+00	4.16E-05	1.51E-04
ENSG00000173269	MMRN2	3.88E+00	4.20E-05	1.52E-04
ENSG00000275216	AL161431.1	4.91E+00	4.21E-05	1.52E-04
ENSG00000173890	GPR160	2.32E+00	4.21E-05	1.52E-04
ENSG00000104154	SLC30A4	1.72E+00	4.25E-05	1.54E-04
ENSG00000163995	ABLIM2	4.21E+00	4.31E-05	1.56E-04
ENSG00000267607	AC011511.5	4.55E+00	4.32E-05	1.56E-04
ENSG00000215910	C1orf167	5.16E+00	4.33E-05	1.56E-04
ENSG00000160796	NBEAL2	1.55E+00	4.37E-05	1.58E-04
ENSG00000172346	CSDC2	1.85E+00	4.40E-05	1.59E-04
ENSG00000162341	TPCN2	1.60E+00	4.42E-05	1.59E-04
ENSG00000170423	KRT78	4.61E+00	4.45E-05	1.61E-04
ENSG00000218052	ADAMTS7P4	4.27E+00	4.47E-05	1.61E-04
ENSG00000186716	BCR	1.06E+00	4.47E-05	1.61E-04
ENSG00000155962	CLIC2	3.92E+00	4.47E-05	1.61E-04
ENSG00000176136	MC5R	4.74E+00	4.48E-05	1.61E-04
ENSG00000102575	ACP5	4.91E+00	4.50E-05	1.62E-04
ENSG00000138622	HCN4	3.20E+00	4.53E-05	1.63E-04
ENSG00000261514	LINC01976	5.25E+00	4.53E-05	1.63E-04
ENSG00000164265	SCGB3A2	5.00E+00	4.54E-05	1.63E-04
ENSG00000091129	NRCAM	4.17E+00	4.63E-05	1.67E-04
ENSG00000090674	MCOLN1	1.49E+00	4.66E-05	1.67E-04
ENSG00000166225	FRS2	1.09E+00	4.67E-05	1.68E-04
ENSG00000186897	C1QL4	1.64E+00	4.77E-05	1.71E-04
ENSG00000160190	SLC37A1	2.83E+00	4.80E-05	1.72E-04
ENSG00000135406	PRPH	5.49E+00	4.81E-05	1.73E-04
ENSG00000163958	ZDHHC19	2.42E+00	4.83E-05	1.73E-04
ENSG00000184012	TMPRSS2	2.57E+00	4.83E-05	1.73E-04
ENSG00000123364	HOXC13	1.18E+00	4.85E-05	1.74E-04
ENSG00000095303	PTGS1	2.85E+00	4.86E-05	1.74E-04
ENSG00000272933	AL391121.1	2.81E+00	4.87E-05	1.74E-04
ENSG00000225511	LINC00475	2.45E+00	4.89E-05	1.75E-04
ENSG00000136040	PLXNC1	2.21E+00	4.92E-05	1.76E-04
ENSG00000162383	SLC1A7	5.49E+00	4.93E-05	1.77E-04
ENSG00000175463	TBC1D10C	5.71E+00	4.95E-05	1.77E-04
ENSG00000115649	CNPPD1	1.18E+00	4.96E-05	1.77E-04
ENSG00000183248	PRR36	4.57E+00	4.96E-05	1.78E-04
ENSG00000078081	LAMP3	2.05E+00	4.97E-05	1.78E-04
ENSG00000174446	SNAPC5	1.13E+00	4.98E-05	1.78E-04
ENSG00000137709	POU2F3	5.38E+00	4.99E-05	1.78E-04
ENSG00000114383	TUSC2	1.19E+00	5.02E-05	1.80E-04
ENSG00000163536	SERPINI1	2.89E+00	5.15E-05	1.84E-04
ENSG00000137642	SORL1	3.37E+00	5.18E-05	1.85E-04

ENSG00000159339	PADI4	2.80E+00	5.18E-05	1.85E-04
ENSG00000156414	TDRD9	4.97E+00	5.18E-05	1.85E-04
ENSG00000188100	FAM25A	5.18E+00	5.30E-05	1.89E-04
ENSG00000179627	ZBTB42	2.30E+00	5.37E-05	1.91E-04
ENSG00000137841	PLCB2	4.86E+00	5.38E-05	1.91E-04
ENSG00000215158	AC138409.2	1.99E+00	5.42E-05	1.93E-04
ENSG00000129993	CBFA2T3	5.03E+00	5.48E-05	1.95E-04
ENSG00000197093	GAL3ST4	3.71E+00	5.49E-05	1.95E-04
ENSG00000105877	DNAH11	1.80E+00	5.65E-05	2.00E-04
ENSG00000172159	FRMD3	2.28E+00	5.67E-05	2.01E-04
ENSG00000149295	DRD2	3.42E+00	5.69E-05	2.02E-04
ENSG00000147437	GNRH1	1.76E+00	5.70E-05	2.02E-04
ENSG00000139117	CPNE8	1.29E+00	5.73E-05	2.03E-04
ENSG00000164120	HPGD	3.94E+00	5.76E-05	2.04E-04
ENSG00000162878	PKDCC	1.83E+00	5.77E-05	2.04E-04
ENSG00000070388	FGF22	4.19E+00	5.79E-05	2.05E-04
ENSG00000168646	AXIN2	1.72E+00	5.86E-05	2.07E-04
ENSG00000170827	CELP	5.48E+00	5.92E-05	2.09E-04
ENSG00000171303	KCNK3	3.04E+00	5.92E-05	2.09E-04
ENSG00000286511	Z95118.2	3.57E+00	5.99E-05	2.12E-04
ENSG00000108405	P2RX1	4.98E+00	6.09E-05	2.15E-04
ENSG00000260401	AP002761.4	5.33E+00	6.09E-05	2.15E-04
ENSG00000172361	CFAP53	3.97E+00	6.24E-05	2.20E-04
ENSG00000162896	PIGR	4.91E+00	6.26E-05	2.20E-04
ENSG00000109220	CHIC2	1.02E+00	6.27E-05	2.20E-04
ENSG00000160949	TONSL	1.09E+00	6.30E-05	2.22E-04
ENSG00000118402	ELOVL4	1.24E+00	6.32E-05	2.22E-04
ENSG00000102125	TAZ	1.29E+00	6.32E-05	2.22E-04
ENSG00000141179	PCTP	1.12E+00	6.49E-05	2.28E-04
ENSG00000122735	DNAI1	5.25E+00	6.55E-05	2.30E-04
ENSG00000060566	CREB3L3	5.03E+00	6.57E-05	2.30E-04
ENSG00000100285	NEFH	3.91E+00	6.59E-05	2.31E-04
ENSG00000133794	ARNTL	1.15E+00	6.60E-05	2.31E-04
ENSG00000172794	RAB37	5.16E+00	6.68E-05	2.34E-04
ENSG00000134917	ADAMTS8	4.92E+00	6.79E-05	2.38E-04
ENSG00000107968	MAP3K8	2.07E+00	6.81E-05	2.38E-04
ENSG00000124391	IL17C	5.01E+00	6.89E-05	2.41E-04
ENSG00000138136	LBX1	5.20E+00	6.91E-05	2.42E-04
ENSG00000113504	SLC12A7	1.04E+00	6.96E-05	2.43E-04
ENSG00000130182	ZSCAN10	4.94E+00	6.97E-05	2.44E-04
ENSG00000125753	VASP	1.01E+00	7.03E-05	2.45E-04
ENSG00000121797	CCRL2	3.88E+00	7.06E-05	2.47E-04
ENSG00000259790	ANP32BP1	4.88E+00	7.16E-05	2.50E-04
ENSG00000173137	ADCK5	1.12E+00	7.19E-05	2.51E-04
ENSG00000167103	PIP5KL1	2.44E+00	7.27E-05	2.53E-04

ENSG00000259847	LINC02126	3.09E+00	7.27E-05	2.53E-04
ENSG00000141837	CACNA1A	1.69E+00	7.28E-05	2.54E-04
ENSG00000214796	AC098934.1	1.93E+00	7.32E-05	2.55E-04
ENSG00000146005	PSD2	4.56E+00	7.34E-05	2.56E-04
ENSG00000184163	C1QTNF12	2.41E+00	7.48E-05	2.60E-04
ENSG00000173320	STOX2	2.97E+00	7.52E-05	2.61E-04
ENSG00000228451	SDAD1P1	1.66E+00	7.55E-05	2.62E-04
ENSG00000180861	LINC01559	5.40E+00	7.82E-05	2.71E-04
ENSG00000108439	PNPO	1.18E+00	7.83E-05	2.72E-04
ENSG00000215089	KRT18P11	1.54E+00	7.85E-05	2.72E-04
ENSG00000205323	SARNP	1.78E+00	7.85E-05	2.72E-04
ENSG00000166405	RIC3	5.06E+00	7.86E-05	2.73E-04
ENSG00000085465	OVGP1	3.80E+00	7.87E-05	2.73E-04
ENSG00000124664	SPDEF	2.87E+00	7.97E-05	2.76E-04
ENSG00000237149	ZNF503-AS2	1.62E+00	7.98E-05	2.77E-04
ENSG00000130829	DUSP9	1.22E+00	8.11E-05	2.81E-04
ENSG00000085514	PILRA	4.30E+00	8.19E-05	2.83E-04
ENSG00000174672	BRSK2	1.23E+00	8.22E-05	2.84E-04
ENSG00000155918	RAET1L	3.55E+00	8.27E-05	2.86E-04
ENSG00000184809	B3GALT5-AS1	5.14E+00	8.34E-05	2.88E-04
ENSG00000184988	TMEM106A	1.62E+00	8.36E-05	2.89E-04
ENSG00000223511	AL683807.1	3.26E+00	8.38E-05	2.89E-04
ENSG00000182327	GLTPD2	4.19E+00	8.44E-05	2.91E-04
ENSG00000160336	ZNF761	1.53E+00	8.62E-05	2.97E-04
ENSG00000107859	PITX3	4.60E+00	8.62E-05	2.97E-04
ENSG00000169689	CENPX	1.15E+00	8.62E-05	2.97E-04
ENSG00000188735	TMEM120B	1.04E+00	8.66E-05	2.98E-04
ENSG00000177465	ACOT4	2.12E+00	8.70E-05	3.00E-04
ENSG00000231389	HLA-DPA1	1.81E+00	9.06E-05	3.12E-04
ENSG00000280011	AL031595.2	4.76E+00	9.13E-05	3.14E-04
ENSG00000130711	PRDM12	4.62E+00	9.18E-05	3.16E-04
ENSG00000120306	CYSTM1	1.14E+00	9.20E-05	3.16E-04
ENSG00000253210	AC040970.1	3.38E+00	9.27E-05	3.18E-04
ENSG00000250041	AC069360.1	3.85E+00	9.28E-05	3.19E-04
ENSG00000011638	TMEM159	1.35E+00	9.36E-05	3.21E-04
ENSG00000139890	REM2	3.09E+00	9.36E-05	3.21E-04
ENSG00000213588	ZBTB9	1.06E+00	9.39E-05	3.22E-04
ENSG00000138642	HERC6	1.41E+00	9.40E-05	3.23E-04
ENSG00000225969	ABHD11-AS1	4.92E+00	9.45E-05	3.24E-04
ENSG00000169509	CRCT1	5.26E+00	9.85E-05	3.37E-04
ENSG00000226721	EEF1DP2	1.86E+00	9.98E-05	3.41E-04
ENSG00000196814	MVB12B	1.62E+00	9.99E-05	3.41E-04
ENSG00000088002	SULT2B1	4.15E+00	1.01E-04	3.46E-04
ENSG00000178852	EFCAB13	2.78E+00	1.03E-04	3.51E-04
ENSG00000152779	SLC16A12	2.82E+00	1.03E-04	3.52E-04

ENSG00000258839	MC1R	1.83E+00	1.03E-04	3.52E-04
ENSG00000272994	AC012360.3	1.22E+00	1.05E-04	3.58E-04
ENSG00000187122	SLIT1	4.84E+00	1.05E-04	3.58E-04
ENSG00000111913	RIPOR2	2.46E+00	1.06E-04	3.60E-04
ENSG00000223861	AL365436.1	2.01E+00	1.07E-04	3.63E-04
ENSG00000160161	CILP2	1.36E+00	1.07E-04	3.65E-04
ENSG00000168703	WFDC12	5.75E+00	1.08E-04	3.65E-04
ENSG00000224870	MRPL20-AS1	1.57E+00	1.09E-04	3.70E-04
ENSG00000258616	LINC02303	3.02E+00	1.10E-04	3.73E-04
ENSG00000236751	LINC01186	2.50E+00	1.10E-04	3.73E-04
ENSG00000142961	MOB3C	2.01E+00	1.10E-04	3.74E-04
ENSG00000086848	ALG9	1.19E+00	1.11E-04	3.76E-04
ENSG00000129654	FOXJ1	2.97E+00	1.13E-04	3.82E-04
ENSG00000256940	PPP1R14B-AS	1.97E+00	1.13E-04	3.82E-04
ENSG00000257108	NHLRC4	4.31E+00	1.13E-04	3.83E-04
ENSG00000188613	NANOS1	1.80E+00	1.13E-04	3.83E-04
ENSG00000176945	MUC20	3.54E+00	1.15E-04	3.87E-04
ENSG00000163885	CFAP100	4.96E+00	1.16E-04	3.92E-04
ENSG00000251455	AC092611.1	4.85E+00	1.17E-04	3.94E-04
ENSG00000215154	AC141586.1	1.46E+00	1.20E-04	4.05E-04
ENSG00000263201	DPEP2NB	4.98E+00	1.21E-04	4.09E-04
ENSG00000205903	ZNF316	1.08E+00	1.24E-04	4.16E-04
ENSG00000267655	AC125437.1	3.01E+00	1.25E-04	4.19E-04
ENSG00000095713	CRTAC1	4.29E+00	1.25E-04	4.21E-04
ENSG00000159714	ZDHHC1	5.14E+00	1.25E-04	4.21E-04
ENSG00000161944	ASGR2	5.21E+00	1.28E-04	4.29E-04
ENSG00000273330	CYP4F36P	4.93E+00	1.31E-04	4.38E-04
ENSG00000260231	KDM7A-DT	1.87E+00	1.32E-04	4.43E-04
ENSG00000197857	ZNF44	1.33E+00	1.34E-04	4.47E-04
ENSG00000136059	VILL	5.56E+00	1.35E-04	4.51E-04
ENSG00000259158	ADAM20P1	3.77E+00	1.36E-04	4.54E-04
ENSG00000235823	OLMALINC	1.10E+00	1.37E-04	4.57E-04
ENSG00000162510	MATN1	3.28E+00	1.38E-04	4.62E-04
ENSG00000001460	STPG1	1.55E+00	1.39E-04	4.63E-04
ENSG00000273812	BX640514.2	3.89E+00	1.41E-04	4.72E-04
ENSG00000163792	TCF23	4.95E+00	1.42E-04	4.74E-04
ENSG00000138735	PDE5A	1.76E+00	1.43E-04	4.75E-04
ENSG00000109667	SLC2A9	3.34E+00	1.47E-04	4.88E-04
ENSG00000162641	AKNAD1	3.27E+00	1.47E-04	4.90E-04
ENSG00000111837	MAK	2.11E+00	1.48E-04	4.92E-04
ENSG00000204936	CD177	3.71E+00	1.48E-04	4.93E-04
ENSG00000198221	AFDN-DT	5.36E+00	1.48E-04	4.93E-04
ENSG00000158125	XDH	2.45E+00	1.49E-04	4.93E-04
ENSG00000188997	KCTD21	1.57E+00	1.49E-04	4.94E-04
ENSG00000187045	TMPRSS6	5.30E+00	1.49E-04	4.95E-04



ENSG00000273230	AC102953.2	1.40E+00	1.50E-04	4.98E-04
ENSG00000227252	AC012063.1	2.89E+00	1.51E-04	4.99E-04
ENSG00000287763	AC068279.2	2.94E+00	1.51E-04	5.02E-04
ENSG00000176428	VPS37D	1.52E+00	1.53E-04	5.07E-04
ENSG00000205625	AL591499.1	4.77E+00	1.54E-04	5.08E-04
ENSG00000157570	TSPAN18	1.34E+00	1.54E-04	5.10E-04
ENSG00000205930	C21orf62-AS1	3.49E+00	1.54E-04	5.10E-04
ENSG00000181284	TMEM102	3.05E+00	1.56E-04	5.15E-04
ENSG00000149922	TBX6	4.82E+00	1.56E-04	5.16E-04
ENSG00000260302	AP005482.1	4.42E+00	1.58E-04	5.21E-04
ENSG00000173338	KCNK7	5.33E+00	1.60E-04	5.27E-04
ENSG00000130755	GMFG	4.31E+00	1.62E-04	5.34E-04
ENSG00000224153	LINC02054	4.72E+00	1.62E-04	5.35E-04
ENSG00000185668	POU3F1	1.97E+00	1.63E-04	5.35E-04
ENSG00000130540	SULT4A1	3.27E+00	1.63E-04	5.38E-04
ENSG00000144908	ALDH1L1	1.94E+00	1.65E-04	5.44E-04
ENSG00000150907	FOXO1	1.52E+00	1.65E-04	5.44E-04
ENSG00000140795	MYLK3	4.75E+00	1.66E-04	5.45E-04
ENSG00000186862	PDZD7	3.50E+00	1.67E-04	5.49E-04
ENSG00000155367	PPM1J	3.56E+00	1.67E-04	5.49E-04
ENSG00000123453	SARDH	1.85E+00	1.68E-04	5.51E-04
ENSG00000279692	AC110285.6	1.55E+00	1.69E-04	5.54E-04
ENSG00000160678	S100A1	3.59E+00	1.71E-04	5.61E-04
ENSG00000269068	AC009955.4	5.25E+00	1.71E-04	5.62E-04
ENSG00000229180	AC006001.3	1.01E+00	1.73E-04	5.66E-04
ENSG00000118960	HS1BP3	1.41E+00	1.73E-04	5.68E-04
ENSG00000244694	PTCHD4	2.31E+00	1.74E-04	5.71E-04
ENSG00000105613	MAST1	1.98E+00	1.76E-04	5.76E-04
ENSG00000105404	RABAC1	1.05E+00	1.77E-04	5.78E-04
ENSG00000119915	ELOVL3	4.70E+00	1.77E-04	5.79E-04
ENSG00000145794	MEGF10	1.05E+00	1.78E-04	5.83E-04
ENSG00000167632	TRAPPC9	1.27E+00	1.79E-04	5.83E-04
ENSG00000264230	ANXA8L1	4.27E+00	1.79E-04	5.83E-04
ENSG00000176244	ACBD7	1.12E+00	1.79E-04	5.83E-04
ENSG00000257178	AC103702.1	3.45E+00	1.79E-04	5.85E-04
ENSG00000173110	HSPA6	2.33E+00	1.83E-04	5.96E-04
ENSG00000025434	NR1H3	1.40E+00	1.84E-04	6.01E-04
ENSG00000163497	FEV	4.28E+00	1.85E-04	6.01E-04
ENSG00000278276	AL110115.2	4.83E+00	1.85E-04	6.04E-04
ENSG00000122678	POLM	1.18E+00	1.89E-04	6.15E-04
ENSG00000149489	ROM1	1.98E+00	1.90E-04	6.18E-04
ENSG00000171680	PLEKHG5	2.10E+00	1.92E-04	6.24E-04
ENSG00000171798	KNDC1	3.69E+00	1.95E-04	6.33E-04
ENSG00000128482	RNF112	4.72E+00	1.97E-04	6.40E-04
ENSG00000120903	CHRNA2	5.21E+00	1.97E-04	6.40E-04

ENSG00000142611	PRDM16	2.37E+00	1.97E-04	6.40E-04
ENSG00000184056	VPS33B	1.39E+00	1.98E-04	6.42E-04
ENSG00000283235	AC139493.2	4.08E+00	1.98E-04	6.44E-04
ENSG00000100399	CHADL	4.49E+00	1.99E-04	6.47E-04
ENSG00000162747	FCGR3B	4.86E+00	1.99E-04	6.47E-04
ENSG00000214049	UCA1	4.69E+00	2.00E-04	6.48E-04
ENSG00000114547	ROPN1B	2.93E+00	2.00E-04	6.49E-04
ENSG00000114698	PLSCR4	1.99E+00	2.01E-04	6.50E-04
ENSG00000135473	PAN2	1.08E+00	2.04E-04	6.62E-04
ENSG00000115590	IL1R2	4.21E+00	2.05E-04	6.64E-04
ENSG00000162241	SLC25A45	2.78E+00	2.07E-04	6.70E-04
ENSG00000196912	ANKRD36B	1.25E+00	2.12E-04	6.85E-04
ENSG00000261600	AC233266.2	2.41E+00	2.12E-04	6.85E-04
ENSG00000176809	LRRC37A3	2.37E+00	2.13E-04	6.89E-04
ENSG00000137460	FHDC1	1.06E+00	2.14E-04	6.90E-04
ENSG00000104059	FAM189A1	2.87E+00	2.14E-04	6.92E-04
ENSG00000161544	CYGB	2.41E+00	2.14E-04	6.92E-04
ENSG00000230424	EMC1-AS1	4.86E+00	2.16E-04	6.97E-04
ENSG00000148408	CACNA1B	4.80E+00	2.18E-04	7.02E-04
ENSG00000233554	B4GALT1-AS1	3.54E+00	2.20E-04	7.10E-04
ENSG00000115523	GNLY	5.24E+00	2.21E-04	7.12E-04
ENSG00000198538	ZNF28	1.02E+00	2.22E-04	7.13E-04
ENSG00000105737	GRIK5	3.07E+00	2.25E-04	7.24E-04
ENSG00000131737	KRT34	4.15E+00	2.26E-04	7.27E-04
ENSG00000174844	DNAH12	4.28E+00	2.27E-04	7.30E-04
ENSG00000197561	ELANE	4.87E+00	2.29E-04	7.35E-04
ENSG00000073861	TBX21	4.37E+00	2.29E-04	7.35E-04
ENSG00000003400	CASP10	3.71E+00	2.32E-04	7.44E-04
ENSG00000074527	NTN4	1.47E+00	2.32E-04	7.44E-04
ENSG00000119899	SLC17A5	1.37E+00	2.33E-04	7.47E-04
ENSG00000074855	ANO8	1.64E+00	2.35E-04	7.54E-04
ENSG00000174945	AMZ1	2.65E+00	2.36E-04	7.57E-04
ENSG00000154342	WNT3A	4.47E+00	2.39E-04	7.66E-04
ENSG00000203727	SAMD5	5.17E+00	2.39E-04	7.66E-04
ENSG00000187135	VSTM2B	4.79E+00	2.42E-04	7.74E-04
ENSG00000188508	KRTDAP	4.80E+00	2.42E-04	7.76E-04
ENSG00000099840	IZUMO4	3.18E+00	2.43E-04	7.79E-04
ENSG00000203999	LINC01270	1.65E+00	2.45E-04	7.83E-04
ENSG00000163959	SLC51A	4.39E+00	2.50E-04	7.99E-04
ENSG00000185189	NRBP2	1.97E+00	2.50E-04	7.99E-04
ENSG00000111319	SCNN1A	4.26E+00	2.51E-04	8.04E-04
ENSG00000185339	TCN2	2.15E+00	2.52E-04	8.05E-04
ENSG00000167984	NLRC3	4.35E+00	2.52E-04	8.05E-04
ENSG00000204611	ZNF616	1.11E+00	2.53E-04	8.08E-04
ENSG00000166126	AMN	4.98E+00	2.55E-04	8.14E-04

ENSG00000056487	PHF21B	2.86E+00	2.56E-04	8.17E-04
ENSG00000221821	C6orf226	1.30E+00	2.56E-04	8.17E-04
ENSG00000184381	PLA2G6	3.26E+00	2.67E-04	8.50E-04
ENSG00000122367	LDB3	2.81E+00	2.68E-04	8.53E-04
ENSG00000134757	DSG3	4.46E+00	2.69E-04	8.55E-04
ENSG00000184508	HDDC3	1.25E+00	2.69E-04	8.55E-04
ENSG00000254615	AC027031.2	1.63E+00	2.72E-04	8.64E-04
ENSG00000230453	ANKRD18B	1.02E+00	2.72E-04	8.64E-04
ENSG00000112902	SEMA5A	1.11E+00	2.73E-04	8.67E-04
ENSG00000089116	LHX5	4.02E+00	2.75E-04	8.73E-04
ENSG00000149557	FEZ1	1.14E+00	2.80E-04	8.89E-04
ENSG00000136457	CHAD	4.97E+00	2.81E-04	8.92E-04
ENSG00000197165	SULT1A2	5.04E+00	2.86E-04	9.07E-04
ENSG00000254614	AP003068.2	1.93E+00	2.88E-04	9.13E-04
ENSG00000243742	RPLP0P2	1.56E+00	2.96E-04	9.36E-04
ENSG00000101194	SLC17A9	4.50E+00	2.99E-04	9.43E-04
ENSG00000136999	CCN3	2.06E+00	2.99E-04	9.43E-04
ENSG00000186684	CYP27C1	1.10E+00	2.99E-04	9.44E-04
ENSG00000064655	EYA2	1.95E+00	3.00E-04	9.48E-04
ENSG00000173641	HSPB7	5.20E+00	3.01E-04	9.48E-04
ENSG00000260750	AC092720.1	5.01E+00	3.06E-04	9.62E-04
ENSG00000185499	MUC1	1.88E+00	3.09E-04	9.71E-04
ENSG00000197822	OCLN	3.18E+00	3.19E-04	1.00E-03
ENSG00000186868	MAPT	1.85E+00	3.19E-04	1.00E-03
ENSG00000260877	AP005233.2	3.41E+00	3.19E-04	1.00E-03
ENSG00000187123	LYPD6	2.33E+00	3.22E-04	1.01E-03
ENSG00000272092	AC087623.2	4.10E+00	3.24E-04	1.02E-03
ENSG00000132825	PPP1R3D	1.05E+00	3.28E-04	1.03E-03
ENSG00000160255	ITGB2	3.43E+00	3.34E-04	1.05E-03
ENSG00000253802	SIRLNT	1.24E+00	3.37E-04	1.06E-03
ENSG00000183145	RIPPLY3	1.53E+00	3.40E-04	1.06E-03
ENSG00000179766	ATP8B5P	1.36E+00	3.40E-04	1.06E-03
ENSG00000272696	AL359091.4	3.93E+00	3.41E-04	1.06E-03
ENSG00000154265	ABCA5	1.09E+00	3.44E-04	1.07E-03
ENSG00000179954	SSC5D	2.47E+00	3.45E-04	1.08E-03
ENSG00000144596	GRIP2	3.20E+00	3.45E-04	1.08E-03
ENSG00000149564	ESAM	1.98E+00	3.46E-04	1.08E-03
ENSG00000239247	RN7SL589P	5.18E+00	3.61E-04	1.12E-03
ENSG00000269466	H3.Y	5.17E+00	3.61E-04	1.12E-03
ENSG00000268460	AC006262.1	4.46E+00	3.65E-04	1.13E-03
ENSG00000179859	RNF227	2.21E+00	3.68E-04	1.14E-03
ENSG00000168679	SLC16A4	2.85E+00	3.74E-04	1.16E-03
ENSG00000269186	LINC01082	4.78E+00	3.76E-04	1.17E-03
ENSG00000218018	AL109955.1	5.44E+00	3.77E-04	1.17E-03
ENSG00000198169	ZNF251	1.21E+00	3.79E-04	1.17E-03

ENSG00000151690	MFSD6	1.55E+00	3.79E-04	1.17E-03
ENSG00000079393	DUSP13	4.30E+00	3.80E-04	1.18E-03
ENSG00000186814	ZSCAN30	1.10E+00	3.84E-04	1.19E-03
ENSG00000072133	RPS6KA6	1.75E+00	3.86E-04	1.19E-03
ENSG00000173599	PC	1.41E+00	3.92E-04	1.21E-03
ENSG00000161921	CXCL16	1.39E+00	3.94E-04	1.22E-03
ENSG00000125457	MIF4GD	1.51E+00	3.96E-04	1.22E-03
ENSG00000287413	AL449363.2	4.66E+00	3.97E-04	1.22E-03
ENSG00000198346	ZNF813	1.30E+00	3.97E-04	1.23E-03
ENSG00000267475	AC008736.1	2.59E+00	4.09E-04	1.26E-03
ENSG00000150556	LYPD6B	3.93E+00	4.09E-04	1.26E-03
ENSG00000125084	WNT1	5.03E+00	4.10E-04	1.26E-03
ENSG00000061987	MON2	1.12E+00	4.14E-04	1.27E-03
ENSG00000255363	LINC02757	5.15E+00	4.14E-04	1.27E-03
ENSG00000227748	AL138916.1	4.68E+00	4.14E-04	1.27E-03
ENSG00000274373	AC148476.1	5.28E+00	4.19E-04	1.29E-03
ENSG00000161912	ADCY10P1	1.77E+00	4.20E-04	1.29E-03
ENSG00000005961	ITGA2B	1.45E+00	4.22E-04	1.30E-03
ENSG00000261801	LOXL1-AS1	1.38E+00	4.28E-04	1.31E-03
ENSG00000047617	ANO2	4.10E+00	4.29E-04	1.32E-03
ENSG00000287677	AC025839.1	4.51E+00	4.33E-04	1.33E-03
ENSG00000144119	C1QL2	4.58E+00	4.33E-04	1.33E-03
ENSG00000171695	LKAAEAR1	2.04E+00	4.34E-04	1.33E-03
ENSG00000072182	ASIC4	4.56E+00	4.34E-04	1.33E-03
ENSG00000183770	FOXL2	2.55E+00	4.40E-04	1.35E-03
ENSG00000105357	MYH14	4.67E+00	4.45E-04	1.36E-03
ENSG00000157240	FZD1	1.19E+00	4.48E-04	1.37E-03
ENSG00000176533	GNG7	1.48E+00	4.52E-04	1.38E-03
ENSG00000283050	GTF2IP12	1.92E+00	4.52E-04	1.38E-03
ENSG00000153789	FAM92B	3.15E+00	4.54E-04	1.39E-03
ENSG00000122254	HS3ST2	4.83E+00	4.54E-04	1.39E-03
ENSG00000276170	AC244153.1	2.86E+00	4.64E-04	1.42E-03
ENSG00000110042	DTX4	1.62E+00	4.67E-04	1.42E-03
ENSG00000167641	PPP1R14A	3.79E+00	4.67E-04	1.42E-03
ENSG00000229585	RPL21P44	2.18E+00	4.68E-04	1.43E-03
ENSG00000142632	ARHGEF19	1.01E+00	4.71E-04	1.43E-03
ENSG00000224079	AC091729.1	5.01E+00	4.71E-04	1.43E-03
ENSG00000162390	ACOT11	2.87E+00	4.72E-04	1.44E-03
ENSG00000164764	SBSPON	2.95E+00	4.75E-04	1.45E-03
ENSG00000186409	CCDC30	2.98E+00	4.77E-04	1.45E-03
ENSG00000274290	HIST1H2BE	4.19E+00	4.81E-04	1.46E-03
ENSG00000119457	SLC46A2	5.18E+00	4.89E-04	1.48E-03
ENSG00000103811	CTSH	1.65E+00	4.90E-04	1.49E-03
ENSG00000107077	KDM4C	1.11E+00	4.92E-04	1.49E-03
ENSG00000203722	RAET1G	2.50E+00	4.93E-04	1.50E-03

ENSG00000183682	BMP8A	3.49E+00	5.01E-04	1.52E-03
ENSG00000177181	RIMKLA	2.52E+00	5.02E-04	1.52E-03
ENSG00000182676	PPP1R27	3.53E+00	5.03E-04	1.52E-03
ENSG00000169548	ZNF280A	4.98E+00	5.04E-04	1.53E-03
ENSG00000158270	COLEC12	1.52E+00	5.10E-04	1.54E-03
ENSG00000181513	ACBD4	1.93E+00	5.11E-04	1.54E-03
ENSG00000143382	ADAMTSL4	2.79E+00	5.14E-04	1.55E-03
ENSG00000160973	FOXH1	4.59E+00	5.14E-04	1.55E-03
ENSG00000154553	PDLIM3	1.58E+00	5.15E-04	1.55E-03
ENSG00000286214	AUXG0100005	3.11E+00	5.15E-04	1.55E-03
ENSG00000164309	CMYA5	3.29E+00	5.18E-04	1.56E-03
ENSG00000101405	OXT	4.45E+00	5.23E-04	1.58E-03
ENSG00000054690	PLEKHH1	2.26E+00	5.28E-04	1.59E-03
ENSG00000057468	MSH4	5.44E+00	5.34E-04	1.61E-03
ENSG00000273143	AL355512.1	2.04E+00	5.34E-04	1.61E-03
ENSG00000066230	SLC9A3	4.63E+00	5.40E-04	1.62E-03
ENSG00000101443	WFDC2	1.84E+00	5.41E-04	1.62E-03
ENSG00000142484	TM4SF5	5.10E+00	5.41E-04	1.62E-03
ENSG00000213996	TM6SF2	2.85E+00	5.52E-04	1.66E-03
ENSG00000197620	CXorf40A	1.28E+00	5.54E-04	1.66E-03
ENSG00000135709	KIAA0513	1.33E+00	5.59E-04	1.67E-03
ENSG00000069667	RORA	2.07E+00	5.61E-04	1.68E-03
ENSG00000172985	SH3RF3	3.73E+00	5.62E-04	1.68E-03
ENSG00000176438	SYNE3	2.36E+00	5.65E-04	1.69E-03
ENSG00000118971	CCND2	2.84E+00	5.66E-04	1.69E-03
ENSG00000188766	SPRED3	2.60E+00	5.68E-04	1.70E-03
ENSG00000164626	KCNK5	1.95E+00	5.71E-04	1.71E-03
ENSG00000134245	WNT2B	2.15E+00	5.73E-04	1.71E-03
ENSG00000131095	GFAP	4.08E+00	5.74E-04	1.72E-03
ENSG00000166448	TMEM130	3.59E+00	5.78E-04	1.73E-03
ENSG00000196139	AKR1C3	3.80E+00	5.86E-04	1.75E-03
ENSG00000167608	TMC4	4.73E+00	5.87E-04	1.75E-03
ENSG00000053702	NRIP2	4.25E+00	5.93E-04	1.77E-03
ENSG00000205212	CCDC144NL	5.03E+00	5.93E-04	1.77E-03
ENSG00000173614	NMNAT1	1.52E+00	5.98E-04	1.78E-03
ENSG00000252010	SCARNA5	2.19E+00	6.03E-04	1.79E-03
ENSG00000127220	ABHD8	1.14E+00	6.03E-04	1.80E-03
ENSG00000196666	FAM180B	4.40E+00	6.21E-04	1.84E-03
ENSG00000135094	SDS	4.38E+00	6.22E-04	1.85E-03
ENSG00000165795	NDRG2	1.83E+00	6.24E-04	1.85E-03
ENSG00000226864	ATE1-AS1	2.11E+00	6.25E-04	1.86E-03
ENSG00000225756	DBH-AS1	3.69E+00	6.28E-04	1.86E-03
ENSG00000109618	SEPSECS	1.24E+00	6.31E-04	1.87E-03
ENSG00000146707	POMZP3	1.21E+00	6.34E-04	1.88E-03
ENSG00000247271	ZBED5-AS1	1.85E+00	6.39E-04	1.89E-03

ENSG00000100319	ZMAT5	1.26E+00	6.39E-04	1.89E-03
ENSG00000225746	MEG8	3.14E+00	6.41E-04	1.90E-03
ENSG00000170745	KCNS3	4.27E+00	6.46E-04	1.91E-03
ENSG00000101049	SGK2	4.00E+00	6.57E-04	1.94E-03
ENSG00000181982	CCDC149	1.58E+00	6.61E-04	1.96E-03
ENSG00000275413	AC002553.2	3.63E+00	6.63E-04	1.96E-03
ENSG00000168255	POLR2J3	1.58E+00	6.71E-04	1.98E-03
ENSG00000273253	AL022328.4	2.04E+00	6.72E-04	1.98E-03
ENSG00000133943	DGLUCY	1.63E+00	6.74E-04	1.99E-03
ENSG00000162869	PPP1R21	1.03E+00	6.76E-04	2.00E-03
ENSG00000249618	LINC02465	5.45E+00	6.76E-04	2.00E-03
ENSG00000187994	RINL	2.88E+00	6.81E-04	2.01E-03
ENSG00000260160	AC011468.1	2.21E+00	6.85E-04	2.02E-03
ENSG00000257557	PPP1R12A-AS1	2.49E+00	6.87E-04	2.03E-03
ENSG00000185010	F8	2.68E+00	6.91E-04	2.04E-03
ENSG00000285188	AC008397.2	3.18E+00	6.94E-04	2.04E-03
ENSG00000272989	LINC02012	4.53E+00	6.96E-04	2.05E-03
ENSG00000184524	CEND1	4.70E+00	6.98E-04	2.05E-03
ENSG00000261888	AC144831.1	3.75E+00	7.00E-04	2.06E-03
ENSG00000279092	AC025678.3	1.72E+00	7.03E-04	2.07E-03
ENSG00000163082	SGPP2	3.99E+00	7.07E-04	2.08E-03
ENSG00000168517	HEXIM2	1.12E+00	7.14E-04	2.10E-03
ENSG00000154065	ANKRD29	2.05E+00	7.18E-04	2.11E-03
ENSG00000158525	CPA5	5.07E+00	7.22E-04	2.12E-03
ENSG00000212464	SNORA12	2.40E+00	7.25E-04	2.13E-03
ENSG00000185640	KRT79	2.58E+00	7.34E-04	2.15E-03
ENSG00000122852	SFTPA1	4.78E+00	7.34E-04	2.15E-03
ENSG00000204540	PSORS1C1	3.50E+00	7.37E-04	2.16E-03
ENSG00000172935	MRGPRF	4.11E+00	7.37E-04	2.16E-03
ENSG00000234678	ELF3-AS1	3.47E+00	7.39E-04	2.16E-03
ENSG00000160323	ADAMTS13	2.62E+00	7.42E-04	2.17E-03
ENSG00000231969	AC007364.1	2.51E+00	7.45E-04	2.18E-03
ENSG00000273802	HIST1H2BG	1.24E+00	7.46E-04	2.18E-03
ENSG00000204706	MAMDC2-AS1	4.36E+00	7.47E-04	2.19E-03
ENSG00000276980	AC008760.2	3.79E+00	7.47E-04	2.19E-03
ENSG00000286138	AC010336.8	2.81E+00	7.54E-04	2.20E-03
ENSG00000075340	ADD2	4.02E+00	7.57E-04	2.21E-03
ENSG00000145861	C1QTNF2	2.35E+00	7.65E-04	2.23E-03
ENSG00000263011	AC108134.4	4.09E+00	7.68E-04	2.24E-03
ENSG00000254531	AP001816.1	1.70E+00	7.71E-04	2.25E-03
ENSG00000272106	AL691432.2	1.73E+00	7.79E-04	2.27E-03
ENSG00000197587	DMBX1	3.50E+00	7.81E-04	2.27E-03
ENSG00000211891	IGHE	4.75E+00	7.81E-04	2.28E-03
ENSG00000241404	EGFL8	2.40E+00	7.83E-04	2.28E-03
ENSG00000125744	RTN2	1.07E+00	7.87E-04	2.29E-03

ENSG00000166736	HTR3A	4.86E+00	7.88E-04	2.29E-03
ENSG00000174137	FAM53A	2.20E+00	7.88E-04	2.29E-03
ENSG00000168484	SFTPC	3.99E+00	7.93E-04	2.31E-03
ENSG00000157510	AFAP1L1	1.40E+00	7.93E-04	2.31E-03
ENSG00000174130	TLR6	1.82E+00	7.95E-04	2.31E-03
ENSG00000167074	TEF	1.81E+00	7.96E-04	2.31E-03
ENSG00000145708	CRHBP	3.60E+00	8.04E-04	2.34E-03
ENSG00000130783	CCDC62	4.10E+00	8.07E-04	2.34E-03
ENSG00000004848	ARX	5.06E+00	8.23E-04	2.39E-03
ENSG00000254573	AP004550.1	4.95E+00	8.25E-04	2.39E-03
ENSG00000226328	NUP50-DT	1.56E+00	8.29E-04	2.40E-03
ENSG00000128242	GAL3ST1	4.45E+00	8.33E-04	2.41E-03
ENSG00000170412	GPRC5C	1.01E+00	8.33E-04	2.41E-03
ENSG00000137880	GCHFR	1.24E+00	8.35E-04	2.42E-03
ENSG00000197776	KLHDC1	4.30E+00	8.37E-04	2.42E-03
ENSG00000214922	HLA-F-AS1	1.65E+00	8.39E-04	2.43E-03
ENSG00000176868	AL358781.1	4.88E+00	8.41E-04	2.43E-03
ENSG00000176406	RIMS2	1.95E+00	8.42E-04	2.43E-03
ENSG00000104967	NOVA2	3.11E+00	8.47E-04	2.45E-03
ENSG00000275719	AC008622.2	3.77E+00	8.55E-04	2.47E-03
ENSG00000197903	HIST1H2BK	1.27E+00	8.60E-04	2.48E-03
ENSG00000146122	DAAM2	3.47E+00	8.69E-04	2.51E-03
ENSG00000182885	ADGRG3	2.88E+00	8.71E-04	2.51E-03
ENSG00000010327	STAB1	4.88E+00	8.73E-04	2.52E-03
ENSG00000176678	FOXL1	2.45E+00	8.74E-04	2.52E-03
ENSG00000112367	FIG4	1.37E+00	8.77E-04	2.53E-03
ENSG00000234580	AL356157.1	4.80E+00	8.79E-04	2.53E-03
ENSG00000258602	LINC01629	2.36E+00	8.82E-04	2.54E-03
ENSG00000273084	AC092171.5	2.90E+00	8.96E-04	2.58E-03
ENSG00000102032	RENBP	4.95E+00	8.99E-04	2.58E-03
ENSG00000138411	HECW2	2.35E+00	8.99E-04	2.58E-03
ENSG00000114656	KIAA1257	5.44E+00	9.02E-04	2.59E-03
ENSG00000237575	PYY2	3.59E+00	9.05E-04	2.60E-03
ENSG00000260288	AC019294.2	4.24E+00	9.06E-04	2.60E-03
ENSG00000124194	GDAP1L1	2.61E+00	9.15E-04	2.63E-03
ENSG00000143772	ITPKB	1.28E+00	9.34E-04	2.68E-03
ENSG00000248587	GDNF-AS1	4.43E+00	9.36E-04	2.68E-03
ENSG00000172350	ABCG4	3.42E+00	9.42E-04	2.70E-03
ENSG00000279491	AP003733.3	3.56E+00	9.44E-04	2.70E-03
ENSG00000238113	LINC01410	2.99E+00	9.50E-04	2.72E-03
ENSG00000286811	AL353138.1	2.02E+00	9.57E-04	2.74E-03
ENSG00000015133	CCDC88C	1.75E+00	9.58E-04	2.74E-03
ENSG00000198746	GPATCH3	1.15E+00	9.59E-04	2.74E-03
ENSG00000259374	NDUFB4P11	3.88E+00	9.62E-04	2.75E-03
ENSG00000158764	ITLN2	4.69E+00	9.68E-04	2.76E-03

ENSG00000107551	RASSF4	1.50E+00	9.73E-04	2.78E-03
ENSG00000181444	ZNF467	4.08E+00	9.79E-04	2.79E-03
ENSG00000136960	ENPP2	2.36E+00	9.84E-04	2.81E-03
ENSG00000257086	AP001453.2	4.59E+00	9.86E-04	2.81E-03
ENSG00000139629	GALNT6	1.39E+00	9.91E-04	2.82E-03
ENSG00000179913	B3GNT3	4.67E+00	9.93E-04	2.83E-03
ENSG00000177728	TMEM94	1.24E+00	9.94E-04	2.83E-03
ENSG00000198088	NUP62CL	2.07E+00	9.95E-04	2.83E-03
ENSG00000118308	LRMP	4.09E+00	9.99E-04	2.84E-03
ENSG00000177076	ACER2	2.85E+00	1.00E-03	2.85E-03
ENSG00000242732	RTL5	2.00E+00	1.00E-03	2.85E-03
ENSG00000272848	AL135910.1	2.11E+00	1.00E-03	2.85E-03
ENSG00000205913	SRRM2-AS1	1.65E+00	1.01E-03	2.86E-03
ENSG00000274897	PANO1	1.97E+00	1.01E-03	2.87E-03
ENSG00000270673	YTHDF3-AS1	2.33E+00	1.01E-03	2.88E-03
ENSG00000167971	CASKIN1	2.47E+00	1.02E-03	2.90E-03
ENSG00000168427	KLHL30	2.92E+00	1.02E-03	2.91E-03
ENSG00000079337	RAPGEF3	3.37E+00	1.03E-03	2.91E-03
ENSG00000206177	HBM	5.32E+00	1.04E-03	2.94E-03
ENSG00000006071	ABCC8	4.85E+00	1.05E-03	2.96E-03
ENSG00000214595	EML6	2.54E+00	1.05E-03	2.98E-03
ENSG00000111077	TNS2	1.01E+00	1.05E-03	2.98E-03
ENSG00000197279	ZNF165	1.37E+00	1.06E-03	2.99E-03
ENSG00000197375	SLC22A5	1.09E+00	1.07E-03	3.03E-03
ENSG00000275202	AL161421.1	1.47E+00	1.08E-03	3.04E-03
ENSG00000086730	LAT2	3.26E+00	1.08E-03	3.06E-03
ENSG00000176909	MAMSTR	1.11E+00	1.09E-03	3.07E-03
ENSG00000126259	KIRREL2	4.25E+00	1.09E-03	3.07E-03
ENSG00000151067	CACNA1C	1.49E+00	1.09E-03	3.08E-03
ENSG00000236502	SIX3-AS1	5.13E+00	1.09E-03	3.09E-03
ENSG00000173013	CCDC96	1.62E+00	1.11E-03	3.13E-03
ENSG00000261068	AL512274.1	4.68E+00	1.12E-03	3.16E-03
ENSG00000163131	CTSS	1.05E+00	1.13E-03	3.17E-03
ENSG00000177133	PRDM16-DT	3.30E+00	1.13E-03	3.19E-03
ENSG00000244482	LILRA6	4.88E+00	1.14E-03	3.20E-03
ENSG00000231711	LINC00899	2.42E+00	1.14E-03	3.21E-03
ENSG00000124370	MCEE	1.12E+00	1.14E-03	3.21E-03
ENSG00000160318	CLDND2	2.04E+00	1.14E-03	3.21E-03
ENSG00000149292	TTC12	1.31E+00	1.15E-03	3.23E-03
ENSG00000130731	METTL26	1.23E+00	1.15E-03	3.24E-03
ENSG00000187140	FOXD3	3.76E+00	1.16E-03	3.27E-03
ENSG00000106258	CYP3A5	4.09E+00	1.17E-03	3.29E-03
ENSG00000179284	DAND5	3.54E+00	1.17E-03	3.29E-03
ENSG00000067221	STOML1	1.20E+00	1.18E-03	3.31E-03
ENSG00000270761	AL355353.1	4.31E+00	1.18E-03	3.31E-03



ENSG00000253200	AC037459.2	2.64E+00	1.20E-03	3.35E-03
ENSG00000154319	FAM167A	1.56E+00	1.20E-03	3.37E-03
ENSG00000245025	AC107959.1	2.15E+00	1.21E-03	3.37E-03
ENSG00000246273	SBF2-AS1	1.90E+00	1.22E-03	3.40E-03
ENSG00000211892	IGHG4	4.32E+00	1.22E-03	3.40E-03
ENSG00000257815	AC025159.1	1.58E+00	1.22E-03	3.41E-03
ENSG00000272275	AC092687.3	1.62E+00	1.23E-03	3.43E-03
ENSG00000205464	ATP6AP1L	1.22E+00	1.23E-03	3.43E-03
ENSG00000049323	LTBP1	1.13E+00	1.23E-03	3.43E-03
ENSG00000156384	SFR1	1.28E+00	1.23E-03	3.43E-03
ENSG00000177363	LRRN4CL	3.86E+00	1.24E-03	3.45E-03
ENSG00000186732	MPPED1	4.81E+00	1.25E-03	3.48E-03
ENSG00000240405	SAMMSON	5.04E+00	1.26E-03	3.50E-03
ENSG00000163472	TMEM79	1.20E+00	1.26E-03	3.51E-03
ENSG00000239382	ALKBH6	2.12E+00	1.26E-03	3.51E-03
ENSG00000089127	OAS1	3.67E+00	1.26E-03	3.52E-03
ENSG00000283849	AC092053.2	5.17E+00	1.26E-03	3.52E-03
ENSG00000197993	KEL	4.15E+00	1.26E-03	3.52E-03
ENSG00000168404	MLKL	1.21E+00	1.29E-03	3.58E-03
ENSG00000286826	AL136129.1	4.73E+00	1.29E-03	3.59E-03
ENSG00000172901	LVRN	3.32E+00	1.31E-03	3.64E-03
ENSG00000255571	MIR9-3HG	4.10E+00	1.31E-03	3.65E-03
ENSG00000163686	ABHD6	1.09E+00	1.31E-03	3.65E-03
ENSG00000269729	AC006262.2	2.97E+00	1.32E-03	3.65E-03
ENSG00000172349	IL16	4.34E+00	1.32E-03	3.67E-03
ENSG00000197599	CCDC154	2.92E+00	1.33E-03	3.70E-03
ENSG00000188747	NOXA1	3.60E+00	1.34E-03	3.71E-03
ENSG00000242028	HYPK	3.51E+00	1.34E-03	3.72E-03
ENSG00000280399	AC022497.1	4.85E+00	1.34E-03	3.72E-03
ENSG00000145198	VWA5B2	4.35E+00	1.35E-03	3.74E-03
ENSG00000138311	ZNF365	1.49E+00	1.36E-03	3.76E-03
ENSG00000150054	MPP7	2.87E+00	1.36E-03	3.76E-03
ENSG00000206432	TMEM200C	3.26E+00	1.39E-03	3.84E-03
ENSG00000197971	MBP	1.13E+00	1.40E-03	3.87E-03
ENSG00000263531	AC130324.1	3.95E+00	1.41E-03	3.88E-03
ENSG00000130304	SLC27A1	1.38E+00	1.41E-03	3.89E-03
ENSG00000233542	AL391845.2	5.47E+00	1.43E-03	3.93E-03
ENSG00000129028	THAP10	1.09E+00	1.43E-03	3.93E-03
ENSG00000064201	TSPAN32	5.08E+00	1.43E-03	3.94E-03
ENSG00000057149	SERPINB3	2.89E+00	1.43E-03	3.94E-03
ENSG00000261481	AC022167.4	5.00E+00	1.45E-03	3.99E-03
ENSG00000002933	TMEM176A	5.30E+00	1.45E-03	3.99E-03
ENSG00000221995	TIAF1	3.23E+00	1.47E-03	4.04E-03
ENSG00000105509	HAS1	4.80E+00	1.48E-03	4.07E-03
ENSG00000243954	RN7SL743P	4.73E+00	1.49E-03	4.08E-03

ENSG00000225914	TSBP1-AS1	4.25E+00	1.49E-03	4.09E-03
ENSG00000176532	PRR15	5.09E+00	1.50E-03	4.12E-03
ENSG00000241764	AC002467.1	1.29E+00	1.50E-03	4.12E-03
ENSG00000268401	AC007785.3	3.64E+00	1.50E-03	4.12E-03
ENSG00000188315	C3orf62	1.13E+00	1.51E-03	4.13E-03
ENSG00000128228	SDF2L1	1.00E+00	1.51E-03	4.14E-03
ENSG00000253891	AC023202.1	4.69E+00	1.52E-03	4.16E-03
ENSG00000211897	IGHG3	4.35E+00	1.53E-03	4.19E-03
ENSG00000183826	BTBD9	1.39E+00	1.54E-03	4.21E-03
ENSG00000196159	FAT4	4.17E+00	1.55E-03	4.25E-03
ENSG00000256443	AP003559.1	4.73E+00	1.56E-03	4.25E-03
ENSG00000236204	LINC01376	4.55E+00	1.56E-03	4.26E-03
ENSG00000172575	RASGRP1	3.51E+00	1.56E-03	4.28E-03
ENSG00000163328	GPR155	1.76E+00	1.57E-03	4.28E-03
ENSG00000238105	GOLGA2P5	1.46E+00	1.57E-03	4.29E-03
ENSG00000178150	ZNF114	1.78E+00	1.58E-03	4.30E-03
ENSG00000229921	KIF25-AS1	5.00E+00	1.58E-03	4.30E-03
ENSG00000213088	ACKR1	3.24E+00	1.59E-03	4.35E-03
ENSG00000123836	PFKFB2	1.02E+00	1.59E-03	4.35E-03
ENSG00000139132	FGD4	1.35E+00	1.59E-03	4.35E-03
ENSG00000267206	LCN6	4.57E+00	1.61E-03	4.38E-03
ENSG00000136689	IL1RN	5.87E+00	1.61E-03	4.38E-03
ENSG00000223638	RFPL4A	4.05E+00	1.62E-03	4.41E-03
ENSG00000167701	GPT	3.83E+00	1.63E-03	4.43E-03
ENSG00000167755	KLK6	4.59E+00	1.63E-03	4.43E-03
ENSG00000176884	GRIN1	3.73E+00	1.63E-03	4.44E-03
ENSG00000173093	CCDC63	3.32E+00	1.63E-03	4.44E-03
ENSG00000178537	SLC25A20	1.24E+00	1.63E-03	4.44E-03
ENSG00000165238	WNK2	1.49E+00	1.64E-03	4.47E-03
ENSG00000091622	PITPNM3	2.12E+00	1.65E-03	4.47E-03
ENSG00000170955	CAVIN3	1.42E+00	1.66E-03	4.51E-03
ENSG00000262484	CCER2	2.97E+00	1.67E-03	4.52E-03
ENSG00000286261	AC022137.3	2.80E+00	1.68E-03	4.56E-03
ENSG00000168481	LGI3	2.28E+00	1.69E-03	4.58E-03
ENSG00000116544	DLGAP3	3.14E+00	1.69E-03	4.59E-03
ENSG00000126947	ARMCX1	1.53E+00	1.69E-03	4.59E-03
ENSG00000006025	OSBPL7	1.25E+00	1.70E-03	4.59E-03
ENSG00000280213	UCKL1-AS1	2.94E+00	1.70E-03	4.60E-03
ENSG00000248429	FAM198B-AS1	2.81E+00	1.70E-03	4.61E-03
ENSG00000168781	PPIP5K1	1.53E+00	1.73E-03	4.68E-03
ENSG00000162105	SHANK2	4.69E+00	1.73E-03	4.69E-03
ENSG00000007237	GAS7	2.68E+00	1.74E-03	4.71E-03
ENSG00000230587	LINC02580	5.48E+00	1.75E-03	4.72E-03
ENSG00000135643	KCNMB4	2.86E+00	1.76E-03	4.76E-03
ENSG00000214174	AMZ2P1	1.11E+00	1.76E-03	4.77E-03

ENSG00000183486	MX2	2.14E+00	1.77E-03	4.79E-03
ENSG00000130700	GATA5	2.62E+00	1.78E-03	4.82E-03
ENSG00000260366	AC026803.1	4.71E+00	1.79E-03	4.83E-03
ENSG00000166682	TMPRSS5	3.72E+00	1.80E-03	4.85E-03
ENSG00000212694	LINC01089	1.42E+00	1.80E-03	4.85E-03
ENSG00000105717	PBX4	1.33E+00	1.80E-03	4.85E-03
ENSG00000233098	CCDC144NL-A	2.82E+00	1.81E-03	4.89E-03
ENSG00000260261	AC124944.2	2.80E+00	1.81E-03	4.89E-03
ENSG00000261889	AC108134.2	1.91E+00	1.82E-03	4.91E-03
ENSG00000232434	AJM1	1.73E+00	1.83E-03	4.92E-03
ENSG00000261787	TCF24	4.15E+00	1.85E-03	4.97E-03
ENSG00000138131	LOXL4	3.73E+00	1.85E-03	4.97E-03
ENSG00000166220	TBATA	4.58E+00	1.85E-03	4.97E-03
ENSG00000176771	NCKAP5	1.32E+00	1.85E-03	4.98E-03
ENSG00000153157	SYCP2L	1.49E+00	1.85E-03	4.98E-03
ENSG00000107742	SPOCK2	2.98E+00	1.87E-03	5.03E-03
ENSG00000101342	TLDC2	4.82E+00	1.89E-03	5.07E-03
ENSG00000106479	ZNF862	2.30E+00	1.89E-03	5.08E-03
ENSG00000236242	MYO16-AS1	4.08E+00	1.89E-03	5.08E-03
ENSG00000179564	LSMEM2	4.29E+00	1.91E-03	5.13E-03
ENSG00000182484	WASH6P	1.50E+00	1.93E-03	5.18E-03
ENSG00000131398	KCNC3	3.76E+00	1.94E-03	5.19E-03
ENSG00000151967	SCHIP1	2.35E+00	1.95E-03	5.22E-03
ENSG00000134020	PEBP4	3.69E+00	1.96E-03	5.23E-03
ENSG00000168135	KCNJ4	3.83E+00	1.96E-03	5.23E-03
ENSG00000167476	JSRP1	3.09E+00	1.96E-03	5.24E-03
ENSG00000160401	CFAP157	3.02E+00	1.96E-03	5.24E-03
ENSG00000166145	SPINT1	2.15E+00	1.97E-03	5.27E-03
ENSG00000239653	PSMD6-AS2	1.35E+00	1.98E-03	5.29E-03
ENSG00000124134	KCNS1	3.44E+00	2.04E-03	5.43E-03
ENSG00000175356	SCUBE2	1.95E+00	2.04E-03	5.44E-03
ENSG00000162438	CTRC	4.06E+00	2.05E-03	5.45E-03
ENSG00000198754	OXCT2	3.93E+00	2.05E-03	5.45E-03
ENSG00000164078	MST1R	4.27E+00	2.06E-03	5.49E-03
ENSG00000272115	AC233992.3	3.88E+00	2.07E-03	5.50E-03
ENSG00000283525	AC005622.1	4.67E+00	2.07E-03	5.50E-03
ENSG00000230753	ZNF341-AS1	3.85E+00	2.08E-03	5.52E-03
ENSG00000158467	AHCYL2	1.20E+00	2.08E-03	5.53E-03
ENSG00000249242	TMEM150C	2.79E+00	2.08E-03	5.54E-03
ENSG00000184349	EFNA5	3.99E+00	2.09E-03	5.56E-03
ENSG00000156711	MAPK13	2.01E+00	2.11E-03	5.60E-03
ENSG00000187098	MITF	1.24E+00	2.11E-03	5.60E-03
ENSG00000100298	APOBEC3H	3.67E+00	2.12E-03	5.62E-03
ENSG00000143851	PTPN7	4.26E+00	2.13E-03	5.65E-03
ENSG00000287553	AC090617.10	2.51E+00	2.15E-03	5.69E-03

ENSG00000257831	AL136418.1	5.10E+00	2.16E-03	5.73E-03
ENSG00000204791	SMPD5	4.55E+00	2.18E-03	5.77E-03
ENSG00000181240	SLC25A41	3.72E+00	2.19E-03	5.80E-03
ENSG00000272086	AC025181.2	1.70E+00	2.20E-03	5.83E-03
ENSG00000266498	AC055811.3	2.16E+00	2.25E-03	5.94E-03
ENSG00000152527	PLEKHH2	1.66E+00	2.26E-03	5.95E-03
ENSG00000229539	AL353194.1	1.60E+00	2.26E-03	5.96E-03
ENSG00000101230	ISM1	2.14E+00	2.29E-03	6.02E-03
ENSG00000155749	FLACC1	2.05E+00	2.31E-03	6.08E-03
ENSG00000111249	CUX2	4.09E+00	2.31E-03	6.08E-03
ENSG00000263874	LINC00672	2.99E+00	2.32E-03	6.10E-03
ENSG00000245571	FAM111A-DT	2.18E+00	2.32E-03	6.11E-03
ENSG00000164287	CDC20B	4.09E+00	2.33E-03	6.12E-03
ENSG00000185761	ADAMTSL5	1.57E+00	2.34E-03	6.14E-03
ENSG00000197616	MYH6	4.37E+00	2.34E-03	6.14E-03
ENSG00000127507	ADGRE2	2.55E+00	2.34E-03	6.15E-03
ENSG00000261997	AC007336.1	2.84E+00	2.34E-03	6.16E-03
ENSG00000120645	IQSEC3	4.63E+00	2.35E-03	6.16E-03
ENSG00000166268	MYRFL	5.04E+00	2.36E-03	6.20E-03
ENSG00000132109	TRIM21	1.11E+00	2.37E-03	6.23E-03
ENSG00000169918	OTUD7A	4.57E+00	2.38E-03	6.25E-03
ENSG00000144712	CAND2	2.66E+00	2.39E-03	6.26E-03
ENSG00000165025	SYK	4.49E+00	2.39E-03	6.27E-03
ENSG00000235538	AL078602.1	3.75E+00	2.40E-03	6.29E-03
ENSG00000104728	ARHGEF10	1.17E+00	2.41E-03	6.31E-03
ENSG00000142233	NTN5	4.46E+00	2.42E-03	6.34E-03
ENSG00000183484	GPR132	5.54E+00	2.43E-03	6.36E-03
ENSG00000275527	AC100835.2	4.69E+00	2.44E-03	6.38E-03
ENSG00000175003	SLC22A1	2.11E+00	2.46E-03	6.44E-03
ENSG00000139174	PRICKLE1	1.77E+00	2.47E-03	6.45E-03
ENSG00000119946	CNNM1	2.66E+00	2.48E-03	6.49E-03
ENSG00000263006	ROCK1P1	3.55E+00	2.49E-03	6.51E-03
ENSG00000169220	RGS14	1.27E+00	2.49E-03	6.51E-03
ENSG00000169252	ADRB2	3.19E+00	2.50E-03	6.53E-03
ENSG00000237945	LINC00649	3.71E+00	2.52E-03	6.58E-03
ENSG00000258457	AL132780.2	2.10E+00	2.53E-03	6.59E-03
ENSG00000283361	CFAP97D2	4.70E+00	2.53E-03	6.60E-03
ENSG00000257950	P2RX5-TAX1BF	2.59E+00	2.54E-03	6.64E-03
ENSG00000187902	SHISA7	4.67E+00	2.55E-03	6.65E-03
ENSG00000004777	ARHGAP33	1.29E+00	2.55E-03	6.65E-03
ENSG00000225828	FAM229A	1.63E+00	2.55E-03	6.65E-03
ENSG00000142405	NLRP12	4.42E+00	2.56E-03	6.68E-03
ENSG00000013725	CD6	4.62E+00	2.57E-03	6.69E-03
ENSG00000012124	CD22	3.94E+00	2.58E-03	6.73E-03
ENSG00000168936	TMEM129	1.14E+00	2.58E-03	6.73E-03

ENSG00000230798	FOXD3-AS1	2.27E+00	2.60E-03	6.77E-03
ENSG00000272789	AC010976.2	2.62E+00	2.60E-03	6.78E-03
ENSG00000231811	AL159166.1	4.88E+00	2.62E-03	6.81E-03
ENSG00000276166	AC092118.2	3.50E+00	2.65E-03	6.88E-03
ENSG00000130997	POLN	2.85E+00	2.67E-03	6.92E-03
ENSG00000285437	POLR2J3	3.44E+00	2.67E-03	6.93E-03
ENSG00000254402	LRRC24	1.71E+00	2.68E-03	6.95E-03
ENSG00000258982	AL133523.1	4.07E+00	2.68E-03	6.96E-03
ENSG00000136828	RALGPS1	1.83E+00	2.71E-03	7.03E-03
ENSG00000169704	GP9	4.57E+00	2.73E-03	7.07E-03
ENSG00000064225	ST3GAL6	1.29E+00	2.73E-03	7.08E-03
ENSG00000138795	LEF1	3.34E+00	2.73E-03	7.08E-03
ENSG00000228793	AL033523.1	1.78E+00	2.74E-03	7.08E-03
ENSG00000134569	LRP4	1.15E+00	2.74E-03	7.11E-03
ENSG00000135299	ANKRD6	1.36E+00	2.75E-03	7.11E-03
ENSG00000158458	NRG2	1.75E+00	2.76E-03	7.13E-03
ENSG00000231133	HAR1B	3.71E+00	2.76E-03	7.14E-03
ENSG00000157368	IL34	1.79E+00	2.81E-03	7.27E-03
ENSG00000140986	RPL3L	4.52E+00	2.82E-03	7.28E-03
ENSG00000245498	AP000866.1	1.99E+00	2.82E-03	7.29E-03
ENSG00000149781	FERMT3	1.78E+00	2.83E-03	7.31E-03
ENSG00000070886	EPHA8	4.09E+00	2.85E-03	7.34E-03
ENSG00000186364	NUDT17	1.43E+00	2.85E-03	7.34E-03
ENSG00000232931	LINC00342	1.10E+00	2.85E-03	7.35E-03
ENSG00000153363	LINC00467	1.40E+00	2.89E-03	7.44E-03
ENSG00000279502	AC016542.2	1.85E+00	2.91E-03	7.51E-03
ENSG00000172508	CARNS1	2.96E+00	2.94E-03	7.56E-03
ENSG00000133739	LRRC1	1.12E+00	2.96E-03	7.61E-03
ENSG00000274678	AC106886.3	4.34E+00	3.00E-03	7.71E-03
ENSG00000260778	AC009065.4	1.88E+00	3.03E-03	7.80E-03
ENSG00000109819	PPARGC1A	5.10E+00	3.06E-03	7.87E-03
ENSG00000138378	STAT4	4.56E+00	3.06E-03	7.88E-03
ENSG00000129009	ISLR	3.85E+00	3.08E-03	7.91E-03
ENSG00000007129	CEACAM21	4.89E+00	3.09E-03	7.94E-03
ENSG00000286940	AL645933.3	3.52E+00	3.10E-03	7.95E-03
ENSG00000172201	ID4	1.96E+00	3.10E-03	7.96E-03
ENSG00000187134	AKR1C1	2.26E+00	3.10E-03	7.97E-03
ENSG00000002745	WNT16	4.78E+00	3.11E-03	7.98E-03
ENSG00000178226	PRSS36	3.62E+00	3.12E-03	8.01E-03
ENSG00000274414	AL121772.1	4.57E+00	3.13E-03	8.02E-03
ENSG00000268218	AC137932.3	3.28E+00	3.13E-03	8.03E-03
ENSG00000138821	SLC39A8	2.38E+00	3.15E-03	8.06E-03
ENSG00000214553	LRRC37A11P	4.38E+00	3.15E-03	8.08E-03
ENSG00000267751	AC009005.1	1.75E+00	3.15E-03	8.08E-03
ENSG00000279981	AC018445.4	2.03E+00	3.16E-03	8.10E-03

ENSG00000269246	AC011445.2	2.19E+00	3.17E-03	8.11E-03
ENSG00000198835	GJC2	2.15E+00	3.19E-03	8.16E-03
ENSG00000287853	AL031668.2	1.85E+00	3.19E-03	8.17E-03
ENSG00000273356	LINC02019	3.29E+00	3.19E-03	8.17E-03
ENSG00000149043	SYT8	3.91E+00	3.23E-03	8.26E-03
ENSG00000124507	PACSIN1	3.21E+00	3.26E-03	8.32E-03
ENSG00000130768	SMPDL3B	2.50E+00	3.29E-03	8.39E-03
ENSG00000100307	CBX7	1.53E+00	3.30E-03	8.43E-03
ENSG00000198203	SULT1C2	3.73E+00	3.32E-03	8.47E-03
ENSG00000286147	AC092445.1	4.65E+00	3.33E-03	8.50E-03
ENSG00000023839	ABCC2	1.60E+00	3.34E-03	8.51E-03
ENSG00000233558	AL050331.1	2.09E+00	3.34E-03	8.51E-03
ENSG00000279571	AL162426.1	3.06E+00	3.35E-03	8.54E-03
ENSG00000271784	AL031055.1	2.90E+00	3.37E-03	8.57E-03
ENSG00000174460	ZCCHC12	3.03E+00	3.37E-03	8.57E-03
ENSG00000214612	RPS19P1	1.93E+00	3.37E-03	8.58E-03
ENSG00000185100	ADSSL1	2.12E+00	3.38E-03	8.60E-03
ENSG00000143387	CTSK	1.80E+00	3.39E-03	8.61E-03
ENSG00000116254	CHD5	2.03E+00	3.39E-03	8.63E-03
ENSG00000155974	GRIP1	3.03E+00	3.40E-03	8.63E-03
ENSG00000143110	C1orf162	2.70E+00	3.41E-03	8.67E-03
ENSG00000158258	CLSTN2	1.58E+00	3.42E-03	8.68E-03
ENSG00000169031	COL4A3	4.79E+00	3.44E-03	8.72E-03
ENSG00000130427	EPO	4.54E+00	3.45E-03	8.74E-03
ENSG00000225180	PVALEF	4.72E+00	3.47E-03	8.79E-03
ENSG00000255200	PGAM1P8	2.33E+00	3.48E-03	8.82E-03
ENSG00000288398	AL109627.1	1.85E+00	3.48E-03	8.83E-03
ENSG00000111199	TRPV4	1.45E+00	3.49E-03	8.84E-03
ENSG00000279208	CR381653.2	4.36E+00	3.50E-03	8.85E-03
ENSG00000170989	S1PR1	2.83E+00	3.51E-03	8.87E-03
ENSG00000224330	AC005019.2	4.27E+00	3.56E-03	8.99E-03
ENSG00000233223	AC016876.1	1.31E+00	3.56E-03	9.01E-03
ENSG00000214514	KRT42P	5.61E+00	3.57E-03	9.01E-03
ENSG00000179846	NKPD1	4.61E+00	3.58E-03	9.06E-03
ENSG00000144681	STAC	2.29E+00	3.59E-03	9.06E-03
ENSG00000176927	EFCAB5	2.01E+00	3.59E-03	9.07E-03
ENSG00000180316	PNPLA1	3.80E+00	3.62E-03	9.13E-03
ENSG00000075945	KIFAP3	1.04E+00	3.64E-03	9.17E-03
ENSG00000176472	ZNF575	2.13E+00	3.68E-03	9.27E-03
ENSG00000230027	AC092813.2	4.64E+00	3.68E-03	9.28E-03
ENSG00000186190	BPIFB3	4.61E+00	3.70E-03	9.30E-03
ENSG00000264023	AC068418.1	4.72E+00	3.72E-03	9.36E-03
ENSG00000242439	AC127024.1	5.07E+00	3.74E-03	9.41E-03
ENSG00000185527	PDE6G	2.29E+00	3.75E-03	9.43E-03
ENSG00000245975	AC090515.2	4.85E+00	3.75E-03	9.43E-03

ENSG00000232453	LINC02777	3.34E+00	3.75E-03	9.44E-03
ENSG00000105219	CNTD2	3.32E+00	3.78E-03	9.50E-03
ENSG00000095587	TLL2	2.90E+00	3.79E-03	9.52E-03
ENSG00000181126	HLA-V	4.68E+00	3.81E-03	9.56E-03
ENSG00000105880	DLX5	5.02E+00	3.82E-03	9.58E-03
ENSG00000272457	AC113194.1	3.57E+00	3.82E-03	9.59E-03
ENSG00000273001	AL731533.2	3.83E+00	3.82E-03	9.59E-03
ENSG00000276744	AC105137.2	3.70E+00	3.84E-03	9.63E-03
ENSG00000286519	AC009236.1	2.48E+00	3.85E-03	9.65E-03
ENSG00000103044	HAS3	1.30E+00	3.86E-03	9.67E-03
ENSG00000228801	AC064807.1	1.22E+00	3.87E-03	9.70E-03
ENSG00000185436	IFNLR1	2.16E+00	3.88E-03	9.72E-03
ENSG00000225442	MPRIP-AS1	5.12E+00	3.90E-03	9.77E-03
ENSG00000163617	CCDC191	1.27E+00	3.91E-03	9.79E-03
ENSG00000143595	AQP10	3.81E+00	3.93E-03	9.84E-03
ENSG00000215218	UBE2QL1	2.18E+00	3.94E-03	9.88E-03
ENSG00000125510	OPRL1	2.59E+00	3.96E-03	9.92E-03
ENSG00000181585	TMIE	3.02E+00	3.97E-03	9.94E-03
ENSG00000163701	IL17RE	4.26E+00	3.97E-03	9.94E-03
ENSG00000248932	AC046134.2	2.57E+00	3.97E-03	9.94E-03
ENSG00000182557	SPNS3	3.78E+00	3.99E-03	9.97E-03
ENSG00000276851	AC002401.4	1.65E+00	3.99E-03	9.97E-03
ENSG00000124257	NEURL2	1.44E+00	4.00E-03	9.98E-03
ENSG00000198155	ZNF876P	1.60E+00	4.00E-03	1.00E-02
ENSG00000250731	TPM3P6	3.12E+00	4.00E-03	1.00E-02
ENSG00000102981	PARD6A	2.81E+00	4.08E-03	1.02E-02
ENSG00000259947	LINC02124	5.05E+00	4.10E-03	1.02E-02
ENSG00000285693	AP002381.2	1.37E+00	4.10E-03	1.02E-02
ENSG00000107954	NEURL1	3.46E+00	4.12E-03	1.03E-02
ENSG00000142621	FHAD1	2.54E+00	4.13E-03	1.03E-02
ENSG00000127831	VIL1	3.13E+00	4.16E-03	1.04E-02
ENSG00000021488	SLC7A9	3.91E+00	4.16E-03	1.04E-02
ENSG00000177614	PGBD5	3.01E+00	4.17E-03	1.04E-02
ENSG00000272686	AC006333.2	1.26E+00	4.18E-03	1.04E-02
ENSG00000143195	ILDR2	3.78E+00	4.23E-03	1.05E-02
ENSG00000272744	AC107214.2	2.56E+00	4.24E-03	1.06E-02
ENSG00000105514	RAB3D	1.28E+00	4.26E-03	1.06E-02
ENSG00000151650	VENTX	4.60E+00	4.26E-03	1.06E-02
ENSG00000121966	CXCR4	4.81E+00	4.27E-03	1.06E-02
ENSG00000273162	AL133215.2	2.15E+00	4.28E-03	1.06E-02
ENSG00000278662	GOLGA6L10	1.63E+00	4.30E-03	1.07E-02
ENSG00000250802	ZBED3-AS1	2.26E+00	4.32E-03	1.07E-02
ENSG00000189149	CRYM-AS1	2.99E+00	4.35E-03	1.08E-02
ENSG00000185433	LINC00158	4.10E+00	4.37E-03	1.08E-02
ENSG00000164674	SYTL3	2.10E+00	4.39E-03	1.09E-02

ENSG00000129214	SHBG	2.19E+00	4.43E-03	1.10E-02
ENSG00000127084	FGD3	3.86E+00	4.44E-03	1.10E-02
ENSG00000137198	GMPR	1.58E+00	4.47E-03	1.11E-02
ENSG00000168038	ULK4	1.19E+00	4.50E-03	1.11E-02
ENSG00000101489	CELF4	4.54E+00	4.51E-03	1.12E-02
ENSG00000099953	MMP11	1.36E+00	4.53E-03	1.12E-02
ENSG00000146856	AGBL3	1.47E+00	4.55E-03	1.12E-02
ENSG00000266010	GATA6-AS1	1.85E+00	4.55E-03	1.12E-02
ENSG00000187268	FAM9C	4.19E+00	4.56E-03	1.13E-02
ENSG00000284640	AL590434.1	3.69E+00	4.59E-03	1.13E-02
ENSG00000175877	TMEM270	4.05E+00	4.61E-03	1.14E-02
ENSG00000112499	SLC22A2	3.77E+00	4.63E-03	1.14E-02
ENSG00000157087	ATP2B2	3.87E+00	4.65E-03	1.15E-02
ENSG00000099219	ERMP1	1.52E+00	4.65E-03	1.15E-02
ENSG00000219133	AL592114.1	3.56E+00	4.66E-03	1.15E-02
ENSG00000111846	GCNT2	1.65E+00	4.66E-03	1.15E-02
ENSG00000126218	F10	3.89E+00	4.68E-03	1.15E-02
ENSG00000265933	LINC00668	5.04E+00	4.73E-03	1.17E-02
ENSG00000028137	TNFRSF1B	1.24E+00	4.74E-03	1.17E-02
ENSG00000183091	NEB	4.36E+00	4.77E-03	1.17E-02
ENSG00000140285	FGF7	4.28E+00	4.77E-03	1.17E-02
ENSG00000257513	NPIPB1P	4.05E+00	4.79E-03	1.18E-02
ENSG00000180549	FUT7	5.00E+00	4.87E-03	1.20E-02
ENSG00000123329	ARHGAP9	4.27E+00	4.87E-03	1.20E-02
ENSG00000174358	SLC6A19	4.94E+00	4.88E-03	1.20E-02
ENSG00000205269	TMEM170B	1.57E+00	4.93E-03	1.21E-02
ENSG00000086967	MYBPC2	4.49E+00	4.94E-03	1.21E-02
ENSG00000167617	CDC42EP5	2.60E+00	4.94E-03	1.21E-02
ENSG00000245275	SAP30L-AS1	1.93E+00	4.96E-03	1.22E-02
ENSG00000231160	KLF3-AS1	3.22E+00	4.99E-03	1.22E-02
ENSG00000226251	LINC02608	3.59E+00	5.03E-03	1.23E-02
ENSG00000287814	AC011407.1	4.72E+00	5.03E-03	1.23E-02
ENSG00000286782	AL355377.3	4.09E+00	5.04E-03	1.23E-02
ENSG00000121075	TBX4	4.17E+00	5.14E-03	1.26E-02
ENSG00000283646	LINC02009	3.99E+00	5.18E-03	1.27E-02
ENSG00000278192	AL118505.1	4.95E+00	5.25E-03	1.28E-02
ENSG00000188818	ZDHC11	1.88E+00	5.26E-03	1.28E-02
ENSG00000270000	AC005479.2	2.47E+00	5.27E-03	1.29E-02
ENSG00000100253	MIOX	3.45E+00	5.31E-03	1.29E-02
ENSG00000115705	TPO	4.63E+00	5.34E-03	1.30E-02
ENSG00000246203	AL353807.3	3.06E+00	5.34E-03	1.30E-02
ENSG00000135218	CD36	3.87E+00	5.39E-03	1.31E-02
ENSG00000235663	SAPCD1-AS1	3.55E+00	5.39E-03	1.31E-02
ENSG00000149418	ST14	3.32E+00	5.41E-03	1.32E-02
ENSG00000146243	IRAK1BP1	1.89E+00	5.45E-03	1.32E-02



ENSG00000168631	MUCL3	4.45E+00	5.46E-03	1.33E-02
ENSG00000279806	AC018629.1	4.71E+00	5.46E-03	1.33E-02
ENSG00000266983	AC011444.1	4.29E+00	5.47E-03	1.33E-02
ENSG00000261790	AC005606.2	4.07E+00	5.50E-03	1.33E-02
ENSG00000100628	ASB2	3.66E+00	5.50E-03	1.33E-02
ENSG00000106733	NMRK1	2.29E+00	5.50E-03	1.34E-02
ENSG00000240891	PLCXD2	1.37E+00	5.52E-03	1.34E-02
ENSG00000279901	AC092117.2	1.86E+00	5.54E-03	1.34E-02
ENSG00000089199	CHGB	3.20E+00	5.58E-03	1.35E-02
ENSG00000115267	IFIH1	1.31E+00	5.62E-03	1.36E-02
ENSG00000115297	TLX2	1.64E+00	5.67E-03	1.37E-02
ENSG00000186907	RTN4RL2	2.04E+00	5.69E-03	1.38E-02
ENSG00000109265	KIAA1211	2.59E+00	5.72E-03	1.38E-02
ENSG00000286001	AC021087.5	2.37E+00	5.72E-03	1.38E-02
ENSG00000243396	AC084198.1	5.05E+00	5.75E-03	1.39E-02
ENSG00000279232	AC008522.1	4.72E+00	5.76E-03	1.39E-02
ENSG00000227070	AC104170.1	3.77E+00	5.79E-03	1.40E-02
ENSG00000171428	NAT1	1.25E+00	5.79E-03	1.40E-02
ENSG00000288086	AL157414.4	4.55E+00	5.80E-03	1.40E-02
ENSG00000279792	AC015909.5	1.39E+00	5.84E-03	1.41E-02
ENSG00000287126	AC108488.3	1.55E+00	5.87E-03	1.41E-02
ENSG00000004939	SLC4A1	4.32E+00	5.93E-03	1.43E-02
ENSG00000184481	FOXO4	1.40E+00	5.94E-03	1.43E-02
ENSG00000105991	HOXA1	2.46E+00	5.95E-03	1.43E-02
ENSG00000125798	FOXA2	2.14E+00	5.95E-03	1.43E-02
ENSG00000136883	KIF12	4.42E+00	5.99E-03	1.44E-02
ENSG00000129646	QRICH2	2.27E+00	6.00E-03	1.44E-02
ENSG00000181143	MUC16	5.27E+00	6.13E-03	1.47E-02
ENSG00000232653	GOLGA8N	3.35E+00	6.17E-03	1.48E-02
ENSG00000126460	PRRG2	1.30E+00	6.18E-03	1.48E-02
ENSG00000156172	C8orf37	1.57E+00	6.18E-03	1.48E-02
ENSG00000109576	AADAT	1.10E+00	6.19E-03	1.48E-02
ENSG00000166888	STAT6	2.56E+00	6.20E-03	1.48E-02
ENSG00000069424	KCNAB2	1.16E+00	6.22E-03	1.49E-02
ENSG00000198416	ZNF658B	4.35E+00	6.24E-03	1.49E-02
ENSG00000088320	REM1	3.81E+00	6.26E-03	1.49E-02
ENSG00000235961	PNMA6A	1.63E+00	6.29E-03	1.50E-02
ENSG00000100362	PVALB	4.08E+00	6.32E-03	1.51E-02
ENSG00000226281	AL031123.1	3.80E+00	6.34E-03	1.51E-02
ENSG00000260190	AL807752.5	2.28E+00	6.35E-03	1.51E-02
ENSG00000058453	CROCC	1.00E+00	6.37E-03	1.52E-02
ENSG00000167371	PRRT2	1.61E+00	6.37E-03	1.52E-02
ENSG00000251615	AC104825.1	1.90E+00	6.38E-03	1.52E-02
ENSG00000183060	LYSMD4	1.00E+00	6.41E-03	1.53E-02
ENSG00000074047	GLI2	1.08E+00	6.41E-03	1.53E-02

ENSG00000154760	SLFN13	2.69E+00	6.43E-03	1.53E-02
ENSG00000267083	KRT18P61	2.29E+00	6.47E-03	1.54E-02
ENSG00000181016	LSMEM1	1.60E+00	6.49E-03	1.55E-02
ENSG00000100027	YPEL1	1.84E+00	6.51E-03	1.55E-02
ENSG00000227744	LINC01940	4.51E+00	6.51E-03	1.55E-02
ENSG00000142347	MYO1F	2.69E+00	6.57E-03	1.56E-02
ENSG00000100299	ARSA	1.10E+00	6.58E-03	1.57E-02
ENSG00000070808	CAMK2A	2.34E+00	6.59E-03	1.57E-02
ENSG00000267577	AC010327.4	4.10E+00	6.60E-03	1.57E-02
ENSG00000278891	AC105101.1	4.54E+00	6.63E-03	1.57E-02
ENSG00000187796	CARD9	1.90E+00	6.65E-03	1.58E-02
ENSG00000105205	CLC	4.44E+00	6.65E-03	1.58E-02
ENSG00000131055	COX4I2	4.77E+00	6.66E-03	1.58E-02
ENSG00000072818	ACAP1	1.56E+00	6.72E-03	1.59E-02
ENSG00000236094	LINC00545	4.48E+00	6.74E-03	1.60E-02
ENSG00000087076	HSD17B14	1.10E+00	6.75E-03	1.60E-02
ENSG00000278873	AC005495.1	3.24E+00	6.76E-03	1.60E-02
ENSG00000249087	ZNF436-AS1	1.93E+00	6.79E-03	1.61E-02
ENSG00000153012	LGI2	3.44E+00	6.80E-03	1.61E-02
ENSG00000224616	RTCA-AS1	1.60E+00	6.83E-03	1.62E-02
ENSG00000228010	AC073343.2	4.50E+00	6.84E-03	1.62E-02
ENSG00000183019	MCEMP1	4.81E+00	6.85E-03	1.62E-02
ENSG00000135063	FAM189A2	3.63E+00	6.88E-03	1.63E-02
ENSG00000165553	NGB	3.66E+00	6.88E-03	1.63E-02
ENSG00000223774	AL513217.1	2.67E+00	6.96E-03	1.64E-02
ENSG00000240922	LSAMP-AS1	4.06E+00	6.97E-03	1.65E-02
ENSG00000178403	NEUROG2	4.95E+00	6.98E-03	1.65E-02
ENSG00000163531	NFASC	1.53E+00	6.98E-03	1.65E-02
ENSG00000280303	ERICD	2.65E+00	7.03E-03	1.66E-02
ENSG00000268678	AC005261.2	3.77E+00	7.07E-03	1.67E-02
ENSG00000211454	AKR7L	3.09E+00	7.08E-03	1.67E-02
ENSG00000100302	RASD2	1.72E+00	7.11E-03	1.67E-02
ENSG00000042317	SPATA7	1.29E+00	7.12E-03	1.68E-02
ENSG00000185674	LYG2	4.91E+00	7.18E-03	1.69E-02
ENSG00000275479	AC087741.2	3.00E+00	7.19E-03	1.69E-02
ENSG00000164398	ACSL6	4.19E+00	7.20E-03	1.69E-02
ENSG00000073067	CYP2W1	4.43E+00	7.22E-03	1.70E-02
ENSG00000132522	GPS2	1.17E+00	7.22E-03	1.70E-02
ENSG00000152315	KCNK13	2.94E+00	7.24E-03	1.70E-02
ENSG00000142178	SIK1	1.62E+00	7.24E-03	1.70E-02
ENSG00000163817	SLC6A20	2.21E+00	7.29E-03	1.71E-02
ENSG00000274363	AC087742.1	3.92E+00	7.35E-03	1.72E-02
ENSG00000204315	FKBPL	1.07E+00	7.43E-03	1.74E-02
ENSG00000043591	ADRB1	3.58E+00	7.48E-03	1.75E-02
ENSG00000240038	AMY2B	4.57E+00	7.50E-03	1.76E-02

ENSG00000170442	KRT86	2.73E+00	7.52E-03	1.76E-02
ENSG00000188681	TEKT4P2	1.08E+00	7.55E-03	1.77E-02
ENSG00000168491	CCDC110	3.43E+00	7.56E-03	1.77E-02
ENSG00000182568	SATB1	4.69E+00	7.60E-03	1.78E-02
ENSG00000251131	AC025171.3	1.60E+00	7.60E-03	1.78E-02
ENSG00000155085	AK9	1.18E+00	7.63E-03	1.78E-02
ENSG00000177459	ERICH5	1.27E+00	7.64E-03	1.79E-02
ENSG00000287918	AF274853.1	3.77E+00	7.69E-03	1.80E-02
ENSG00000123191	ATP7B	2.13E+00	7.80E-03	1.82E-02
ENSG00000105642	KCNN1	1.64E+00	7.81E-03	1.82E-02
ENSG00000141401	IMPA2	1.13E+00	7.83E-03	1.83E-02
ENSG00000095370	SH2D3C	2.39E+00	7.96E-03	1.85E-02
ENSG00000162825	NBPF20	1.10E+00	8.00E-03	1.86E-02
ENSG00000226094	RPL7P3	4.51E+00	8.04E-03	1.87E-02
ENSG00000246777	AC044802.1	1.52E+00	8.07E-03	1.88E-02
ENSG00000246526	LINC002481	3.71E+00	8.08E-03	1.88E-02
ENSG00000272009	AL121944.1	1.89E+00	8.09E-03	1.88E-02
ENSG00000255100	AP003119.2	2.42E+00	8.09E-03	1.88E-02
ENSG00000225465	RFPL1S	4.23E+00	8.10E-03	1.88E-02
ENSG00000186191	BPIFB4	3.88E+00	8.13E-03	1.89E-02
ENSG00000179314	WSCD1	4.50E+00	8.28E-03	1.92E-02
ENSG00000114638	UPK1B	4.60E+00	8.29E-03	1.92E-02
ENSG00000197859	ADAMTSL2	4.29E+00	8.32E-03	1.93E-02
ENSG00000099869	IGF2-AS	3.64E+00	8.35E-03	1.93E-02
ENSG00000149654	CDH22	4.27E+00	8.37E-03	1.94E-02
ENSG00000182912	TSPEAR-AS2	4.29E+00	8.39E-03	1.94E-02
ENSG00000174498	IGDCC3	3.06E+00	8.49E-03	1.96E-02
ENSG00000177398	UMODL1	4.25E+00	8.50E-03	1.96E-02
ENSG00000186510	CLCNKA	3.91E+00	8.53E-03	1.97E-02
ENSG00000270179	AP002840.2	4.06E+00	8.55E-03	1.97E-02
ENSG00000273010	AL360270.3	4.11E+00	8.56E-03	1.98E-02
ENSG00000189233	NUGGC	3.70E+00	8.58E-03	1.98E-02
ENSG00000149243	KLHL35	4.05E+00	8.60E-03	1.98E-02
ENSG00000272636	DOC2B	2.38E+00	8.64E-03	1.99E-02
ENSG00000267750	RUNDC3A-AS1	2.23E+00	8.77E-03	2.02E-02
ENSG00000279649	AC020978.9	4.03E+00	8.80E-03	2.03E-02
ENSG00000132874	SLC14A2	4.58E+00	8.84E-03	2.04E-02
ENSG00000197632	SERPINB2	1.21E+00	8.90E-03	2.05E-02
ENSG00000112320	SOBP	1.38E+00	8.95E-03	2.06E-02
ENSG00000259100	AL157791.1	3.85E+00	8.96E-03	2.06E-02
ENSG00000197576	HOXA4	1.94E+00	9.03E-03	2.07E-02
ENSG00000134627	PIWIL4	3.52E+00	9.04E-03	2.08E-02
ENSG00000280239	AC011498.7	1.53E+00	9.06E-03	2.08E-02
ENSG00000146215	CRIP3	3.56E+00	9.07E-03	2.08E-02
ENSG00000196357	ZNF565	1.12E+00	9.09E-03	2.09E-02

ENSG00000267719	LINC02078	3.99E+00	9.10E-03	2.09E-02
ENSG00000049769	PPP1R3F	1.10E+00	9.14E-03	2.10E-02
ENSG00000261543	AC010931.3	3.95E+00	9.16E-03	2.10E-02
ENSG00000161040	FBXL13	1.98E+00	9.17E-03	2.10E-02
ENSG00000069764	PLA2G10	4.32E+00	9.19E-03	2.11E-02
ENSG00000162461	SLC25A34	2.12E+00	9.24E-03	2.12E-02
ENSG00000136931	NR5A1	3.74E+00	9.26E-03	2.12E-02
ENSG00000285848	AC025280.3	3.83E+00	9.26E-03	2.12E-02
ENSG00000161270	NPHS1	4.00E+00	9.27E-03	2.12E-02
ENSG00000027869	SH2D2A	3.06E+00	9.34E-03	2.14E-02
ENSG00000141441	GAREM1	2.00E+00	9.39E-03	2.15E-02
ENSG00000132793	LPIN3	1.96E+00	9.46E-03	2.16E-02
ENSG00000205085	FAM71F2	3.89E+00	9.47E-03	2.16E-02
ENSG00000279361	AC079331.1	3.33E+00	9.48E-03	2.17E-02
ENSG00000175104	TRAF6	1.08E+00	9.55E-03	2.18E-02
ENSG00000214827	MTCP1	2.68E+00	9.59E-03	2.19E-02
ENSG00000284669	AC092053.3	4.02E+00	9.61E-03	2.19E-02
ENSG00000206190	ATP10A	4.98E+00	9.61E-03	2.19E-02
ENSG00000252835	SCARNA21	3.19E+00	9.67E-03	2.20E-02
ENSG00000224186	C5orf66	2.91E+00	9.67E-03	2.20E-02
ENSG00000132698	RAB25	4.08E+00	9.71E-03	2.21E-02
ENSG00000184347	SLIT3	1.80E+00	9.75E-03	2.22E-02
ENSG00000135447	PPP1R1A	4.65E+00	9.85E-03	2.24E-02
ENSG00000277476	AC005332.5	2.64E+00	9.87E-03	2.24E-02
ENSG00000204257	HLA-DMA	2.41E+00	9.88E-03	2.25E-02
ENSG00000205593	DENND6B	1.50E+00	9.95E-03	2.26E-02
ENSG00000117707	PROX1	4.52E+00	9.96E-03	2.26E-02
ENSG00000234618	RPSAP9	3.14E+00	9.97E-03	2.26E-02
ENSG00000154485	MMP21	3.63E+00	1.01E-02	2.29E-02
ENSG00000235214	FAM83C-AS1	4.20E+00	1.01E-02	2.30E-02
ENSG00000227741	AL121987.2	4.57E+00	1.02E-02	2.30E-02
ENSG00000160963	COL26A1	4.19E+00	1.02E-02	2.31E-02
ENSG00000187583	PLEKHN1	1.01E+00	1.02E-02	2.31E-02
ENSG00000198915	RASGEF1A	3.71E+00	1.02E-02	2.31E-02
ENSG00000167011	NAT16	2.54E+00	1.02E-02	2.32E-02
ENSG00000249346	LINC01016	3.99E+00	1.03E-02	2.32E-02
ENSG00000174407	MIR1-1HG	4.73E+00	1.03E-02	2.32E-02
ENSG00000228278	ORM2	4.73E+00	1.03E-02	2.33E-02
ENSG00000186919	ZACN	3.51E+00	1.03E-02	2.34E-02
ENSG00000132702	HAPLN2	4.07E+00	1.03E-02	2.34E-02
ENSG00000267288	AC138150.2	3.06E+00	1.03E-02	2.34E-02
ENSG00000143434	SEMA6C	1.05E+00	1.04E-02	2.34E-02
ENSG00000283390	AC068631.3	1.30E+00	1.04E-02	2.34E-02
ENSG00000237187	NR2F1-AS1	1.47E+00	1.04E-02	2.36E-02
ENSG00000279140	AL590326.1	1.26E+00	1.05E-02	2.36E-02

ENSG00000081148	IMPG2	4.12E+00	1.05E-02	2.36E-02
ENSG00000181031	RPH3AL	2.17E+00	1.05E-02	2.37E-02
ENSG00000175697	GPR156	3.16E+00	1.05E-02	2.38E-02
ENSG00000272449	AL139246.5	3.13E+00	1.05E-02	2.38E-02
ENSG00000273297	AC009275.1	1.27E+00	1.06E-02	2.39E-02
ENSG00000273226	AL391834.2	3.40E+00	1.06E-02	2.39E-02
ENSG00000139910	NOVA1	3.30E+00	1.07E-02	2.40E-02
ENSG00000207751	AP000553.1	3.57E+00	1.07E-02	2.41E-02
ENSG00000002746	HECW1	1.45E+00	1.07E-02	2.41E-02
ENSG00000106004	HOXA5	1.07E+00	1.07E-02	2.41E-02
ENSG00000268583	AC011466.1	2.16E+00	1.07E-02	2.41E-02
ENSG00000149212	SESN3	3.04E+00	1.08E-02	2.43E-02
ENSG00000223903	RPL23P4	3.32E+00	1.09E-02	2.44E-02
ENSG00000285646	AL021155.5	2.22E+00	1.09E-02	2.46E-02
ENSG00000103241	FOXF1	1.17E+00	1.10E-02	2.46E-02
ENSG00000080007	DDX43	4.69E+00	1.10E-02	2.47E-02
ENSG00000189129	PLAC9	1.94E+00	1.10E-02	2.47E-02
ENSG00000149927	DOC2A	1.32E+00	1.11E-02	2.49E-02
ENSG00000182950	ODF3L1	3.06E+00	1.11E-02	2.49E-02
ENSG00000122679	RAMP3	3.69E+00	1.12E-02	2.51E-02
ENSG00000204344	STK19	1.11E+00	1.12E-02	2.51E-02
ENSG00000241735	FABP5P3	4.03E+00	1.12E-02	2.51E-02
ENSG00000214548	MEG3	4.05E+00	1.13E-02	2.52E-02
ENSG00000183150	GPR19	3.16E+00	1.13E-02	2.52E-02
ENSG00000271980	AC012640.4	3.94E+00	1.13E-02	2.53E-02
ENSG00000263080	AC009121.3	3.41E+00	1.13E-02	2.53E-02
ENSG00000178222	RNF212	4.82E+00	1.14E-02	2.54E-02
ENSG00000140022	STON2	1.92E+00	1.14E-02	2.55E-02
ENSG00000262370	AC108134.3	4.22E+00	1.14E-02	2.55E-02
ENSG00000156042	CFAP70	3.17E+00	1.14E-02	2.55E-02
ENSG00000165643	SOHLH1	4.59E+00	1.16E-02	2.58E-02
ENSG00000169228	RAB24	2.38E+00	1.16E-02	2.60E-02
ENSG00000166407	LMO1	2.48E+00	1.17E-02	2.61E-02
ENSG00000177875	CCDC184	4.40E+00	1.17E-02	2.61E-02
ENSG00000146250	PRSS35	2.28E+00	1.17E-02	2.61E-02
ENSG00000185652	NTF3	4.66E+00	1.17E-02	2.61E-02
ENSG00000248445	SEMA6A-AS1	2.93E+00	1.18E-02	2.63E-02
ENSG00000261652	C15orf65	2.13E+00	1.19E-02	2.65E-02
ENSG00000145824	CXCL14	2.70E+00	1.20E-02	2.66E-02
ENSG00000249550	LINC01234	3.08E+00	1.20E-02	2.67E-02
ENSG00000198771	RCSD1	3.14E+00	1.20E-02	2.68E-02
ENSG00000229414	KCNQ1-AS1	4.09E+00	1.22E-02	2.71E-02
ENSG00000132623	ANKEF1	1.23E+00	1.23E-02	2.72E-02
ENSG00000286619	AC119673.2	3.72E+00	1.24E-02	2.74E-02
ENSG00000177238	TRIM72	3.72E+00	1.24E-02	2.76E-02

ENSG00000285872	AC007240.3	3.06E+00	1.24E-02	2.76E-02
ENSG00000213901	SLC23A3	2.17E+00	1.25E-02	2.76E-02
ENSG00000124253	PCK1	4.36E+00	1.25E-02	2.78E-02
ENSG00000132386	SERPINF1	2.98E+00	1.26E-02	2.79E-02
ENSG00000276952	AL121772.3	1.77E+00	1.26E-02	2.79E-02
ENSG00000117595	IRF6	1.52E+00	1.26E-02	2.80E-02
ENSG00000143226	FCGR2A	2.73E+00	1.27E-02	2.80E-02
ENSG00000088280	ASAP3	1.03E+00	1.27E-02	2.80E-02
ENSG00000172382	PRSS27	1.01E+00	1.28E-02	2.82E-02
ENSG00000233755	AL050344.1	4.11E+00	1.28E-02	2.82E-02
ENSG00000250271	AC068647.2	2.09E+00	1.29E-02	2.85E-02
ENSG00000148200	NR6A1	1.04E+00	1.30E-02	2.86E-02
ENSG00000186891	TNFRSF18	3.53E+00	1.30E-02	2.87E-02
ENSG00000279161	AC093503.3	2.88E+00	1.30E-02	2.87E-02
ENSG00000222035	KIAA2012-AS1	3.04E+00	1.31E-02	2.88E-02
ENSG00000136944	LMX1B	1.84E+00	1.32E-02	2.90E-02
ENSG00000214212	C19orf38	2.15E+00	1.32E-02	2.90E-02
ENSG00000100068	LRP5L	1.51E+00	1.32E-02	2.90E-02
ENSG00000251576	LINC01267	3.78E+00	1.32E-02	2.91E-02
ENSG00000128596	CCDC136	1.08E+00	1.33E-02	2.93E-02
ENSG00000226900	AL451069.1	4.07E+00	1.33E-02	2.93E-02
ENSG00000144671	SLC22A14	2.99E+00	1.34E-02	2.95E-02
ENSG00000264569	DCXR-DT	3.24E+00	1.34E-02	2.96E-02
ENSG00000143355	LHX9	2.35E+00	1.35E-02	2.97E-02
ENSG00000285867	BX470102.2	3.37E+00	1.36E-02	2.98E-02
ENSG00000100678	SLC8A3	3.64E+00	1.36E-02	2.99E-02
ENSG00000132026	RTBDN	3.21E+00	1.36E-02	2.99E-02
ENSG00000271858	CYB561D2	4.53E+00	1.37E-02	3.00E-02
ENSG00000157927	RADIL	1.49E+00	1.37E-02	3.00E-02
ENSG00000227053	AC105446.1	1.46E+00	1.38E-02	3.03E-02
ENSG00000269578	AC008764.7	2.08E+00	1.38E-02	3.04E-02
ENSG00000223745	CCDC18-AS1	1.44E+00	1.39E-02	3.04E-02
ENSG00000257335	MGAM	4.03E+00	1.39E-02	3.04E-02
ENSG00000256448	AP000763.3	3.32E+00	1.39E-02	3.04E-02
ENSG00000241081	RPL22P2	2.52E+00	1.40E-02	3.07E-02
ENSG00000105697	HAMP	4.28E+00	1.40E-02	3.07E-02
ENSG00000271849	AC012603.1	4.31E+00	1.40E-02	3.07E-02
ENSG00000219626	FAM228B	1.50E+00	1.41E-02	3.09E-02
ENSG00000167046	AL357033.1	3.72E+00	1.41E-02	3.09E-02
ENSG00000253667	AC100821.1	2.55E+00	1.41E-02	3.09E-02
ENSG00000281406	BLACAT1	4.04E+00	1.42E-02	3.09E-02
ENSG00000100593	ISM2	2.60E+00	1.42E-02	3.09E-02
ENSG00000187889	FYB2	4.51E+00	1.42E-02	3.10E-02
ENSG00000273136	NBPF26	1.91E+00	1.43E-02	3.11E-02
ENSG00000274828	AC068473.5	1.08E+00	1.44E-02	3.13E-02

ENSG00000142583	SLC2A5	2.65E+00	1.44E-02	3.15E-02
ENSG00000166762	CATSPER2	1.37E+00	1.45E-02	3.16E-02
ENSG00000226338	AC079150.1	1.05E+00	1.46E-02	3.19E-02
ENSG00000139194	RBP5	3.49E+00	1.47E-02	3.19E-02
ENSG00000225193	RPS12P26	2.10E+00	1.48E-02	3.22E-02
ENSG00000273599	AL731571.1	3.37E+00	1.49E-02	3.25E-02
ENSG00000091428	RAPGEF4	2.12E+00	1.49E-02	3.25E-02
ENSG00000232080	AL662789.1	4.14E+00	1.49E-02	3.25E-02
ENSG00000174529	TMEM81	1.55E+00	1.50E-02	3.25E-02
ENSG00000176919	C8G	2.16E+00	1.50E-02	3.25E-02
ENSG00000276250	AC127024.6	3.46E+00	1.50E-02	3.25E-02
ENSG00000286532	PARTICL	1.36E+00	1.51E-02	3.27E-02
ENSG00000214915	BX546450.1	4.35E+00	1.51E-02	3.28E-02
ENSG00000087250	MT3	3.79E+00	1.52E-02	3.29E-02
ENSG00000158104	HPD	3.48E+00	1.52E-02	3.29E-02
ENSG00000227373	RABGAP1L-DT	3.33E+00	1.52E-02	3.29E-02
ENSG00000166105	GLB1L3	1.65E+00	1.52E-02	3.29E-02
ENSG00000206113	CFAP99	4.27E+00	1.52E-02	3.30E-02
ENSG00000141639	MAPK4	4.11E+00	1.53E-02	3.30E-02
ENSG00000255120	OVOL1-AS1	4.24E+00	1.53E-02	3.31E-02
ENSG00000286699	AC084198.2	2.40E+00	1.54E-02	3.33E-02
ENSG00000226088	AL158839.1	3.85E+00	1.54E-02	3.34E-02
ENSG00000172000	ZNF556	3.55E+00	1.54E-02	3.34E-02
ENSG00000261335	AC005837.1	2.48E+00	1.55E-02	3.34E-02
ENSG00000287808	AL355999.1	4.28E+00	1.55E-02	3.35E-02
ENSG00000122733	PHF24	2.77E+00	1.58E-02	3.42E-02
ENSG00000287710	AC067852.5	1.48E+00	1.59E-02	3.43E-02
ENSG00000101306	MYLK2	1.32E+00	1.59E-02	3.43E-02
ENSG00000132677	RHBG	3.90E+00	1.60E-02	3.44E-02
ENSG00000277602	AC005363.2	1.81E+00	1.60E-02	3.44E-02
ENSG00000237452	BHMG1	3.75E+00	1.61E-02	3.46E-02
ENSG00000185973	TMLHE	1.33E+00	1.61E-02	3.46E-02
ENSG00000204947	ZNF425	1.26E+00	1.61E-02	3.46E-02
ENSG00000163072	NOSTRIN	2.63E+00	1.62E-02	3.49E-02
ENSG00000111671	SPSB2	1.25E+00	1.63E-02	3.49E-02
ENSG00000113196	HAND1	4.30E+00	1.64E-02	3.52E-02
ENSG00000116774	OLFML3	1.84E+00	1.65E-02	3.53E-02
ENSG00000132622	HSPA12B	4.33E+00	1.65E-02	3.55E-02
ENSG00000271882	AP001330.4	2.33E+00	1.66E-02	3.56E-02
ENSG00000123999	INHA	2.68E+00	1.66E-02	3.56E-02
ENSG00000156206	CFAP161	4.22E+00	1.66E-02	3.56E-02
ENSG00000272375	AC026979.3	3.28E+00	1.66E-02	3.57E-02
ENSG00000198208	RPS6KL1	3.25E+00	1.67E-02	3.57E-02
ENSG00000165457	FOLR2	4.15E+00	1.67E-02	3.58E-02
ENSG00000233654	AC108047.1	1.06E+00	1.67E-02	3.58E-02

ENSG00000188868	ZNF563	1.02E+00	1.67E-02	3.59E-02
ENSG00000260064	AC092332.1	4.41E+00	1.67E-02	3.59E-02
ENSG00000258891	AC005480.1	3.86E+00	1.68E-02	3.59E-02
ENSG00000272953	AC092171.4	2.82E+00	1.68E-02	3.59E-02
ENSG00000255931	AP003108.1	4.21E+00	1.68E-02	3.60E-02
ENSG00000101441	CST4	3.72E+00	1.69E-02	3.60E-02
ENSG00000136695	IL36RN	4.51E+00	1.69E-02	3.60E-02
ENSG00000182931	WFDC10B	1.73E+00	1.69E-02	3.60E-02
ENSG00000241088	RPL17P44	4.48E+00	1.69E-02	3.60E-02
ENSG00000125731	SH2D3A	3.48E+00	1.70E-02	3.63E-02
ENSG00000232079	LINC01697	3.75E+00	1.70E-02	3.64E-02
ENSG00000272787	AC253536.6	2.25E+00	1.71E-02	3.64E-02
ENSG00000281548	LINC00895	4.16E+00	1.71E-02	3.65E-02
ENSG00000084710	EFR3B	1.47E+00	1.72E-02	3.67E-02
ENSG00000196074	SYCP2	1.18E+00	1.72E-02	3.68E-02
ENSG00000168878	SFTPB	4.62E+00	1.73E-02	3.69E-02
ENSG00000077984	CST7	4.08E+00	1.73E-02	3.70E-02
ENSG00000205922	ONECUT3	2.56E+00	1.74E-02	3.71E-02
ENSG00000168356	SCN11A	3.53E+00	1.74E-02	3.71E-02
ENSG00000175567	UCP2	1.07E+00	1.74E-02	3.72E-02
ENSG00000163235	TGFA	2.34E+00	1.75E-02	3.72E-02
ENSG00000151090	THRB	2.54E+00	1.75E-02	3.72E-02
ENSG00000259985	AC017100.1	2.23E+00	1.76E-02	3.74E-02
ENSG00000188981	MSANTD1	1.98E+00	1.76E-02	3.74E-02
ENSG00000271913	AL035530.2	2.82E+00	1.77E-02	3.75E-02
ENSG00000179406	LINC00174	1.59E+00	1.77E-02	3.76E-02
ENSG00000260926	AC016134.1	3.42E+00	1.77E-02	3.76E-02
ENSG00000271754	AL355802.3	1.61E+00	1.77E-02	3.77E-02
ENSG00000139970	RTN1	3.19E+00	1.77E-02	3.77E-02
ENSG00000166948	TGM6	4.09E+00	1.78E-02	3.78E-02
ENSG00000280138	AC027290.2	1.21E+00	1.78E-02	3.78E-02
ENSG00000273204	AC104506.1	1.52E+00	1.78E-02	3.79E-02
ENSG00000104826	LHB	3.02E+00	1.79E-02	3.80E-02
ENSG00000130045	NXNL2	1.50E+00	1.79E-02	3.80E-02
ENSG00000227110	LMCD1-AS1	2.45E+00	1.79E-02	3.80E-02
ENSG00000142661	MYOM3	4.38E+00	1.79E-02	3.80E-02
ENSG00000041353	RAB27B	1.14E+00	1.80E-02	3.81E-02
ENSG00000204666	AC010624.1	2.15E+00	1.80E-02	3.81E-02
ENSG00000151136	BTBD11	2.52E+00	1.80E-02	3.82E-02
ENSG00000237788	AL162615.1	2.70E+00	1.81E-02	3.83E-02
ENSG00000249307	LINC01088	2.96E+00	1.82E-02	3.85E-02
ENSG00000106804	C5	2.10E+00	1.82E-02	3.85E-02
ENSG00000267535	LINC00868	4.08E+00	1.82E-02	3.85E-02
ENSG00000127415	IDUA	1.38E+00	1.82E-02	3.86E-02
ENSG00000161031	PGLYRP2	4.01E+00	1.82E-02	3.86E-02



ENSG00000142224	IL19	4.48E+00	1.82E-02	3.86E-02
ENSG00000163491	NEK10	1.76E+00	1.84E-02	3.88E-02
ENSG00000164619	BMPER	1.09E+00	1.84E-02	3.88E-02
ENSG00000228643	AC079779.2	2.42E+00	1.84E-02	3.88E-02
ENSG00000053108	FSTL4	4.03E+00	1.84E-02	3.89E-02
ENSG00000227885	AL590652.1	2.92E+00	1.85E-02	3.90E-02
ENSG00000282961	PRNCR1	1.84E+00	1.86E-02	3.92E-02
ENSG00000241170	AP001992.1	1.42E+00	1.87E-02	3.94E-02
ENSG00000285664	AL139317.5	3.23E+00	1.88E-02	3.95E-02
ENSG00000273271	AP000254.2	2.20E+00	1.88E-02	3.96E-02
ENSG00000136250	AOAH	3.54E+00	1.88E-02	3.96E-02
ENSG00000157856	DRC1	3.17E+00	1.88E-02	3.96E-02
ENSG00000153495	TEX29	1.74E+00	1.88E-02	3.96E-02
ENSG00000167800	TBX10	4.42E+00	1.89E-02	3.97E-02
ENSG00000249915	PDCD6	1.19E+00	1.90E-02	4.00E-02
ENSG00000260081	AF274858.1	1.46E+00	1.90E-02	4.01E-02
ENSG00000281100	AC105749.1	4.21E+00	1.91E-02	4.03E-02
ENSG00000174514	MFSD4A	3.03E+00	1.92E-02	4.04E-02
ENSG00000162975	KCNF1	2.93E+00	1.93E-02	4.06E-02
ENSG00000134215	VAV3	1.47E+00	1.95E-02	4.10E-02
ENSG00000235527	HIPK1-AS1	2.89E+00	1.96E-02	4.11E-02
ENSG00000256967	AC018653.3	4.53E+00	1.97E-02	4.13E-02
ENSG00000145506	NKD2	3.89E+00	1.98E-02	4.15E-02
ENSG00000100385	IL2RB	2.69E+00	2.01E-02	4.21E-02
ENSG00000227533	SLC2A1-AS1	2.69E+00	2.01E-02	4.21E-02
ENSG00000280109	PLAC4	4.64E+00	2.02E-02	4.22E-02
ENSG00000286393	Z97192.4	4.44E+00	2.02E-02	4.22E-02
ENSG00000100053	CRYBB3	3.65E+00	2.02E-02	4.22E-02
ENSG00000252118	RNU6ATAC39F	4.47E+00	2.02E-02	4.23E-02
ENSG00000259711	AC106738.1	3.39E+00	2.03E-02	4.25E-02
ENSG00000014914	MTMR11	1.07E+00	2.04E-02	4.26E-02
ENSG00000149531	FRG1BP	1.23E+00	2.04E-02	4.26E-02
ENSG00000213638	ADAT3	2.05E+00	2.04E-02	4.27E-02
ENSG00000268603	AC053503.5	3.73E+00	2.05E-02	4.28E-02
ENSG00000158486	DNAH3	3.06E+00	2.07E-02	4.31E-02
ENSG00000139946	PELI2	3.36E+00	2.07E-02	4.32E-02
ENSG00000273225	FAM25BP	4.51E+00	2.07E-02	4.32E-02
ENSG00000272518	AC036214.2	1.26E+00	2.08E-02	4.33E-02
ENSG00000204531	POU5F1	3.97E+00	2.09E-02	4.36E-02
ENSG00000099866	MADCAM1	1.49E+00	2.09E-02	4.36E-02
ENSG00000164695	CHMP4C	2.24E+00	2.09E-02	4.36E-02
ENSG00000180383	DEFB124	5.07E+00	2.10E-02	4.37E-02
ENSG00000237773	AC073332.1	1.80E+00	2.10E-02	4.38E-02
ENSG00000267940	AC022762.2	2.22E+00	2.11E-02	4.39E-02
ENSG00000163794	UCN	2.24E+00	2.11E-02	4.39E-02

ENSG00000171517	LPAR3	1.47E+00	2.11E-02	4.39E-02
ENSG00000011083	SLC6A7	4.28E+00	2.11E-02	4.39E-02
ENSG00000250371	AC007370.2	2.97E+00	2.11E-02	4.40E-02
ENSG00000267280	TBX2-AS1	1.27E+00	2.12E-02	4.41E-02
ENSG00000079482	OPHN1	1.26E+00	2.12E-02	4.41E-02
ENSG00000004948	CALCR	4.83E+00	2.15E-02	4.46E-02
ENSG00000263335	AF001548.2	1.73E+00	2.15E-02	4.47E-02
ENSG00000207003	RNU6-611P	2.87E+00	2.17E-02	4.50E-02
ENSG00000226179	LINC00685	1.25E+00	2.17E-02	4.50E-02
ENSG00000225655	BX255923.1	2.40E+00	2.17E-02	4.50E-02
ENSG00000269313	MAGIX	1.82E+00	2.19E-02	4.54E-02
ENSG00000267453	CLEC4O	4.21E+00	2.19E-02	4.54E-02
ENSG00000216490	IFI30	2.03E+00	2.20E-02	4.56E-02
ENSG00000162426	SLC45A1	2.34E+00	2.20E-02	4.56E-02
ENSG00000256625	AC092747.2	1.53E+00	2.21E-02	4.57E-02
ENSG00000272341	AL137003.2	1.41E+00	2.22E-02	4.58E-02
ENSG00000287510	AL137857.1	3.17E+00	2.22E-02	4.59E-02
ENSG00000128815	WDFY4	4.33E+00	2.23E-02	4.61E-02
ENSG00000008056	SYN1	1.88E+00	2.25E-02	4.65E-02
ENSG00000172345	STARD5	1.86E+00	2.26E-02	4.66E-02
ENSG00000235978	AC018816.1	1.81E+00	2.26E-02	4.66E-02
ENSG00000236753	MKLN1-AS	1.08E+00	2.28E-02	4.70E-02
ENSG00000261087	AP003469.4	1.84E+00	2.29E-02	4.72E-02
ENSG00000121101	TEX14	2.37E+00	2.29E-02	4.72E-02
ENSG00000154102	C16orf74	1.22E+00	2.29E-02	4.73E-02
ENSG00000157782	CABP1	2.54E+00	2.30E-02	4.73E-02
ENSG00000142748	FCN3	3.48E+00	2.30E-02	4.74E-02
ENSG00000005844	ITGAL	3.96E+00	2.31E-02	4.76E-02
ENSG00000267279	AC090409.1	3.93E+00	2.32E-02	4.76E-02
ENSG00000230131	LINC02641	2.96E+00	2.32E-02	4.76E-02
ENSG00000154263	ABCA10	1.98E+00	2.32E-02	4.78E-02
ENSG00000203593	AC005342.1	4.05E+00	2.33E-02	4.79E-02
ENSG00000253183	AC005531.1	4.13E+00	2.33E-02	4.79E-02
ENSG00000157423	HYDIN	2.68E+00	2.33E-02	4.79E-02
ENSG00000224846	AL133351.1	2.26E+00	2.33E-02	4.79E-02
ENSG00000171532	NEUROD2	3.29E+00	2.34E-02	4.81E-02
ENSG00000234807	LINC01135	3.56E+00	2.34E-02	4.81E-02
ENSG00000109943	CRTAM	3.33E+00	2.34E-02	4.81E-02
ENSG00000159247	TUBBP5	4.37E+00	2.34E-02	4.82E-02
ENSG00000204482	LST1	2.22E+00	2.35E-02	4.82E-02
ENSG00000286563	AC078983.1	3.07E+00	2.35E-02	4.82E-02
ENSG00000261730	AL034346.1	3.00E+00	2.35E-02	4.82E-02
ENSG00000176928	GCNT4	2.59E+00	2.35E-02	4.83E-02
ENSG00000275441	AC020765.2	1.36E+00	2.36E-02	4.84E-02
ENSG00000188620	HMX3	4.21E+00	2.36E-02	4.85E-02

ENSG00000179528	LBX2	3.04E+00	2.39E-02	4.89E-02
ENSG00000256037	MRPL40P1	3.46E+00	2.39E-02	4.89E-02
ENSG00000124116	WFDC3	1.05E+00	2.40E-02	4.91E-02
ENSG00000162777	DENND2D	2.03E+00	2.40E-02	4.91E-02
ENSG00000276259	AC009118.3	2.39E+00	2.40E-02	4.92E-02
ENSG00000125910	S1PR4	4.47E+00	2.41E-02	4.92E-02
ENSG00000204511	MCCD1	3.86E+00	2.41E-02	4.93E-02
ENSG00000135100	HNF1A	3.62E+00	2.41E-02	4.94E-02
ENSG00000259182	AC019254.1	4.27E+00	2.41E-02	4.94E-02
ENSG00000235750	KIAA0040	4.16E+00	2.41E-02	4.94E-02
ENSG00000172543	CTSW	1.90E+00	2.42E-02	4.95E-02
ENSG00000198342	ZNF442	1.19E+00	2.44E-02	4.99E-02

**Supplementary table 10. Significant DRGs in Ad-KLF4 versus Ad-EGFP transduced samples on IL-1 $\beta$  stimulation.**

Gene ID	Gene name	Log2(FC)	P value	FDR
ENSG00000137801	THBS1	-4.16E+00	8.27E-168	5.63E-165
ENSG00000115414	FN1	-3.07E+00	5.70E-166	3.61E-163
ENSG00000128050	PAICS	-2.80E+00	6.75E-161	3.88E-158
ENSG00000122641	INHBA	-4.82E+00	1.95E-157	1.02E-154
ENSG00000120708	TGFBI	-2.38E+00	2.29E-148	1.05E-145
ENSG00000003436	TFPI	-3.89E+00	1.22E-141	5.23E-139
ENSG00000057019	DCBLD2	-2.50E+00	1.17E-130	4.57E-128
ENSG00000277443	MARCKS	-2.30E+00	9.72E-124	3.25E-121
ENSG00000140416	TPM1	-2.04E+00	1.58E-123	5.17E-121
ENSG00000166741	NNMT	-3.84E+00	3.63E-122	1.17E-119
ENSG00000163661	PTX3	-5.14E+00	1.43E-108	4.05E-106
ENSG00000133110	POSTN	-5.19E+00	1.42E-105	3.72E-103
ENSG00000128606	LRRC17	-3.62E+00	7.68E-105	1.99E-102
ENSG00000135486	HNRNPA1	-1.51E+00	7.18E-103	1.78E-100
ENSG00000152952	PLOD2	-2.21E+00	2.93E-102	7.17E-100
ENSG00000117519	CNN3	-2.42E+00	1.57E-99	3.61E-97
ENSG00000108342	CSF3	-5.30E+00	2.14E-98	4.80E-96
ENSG00000162692	VCAM1	-8.06E+00	1.05E-97	2.32E-95
ENSG00000114251	WNT5A	-2.54E+00	8.83E-90	1.69E-87
ENSG00000152795	HNRNPDL	-1.54E+00	7.13E-89	1.34E-86
ENSG00000106799	TGFBR1	-3.43E+00	2.02E-86	3.61E-84
ENSG00000122786	CALD1	-1.97E+00	4.79E-86	8.47E-84
ENSG00000101335	MYL9	-3.09E+00	1.31E-84	2.27E-82
ENSG00000170558	CDH2	-2.69E+00	5.90E-82	9.27E-80
ENSG00000128342	LIF	-3.39E+00	8.32E-82	1.29E-79
ENSG00000100345	MYH9	-2.55E+00	3.61E-81	5.43E-79
ENSG00000118523	CCN2	-3.53E+00	2.78E-80	4.02E-78
ENSG00000041982	TNC	-5.22E+00	7.08E-80	1.02E-77
ENSG00000004478	FKBP4	-1.88E+00	1.09E-78	1.52E-76
ENSG00000128989	ARPP19	-2.45E+00	2.22E-78	3.07E-76
ENSG00000165512	ZNF22	-3.13E+00	3.89E-77	5.18E-75
ENSG00000100644	HIF1A	-1.82E+00	3.67E-76	4.78E-74
ENSG00000130826	DKC1	-2.40E+00	7.54E-76	9.68E-74
ENSG00000144381	HSPD1	-1.44E+00	4.47E-73	5.44E-71
ENSG00000080608	PUM3	-2.76E+00	2.12E-71	2.42E-69
ENSG00000105835	NAMPT	-2.07E+00	9.88E-71	1.12E-68
ENSG00000156804	FBXO32	-2.90E+00	7.21E-70	7.98E-68
ENSG00000178860	MSC	-5.95E+00	1.82E-68	1.96E-66
ENSG00000039560	RAI14	-2.76E+00	1.96E-68	2.09E-66
ENSG00000101384	JAG1	-2.19E+00	2.62E-68	2.78E-66
ENSG00000134013	LOXL2	-2.71E+00	4.99E-67	5.15E-65
ENSG00000105137	SYDE1	-2.94E+00	2.54E-65	2.49E-63
ENSG00000108691	CCL2	-9.12E+00	3.75E-65	3.64E-63

ENSG00000148154	UGCG	-2.13E+00	1.95E-63	1.84E-61
ENSG00000134294	SLC38A2	-1.80E+00	2.08E-63	1.95E-61
ENSG00000136244	IL6	-7.64E+00	6.46E-63	6.00E-61
ENSG00000122884	P4HA1	-1.60E+00	1.31E-62	1.20E-60
ENSG00000168685	IL7R	-5.38E+00	4.14E-62	3.75E-60
ENSG00000112096	SOD2	-3.57E+00	5.35E-60	4.63E-58
ENSG00000181588	MEX3D	-2.37E+00	6.18E-60	5.33E-58
ENSG00000131378	RFTN1	-2.96E+00	8.08E-59	6.69E-57
ENSG00000145220	LYAR	-1.97E+00	1.09E-58	8.94E-57
ENSG00000163938	GNL3	-1.91E+00	2.04E-57	1.63E-55
ENSG00000106484	MEST	-2.64E+00	2.61E-57	2.07E-55
ENSG00000114861	FOXP1	-2.92E+00	1.12E-56	8.61E-55
ENSG00000138385	SSB	-1.66E+00	1.18E-56	9.03E-55
ENSG00000137745	MMP13	-4.59E+00	1.58E-56	1.20E-54
ENSG00000176014	TUBB6	-2.28E+00	2.58E-56	1.95E-54
ENSG00000115594	IL1R1	-4.41E+00	4.15E-56	3.12E-54
ENSG00000084112	SSH1	-2.69E+00	5.35E-56	4.00E-54
ENSG00000101361	NOP56	-1.84E+00	1.12E-55	8.32E-54
ENSG00000102172	SMS	-2.31E+00	5.09E-55	3.71E-53
ENSG00000167635	ZNF146	-1.89E+00	1.31E-54	9.45E-53
ENSG00000110841	PPFIBP1	-2.27E+00	2.45E-54	1.76E-52
ENSG00000070961	ATP2B1	-1.55E+00	3.80E-54	2.69E-52
ENSG00000092969	TGFB2	-2.51E+00	6.97E-54	4.87E-52
ENSG00000119403	PHF19	-2.03E+00	8.03E-54	5.59E-52
ENSG00000064102	INTS13	-1.92E+00	2.55E-53	1.74E-51
ENSG00000155189	AGPAT5	-1.49E+00	2.68E-53	1.82E-51
ENSG00000109971	HSPA8	-1.04E+00	3.25E-53	2.18E-51
ENSG00000206053	JPT2	-1.81E+00	6.60E-53	4.37E-51
ENSG00000134333	LDHA	-1.69E+00	5.60E-52	3.64E-50
ENSG00000148848	ADAM12	-2.92E+00	2.06E-51	1.32E-49
ENSG00000125148	MT2A	-4.68E+00	1.09E-50	6.76E-49
ENSG00000124766	SOX4	-1.81E+00	1.44E-50	8.87E-49
ENSG00000182985	CADM1	-2.73E+00	7.84E-50	4.79E-48
ENSG00000147454	SLC25A37	-2.02E+00	8.01E-50	4.88E-48
ENSG00000163734	CXCL3	-5.32E+00	9.11E-50	5.49E-48
ENSG00000111252	SH2B3	-3.58E+00	2.97E-49	1.75E-47
ENSG00000115380	EFEMP1	-2.43E+00	3.19E-49	1.88E-47
ENSG00000141522	ARHGDI1	-1.79E+00	4.49E-49	2.63E-47
ENSG00000071539	TRIP13	-1.92E+00	8.11E-49	4.72E-47
ENSG00000146729	NIPSNAP2	-3.49E+00	8.80E-49	5.10E-47
ENSG00000168264	IRF2BP2	-1.44E+00	1.56E-48	9.03E-47
ENSG00000150630	VEGFC	-3.75E+00	3.40E-48	1.95E-46
ENSG00000177311	ZBTB38	-1.75E+00	1.71E-47	9.64E-46
ENSG00000152558	TMEM123	-2.11E+00	3.15E-47	1.76E-45
ENSG00000182481	KPNA2	-1.52E+00	3.99E-47	2.22E-45

ENSG00000115484	CCT4	-1.14E+00	2.09E-46	1.15E-44
ENSG00000136026	CKAP4	-1.51E+00	2.34E-46	1.28E-44
ENSG00000145934	TENM2	-5.73E+00	2.52E-46	1.37E-44
ENSG00000160991	ORAI2	-2.12E+00	1.64E-45	8.77E-44
ENSG00000145907	G3BP1	-1.45E+00	4.24E-45	2.25E-43
ENSG00000142871	CCN1	-1.11E+00	4.46E-45	2.35E-43
ENSG00000134057	CCNB1	-1.81E+00	5.23E-45	2.75E-43
ENSG00000104635	SLC39A14	-2.02E+00	7.20E-45	3.77E-43
ENSG00000132780	NASP	-1.49E+00	4.39E-44	2.27E-42
ENSG00000104408	EIF3E	-1.20E+00	1.19E-43	6.06E-42
ENSG00000134954	ETS1	-2.17E+00	5.77E-43	2.87E-41
ENSG00000055044	NOP58	-1.26E+00	8.76E-43	4.32E-41
ENSG00000089351	GRAMD1A	-2.34E+00	8.87E-43	4.36E-41
ENSG00000115053	NCL	-1.54E+00	1.39E-42	6.70E-41
ENSG00000189403	HMGB1	-1.22E+00	2.60E-42	1.24E-40
ENSG00000104332	SFRP1	-2.38E+00	3.14E-42	1.50E-40
ENSG00000185551	NR2F2	-1.89E+00	3.93E-42	1.87E-40
ENSG00000143228	NUF2	-1.83E+00	6.85E-42	3.21E-40
ENSG00000204856	FAM216A	-3.83E+00	3.78E-41	1.73E-39
ENSG00000182752	PAPPA	-4.65E+00	5.92E-41	2.70E-39
ENSG00000144749	LRIG1	-2.41E+00	8.41E-41	3.81E-39
ENSG00000072958	AP1M1	-2.09E+00	1.15E-40	5.19E-39
ENSG00000121152	NCAPH	-2.17E+00	2.43E-40	1.07E-38
ENSG00000136997	MYC	-2.89E+00	4.88E-40	2.12E-38
ENSG00000182197	EXT1	-1.62E+00	1.01E-39	4.35E-38
ENSG00000165704	HPRT1	-1.94E+00	1.03E-39	4.42E-38
ENSG00000163017	ACTG2	-7.69E+00	3.09E-39	1.30E-37
ENSG00000075142	SRI	-2.53E+00	3.14E-39	1.32E-37
ENSG00000211455	STK38L	-1.76E+00	3.27E-39	1.37E-37
ENSG00000196363	WDR5	-2.86E+00	6.10E-39	2.53E-37
ENSG00000169429	CXCL8	-6.38E+00	8.36E-39	3.45E-37
ENSG00000124207	CSE1L	-1.10E+00	1.75E-38	7.17E-37
ENSG00000136490	LIMD2	-3.84E+00	2.27E-38	9.21E-37
ENSG00000157654	PALM2-AKAP2	-1.80E+00	4.20E-38	1.69E-36
ENSG00000171490	RSL1D1	-1.18E+00	7.56E-38	3.03E-36
ENSG00000126457	PRMT1	-2.24E+00	1.11E-37	4.40E-36
ENSG00000080573	COL5A3	-2.89E+00	1.39E-37	5.46E-36
ENSG00000204262	COL5A2	-1.91E+00	1.41E-37	5.57E-36
ENSG00000181163	NPM1	-1.73E+00	2.21E-37	8.53E-36
ENSG00000117020	AKT3	-1.81E+00	2.39E-37	9.19E-36
ENSG00000105825	TFPI2	-4.73E+00	2.42E-37	9.30E-36
ENSG00000173726	TOMM20	-1.26E+00	3.15E-37	1.20E-35
ENSG00000213160	KLHL23	-2.57E+00	3.37E-37	1.28E-35
ENSG00000040275	SPDL1	-1.53E+00	5.18E-37	1.95E-35
ENSG00000150347	ARID5B	-2.88E+00	6.72E-37	2.53E-35

ENSG00000056558	TRAF1	-4.61E+00	7.99E-37	2.99E-35
ENSG00000162614	NEXN	-2.56E+00	1.13E-36	4.23E-35
ENSG00000163468	CCT3	-1.05E+00	1.14E-36	4.26E-35
ENSG00000143401	ANP32E	-1.57E+00	1.61E-36	5.94E-35
ENSG00000184220	CMSS1	-1.72E+00	1.87E-36	6.85E-35
ENSG00000122406	RPL5	-1.53E+00	2.37E-36	8.61E-35
ENSG00000113460	BRIX1	-1.23E+00	2.51E-36	9.11E-35
ENSG00000178035	IMPDH2	-1.52E+00	3.11E-36	1.12E-34
ENSG00000144642	RBMS3	-3.46E+00	3.21E-36	1.15E-34
ENSG00000107833	NPM3	-2.79E+00	3.61E-36	1.29E-34
ENSG00000130024	PHF10	-1.74E+00	3.96E-36	1.41E-34
ENSG00000172380	GNG12	-1.53E+00	7.56E-36	2.67E-34
ENSG00000099810	MTAP	-1.46E+00	9.08E-36	3.19E-34
ENSG00000111716	LDHB	-1.70E+00	2.30E-35	7.92E-34
ENSG00000074219	TEAD2	-3.33E+00	5.77E-35	1.95E-33
ENSG00000114446	IFT57	-1.62E+00	9.49E-35	3.19E-33
ENSG00000149591	TAGLN	-3.19E+00	9.78E-35	3.28E-33
ENSG00000197498	RPF2	-1.69E+00	2.03E-34	6.75E-33
ENSG00000138448	ITGAV	-1.68E+00	2.07E-34	6.86E-33
ENSG00000153936	HS2ST1	-1.83E+00	3.59E-34	1.18E-32
ENSG00000156508	EEF1A1	-1.29E+00	6.36E-34	2.09E-32
ENSG00000114450	GNB4	-1.84E+00	1.59E-33	5.10E-32
ENSG00000235531	MSC-AS1	-2.29E+00	1.74E-33	5.58E-32
ENSG00000065150	IPO5	-1.20E+00	1.76E-33	5.64E-32
ENSG00000111845	PAK1IP1	-2.02E+00	3.36E-33	1.07E-31
ENSG00000163597	SNHG16	-1.50E+00	3.39E-33	1.07E-31
ENSG00000154473	BUB3	-1.14E+00	3.74E-33	1.18E-31
ENSG00000154945	ANKRD40	-1.60E+00	3.76E-33	1.18E-31
ENSG00000124875	CXCL6	-9.38E+00	4.00E-33	1.26E-31
ENSG00000163811	WDR43	-1.36E+00	4.32E-33	1.36E-31
ENSG00000072110	ACTN1	-1.17E+00	5.75E-33	1.79E-31
ENSG00000166949	SMAD3	-1.57E+00	5.82E-33	1.81E-31
ENSG00000128283	CDC42EP1	-2.37E+00	7.55E-33	2.34E-31
ENSG00000107949	BCCIP	-1.15E+00	9.45E-33	2.91E-31
ENSG00000136261	BZW2	-2.31E+00	1.41E-32	4.30E-31
ENSG00000026025	VIM	-2.11E+00	1.61E-32	4.88E-31
ENSG00000196715	VKORC1L1	-2.34E+00	3.23E-32	9.73E-31
ENSG00000176171	BNIP3	-3.10E+00	3.43E-32	1.03E-30
ENSG00000164465	DCBLD1	-1.78E+00	3.45E-32	1.03E-30
ENSG00000198034	RPS4X	-1.41E+00	4.20E-32	1.25E-30
ENSG00000168542	COL3A1	-2.74E+00	5.20E-32	1.54E-30
ENSG00000128059	PPAT	-2.07E+00	1.04E-31	3.03E-30
ENSG00000111799	COL12A1	-4.11E+00	1.13E-31	3.31E-30
ENSG00000081041	CXCL2	-7.52E+00	2.63E-31	7.61E-30
ENSG00000089006	SNX5	-1.00E+00	6.05E-31	1.74E-29

ENSG00000132639	SNAP25	-4.29E+00	6.07E-31	1.74E-29
ENSG00000159200	RCAN1	-2.24E+00	6.29E-31	1.80E-29
ENSG00000196628	TCF4	-2.83E+00	7.76E-31	2.22E-29
ENSG00000106366	SERPINE1	-2.38E+00	8.00E-31	2.28E-29
ENSG00000137076	TLN1	-2.16E+00	9.86E-31	2.78E-29
ENSG00000152990	ADGRA3	-2.39E+00	1.24E-30	3.48E-29
ENSG00000115561	CHMP3	-1.59E+00	1.96E-30	5.46E-29
ENSG00000159128	IFNGR2	-1.91E+00	2.20E-30	6.10E-29
ENSG00000116649	SRM	-1.85E+00	2.69E-30	7.44E-29
ENSG00000101447	FAM83D	-1.47E+00	3.49E-30	9.60E-29
ENSG00000153993	SEMA3D	-2.87E+00	4.29E-30	1.17E-28
ENSG00000139278	GLIPR1	-3.06E+00	4.64E-30	1.26E-28
ENSG00000103202	NME4	-3.07E+00	5.45E-30	1.47E-28
ENSG00000106546	AHR	-1.95E+00	6.74E-30	1.82E-28
ENSG00000182718	ANXA2	-1.34E+00	1.00E-29	2.66E-28
ENSG00000164163	ABCE1	-1.39E+00	1.53E-29	4.02E-28
ENSG00000128641	MYO1B	-1.47E+00	2.58E-29	6.75E-28
ENSG00000158290	CUL4B	-1.46E+00	3.25E-29	8.49E-28
ENSG00000148677	ANKRD1	-4.44E+00	3.37E-29	8.77E-28
ENSG00000111912	NCOA7	-1.95E+00	3.92E-29	1.02E-27
ENSG00000145386	CCNA2	-1.31E+00	4.38E-29	1.13E-27
ENSG00000119729	RHOQ	-1.86E+00	4.71E-29	1.22E-27
ENSG00000157350	ST3GAL2	-1.32E+00	5.04E-29	1.30E-27
ENSG00000099250	NRP1	-2.55E+00	6.36E-29	1.63E-27
ENSG00000143641	GALNT2	-1.51E+00	7.46E-29	1.91E-27
ENSG00000132341	RAN	-1.46E+00	7.73E-29	1.98E-27
ENSG00000164109	MAD2L1	-1.57E+00	8.37E-29	2.14E-27
ENSG00000135074	ADAM19	-2.24E+00	8.41E-29	2.15E-27
ENSG00000164932	CTHRC1	-3.60E+00	8.48E-29	2.16E-27
ENSG00000198826	ARHGAP11A	-1.63E+00	9.14E-29	2.32E-27
ENSG00000049249	TNFRSF9	-3.23E+00	9.38E-29	2.37E-27
ENSG00000166197	NOLC1	-1.47E+00	9.59E-29	2.42E-27
ENSG00000026559	KCNG1	-1.64E+00	1.01E-28	2.53E-27
ENSG00000166250	CLMP	-2.08E+00	1.35E-28	3.35E-27
ENSG00000178921	PFAS	-2.54E+00	1.44E-28	3.56E-27
ENSG00000077150	NFKB2	-1.54E+00	1.48E-28	3.65E-27
ENSG00000073756	PTGS2	-3.60E+00	1.59E-28	3.93E-27
ENSG00000065183	WDR3	-2.77E+00	1.63E-28	4.01E-27
ENSG00000000003	TSPAN6	-1.77E+00	2.68E-28	6.50E-27
ENSG00000076248	UNG	-1.62E+00	3.38E-28	8.17E-27
ENSG00000142945	KIF2C	-1.64E+00	3.48E-28	8.38E-27
ENSG00000111275	ALDH2	-2.49E+00	3.48E-28	8.38E-27
ENSG00000170854	RIOX2	-2.60E+00	3.71E-28	8.89E-27
ENSG00000100243	CYB5R3	-1.93E+00	6.53E-28	1.54E-26
ENSG00000178105	DDX10	-2.33E+00	7.17E-28	1.69E-26



ENSG00000205581	HMG1	-1.05E+00	1.20E-27	2.80E-26
ENSG00000092199	HNRNPC	-1.11E+00	1.42E-27	3.29E-26
ENSG00000182054	IDH2	-2.00E+00	1.67E-27	3.86E-26
ENSG00000171453	POLR1C	-1.43E+00	1.75E-27	4.05E-26
ENSG00000147274	RBMX	-1.14E+00	1.81E-27	4.18E-26
ENSG00000116120	FARSB	-2.09E+00	2.25E-27	5.19E-26
ENSG00000198042	MAK16	-2.23E+00	2.56E-27	5.86E-26
ENSG00000159131	GART	-1.23E+00	2.67E-27	6.10E-26
ENSG00000157500	APPL1	-2.06E+00	2.86E-27	6.54E-26
ENSG00000113721	PDGFRB	-2.42E+00	3.15E-27	7.18E-26
ENSG00000110172	CHORDC1	-1.49E+00	4.09E-27	9.23E-26
ENSG00000140682	TGFB11	-1.92E+00	4.34E-27	9.79E-26
ENSG00000152556	PFKM	-2.05E+00	6.78E-27	1.52E-25
ENSG00000089009	RPL6	-1.29E+00	8.60E-27	1.92E-25
ENSG00000147687	TATDN1	-2.08E+00	1.14E-26	2.52E-25
ENSG00000111817	DSE	-1.43E+00	1.32E-26	2.92E-25
ENSG00000118985	ELL2	-1.94E+00	1.36E-26	2.99E-25
ENSG00000175792	RUVBL1	-1.61E+00	1.68E-26	3.66E-25
ENSG00000108561	C1QBP	-1.73E+00	1.73E-26	3.76E-25
ENSG00000101255	TRIB3	-2.12E+00	1.83E-26	3.98E-25
ENSG00000123131	PRDX4	-1.85E+00	3.92E-26	8.42E-25
ENSG00000085415	SEH1L	-1.80E+00	3.97E-26	8.53E-25
ENSG00000140443	IGF1R	-2.28E+00	6.40E-26	1.36E-24
ENSG00000123485	HJURP	-1.52E+00	6.90E-26	1.47E-24
ENSG00000105185	PDCD5	-2.22E+00	7.36E-26	1.56E-24
ENSG00000171724	VAT1L	-2.84E+00	7.44E-26	1.58E-24
ENSG00000109805	NCAPG	-1.26E+00	9.98E-26	2.11E-24
ENSG00000171951	SCG2	-3.33E+00	1.01E-25	2.13E-24
ENSG00000164176	EDIL3	-1.49E+00	1.02E-25	2.16E-24
ENSG00000145860	RNF145	-1.15E+00	1.11E-25	2.33E-24
ENSG00000090621	PABPC4	-1.03E+00	1.26E-25	2.63E-24
ENSG00000105255	FSD1	-2.05E+00	1.38E-25	2.89E-24
ENSG00000135521	LTV1	-1.29E+00	1.42E-25	2.96E-24
ENSG00000165732	DDX21	-1.12E+00	1.45E-25	3.02E-24
ENSG00000163739	CXCL1	-4.02E+00	1.47E-25	3.06E-24
ENSG00000130935	NOL11	-1.23E+00	1.49E-25	3.10E-24
ENSG00000141905	NFIC	-1.61E+00	1.63E-25	3.39E-24
ENSG00000225663	MCRIP1	-3.73E+00	1.84E-25	3.82E-24
ENSG00000165801	ARHGEF40	-2.05E+00	2.02E-25	4.18E-24
ENSG00000137154	RPS6	-1.33E+00	2.05E-25	4.24E-24
ENSG00000166012	TAF1D	-1.06E+00	2.06E-25	4.24E-24
ENSG00000166923	GREM1	-3.88E+00	2.14E-25	4.41E-24
ENSG00000049449	RCN1	-1.07E+00	2.72E-25	5.58E-24
ENSG00000048162	NOP16	-1.62E+00	3.20E-25	6.55E-24
ENSG00000058056	USP13	-1.90E+00	3.74E-25	7.61E-24

ENSG00000155903	RASA2	-3.39E+00	3.99E-25	8.09E-24
ENSG00000147408	CSGALNACT1	-3.05E+00	4.93E-25	9.97E-24
ENSG00000122565	CBX3	-1.34E+00	5.44E-25	1.10E-23
ENSG00000074695	LMAN1	-1.11E+00	5.90E-25	1.19E-23
ENSG00000095752	IL11	-2.30E+00	7.13E-25	1.43E-23
ENSG00000159167	STC1	-3.14E+00	1.10E-24	2.20E-23
ENSG00000100413	POLR3H	-1.49E+00	1.55E-24	3.06E-23
ENSG00000140945	CDH13	-1.73E+00	1.60E-24	3.15E-23
ENSG00000112984	KIF20A	-1.97E+00	1.64E-24	3.22E-23
ENSG00000168268	NT5DC2	-1.63E+00	2.06E-24	4.03E-23
ENSG00000088205	DDX18	-1.63E+00	2.40E-24	4.66E-23
ENSG00000178999	AURKB	-2.12E+00	2.58E-24	5.02E-23
ENSG00000117228	GBP1	-1.34E+00	2.81E-24	5.44E-23
ENSG00000181104	F2R	-2.15E+00	3.00E-24	5.78E-23
ENSG00000175387	SMAD2	-1.43E+00	3.60E-24	6.92E-23
ENSG00000138668	HNRNPD	-1.00E+00	3.77E-24	7.24E-23
ENSG00000166681	BEX3	-1.73E+00	4.09E-24	7.82E-23
ENSG00000006634	DBF4	-1.53E+00	4.19E-24	8.00E-23
ENSG00000141030	COPS3	-1.01E+00	5.32E-24	1.01E-22
ENSG00000261327	AC134312.5	-3.35E+00	5.80E-24	1.10E-22
ENSG00000113368	LMNB1	-1.64E+00	6.24E-24	1.18E-22
ENSG00000173145	NOC3L	-1.76E+00	6.55E-24	1.24E-22
ENSG00000148843	PDCD11	-1.66E+00	7.62E-24	1.44E-22
ENSG00000114023	FAM162A	-1.72E+00	8.86E-24	1.66E-22
ENSG00000072042	RDH11	-1.16E+00	8.88E-24	1.66E-22
ENSG00000010292	NCAPD2	-1.21E+00	9.79E-24	1.83E-22
ENSG00000111450	STX2	-2.63E+00	1.16E-23	2.15E-22
ENSG00000137124	ALDH1B1	-2.63E+00	1.38E-23	2.55E-22
ENSG00000164934	DCAF13	-1.26E+00	1.51E-23	2.78E-22
ENSG00000123610	TNFAIP6	-2.69E+00	1.81E-23	3.32E-22
ENSG00000138074	SLC5A6	-1.94E+00	1.85E-23	3.39E-22
ENSG00000131238	PPT1	-1.17E+00	2.38E-23	4.33E-22
ENSG00000167552	TUBA1A	-1.36E+00	2.57E-23	4.67E-22
ENSG00000105849	TWISTNB	-1.52E+00	2.59E-23	4.70E-22
ENSG00000163359	COL6A3	-1.25E+00	2.99E-23	5.42E-22
ENSG00000162433	AK4	-2.11E+00	3.10E-23	5.60E-22
ENSG00000145425	RPS3A	-1.56E+00	3.31E-23	5.96E-22
ENSG00000162377	COA7	-1.60E+00	4.74E-23	8.50E-22
ENSG00000117318	ID3	-1.54E+00	5.89E-23	1.05E-21
ENSG00000153071	DAB2	-2.41E+00	6.65E-23	1.18E-21
ENSG00000136108	CKAP2	-1.46E+00	7.48E-23	1.32E-21
ENSG00000115163	CENPA	-2.07E+00	7.63E-23	1.35E-21
ENSG00000162694	EXTL2	-2.01E+00	8.18E-23	1.44E-21
ENSG00000135698	MPHOSPH6	-1.48E+00	8.46E-23	1.49E-21
ENSG00000146376	ARHGAP18	-2.91E+00	9.94E-23	1.74E-21

ENSG00000137807	KIF23	-1.45E+00	1.02E-22	1.78E-21
ENSG00000183527	PSMG1	-2.12E+00	1.05E-22	1.83E-21
ENSG00000196700	ZNF512B	-2.78E+00	1.12E-22	1.96E-21
ENSG00000131943	C19orf12	-3.14E+00	1.19E-22	2.07E-21
ENSG00000163535	SGO2	-1.97E+00	1.24E-22	2.15E-21
ENSG00000255302	EID1	-1.07E+00	1.41E-22	2.43E-21
ENSG00000008311	AASS	-2.27E+00	1.73E-22	2.97E-21
ENSG00000178531	CTXN1	-1.82E+00	1.91E-22	3.28E-21
ENSG00000143799	PARP1	-1.09E+00	1.93E-22	3.31E-21
ENSG00000150938	CRIM1	-1.16E+00	1.99E-22	3.40E-21
ENSG00000146535	GNA12	-1.82E+00	2.19E-22	3.74E-21
ENSG00000180801	ARSJ	-2.06E+00	2.33E-22	3.97E-21
ENSG00000154096	THY1	-2.15E+00	2.77E-22	4.70E-21
ENSG00000115363	EVA1A	-4.92E+00	2.97E-22	5.03E-21
ENSG00000073111	MCM2	-1.26E+00	3.34E-22	5.65E-21
ENSG00000164649	CDCA7L	-1.69E+00	3.80E-22	6.38E-21
ENSG00000105202	FBL	-1.30E+00	4.05E-22	6.80E-21
ENSG00000108861	DUSP3	-1.72E+00	4.25E-22	7.11E-21
ENSG00000134686	PHC2	-1.34E+00	5.12E-22	8.55E-21
ENSG00000087586	AURKA	-1.51E+00	5.86E-22	9.78E-21
ENSG00000172156	CCL11	-7.79E+00	7.93E-22	1.32E-20
ENSG00000166851	PLK1	-1.63E+00	8.08E-22	1.34E-20
ENSG00000135919	SERPINE2	-1.23E+00	9.39E-22	1.55E-20
ENSG00000137962	ARHGAP29	-1.32E+00	9.47E-22	1.56E-20
ENSG00000198363	ASPH	-1.05E+00	1.06E-21	1.74E-20
ENSG00000113758	DBN1	-1.54E+00	1.33E-21	2.17E-20
ENSG00000091127	PUS7	-2.49E+00	1.39E-21	2.27E-20
ENSG00000115816	CEBPZ	-1.02E+00	1.91E-21	3.10E-20
ENSG00000185359	HGS	-1.56E+00	3.30E-21	5.27E-20
ENSG00000104472	CHRAC1	-1.51E+00	4.09E-21	6.49E-20
ENSG00000198900	TOP1	-1.24E+00	4.51E-21	7.15E-20
ENSG00000151835	SACS	-1.83E+00	4.84E-21	7.65E-20
ENSG00000138685	FGF2	-1.27E+00	5.19E-21	8.19E-20
ENSG00000177425	PAWR	-1.15E+00	5.87E-21	9.24E-20
ENSG00000085491	SLC25A24	-1.14E+00	7.41E-21	1.16E-19
ENSG00000097033	SH3GLB1	-1.63E+00	1.07E-20	1.67E-19
ENSG00000156471	PTDSS1	-1.37E+00	1.25E-20	1.94E-19
ENSG00000132541	RIDA	-2.02E+00	1.29E-20	1.99E-19
ENSG00000121940	CLCC1	-2.74E+00	1.31E-20	2.02E-19
ENSG00000110330	BIRC2	-1.58E+00	1.55E-20	2.39E-19
ENSG00000153560	UBP1	-1.25E+00	1.78E-20	2.74E-19
ENSG00000173068	BNC2	-2.68E+00	1.81E-20	2.77E-19
ENSG00000146072	TNFRSF21	-1.83E+00	1.94E-20	2.97E-19
ENSG00000162458	FBLIM1	-1.77E+00	2.47E-20	3.75E-19
ENSG00000104884	ERCC2	-2.01E+00	2.69E-20	4.09E-19

ENSG00000184277	TM2D3	-2.10E+00	2.75E-20	4.18E-19
ENSG00000075420	FNDC3B	-1.11E+00	3.27E-20	4.95E-19
ENSG00000004455	AK2	-1.79E+00	3.45E-20	5.21E-19
ENSG00000117650	NEK2	-1.49E+00	3.54E-20	5.35E-19
ENSG00000100029	PES1	-1.14E+00	3.68E-20	5.55E-19
ENSG00000152749	GPR180	-1.27E+00	4.11E-20	6.16E-19
ENSG00000184838	PRR16	-3.81E+00	4.15E-20	6.21E-19
ENSG00000139318	DUSP6	-2.37E+00	4.59E-20	6.85E-19
ENSG00000167721	TSR1	-1.28E+00	5.21E-20	7.75E-19
ENSG00000173757	STAT5B	-1.55E+00	5.35E-20	7.96E-19
ENSG00000198796	ALPK2	-2.54E+00	8.02E-20	1.18E-18
ENSG00000074201	CLNS1A	-1.01E+00	8.70E-20	1.28E-18
ENSG00000112186	CAP2	-3.81E+00	8.73E-20	1.28E-18
ENSG00000099194	SCD	-1.05E+00	9.93E-20	1.46E-18
ENSG00000162645	GBP2	-3.15E+00	1.01E-19	1.48E-18
ENSG00000121864	ZNF639	-1.87E+00	1.06E-19	1.55E-18
ENSG00000123179	EBPL	-2.43E+00	1.16E-19	1.69E-18
ENSG00000114686	MRPL3	-1.13E+00	1.18E-19	1.71E-18
ENSG00000156110	ADK	-1.33E+00	1.25E-19	1.81E-18
ENSG00000131370	SH3BP5	-2.81E+00	1.47E-19	2.12E-18
ENSG00000166788	SAAL1	-1.53E+00	1.65E-19	2.38E-18
ENSG00000116251	RPL22	-1.25E+00	1.77E-19	2.54E-18
ENSG00000186340	THBS2	-2.44E+00	2.19E-19	3.12E-18
ENSG00000146281	PM20D2	-1.72E+00	2.29E-19	3.27E-18
ENSG00000198755	RPL10A	-1.29E+00	2.83E-19	4.01E-18
ENSG00000135624	CCT7	-1.06E+00	3.93E-19	5.52E-18
ENSG00000111328	CDK2AP1	-1.61E+00	3.94E-19	5.53E-18
ENSG00000101871	MID1	-1.93E+00	4.22E-19	5.91E-18
ENSG00000159164	SV2A	-1.53E+00	4.40E-19	6.16E-18
ENSG00000134986	NREP	-3.68E+00	5.99E-19	8.30E-18
ENSG00000129128	SPCS3	-1.08E+00	6.01E-19	8.31E-18
ENSG00000179431	FJX1	-4.48E+00	6.25E-19	8.63E-18
ENSG00000122862	SRGN	-2.27E+00	6.77E-19	9.31E-18
ENSG00000184374	COLEC10	-4.19E+00	6.95E-19	9.54E-18
ENSG00000130176	CNN1	-2.11E+00	6.96E-19	9.55E-18
ENSG00000086189	DIMT1	-2.09E+00	8.42E-19	1.15E-17
ENSG00000145332	KLHL8	-2.10E+00	8.72E-19	1.19E-17
ENSG00000123094	RASSF8	-1.24E+00	8.77E-19	1.19E-17
ENSG00000143157	POGK	-3.80E+00	9.59E-19	1.30E-17
ENSG00000168028	RPSA	-1.28E+00	1.05E-18	1.43E-17
ENSG00000180340	FZD2	-2.24E+00	1.16E-18	1.57E-17
ENSG00000163808	KIF15	-1.71E+00	1.25E-18	1.69E-17
ENSG00000179041	RRS1	-2.00E+00	1.25E-18	1.69E-17
ENSG00000010270	STARD3NL	-1.84E+00	1.35E-18	1.82E-17
ENSG00000143067	ZNF697	-2.39E+00	1.57E-18	2.10E-17

ENSG00000023445	BIRC3	-2.90E+00	1.77E-18	2.36E-17
ENSG00000145147	SLIT2	-1.64E+00	1.95E-18	2.60E-17
ENSG00000134987	WDR36	-1.63E+00	2.30E-18	3.04E-17
ENSG00000126602	TRAP1	-1.47E+00	2.45E-18	3.23E-17
ENSG00000074800	ENO1	-1.27E+00	2.45E-18	3.23E-17
ENSG00000104320	NBN	-1.35E+00	2.47E-18	3.25E-17
ENSG00000151414	NEK7	-1.81E+00	2.55E-18	3.36E-17
ENSG00000125841	NRSN2	-1.48E+00	2.55E-18	3.36E-17
ENSG00000099998	GGT5	-2.90E+00	2.84E-18	3.73E-17
ENSG00000137692	DCUN1D5	-1.64E+00	3.67E-18	4.79E-17
ENSG00000123975	CKS2	-2.10E+00	4.62E-18	6.01E-17
ENSG00000071054	MAP4K4	-1.04E+00	4.93E-18	6.39E-17
ENSG00000151135	TMEM263	-1.09E+00	5.12E-18	6.64E-17
ENSG00000075213	SEMA3A	-4.00E+00	7.56E-18	9.72E-17
ENSG00000175063	UBE2C	-1.17E+00	9.46E-18	1.21E-16
ENSG00000115946	PNO1	-1.86E+00	9.85E-18	1.26E-16
ENSG00000015475	BID	-2.81E+00	1.03E-17	1.31E-16
ENSG00000186575	NF2	-1.20E+00	1.24E-17	1.57E-16
ENSG00000125538	IL1B	-5.85E+00	1.29E-17	1.63E-16
ENSG00000165304	MELK	-1.09E+00	1.37E-17	1.73E-16
ENSG00000198498	TMA16	-1.24E+00	1.44E-17	1.81E-16
ENSG00000162585	FAAP20	-2.24E+00	1.66E-17	2.09E-16
ENSG00000169604	ANTXR1	-1.69E+00	1.68E-17	2.11E-16
ENSG00000138835	RGS3	-2.49E+00	1.83E-17	2.30E-16
ENSG00000128609	NDUFA5	-1.04E+00	1.94E-17	2.43E-16
ENSG00000069998	HDHD5	-1.31E+00	2.22E-17	2.76E-16
ENSG00000186468	RPS23	-1.62E+00	2.47E-17	3.06E-16
ENSG00000186185	KIF18B	-1.48E+00	2.61E-17	3.23E-16
ENSG00000011426	ANLN	-1.21E+00	2.77E-17	3.41E-16
ENSG00000131467	PSME3	-1.20E+00	2.81E-17	3.45E-16
ENSG00000137809	ITGA11	-2.90E+00	3.22E-17	3.95E-16
ENSG00000138698	RAP1GDS1	-2.51E+00	3.27E-17	4.00E-16
ENSG00000183098	GPC6	-3.72E+00	3.32E-17	4.05E-16
ENSG00000077348	EXOSC5	-2.57E+00	3.67E-17	4.47E-16
ENSG00000145623	OSMR	-1.92E+00	3.93E-17	4.78E-16
ENSG00000173638	SLC19A1	-1.65E+00	4.57E-17	5.53E-16
ENSG00000213186	TRIM59	-1.81E+00	5.60E-17	6.77E-16
ENSG00000142676	RPL11	-1.25E+00	6.19E-17	7.46E-16
ENSG00000159593	NAE1	-1.02E+00	6.20E-17	7.46E-16
ENSG00000146648	EGFR	-1.73E+00	6.31E-17	7.59E-16
ENSG00000139514	SLC7A1	-1.80E+00	6.63E-17	7.97E-16
ENSG00000118418	HMG3	-1.67E+00	7.12E-17	8.54E-16
ENSG00000112578	BYSL	-1.37E+00	7.18E-17	8.60E-16
ENSG00000169715	MT1E	-2.64E+00	8.37E-17	9.97E-16
ENSG00000102144	PGK1	-1.20E+00	8.90E-17	1.06E-15

ENSG00000163874	ZC3H12A	-1.63E+00	9.00E-17	1.07E-15
ENSG00000109861	CTSC	-2.22E+00	9.05E-17	1.07E-15
ENSG00000156103	MMP16	-2.38E+00	9.11E-17	1.08E-15
ENSG00000072840	EVC	-2.12E+00	1.05E-16	1.24E-15
ENSG00000084774	CAD	-2.30E+00	1.14E-16	1.34E-15
ENSG00000153714	LURAP1L	-2.54E+00	1.15E-16	1.35E-15
ENSG00000198830	HMG2	-1.50E+00	1.23E-16	1.44E-15
ENSG00000187193	MT1X	-1.74E+00	1.35E-16	1.58E-15
ENSG00000138035	PNPT1	-1.71E+00	1.55E-16	1.80E-15
ENSG00000080200	CRYBG3	-1.77E+00	1.67E-16	1.93E-15
ENSG00000082516	GEMIN5	-1.81E+00	1.80E-16	2.08E-15
ENSG00000139684	ESD	-1.55E+00	2.06E-16	2.37E-15
ENSG00000103485	QPRT	-1.96E+00	2.13E-16	2.45E-15
ENSG00000108688	CCL7	-7.83E+00	2.21E-16	2.53E-15
ENSG00000139146	SINHCAF	-1.86E+00	2.21E-16	2.53E-15
ENSG00000122873	CISD1	-1.26E+00	2.37E-16	2.71E-15
ENSG00000261236	BOP1	-1.37E+00	2.54E-16	2.90E-15
ENSG00000170425	ADORA2B	-1.48E+00	2.94E-16	3.34E-15
ENSG00000226950	DANCR	-2.50E+00	3.02E-16	3.43E-15
ENSG00000176697	BDNF	-2.02E+00	3.09E-16	3.50E-15
ENSG00000120158	RCL1	-1.59E+00	3.12E-16	3.54E-15
ENSG00000143507	DUSP10	-2.90E+00	3.17E-16	3.58E-15
ENSG00000056097	ZFR	-1.10E+00	3.19E-16	3.61E-15
ENSG00000090447	TFAP4	-3.26E+00	3.40E-16	3.84E-15
ENSG00000182952	HMG2	-1.42E+00	3.41E-16	3.85E-15
ENSG00000137547	MRPL15	-1.54E+00	3.62E-16	4.07E-15
ENSG00000180616	SSTR2	-6.16E+00	3.68E-16	4.14E-15
ENSG00000106305	AIMP2	-1.32E+00	3.73E-16	4.19E-15
ENSG00000172986	GXYLT2	-3.38E+00	3.78E-16	4.24E-15
ENSG00000160208	RRP1B	-1.11E+00	3.96E-16	4.43E-15
ENSG00000115368	WDR75	-1.67E+00	4.40E-16	4.91E-15
ENSG00000150760	DOCK1	-1.41E+00	5.01E-16	5.58E-15
ENSG00000116285	ERRF1	-1.15E+00	5.03E-16	5.61E-15
ENSG00000186470	BTN3A2	-1.83E+00	5.43E-16	6.03E-15
ENSG00000080986	NDC80	-1.69E+00	5.46E-16	6.06E-15
ENSG00000213390	ARHGAP19	-2.62E+00	6.32E-16	6.98E-15
ENSG00000172965	MIR4435-2HG	-1.76E+00	6.63E-16	7.31E-15
ENSG00000138363	ATIC	-1.14E+00	7.09E-16	7.79E-15
ENSG00000270885	RASL10B	-3.31E+00	7.69E-16	8.43E-15
ENSG00000117592	PRDX6	-1.10E+00	7.82E-16	8.56E-15
ENSG00000109320	NFKB1	-1.40E+00	8.16E-16	8.93E-15
ENSG00000120318	ARAP3	-3.30E+00	8.47E-16	9.26E-15
ENSG00000108651	UTP6	-1.05E+00	8.91E-16	9.73E-15
ENSG00000183207	RUVBL2	-1.17E+00	9.67E-16	1.05E-14
ENSG00000133706	LARS	-1.57E+00	1.01E-15	1.10E-14

ENSG00000065809	FAM107B	-1.79E+00	1.04E-15	1.13E-14
ENSG00000173511	VEGFB	-2.39E+00	1.11E-15	1.21E-14
ENSG00000188846	RPL14	-1.26E+00	1.15E-15	1.24E-14
ENSG00000135414	GDF11	-2.36E+00	1.15E-15	1.25E-14
ENSG00000117395	EBNA1BP2	-1.39E+00	1.22E-15	1.32E-14
ENSG00000105186	ANKRD27	-1.84E+00	1.26E-15	1.36E-14
ENSG00000197061	HIST1H4C	-3.05E+00	1.42E-15	1.53E-14
ENSG00000008282	SYPL1	-1.17E+00	1.45E-15	1.56E-14
ENSG00000058804	NDC1	-1.48E+00	1.62E-15	1.74E-14
ENSG00000143499	SMYD2	-3.13E+00	1.66E-15	1.78E-14
ENSG00000134138	MEIS2	-1.18E+00	1.76E-15	1.88E-14
ENSG00000177119	ANO6	-1.14E+00	1.84E-15	1.97E-14
ENSG00000077044	DGKD	-1.49E+00	1.88E-15	2.00E-14
ENSG00000171302	CANT1	-1.35E+00	1.98E-15	2.11E-14
ENSG00000143179	UCK2	-1.40E+00	2.15E-15	2.28E-14
ENSG00000125743	SNRPD2	-2.43E+00	2.38E-15	2.52E-14
ENSG00000105854	PON2	-1.02E+00	2.41E-15	2.56E-14
ENSG00000198015	MRPL42	-1.15E+00	2.59E-15	2.73E-14
ENSG00000135549	PKIB	-3.18E+00	2.62E-15	2.77E-14
ENSG00000089157	RPLP0	-1.26E+00	2.77E-15	2.92E-14
ENSG00000066583	ISOC1	-2.00E+00	2.78E-15	2.93E-14
ENSG00000100426	ZBED4	-2.44E+00	2.80E-15	2.95E-14
ENSG00000120800	UTP20	-1.81E+00	2.94E-15	3.09E-14
ENSG00000173391	OLR1	-2.86E+00	3.01E-15	3.17E-14
ENSG00000126749	EMG1	-1.62E+00	3.42E-15	3.59E-14
ENSG00000100462	PRMT5	-1.41E+00	3.49E-15	3.66E-14
ENSG00000186187	ZNRF1	-1.18E+00	3.61E-15	3.78E-14
ENSG00000087095	NLK	-1.29E+00	3.92E-15	4.10E-14
ENSG00000065923	SLC9A7	-2.25E+00	4.01E-15	4.18E-14
ENSG00000203668	CHML	-1.56E+00	4.12E-15	4.30E-14
ENSG00000139793	MBNL2	-1.54E+00	4.14E-15	4.32E-14
ENSG00000160767	FAM189B	-1.61E+00	4.49E-15	4.67E-14
ENSG00000179115	FARSA	-1.12E+00	4.72E-15	4.90E-14
ENSG00000143815	LBR	-1.06E+00	4.75E-15	4.93E-14
ENSG00000155115	GTF3C6	-1.10E+00	5.47E-15	5.66E-14
ENSG00000184887	BTBD6	-1.61E+00	5.55E-15	5.73E-14
ENSG00000164292	RHOBTB3	-1.77E+00	6.13E-15	6.30E-14
ENSG00000154122	ANKH	-1.33E+00	6.24E-15	6.41E-14
ENSG00000149313	AASDHPPT	-1.32E+00	6.36E-15	6.53E-14
ENSG00000154277	UCHL1	-1.11E+00	6.56E-15	6.73E-14
ENSG00000112742	TTK	-1.25E+00	7.31E-15	7.47E-14
ENSG00000113448	PDE4D	-1.79E+00	7.72E-15	7.89E-14
ENSG00000204628	RACK1	-1.39E+00	8.00E-15	8.15E-14
ENSG00000169554	ZEB2	-2.00E+00	8.09E-15	8.23E-14
ENSG00000113594	LIFR	-2.16E+00	8.10E-15	8.24E-14

ENSG00000073060	SCARB1	-1.36E+00	8.11E-15	8.24E-14
ENSG00000118257	NRP2	-1.72E+00	9.34E-15	9.45E-14
ENSG00000105810	CDK6	-1.27E+00	9.70E-15	9.80E-14
ENSG00000198522	GPN1	-1.48E+00	9.73E-15	9.82E-14
ENSG00000079819	EPB41L2	-1.52E+00	1.03E-14	1.03E-13
ENSG00000135111	TBX3	-1.29E+00	1.12E-14	1.12E-13
ENSG00000111859	NEDD9	-2.06E+00	1.18E-14	1.18E-13
ENSG00000162851	TFB2M	-2.10E+00	1.18E-14	1.18E-13
ENSG00000150990	DHX37	-1.25E+00	1.22E-14	1.22E-13
ENSG00000102390	PBDC1	-1.24E+00	1.23E-14	1.22E-13
ENSG00000107249	GLIS3	-1.86E+00	1.25E-14	1.25E-13
ENSG00000100823	APEX1	-1.20E+00	1.27E-14	1.26E-13
ENSG00000043514	TRIT1	-2.41E+00	1.37E-14	1.36E-13
ENSG00000116830	TTF2	-1.89E+00	1.50E-14	1.49E-13
ENSG00000071575	TRIB2	-3.95E+00	1.50E-14	1.49E-13
ENSG00000135372	NAT10	-1.30E+00	1.71E-14	1.68E-13
ENSG00000020256	ZFP64	-1.09E+00	1.72E-14	1.70E-13
ENSG00000164054	SHISA5	-1.04E+00	1.86E-14	1.83E-13
ENSG00000221869	CEBPD	-2.04E+00	1.94E-14	1.90E-13
ENSG00000253276	CCDC71L	-1.28E+00	1.94E-14	1.90E-13
ENSG00000138430	OLA1	-1.02E+00	2.39E-14	2.32E-13
ENSG00000173588	CEP83	-1.70E+00	2.39E-14	2.32E-13
ENSG00000180370	PAK2	-1.05E+00	2.46E-14	2.38E-13
ENSG00000108679	LGALS3BP	-1.24E+00	2.56E-14	2.47E-13
ENSG00000163069	SGCB	-1.03E+00	2.63E-14	2.54E-13
ENSG00000179241	LDLRAD3	-3.40E+00	2.63E-14	2.54E-13
ENSG00000141384	TAF4B	-2.86E+00	2.90E-14	2.79E-13
ENSG00000127863	TNFRSF19	-3.68E+00	2.90E-14	2.79E-13
ENSG00000184357	HIST1H1B	-2.84E+00	3.08E-14	2.95E-13
ENSG00000197894	ADH5	-1.22E+00	3.14E-14	3.01E-13
ENSG00000115419	GLS	-1.29E+00	3.75E-14	3.58E-13
ENSG00000241343	RPL36A	-1.94E+00	4.22E-14	4.01E-13
ENSG00000164305	CASP3	-1.26E+00	4.71E-14	4.46E-13
ENSG00000066697	MSANTD3	-1.46E+00	4.80E-14	4.54E-13
ENSG00000138190	EXOC6	-2.18E+00	4.86E-14	4.59E-13
ENSG00000124784	RIOK1	-1.40E+00	5.21E-14	4.91E-13
ENSG00000113645	WWC1	-2.04E+00	5.51E-14	5.19E-13
ENSG00000183010	PYCR1	-2.21E+00	6.03E-14	5.67E-13
ENSG00000146416	AIG1	-2.30E+00	7.03E-14	6.57E-13
ENSG00000138442	WDR12	-1.40E+00	8.12E-14	7.57E-13
ENSG00000183386	FHL3	-1.56E+00	8.15E-14	7.59E-13
ENSG00000112208	BAG2	-1.51E+00	9.20E-14	8.53E-13
ENSG00000147874	HAUS6	-1.13E+00	9.51E-14	8.81E-13
ENSG00000137054	POLR1E	-1.13E+00	9.70E-14	8.99E-13
ENSG00000165915	SLC39A13	-1.86E+00	1.01E-13	9.33E-13



ENSG00000165506	DNAAF2	-1.86E+00	1.09E-13	1.01E-12
ENSG00000106344	RBM28	-1.16E+00	1.10E-13	1.01E-12
ENSG00000139354	GAS2L3	-1.89E+00	1.25E-13	1.15E-12
ENSG00000101158	NELFCD	-1.07E+00	1.27E-13	1.17E-12
ENSG00000166347	CYB5A	-2.06E+00	1.31E-13	1.20E-12
ENSG00000226479	TMEM185B	-1.49E+00	1.33E-13	1.21E-12
ENSG00000135390	ATP5MC2	-2.37E+00	1.41E-13	1.29E-12
ENSG00000089057	SLC23A2	-1.77E+00	1.43E-13	1.31E-12
ENSG00000176105	YES1	-1.07E+00	1.68E-13	1.52E-12
ENSG00000005249	PRKAR2B	-2.04E+00	2.46E-13	2.21E-12
ENSG00000164949	GEM	-3.92E+00	2.60E-13	2.33E-12
ENSG00000100105	PATZ1	-2.02E+00	2.69E-13	2.41E-12
ENSG00000154845	PPP4R1	-1.29E+00	2.82E-13	2.52E-12
ENSG00000126787	DLGAP5	-1.22E+00	2.90E-13	2.59E-12
ENSG00000151338	MIPOL1	-1.88E+00	3.00E-13	2.68E-12
ENSG00000118965	WDR35	-2.52E+00	3.03E-13	2.70E-12
ENSG00000154743	TSEN2	-2.20E+00	3.07E-13	2.73E-12
ENSG00000044090	CUL7	-1.91E+00	3.11E-13	2.77E-12
ENSG00000104356	POP1	-1.20E+00	3.27E-13	2.91E-12
ENSG00000110104	CCDC86	-1.57E+00	3.41E-13	3.02E-12
ENSG00000180694	TMEM64	-1.59E+00	3.45E-13	3.06E-12
ENSG00000198176	TFDP1	-1.03E+00	3.65E-13	3.23E-12
ENSG00000164741	DLC1	-1.11E+00	3.65E-13	3.23E-12
ENSG00000230629	RPS23P8	-1.46E+00	4.34E-13	3.82E-12
ENSG00000149273	RPS3	-1.38E+00	4.84E-13	4.25E-12
ENSG00000198417	MT1F	-5.70E+00	4.98E-13	4.37E-12
ENSG00000197601	FAR1	-1.13E+00	5.30E-13	4.63E-12
ENSG00000042062	RIPOR3	-3.86E+00	5.87E-13	5.12E-12
ENSG00000203666	EFCAB2	-1.66E+00	6.18E-13	5.38E-12
ENSG00000109189	USP46	-1.74E+00	6.47E-13	5.63E-12
ENSG00000160124	CCDC58	-1.22E+00	6.65E-13	5.78E-12
ENSG00000197045	GMFB	-1.15E+00	6.86E-13	5.95E-12
ENSG00000151012	SLC7A11	-1.72E+00	7.44E-13	6.44E-12
ENSG00000116337	AMPD2	-1.68E+00	7.68E-13	6.64E-12
ENSG00000105677	TMEM147	-1.46E+00	8.56E-13	7.36E-12
ENSG00000239900	ADSL	-2.47E+00	8.56E-13	7.36E-12
ENSG00000065882	TBC1D1	-1.17E+00	8.70E-13	7.46E-12
ENSG00000178776	C5orf46	-4.28E+00	8.73E-13	7.49E-12
ENSG00000167088	SNRPD1	-1.51E+00	9.05E-13	7.75E-12
ENSG00000147650	LRP12	-1.29E+00	9.13E-13	7.82E-12
ENSG00000027697	IFNGR1	-1.07E+00	9.34E-13	7.99E-12
ENSG00000023909	GCLM	-1.06E+00	9.34E-13	7.99E-12
ENSG00000135070	ISCA1	-1.25E+00	9.41E-13	8.04E-12
ENSG00000157557	ETS2	-1.53E+00	9.66E-13	8.23E-12
ENSG00000196204	RNF216P1	-1.95E+00	9.78E-13	8.33E-12

ENSG00000118193	KIF14	-1.33E+00	9.92E-13	8.44E-12
ENSG00000104343	UBE2W	-1.30E+00	1.15E-12	9.77E-12
ENSG00000080819	CPOX	-1.12E+00	1.18E-12	9.97E-12
ENSG00000196497	IPO4	-2.81E+00	1.19E-12	1.00E-11
ENSG00000137513	NARS2	-2.46E+00	1.20E-12	1.01E-11
ENSG00000142207	URB1	-1.58E+00	1.33E-12	1.12E-11
ENSG00000163872	YEATS2	-1.95E+00	1.35E-12	1.13E-11
ENSG00000112983	BRD8	-1.15E+00	1.35E-12	1.13E-11
ENSG00000156469	MTERF3	-1.60E+00	1.36E-12	1.14E-11
ENSG00000011295	TTC19	-1.19E+00	1.38E-12	1.15E-11
ENSG00000113048	MRPS27	-1.07E+00	1.41E-12	1.18E-11
ENSG00000134287	ARF3	-1.20E+00	1.42E-12	1.19E-11
ENSG00000205084	TMEM231	-1.97E+00	1.48E-12	1.24E-11
ENSG00000158234	FAIM	-1.64E+00	1.55E-12	1.29E-11
ENSG00000180198	RCC1	-1.26E+00	1.58E-12	1.32E-11
ENSG00000161013	MGAT4B	-1.13E+00	1.71E-12	1.43E-11
ENSG00000104856	RELB	-1.31E+00	1.78E-12	1.48E-11
ENSG00000103353	UBFD1	-1.05E+00	1.83E-12	1.52E-11
ENSG00000103356	EARS2	-1.41E+00	2.02E-12	1.68E-11
ENSG00000103494	RPGRIP1L	-1.58E+00	2.45E-12	2.02E-11
ENSG00000126249	PDCD2L	-2.12E+00	2.95E-12	2.42E-11
ENSG00000104219	ZDHHC2	-2.53E+00	3.15E-12	2.58E-11
ENSG00000182963	GJC1	-1.02E+00	3.28E-12	2.67E-11
ENSG00000164040	PGRMC2	-1.10E+00	3.38E-12	2.75E-11
ENSG00000093010	COMT	-1.34E+00	3.52E-12	2.86E-11
ENSG00000151790	TDO2	-5.65E+00	3.54E-12	2.87E-11
ENSG00000151304	SRFBP1	-1.31E+00	3.65E-12	2.96E-11
ENSG00000111145	ELK3	-1.08E+00	3.83E-12	3.11E-11
ENSG00000196968	FUT11	-1.30E+00	3.97E-12	3.21E-11
ENSG00000104964	TLE5	-1.20E+00	4.18E-12	3.37E-11
ENSG00000129347	KRI1	-1.05E+00	4.27E-12	3.44E-11
ENSG00000089685	BIRC5	-1.24E+00	4.30E-12	3.47E-11
ENSG00000164904	ALDH7A1	-1.16E+00	4.74E-12	3.81E-11
ENSG00000160193	WDR4	-1.46E+00	4.79E-12	3.85E-11
ENSG00000151576	QTRT2	-1.05E+00	4.83E-12	3.89E-11
ENSG00000182979	MTA1	-1.73E+00	4.93E-12	3.96E-11
ENSG00000131747	TOP2A	-1.30E+00	5.10E-12	4.08E-11
ENSG00000018510	AGPS	-1.12E+00	5.13E-12	4.10E-11
ENSG00000168785	TSPAN5	-1.30E+00	5.44E-12	4.35E-11
ENSG00000072756	TRNT1	-1.68E+00	5.70E-12	4.54E-11
ENSG00000165283	STOML2	-1.24E+00	5.81E-12	4.63E-11
ENSG00000133169	BEX1	-2.03E+00	5.95E-12	4.73E-11
ENSG00000058600	POLR3E	-1.41E+00	6.07E-12	4.82E-11
ENSG00000026508	CD44	-1.49E+00	6.09E-12	4.84E-11
ENSG00000174136	RGMB	-1.70E+00	6.62E-12	5.24E-11

ENSG00000048991	R3HDM1	-1.42E+00	6.71E-12	5.31E-11
ENSG00000142102	PGGHG	-5.69E+00	7.24E-12	5.71E-11
ENSG00000204576	PRR3	-1.70E+00	7.48E-12	5.90E-11
ENSG00000185634	SHC4	-4.05E+00	7.50E-12	5.91E-11
ENSG00000214706	IFRD2	-1.03E+00	8.08E-12	6.35E-11
ENSG00000112175	BMP5	-5.06E+00	8.83E-12	6.92E-11
ENSG00000145536	ADAMTS16	-2.35E+00	9.20E-12	7.19E-11
ENSG00000082512	TRAF5	-2.85E+00	9.38E-12	7.32E-11
ENSG00000138160	KIF11	-1.46E+00	1.04E-11	8.07E-11
ENSG00000117877	CD3EAP	-1.14E+00	1.05E-11	8.19E-11
ENSG00000164647	STEAP1	-3.87E+00	1.17E-11	9.06E-11
ENSG00000157168	NRG1	-1.21E+00	1.20E-11	9.29E-11
ENSG00000166326	TRIM44	-1.01E+00	1.21E-11	9.34E-11
ENSG00000173085	COQ2	-1.27E+00	1.28E-11	9.87E-11
ENSG00000148303	RPL7A	-1.04E+00	1.29E-11	9.92E-11
ENSG00000153989	NUS1	-1.59E+00	1.29E-11	9.92E-11
ENSG00000227057	WDR46	-1.08E+00	1.35E-11	1.04E-10
ENSG00000148690	FRA10AC1	-1.02E+00	1.37E-11	1.06E-10
ENSG00000165819	METTL3	-1.27E+00	1.43E-11	1.10E-10
ENSG00000117724	CENPF	-1.30E+00	1.53E-11	1.18E-10
ENSG00000140006	WDR89	-1.38E+00	1.54E-11	1.18E-10
ENSG00000184992	BRI3BP	-1.00E+00	1.58E-11	1.21E-10
ENSG00000086475	SEPHS1	-1.07E+00	1.62E-11	1.24E-10
ENSG00000153976	HS3ST3A1	-3.46E+00	1.63E-11	1.25E-10
ENSG00000269190	FBXO17	-1.73E+00	1.65E-11	1.26E-10
ENSG00000076554	TPD52	-1.58E+00	1.68E-11	1.28E-10
ENSG00000123143	PKN1	-1.07E+00	1.69E-11	1.29E-10
ENSG00000159228	CBR1	-1.35E+00	1.76E-11	1.34E-10
ENSG00000044459	CNTLN	-1.14E+00	1.85E-11	1.41E-10
ENSG00000116962	NID1	-1.55E+00	1.87E-11	1.42E-10
ENSG00000145012	LPP	-1.17E+00	1.90E-11	1.44E-10
ENSG00000099999	RNF215	-3.83E+00	1.97E-11	1.49E-10
ENSG00000047932	GOPC	-1.25E+00	1.99E-11	1.51E-10
ENSG00000125817	CENPB	-1.03E+00	2.08E-11	1.57E-10
ENSG00000133816	MICAL2	-1.01E+00	2.11E-11	1.59E-10
ENSG00000113273	ARSB	-1.73E+00	2.22E-11	1.67E-10
ENSG00000163138	PACRGL	-1.88E+00	2.24E-11	1.69E-10
ENSG00000132356	PRKAA1	-1.02E+00	2.36E-11	1.77E-10
ENSG00000245648	AC022075.1	-2.05E+00	2.36E-11	1.77E-10
ENSG00000164506	STXBP5	-1.15E+00	2.42E-11	1.81E-10
ENSG00000186687	LYRM7	-2.24E+00	2.49E-11	1.86E-10
ENSG00000168298	HIST1H1E	-2.33E+00	2.58E-11	1.93E-10
ENSG00000116005	PCYOX1	-1.09E+00	2.60E-11	1.94E-10
ENSG00000133107	TRPC4	-2.13E+00	2.61E-11	1.95E-10
ENSG00000073536	NLE1	-1.82E+00	2.76E-11	2.06E-10

ENSG00000070718	AP3M2	-1.07E+00	3.04E-11	2.26E-10
ENSG00000144354	CDCA7	-1.53E+00	3.04E-11	2.26E-10
ENSG00000070785	EIF2B3	-1.14E+00	3.34E-11	2.47E-10
ENSG00000140694	PARN	-1.03E+00	3.42E-11	2.53E-10
ENSG00000197043	ANXA6	-1.23E+00	3.74E-11	2.75E-10
ENSG00000164346	NSA2	-1.06E+00	4.25E-11	3.12E-10
ENSG00000023902	PLEKHO1	-1.36E+00	4.43E-11	3.24E-10
ENSG00000109674	NEIL3	-1.70E+00	4.53E-11	3.31E-10
ENSG00000168002	POLR2G	-1.38E+00	4.53E-11	3.31E-10
ENSG00000110700	RPS13	-1.29E+00	4.63E-11	3.38E-10
ENSG00000131844	MCCC2	-1.28E+00	4.75E-11	3.46E-10
ENSG00000144043	TEX261	-1.03E+00	4.85E-11	3.53E-10
ENSG00000181634	TNFSF15	-5.69E+00	4.90E-11	3.57E-10
ENSG00000124575	HIST1H1D	-1.60E+00	5.25E-11	3.81E-10
ENSG00000086712	TXLNG	-1.01E+00	5.51E-11	4.00E-10
ENSG00000039123	MTREX	-1.16E+00	5.64E-11	4.09E-10
ENSG00000123213	NLN	-2.38E+00	6.12E-11	4.43E-10
ENSG00000165030	NFIL3	-1.71E+00	6.34E-11	4.58E-10
ENSG00000143995	MEIS1	-3.73E+00	6.64E-11	4.79E-10
ENSG00000197555	SIPA1L1	-1.21E+00	6.94E-11	4.99E-10
ENSG00000177697	CD151	-1.49E+00	7.40E-11	5.30E-10
ENSG00000101189	MRGBP	-1.03E+00	7.65E-11	5.48E-10
ENSG00000107438	PDLIM1	-1.28E+00	7.79E-11	5.57E-10
ENSG00000166033	HTRA1	-2.13E+00	7.92E-11	5.66E-10
ENSG00000151466	SCLT1	-1.20E+00	8.23E-11	5.87E-10
ENSG00000104231	ZFAND1	-1.68E+00	8.30E-11	5.92E-10
ENSG00000160803	UBQLN4	-1.59E+00	8.44E-11	6.01E-10
ENSG00000111231	GPN3	-1.05E+00	9.78E-11	6.94E-10
ENSG00000136522	MRPL47	-1.10E+00	9.92E-11	7.03E-10
ENSG00000107815	TWINK	-1.43E+00	1.00E-10	7.10E-10
ENSG00000211456	SACM1L	-1.00E+00	1.04E-10	7.34E-10
ENSG00000116641	DOCK7	-1.48E+00	1.06E-10	7.51E-10
ENSG00000113356	POLR3G	-1.35E+00	1.22E-10	8.55E-10
ENSG00000204381	LAYN	-1.95E+00	1.30E-10	9.16E-10
ENSG00000053372	MRTO4	-1.27E+00	1.31E-10	9.17E-10
ENSG00000116679	IVNS1ABP	-1.15E+00	1.35E-10	9.51E-10
ENSG00000010803	SCMH1	-2.32E+00	1.36E-10	9.51E-10
ENSG00000120738	EGR1	-2.29E+00	1.38E-10	9.68E-10
ENSG00000188158	NHS	-3.25E+00	1.38E-10	9.69E-10
ENSG00000121621	KIF18A	-1.35E+00	1.43E-10	1.00E-09
ENSG00000117411	B4GALT2	-1.43E+00	1.46E-10	1.02E-09
ENSG00000164611	PTTG1	-1.43E+00	1.49E-10	1.04E-09
ENSG00000134072	CAMK1	-2.01E+00	1.65E-10	1.15E-09
ENSG00000249669	CARMN	-2.58E+00	1.67E-10	1.16E-09
ENSG00000120837	NFYB	-1.00E+00	1.72E-10	1.20E-09

ENSG00000272599	AC016394.2	-3.33E+00	1.84E-10	1.27E-09
ENSG00000068097	HEATR6	-1.41E+00	1.88E-10	1.30E-09
ENSG00000196876	SCN8A	-2.20E+00	1.97E-10	1.36E-09
ENSG00000255737	AGAP2-AS1	-3.05E+00	1.97E-10	1.36E-09
ENSG00000114391	RPL24	-1.07E+00	2.12E-10	1.46E-09
ENSG00000175183	CSRP2	-1.54E+00	2.13E-10	1.47E-09
ENSG00000105792	CFAP69	-3.52E+00	2.17E-10	1.50E-09
ENSG00000171863	RPS7	-1.31E+00	2.19E-10	1.51E-09
ENSG00000164167	LSM6	-1.28E+00	2.28E-10	1.57E-09
ENSG00000003989	SLC7A2	-2.52E+00	2.32E-10	1.59E-09
ENSG00000111144	LTA4H	-1.06E+00	2.34E-10	1.61E-09
ENSG00000116001	TIA1	-1.26E+00	2.38E-10	1.63E-09
ENSG00000118707	TGIF2	-1.27E+00	2.56E-10	1.76E-09
ENSG00000070540	WIPI1	-2.52E+00	2.64E-10	1.81E-09
ENSG00000139131	YARS2	-1.37E+00	2.72E-10	1.86E-09
ENSG00000287151	C2orf27A	-2.64E+00	2.81E-10	1.91E-09
ENSG00000104447	TRPS1	-1.69E+00	3.04E-10	2.06E-09
ENSG00000257093	DENND11	-3.37E+00	3.10E-10	2.10E-09
ENSG00000167747	C19orf48	-1.02E+00	3.11E-10	2.11E-09
ENSG00000165271	NOL6	-1.45E+00	3.12E-10	2.12E-09
ENSG00000137337	MDC1	-1.23E+00	3.18E-10	2.15E-09
ENSG00000135446	CDK4	-1.29E+00	3.21E-10	2.17E-09
ENSG00000166068	SPRED1	-1.15E+00	3.29E-10	2.22E-09
ENSG00000071994	PDCD2	-1.15E+00	3.37E-10	2.28E-09
ENSG00000092140	G2E3	-1.30E+00	3.50E-10	2.36E-09
ENSG00000029153	ARNTL2	-1.09E+00	3.65E-10	2.46E-09
ENSG00000234883	MIR155HG	-4.03E+00	3.71E-10	2.49E-09
ENSG00000115318	LOXL3	-2.61E+00	3.83E-10	2.57E-09
ENSG00000143156	NME7	-1.71E+00	4.22E-10	2.82E-09
ENSG00000104164	BLOC1S6	-1.00E+00	4.39E-10	2.93E-09
ENSG00000139239	RPL14P1	-1.31E+00	4.48E-10	2.99E-09
ENSG00000144802	NFKBIZ	-1.07E+00	4.54E-10	3.03E-09
ENSG00000166444	ST5	-1.60E+00	4.74E-10	3.16E-09
ENSG00000174842	GLMN	-1.38E+00	4.98E-10	3.31E-09
ENSG00000159216	RUNX1	-1.35E+00	4.99E-10	3.32E-09
ENSG00000105948	TTC26	-1.50E+00	5.21E-10	3.46E-09
ENSG00000232759	AC002480.1	-5.06E+00	5.34E-10	3.54E-09
ENSG00000164024	METAP1	-1.07E+00	5.39E-10	3.57E-09
ENSG00000271601	LIX1L	-1.14E+00	5.45E-10	3.61E-09
ENSG00000143771	CNIH4	-1.46E+00	5.45E-10	3.61E-09
ENSG00000205871	RPS3AP47	-1.21E+00	5.52E-10	3.65E-09
ENSG00000114423	CBLB	-1.31E+00	5.65E-10	3.73E-09
ENSG00000187240	DYNC2H1	-1.60E+00	5.93E-10	3.91E-09
ENSG00000134851	TMEM165	-1.12E+00	5.96E-10	3.93E-09
ENSG00000156017	CARNMT1	-1.21E+00	6.04E-10	3.97E-09

ENSG00000035499	DEPDC1B	-1.37E+00	6.07E-10	3.99E-09
ENSG00000148484	RSU1	-1.12E+00	6.50E-10	4.27E-09
ENSG00000130713	EXOSC2	-1.22E+00	6.54E-10	4.29E-09
ENSG00000152256	PDK1	-1.53E+00	7.30E-10	4.76E-09
ENSG00000145819	ARHGAP26	-1.39E+00	7.38E-10	4.81E-09
ENSG00000156398	SFXN2	-2.99E+00	7.44E-10	4.85E-09
ENSG00000138778	CENPE	-1.35E+00	7.61E-10	4.96E-09
ENSG00000254726	MEX3A	-1.10E+00	7.89E-10	5.13E-09
ENSG00000104524	PYCR3	-2.17E+00	8.13E-10	5.28E-09
ENSG00000121879	PIK3CA	-1.21E+00	8.99E-10	5.82E-09
ENSG00000197442	MAP3K5	-2.11E+00	9.02E-10	5.83E-09
ENSG00000059588	TARBP1	-1.64E+00	9.43E-10	6.09E-09
ENSG00000119285	HEATR1	-1.43E+00	9.46E-10	6.10E-09
ENSG00000174099	MSRB3	-1.08E+00	9.79E-10	6.30E-09
ENSG00000072571	HMMR	-1.18E+00	1.16E-09	7.42E-09
ENSG00000134480	CCNH	-1.38E+00	1.39E-09	8.83E-09
ENSG00000005436	GCFC2	-1.23E+00	1.43E-09	9.08E-09
ENSG00000152413	HOMER1	-1.55E+00	1.48E-09	9.39E-09
ENSG00000066651	TRMT11	-1.17E+00	1.49E-09	9.40E-09
ENSG00000115009	CCL20	-2.36E+00	1.55E-09	9.78E-09
ENSG00000114739	ACVR2B	-2.56E+00	1.56E-09	9.82E-09
ENSG00000168310	IRF2	-1.23E+00	1.61E-09	1.02E-08
ENSG00000112414	ADGRG6	-1.22E+00	1.65E-09	1.04E-08
ENSG00000005156	LIG3	-1.19E+00	1.66E-09	1.04E-08
ENSG00000001084	GCLC	-1.68E+00	1.67E-09	1.05E-08
ENSG00000065485	PDIA5	-1.10E+00	1.74E-09	1.09E-08
ENSG00000100138	SNU13	-1.04E+00	1.78E-09	1.11E-08
ENSG00000105926	MPP6	-1.15E+00	1.93E-09	1.21E-08
ENSG00000139197	PEX5	-1.04E+00	1.96E-09	1.22E-08
ENSG00000137502	RAB30	-1.73E+00	1.96E-09	1.23E-08
ENSG00000133393	FOPNL	-1.14E+00	1.98E-09	1.24E-08
ENSG00000107798	LIPA	-1.16E+00	2.03E-09	1.26E-08
ENSG00000163002	NUP35	-1.21E+00	2.03E-09	1.27E-08
ENSG00000123552	USP45	-1.50E+00	2.08E-09	1.29E-08
ENSG00000116157	GPX7	-3.08E+00	2.16E-09	1.34E-08
ENSG00000126790	L3HYPDH	-1.67E+00	2.22E-09	1.38E-08
ENSG00000154310	TNIK	-1.63E+00	2.23E-09	1.38E-08
ENSG00000143947	RPS27A	-1.23E+00	2.59E-09	1.60E-08
ENSG00000154736	ADAMTS5	-3.88E+00	2.68E-09	1.66E-08
ENSG00000134198	TSPAN2	-2.54E+00	2.71E-09	1.67E-08
ENSG00000180357	ZNF609	-1.19E+00	2.92E-09	1.80E-08
ENSG00000137331	IER3	-1.43E+00	3.00E-09	1.85E-08
ENSG00000136010	ALDH1L2	-2.71E+00	3.03E-09	1.86E-08
ENSG00000224032	EPB41L4A-AS1	-1.26E+00	3.05E-09	1.88E-08
ENSG00000126767	ELK1	-1.08E+00	3.09E-09	1.90E-08

ENSG00000135763	URB2	-1.47E+00	3.27E-09	2.00E-08
ENSG00000119865	CNRIP1	-1.26E+00	3.31E-09	2.03E-08
ENSG00000134744	TUT4	-1.28E+00	3.32E-09	2.03E-08
ENSG00000197646	PDCD1LG2	-3.47E+00	3.45E-09	2.11E-08
ENSG00000146592	CREB5	-2.40E+00	3.48E-09	2.13E-08
ENSG00000120833	SOCS2	-1.50E+00	3.78E-09	2.30E-08
ENSG00000170365	SMAD1	-1.32E+00	3.78E-09	2.30E-08
ENSG00000140280	LYSMD2	-2.40E+00	3.95E-09	2.40E-08
ENSG00000102967	DHODH	-2.05E+00	4.06E-09	2.46E-08
ENSG00000169105	CHST14	-1.17E+00	4.07E-09	2.47E-08
ENSG00000117569	PTBP2	-2.08E+00	4.07E-09	2.47E-08
ENSG00000005302	MSL3	-1.08E+00	4.23E-09	2.56E-08
ENSG00000064393	HIPK2	-1.17E+00	4.38E-09	2.64E-08
ENSG00000163378	EOGT	-1.54E+00	4.52E-09	2.72E-08
ENSG00000125430	HS3ST3B1	-2.15E+00	4.91E-09	2.95E-08
ENSG00000176907	TCIM	-5.58E+00	5.01E-09	3.00E-08
ENSG00000024526	DEPDC1	-1.16E+00	5.48E-09	3.27E-08
ENSG00000100196	KDEL3	-1.75E+00	5.56E-09	3.31E-08
ENSG00000013619	MAMLD1	-2.29E+00	5.61E-09	3.34E-08
ENSG00000147889	CDKN2A	-1.81E+00	5.63E-09	3.35E-08
ENSG00000103257	SLC7A5	-1.04E+00	5.74E-09	3.41E-08
ENSG00000135185	TMEM243	-1.64E+00	5.80E-09	3.45E-08
ENSG00000172301	COPRS	-1.16E+00	5.80E-09	3.45E-08
ENSG00000135480	KRT7	-2.62E+00	5.94E-09	3.52E-08
ENSG00000196177	ACADSB	-2.10E+00	6.07E-09	3.60E-08
ENSG00000135245	HILPDA	-1.56E+00	6.10E-09	3.62E-08
ENSG00000086062	B4GALT1	-1.24E+00	6.22E-09	3.68E-08
ENSG00000004139	SARM1	-1.49E+00	6.63E-09	3.92E-08
ENSG00000187676	B3GLCT	-1.02E+00	6.93E-09	4.09E-08
ENSG00000166780	BMERB1	-1.21E+00	6.96E-09	4.11E-08
ENSG00000100625	SIX4	-1.56E+00	7.43E-09	4.37E-08
ENSG00000205208	C4orf46	-1.27E+00	7.57E-09	4.45E-08
ENSG00000134775	FHOD3	-3.71E+00	7.60E-09	4.47E-08
ENSG00000187231	SESTD1	-1.23E+00	7.61E-09	4.47E-08
ENSG00000197594	ENPP1	-2.20E+00	8.08E-09	4.74E-08
ENSG00000176022	B3GALT6	-1.13E+00	8.60E-09	5.02E-08
ENSG00000168116	KIAA1586	-1.26E+00	8.79E-09	5.13E-08
ENSG00000092096	SLC22A17	-1.24E+00	9.50E-09	5.52E-08
ENSG00000125691	RPL23	-1.32E+00	1.02E-08	5.92E-08
ENSG00000141934	PLPP2	-1.46E+00	1.05E-08	6.09E-08
ENSG00000064607	SUGP2	-1.01E+00	1.05E-08	6.10E-08
ENSG00000122585	NPY	-3.56E+00	1.05E-08	6.10E-08
ENSG00000182013	PNMA8A	-2.30E+00	1.07E-08	6.21E-08
ENSG00000158985	CDC42SE2	-1.28E+00	1.08E-08	6.28E-08
ENSG00000051825	MPHOSPH9	-1.39E+00	1.15E-08	6.62E-08

ENSG00000171262	FAM98B	-1.01E+00	1.18E-08	6.79E-08
ENSG00000186908	ZDHHC17	-1.49E+00	1.18E-08	6.82E-08
ENSG00000140577	CRTC3	-1.06E+00	1.19E-08	6.87E-08
ENSG00000078401	EDN1	-2.10E+00	1.24E-08	7.15E-08
ENSG00000115963	RND3	-1.20E+00	1.25E-08	7.17E-08
ENSG00000235552	RPL6P27	-1.09E+00	1.26E-08	7.24E-08
ENSG00000115073	ACTR1B	-1.23E+00	1.30E-08	7.46E-08
ENSG00000066279	ASPM	-1.02E+00	1.30E-08	7.46E-08
ENSG00000151458	ANKRD50	-1.52E+00	1.31E-08	7.53E-08
ENSG00000165526	RPUSD4	-1.03E+00	1.40E-08	7.98E-08
ENSG00000133121	STARD13	-2.30E+00	1.42E-08	8.10E-08
ENSG00000073150	PANX2	-2.08E+00	1.48E-08	8.41E-08
ENSG00000074319	TSG101	-1.06E+00	1.48E-08	8.43E-08
ENSG00000104047	DTWD1	-1.17E+00	1.48E-08	8.45E-08
ENSG00000143390	RFX5	-1.40E+00	1.49E-08	8.49E-08
ENSG00000135451	TROAP	-1.27E+00	1.59E-08	9.02E-08
ENSG00000099385	BCL7C	-1.74E+00	1.61E-08	9.16E-08
ENSG00000196323	ZBTB44	-1.42E+00	1.62E-08	9.17E-08
ENSG00000158122	PRXL2C	-1.99E+00	1.62E-08	9.21E-08
ENSG00000254004	ZNF260	-1.22E+00	1.63E-08	9.22E-08
ENSG00000182004	SNRPE	-1.45E+00	1.65E-08	9.33E-08
ENSG00000224578	HNRNPA1P48	-1.59E+00	1.65E-08	9.36E-08
ENSG00000169019	COMMD8	-1.22E+00	1.77E-08	9.98E-08
ENSG00000107159	CA9	-4.24E+00	1.84E-08	1.04E-07
ENSG00000108423	TUBD1	-1.11E+00	1.86E-08	1.05E-07
ENSG00000101751	POLI	-2.99E+00	1.86E-08	1.05E-07
ENSG00000157224	CLDN12	-1.45E+00	1.88E-08	1.06E-07
ENSG00000198353	HOXC4	-1.43E+00	1.95E-08	1.10E-07
ENSG00000240972	MIF	-2.03E+00	1.95E-08	1.10E-07
ENSG00000145604	SKP2	-1.05E+00	1.98E-08	1.11E-07
ENSG00000237976	AL391069.2	-5.04E+00	1.99E-08	1.12E-07
ENSG00000143314	MRPL24	-1.50E+00	2.01E-08	1.13E-07
ENSG00000152894	PTPRK	-1.02E+00	2.04E-08	1.14E-07
ENSG00000149187	CELF1	-1.10E+00	2.13E-08	1.19E-07
ENSG00000050344	NFE2L3	-1.64E+00	2.17E-08	1.21E-07
ENSG00000163710	PCOLCE2	-1.31E+00	2.18E-08	1.22E-07
ENSG00000278540	ACACA	-1.17E+00	2.25E-08	1.26E-07
ENSG00000092208	GEMIN2	-1.17E+00	2.28E-08	1.27E-07
ENSG00000076053	RBM7	-1.17E+00	2.32E-08	1.29E-07
ENSG00000063587	ZNF275	-1.98E+00	2.33E-08	1.30E-07
ENSG00000240476	LINC00973	-4.32E+00	2.40E-08	1.33E-07
ENSG00000276293	PIP4K2B	-1.15E+00	2.42E-08	1.34E-07
ENSG00000008324	SS18L2	-1.11E+00	2.47E-08	1.37E-07
ENSG00000153574	RPIA	-1.01E+00	2.55E-08	1.41E-07
ENSG00000132952	USPL1	-1.62E+00	2.60E-08	1.44E-07



ENSG00000181007	ZFP82	-1.41E+00	2.60E-08	1.44E-07
ENSG00000156970	BUB1B	-1.20E+00	2.62E-08	1.45E-07
ENSG00000146232	NFKBIE	-1.49E+00	2.69E-08	1.48E-07
ENSG00000197299	BLM	-1.37E+00	2.76E-08	1.52E-07
ENSG00000100526	CDKN3	-1.05E+00	2.87E-08	1.57E-07
ENSG00000037897	METTL1	-1.69E+00	2.88E-08	1.58E-07
ENSG00000185420	SMYD3	-1.32E+00	2.90E-08	1.59E-07
ENSG00000159199	ATP5MC1	-1.77E+00	3.07E-08	1.68E-07
ENSG00000150636	CCDC102B	-3.63E+00	3.09E-08	1.69E-07
ENSG00000184924	PTRHD1	-1.54E+00	3.23E-08	1.76E-07
ENSG00000123689	G0S2	-4.41E+00	3.30E-08	1.79E-07
ENSG00000247626	MARS2	-2.83E+00	3.30E-08	1.79E-07
ENSG00000136630	HLX	-2.56E+00	3.35E-08	1.82E-07
ENSG00000232774	AL355916.1	-4.74E+00	3.49E-08	1.89E-07
ENSG00000160446	ZDHHC12	-1.83E+00	3.52E-08	1.91E-07
ENSG00000240225	ZNF542P	-1.03E+00	3.72E-08	2.01E-07
ENSG00000101811	CSTF2	-1.03E+00	3.73E-08	2.02E-07
ENSG00000136897	MRPL50	-1.04E+00	3.82E-08	2.06E-07
ENSG00000171155	C1GALT1C1	-1.14E+00	3.93E-08	2.12E-07
ENSG00000248008	NRAV	-2.34E+00	4.03E-08	2.17E-07
ENSG00000135083	CCNJL	-2.37E+00	4.33E-08	2.33E-07
ENSG00000151702	FLI1	-1.29E+00	4.67E-08	2.51E-07
ENSG00000146950	SHROOM2	-2.55E+00	4.81E-08	2.58E-07
ENSG00000109475	RPL34	-1.68E+00	5.25E-08	2.81E-07
ENSG00000140386	SCAPER	-1.49E+00	5.49E-08	2.92E-07
ENSG00000139343	SNRPF	-1.21E+00	5.64E-08	3.00E-07
ENSG00000180228	PRKRA	-1.44E+00	5.68E-08	3.02E-07
ENSG00000161179	YDJC	-1.63E+00	5.80E-08	3.08E-07
ENSG00000118181	RPS25	-1.13E+00	5.80E-08	3.08E-07
ENSG00000115541	HSPE1	-1.31E+00	5.84E-08	3.10E-07
ENSG00000010165	EEF1AKNMT	-1.09E+00	5.85E-08	3.11E-07
ENSG00000139154	AEBP2	-1.13E+00	5.93E-08	3.15E-07
ENSG00000259807	AC009093.1	-2.94E+00	6.03E-08	3.20E-07
ENSG00000198018	ENTPD7	-1.28E+00	6.11E-08	3.24E-07
ENSG00000125630	POLR1B	-1.45E+00	6.22E-08	3.29E-07
ENSG00000180611	MB21D2	-1.37E+00	6.37E-08	3.37E-07
ENSG00000239672	NME1	-1.31E+00	6.92E-08	3.65E-07
ENSG00000112319	EYA4	-1.38E+00	7.16E-08	3.76E-07
ENSG00000133243	BTBD2	-1.07E+00	7.30E-08	3.84E-07
ENSG00000139263	LRIG3	-1.48E+00	7.41E-08	3.89E-07
ENSG00000130723	PRRC2B	-1.06E+00	7.49E-08	3.93E-07
ENSG00000101160	CTSZ	-1.93E+00	7.74E-08	4.05E-07
ENSG00000143341	HMCN1	-3.65E+00	8.26E-08	4.31E-07
ENSG00000077097	TOP2B	-1.02E+00	8.39E-08	4.38E-07
ENSG00000164587	RPS14	-1.18E+00	8.52E-08	4.44E-07

ENSG00000121210	TMEM131L	-1.48E+00	8.56E-08	4.46E-07
ENSG00000222041	CYTOR	-1.47E+00	8.77E-08	4.56E-07
ENSG00000139083	ETV6	-1.10E+00	8.89E-08	4.62E-07
ENSG00000173918	C1QTNF1	-1.50E+00	8.91E-08	4.63E-07
ENSG00000140263	SORD	-2.64E+00	9.37E-08	4.86E-07
ENSG00000129925	TMEM8A	-1.08E+00	9.47E-08	4.90E-07
ENSG00000149968	MMP3	-4.96E+00	9.92E-08	5.12E-07
ENSG00000160131	VMA21	-1.07E+00	1.03E-07	5.28E-07
ENSG00000244313	AC024293.1	-1.64E+00	1.04E-07	5.36E-07
ENSG00000231940	RPS7P3	-1.62E+00	1.05E-07	5.40E-07
ENSG00000148459	PDSS1	-1.83E+00	1.06E-07	5.47E-07
ENSG00000250321	AC079140.2	-1.39E+00	1.08E-07	5.55E-07
ENSG00000102271	KLHL4	-3.45E+00	1.12E-07	5.73E-07
ENSG00000124508	BTN2A2	-1.82E+00	1.15E-07	5.91E-07
ENSG00000131469	RPL27	-1.51E+00	1.16E-07	5.93E-07
ENSG00000144061	NPHP1	-1.90E+00	1.18E-07	6.05E-07
ENSG00000135686	KLHL36	-1.31E+00	1.22E-07	6.22E-07
ENSG00000164211	STARD4	-1.41E+00	1.29E-07	6.55E-07
ENSG00000166770	ZNF667-AS1	-1.72E+00	1.29E-07	6.55E-07
ENSG00000133315	MACROD1	-1.79E+00	1.33E-07	6.73E-07
ENSG00000124006	OBSL1	-1.40E+00	1.34E-07	6.78E-07
ENSG00000163006	CCDC138	-1.36E+00	1.35E-07	6.83E-07
ENSG00000205765	C5orf51	-1.28E+00	1.35E-07	6.85E-07
ENSG00000182195	LDOC1	-1.25E+00	1.41E-07	7.12E-07
ENSG00000167291	TBC1D16	-1.61E+00	1.43E-07	7.25E-07
ENSG00000167695	TLCD3A	-1.41E+00	1.44E-07	7.27E-07
ENSG00000148082	SHC3	-2.55E+00	1.44E-07	7.27E-07
ENSG00000104324	CPQ	-2.61E+00	1.48E-07	7.45E-07
ENSG00000139211	AMIGO2	-1.40E+00	1.54E-07	7.75E-07
ENSG00000106868	SUSD1	-1.81E+00	1.56E-07	7.85E-07
ENSG00000154917	RAB6B	-1.46E+00	1.57E-07	7.87E-07
ENSG00000142541	RPL13A	-1.17E+00	1.58E-07	7.96E-07
ENSG00000036549	AC118549.1	-1.10E+00	1.64E-07	8.23E-07
ENSG00000185404	SP140L	-1.11E+00	1.65E-07	8.26E-07
ENSG00000115970	THADA	-1.47E+00	1.68E-07	8.40E-07
ENSG00000125821	DTD1	-1.19E+00	1.69E-07	8.44E-07
ENSG00000154328	NEIL2	-2.45E+00	1.74E-07	8.68E-07
ENSG00000106701	FSD1L	-2.19E+00	1.80E-07	8.96E-07
ENSG00000089123	TASP1	-1.07E+00	1.80E-07	8.97E-07
ENSG00000110911	SLC11A2	-1.29E+00	1.84E-07	9.14E-07
ENSG00000165996	HACD1	-2.09E+00	1.86E-07	9.23E-07
ENSG00000213516	RBMXL1	-1.15E+00	1.88E-07	9.34E-07
ENSG00000139370	SLC15A4	-1.27E+00	2.05E-07	1.02E-06
ENSG00000083845	RPS5	-1.15E+00	2.06E-07	1.02E-06
ENSG00000067992	PDK3	-1.48E+00	2.09E-07	1.03E-06

ENSG00000137285	TUBB2B	-1.14E+00	2.10E-07	1.04E-06
ENSG00000276107	AC037198.1	-2.58E+00	2.10E-07	1.04E-06
ENSG00000165821	SALL2	-3.90E+00	2.14E-07	1.06E-06
ENSG00000071051	NCK2	-1.15E+00	2.20E-07	1.08E-06
ENSG00000173221	GLRX	-1.96E+00	2.20E-07	1.09E-06
ENSG00000123545	NDUFAF4	-1.42E+00	2.24E-07	1.11E-06
ENSG00000164164	OTUD4	-1.32E+00	2.48E-07	1.22E-06
ENSG00000164251	F2RL1	-1.67E+00	2.54E-07	1.25E-06
ENSG00000168398	BDKRB2	-1.21E+00	2.58E-07	1.27E-06
ENSG00000156735	BAG4	-1.06E+00	2.62E-07	1.29E-06
ENSG00000231500	RPS18	-1.19E+00	2.72E-07	1.33E-06
ENSG00000175414	ARL10	-2.29E+00	2.73E-07	1.34E-06
ENSG00000166261	ZNF202	-1.37E+00	2.88E-07	1.41E-06
ENSG00000153551	CMTM7	-1.18E+00	2.88E-07	1.41E-06
ENSG00000197958	RPL12	-1.19E+00	3.06E-07	1.49E-06
ENSG00000187837	HIST1H1C	-1.17E+00	3.06E-07	1.49E-06
ENSG00000167118	URM1	-1.27E+00	3.29E-07	1.60E-06
ENSG00000137970	RPL7P9	-1.03E+00	3.34E-07	1.62E-06
ENSG00000175970	UNC119B	-1.18E+00	3.47E-07	1.68E-06
ENSG00000144320	LNPB	-1.16E+00	3.57E-07	1.72E-06
ENSG00000206195	DUXAP8	-2.92E+00	3.62E-07	1.75E-06
ENSG00000152147	GEMIN6	-1.22E+00	3.76E-07	1.81E-06
ENSG00000100767	PAPLN	-2.10E+00	3.92E-07	1.89E-06
ENSG00000118263	KLF7	-1.55E+00	3.99E-07	1.92E-06
ENSG00000164182	NDUFAF2	-1.57E+00	4.24E-07	2.03E-06
ENSG00000156853	ZNF689	-1.19E+00	4.31E-07	2.06E-06
ENSG00000136425	CIB2	-1.31E+00	4.33E-07	2.07E-06
ENSG00000165259	HDX	-2.80E+00	4.41E-07	2.11E-06
ENSG00000120658	ENOX1	-2.27E+00	4.68E-07	2.23E-06
ENSG00000111906	HDDC2	-1.00E+00	4.72E-07	2.25E-06
ENSG00000080823	MOK	-1.50E+00	5.32E-07	2.52E-06
ENSG00000162244	RPL29	-1.37E+00	5.50E-07	2.60E-06
ENSG00000136273	HUS1	-1.55E+00	5.54E-07	2.62E-06
ENSG00000154734	ADAMTS1	-1.50E+00	5.69E-07	2.69E-06
ENSG00000120217	CD274	-2.54E+00	5.72E-07	2.70E-06
ENSG00000128602	SMO	-1.27E+00	5.72E-07	2.70E-06
ENSG00000119927	GPAM	-1.80E+00	5.75E-07	2.71E-06
ENSG00000064199	SPA17	-1.37E+00	5.93E-07	2.79E-06
ENSG00000103319	EEF2K	-1.19E+00	6.00E-07	2.82E-06
ENSG00000172469	MANEA	-1.45E+00	6.14E-07	2.88E-06
ENSG00000136247	ZDHHC4	-1.28E+00	6.16E-07	2.89E-06
ENSG00000111186	WNT5B	-1.89E+00	6.22E-07	2.92E-06
ENSG00000198837	DENND4B	-1.55E+00	6.24E-07	2.92E-06
ENSG00000130810	PPAN	-1.34E+00	6.25E-07	2.93E-06
ENSG00000181544	FANCB	-1.34E+00	6.31E-07	2.95E-06

ENSG00000158863	FAM160B2	-1.40E+00	6.42E-07	3.00E-06
ENSG00000006530	AGK	-1.04E+00	6.50E-07	3.04E-06
ENSG00000228594	FNDC10	-1.52E+00	6.67E-07	3.11E-06
ENSG00000114942	EEF1B2	-1.03E+00	6.69E-07	3.12E-06
ENSG00000124802	EEF1E1	-1.09E+00	6.72E-07	3.13E-06
ENSG00000249992	TMEM158	-1.23E+00	7.19E-07	3.34E-06
ENSG00000118503	TNFAIP3	-1.10E+00	7.23E-07	3.36E-06
ENSG00000074181	NOTCH3	-1.53E+00	7.45E-07	3.45E-06
ENSG00000148498	PARD3	-1.08E+00	7.52E-07	3.48E-06
ENSG00000189046	ALKBH2	-1.18E+00	7.70E-07	3.56E-06
ENSG00000244879	GABPB1-AS1	-1.32E+00	7.73E-07	3.57E-06
ENSG00000145681	HAPLN1	-1.78E+00	7.81E-07	3.60E-06
ENSG00000139289	PHLDA1	-1.58E+00	8.01E-07	3.69E-06
ENSG00000196465	MYL6B	-1.13E+00	8.09E-07	3.72E-06
ENSG00000235175	RPL26P37	-1.07E+00	8.10E-07	3.73E-06
ENSG00000171889	MIR31HG	-2.26E+00	8.32E-07	3.82E-06
ENSG00000203805	PLPP4	-3.19E+00	8.76E-07	4.01E-06
ENSG00000232445	AC006329.1	-1.72E+00	9.10E-07	4.16E-06
ENSG00000154237	LRRK1	-1.67E+00	1.01E-06	4.59E-06
ENSG00000129480	DTD2	-1.42E+00	1.01E-06	4.62E-06
ENSG00000085982	USP40	-4.35E+00	1.02E-06	4.65E-06
ENSG00000234664	HMG2P5	-2.04E+00	1.06E-06	4.82E-06
ENSG00000152484	USP12	-1.19E+00	1.09E-06	4.95E-06
ENSG00000253414	AC124067.2	-2.46E+00	1.09E-06	4.96E-06
ENSG00000006042	TMEM98	-1.12E+00	1.10E-06	4.97E-06
ENSG00000072401	UBE2D1	-1.23E+00	1.12E-06	5.05E-06
ENSG00000196456	ZNF775	-2.07E+00	1.16E-06	5.24E-06
ENSG00000127920	GNG11	-2.33E+00	1.17E-06	5.30E-06
ENSG00000164761	TNFRSF11B	-1.80E+00	1.20E-06	5.41E-06
ENSG00000165730	STOX1	-2.21E+00	1.21E-06	5.46E-06
ENSG00000113838	TBCCD1	-3.02E+00	1.25E-06	5.62E-06
ENSG00000198131	ZNF544	-1.12E+00	1.31E-06	5.90E-06
ENSG00000170946	DNAJC24	-1.19E+00	1.32E-06	5.92E-06
ENSG00000186871	ERCC6L	-1.19E+00	1.34E-06	6.04E-06
ENSG00000136319	TTC5	-1.19E+00	1.41E-06	6.31E-06
ENSG00000181924	COA4	-1.29E+00	1.41E-06	6.32E-06
ENSG00000038002	AGA	-1.43E+00	1.42E-06	6.36E-06
ENSG00000164687	FABP5	-2.29E+00	1.45E-06	6.49E-06
ENSG00000138286	FAM149B1	-4.03E+00	1.46E-06	6.51E-06
ENSG00000176371	ZSCAN2	-2.28E+00	1.50E-06	6.68E-06
ENSG00000140987	ZSCAN32	-1.00E+00	1.50E-06	6.68E-06
ENSG00000143363	PRUNE1	-1.61E+00	1.56E-06	6.95E-06
ENSG00000064042	LIMCH1	-1.08E+00	1.56E-06	6.96E-06
ENSG00000122952	ZWINT	-1.09E+00	1.59E-06	7.07E-06
ENSG00000281398	SNHG4	-2.51E+00	1.61E-06	7.15E-06

ENSG00000121481	RNF2	-1.47E+00	1.65E-06	7.30E-06
ENSG00000073670	ADAM11	-1.58E+00	1.67E-06	7.37E-06
ENSG00000136205	TNS3	-1.56E+00	1.73E-06	7.65E-06
ENSG00000176720	BOK	-1.09E+00	1.78E-06	7.84E-06
ENSG00000276345	AC004556.3	-1.70E+00	1.80E-06	7.91E-06
ENSG00000132768	DPH2	-1.71E+00	1.92E-06	8.42E-06
ENSG00000164338	UTP15	-1.01E+00	1.97E-06	8.66E-06
ENSG00000198918	RPL39	-1.56E+00	2.00E-06	8.75E-06
ENSG00000145375	SPATA5	-1.34E+00	2.05E-06	8.97E-06
ENSG00000132205	EMILIN2	-1.25E+00	2.10E-06	9.20E-06
ENSG00000122376	SHLD2	-1.34E+00	2.13E-06	9.30E-06
ENSG00000152465	NMT2	-1.03E+00	2.17E-06	9.48E-06
ENSG00000027847	B4GALT7	-1.11E+00	2.18E-06	9.53E-06
ENSG00000118564	FBXL5	-1.06E+00	2.20E-06	9.58E-06
ENSG00000263266	RPS7P1	-1.19E+00	2.28E-06	9.92E-06
ENSG00000167637	ZNF283	-1.53E+00	2.38E-06	1.03E-05
ENSG00000138382	METTL5	-1.04E+00	2.48E-06	1.08E-05
ENSG00000147130	ZMYM3	-1.31E+00	2.49E-06	1.08E-05
ENSG00000184602	SNN	-1.11E+00	2.51E-06	1.09E-05
ENSG00000172123	SLFN12	-1.40E+00	2.52E-06	1.09E-05
ENSG00000134259	NGF	-2.14E+00	2.54E-06	1.10E-05
ENSG00000104213	PDGFRL	-3.63E+00	2.57E-06	1.11E-05
ENSG00000229117	RPL41	-1.12E+00	2.71E-06	1.17E-05
ENSG00000134668	SPOCD1	-1.85E+00	2.97E-06	1.27E-05
ENSG00000146425	DYNLT1	-1.02E+00	3.04E-06	1.30E-05
ENSG00000205060	SLC35B4	-1.26E+00	3.10E-06	1.33E-05
ENSG00000055147	FAM114A2	-1.40E+00	3.17E-06	1.36E-05
ENSG00000198858	R3HDM4	-1.53E+00	3.18E-06	1.36E-05
ENSG00000229659	RPL26P6	-1.09E+00	3.21E-06	1.37E-05
ENSG00000263001	GTF2I	-1.08E+00	3.29E-06	1.41E-05
ENSG00000185201	IFITM2	-1.06E+00	3.30E-06	1.41E-05
ENSG00000172379	ARNT2	-1.17E+00	3.31E-06	1.41E-05
ENSG00000170293	CMTM8	-2.54E+00	3.32E-06	1.42E-05
ENSG00000117069	ST6GALNAC5	-4.00E+00	3.35E-06	1.43E-05
ENSG00000124614	RPS10	-1.34E+00	3.44E-06	1.47E-05
ENSG00000049192	ADAMTS6	-1.09E+00	3.47E-06	1.48E-05
ENSG00000197756	RPL37A	-1.08E+00	3.48E-06	1.48E-05
ENSG00000257727	CNPY2	-1.05E+00	3.48E-06	1.48E-05
ENSG00000164603	BMT2	-1.39E+00	3.56E-06	1.51E-05
ENSG00000236609	ZNF853	-2.55E+00	3.60E-06	1.53E-05
ENSG00000152253	SPC25	-1.21E+00	3.70E-06	1.57E-05
ENSG00000232949	AC002480.2	-3.76E+00	3.70E-06	1.57E-05
ENSG00000162595	DIRAS3	-2.94E+00	3.95E-06	1.67E-05
ENSG00000240602	AADACP1	-2.00E+00	3.98E-06	1.68E-05
ENSG00000152078	TLCD4	-2.65E+00	3.99E-06	1.68E-05

ENSG00000187049	TMEM216	-1.41E+00	4.04E-06	1.70E-05
ENSG00000163545	NUAK2	-1.42E+00	4.07E-06	1.72E-05
ENSG00000236453	AC003092.1	-2.49E+00	4.07E-06	1.72E-05
ENSG00000149541	B3GAT3	-1.04E+00	4.21E-06	1.77E-05
ENSG00000132563	REEP2	-1.69E+00	4.23E-06	1.78E-05
ENSG00000146540	C7orf50	-1.03E+00	4.23E-06	1.78E-05
ENSG00000241127	YAE1	-1.32E+00	4.24E-06	1.78E-05
ENSG00000239559	RPL37P2	-1.38E+00	4.34E-06	1.82E-05
ENSG00000163013	FBXO41	-2.99E+00	4.41E-06	1.85E-05
ENSG00000148288	GBGT1	-3.70E+00	4.47E-06	1.87E-05
ENSG00000188321	ZNF559	-1.71E+00	4.65E-06	1.94E-05
ENSG00000262919	CCNQ	-1.26E+00	4.77E-06	1.99E-05
ENSG00000162430	SELENON	-1.20E+00	4.87E-06	2.03E-05
ENSG00000272269	AL138724.1	-1.71E+00	4.90E-06	2.04E-05
ENSG00000162490	DRAXIN	-1.50E+00	4.94E-06	2.06E-05
ENSG00000162650	ATXN7L2	-1.53E+00	5.00E-06	2.08E-05
ENSG00000151388	ADAMTS12	-1.08E+00	5.10E-06	2.12E-05
ENSG00000126088	UROD	-1.10E+00	5.17E-06	2.14E-05
ENSG00000096654	ZNF184	-1.43E+00	5.38E-06	2.23E-05
ENSG00000143801	PSEN2	-2.35E+00	5.56E-06	2.30E-05
ENSG00000174236	REP15	-2.87E+00	5.64E-06	2.33E-05
ENSG00000176155	CCDC57	-1.23E+00	5.70E-06	2.35E-05
ENSG00000071082	RPL31	-1.05E+00	6.14E-06	2.53E-05
ENSG00000163257	DCAF16	-1.13E+00	6.29E-06	2.59E-05
ENSG00000164291	ARSK	-1.47E+00	6.55E-06	2.69E-05
ENSG00000164849	GPR146	-2.62E+00	6.63E-06	2.72E-05
ENSG00000188352	FOCAD	-1.50E+00	6.88E-06	2.82E-05
ENSG00000213654	GPSM3	-3.30E+00	7.04E-06	2.88E-05
ENSG00000247095	MIR210HG	-3.63E+00	7.09E-06	2.90E-05
ENSG00000267041	ZNF850	-1.81E+00	7.10E-06	2.90E-05
ENSG00000169084	DHR SX	-1.08E+00	7.42E-06	3.02E-05
ENSG00000165060	FXN	-1.42E+00	7.59E-06	3.09E-05
ENSG00000151917	BEND6	-2.16E+00	7.62E-06	3.10E-05
ENSG00000218175	AC016739.1	-2.07E+00	7.64E-06	3.11E-05
ENSG00000005100	DHX33	-1.03E+00	7.69E-06	3.13E-05
ENSG00000212802	RPL15P3	-1.41E+00	7.69E-06	3.13E-05
ENSG00000083807	SLC27A5	-2.43E+00	7.74E-06	3.15E-05
ENSG00000184260	HIST2H2AC	-1.64E+00	7.83E-06	3.18E-05
ENSG00000166228	PCBD1	-1.23E+00	7.92E-06	3.22E-05
ENSG00000185630	PBX1	-1.26E+00	7.93E-06	3.22E-05
ENSG00000244398	AC116533.1	-1.08E+00	8.07E-06	3.27E-05
ENSG00000157214	STEAP2	-3.61E+00	8.47E-06	3.42E-05
ENSG00000172716	SLFN11	-1.51E+00	8.55E-06	3.45E-05
ENSG00000145592	RPL37	-1.33E+00	8.70E-06	3.51E-05
ENSG00000182552	RWDD4	-1.05E+00	8.82E-06	3.56E-05

ENSG00000232677	LINC00665	-1.71E+00	8.99E-06	3.62E-05
ENSG00000233532	LINC00460	-3.98E+00	9.09E-06	3.66E-05
ENSG00000186416	NKRF	-1.04E+00	9.27E-06	3.72E-05
ENSG00000153404	PLEKHG4B	-2.33E+00	9.28E-06	3.72E-05
ENSG00000133740	E2F5	-2.68E+00	9.33E-06	3.74E-05
ENSG00000182154	MRPL41	-1.55E+00	9.61E-06	3.85E-05
ENSG00000198467	TPM2	-1.04E+00	9.70E-06	3.88E-05
ENSG00000117152	RGS4	-1.75E+00	9.96E-06	3.98E-05
ENSG00000164066	INTU	-1.34E+00	1.02E-05	4.09E-05
ENSG00000018699	TTC27	-1.12E+00	1.08E-05	4.30E-05
ENSG00000104518	GSDMD	-1.00E+00	1.09E-05	4.34E-05
ENSG00000218426	AL590867.2	-1.50E+00	1.11E-05	4.43E-05
ENSG00000125459	MSTO1	-3.49E+00	1.13E-05	4.51E-05
ENSG00000106683	LIMK1	-1.17E+00	1.15E-05	4.58E-05
ENSG00000139637	C12orf10	-1.12E+00	1.16E-05	4.59E-05
ENSG00000100626	GALNT16	-1.92E+00	1.21E-05	4.77E-05
ENSG00000198121	LPAR1	-1.37E+00	1.24E-05	4.89E-05
ENSG00000008394	MGST1	-1.09E+00	1.24E-05	4.91E-05
ENSG00000215417	MIR17HG	-3.42E+00	1.26E-05	4.96E-05
ENSG00000167272	POP5	-1.26E+00	1.28E-05	5.04E-05
ENSG00000125246	CLYBL	-4.36E+00	1.28E-05	5.04E-05
ENSG00000226396	AL031727.1	-1.02E+00	1.28E-05	5.04E-05
ENSG00000143545	RAB13	-1.04E+00	1.31E-05	5.15E-05
ENSG00000165490	DDIAS	-1.12E+00	1.31E-05	5.15E-05
ENSG00000163453	IGFBP7	-1.64E+00	1.34E-05	5.27E-05
ENSG00000089775	ZBTB25	-1.33E+00	1.43E-05	5.57E-05
ENSG00000154511	DIPK1A	-1.33E+00	1.54E-05	5.97E-05
ENSG00000143498	TAF1A	-1.12E+00	1.54E-05	5.99E-05
ENSG00000213315	AL122020.1	-1.31E+00	1.56E-05	6.05E-05
ENSG00000196284	SUPT3H	-1.74E+00	1.59E-05	6.17E-05
ENSG00000174748	RPL15	-1.05E+00	1.59E-05	6.18E-05
ENSG00000183828	NUDT14	-1.95E+00	1.62E-05	6.28E-05
ENSG00000102743	SLC25A15	-1.63E+00	1.67E-05	6.45E-05
ENSG00000184785	SMIM10	-3.22E+00	1.68E-05	6.48E-05
ENSG00000112159	MDN1	-1.18E+00	1.69E-05	6.54E-05
ENSG00000168758	SEMA4C	-1.15E+00	1.74E-05	6.70E-05
ENSG00000140600	SH3GL3	-3.14E+00	1.74E-05	6.72E-05
ENSG00000233117	LINC00702	-2.87E+00	1.74E-05	6.72E-05
ENSG00000188130	MAPK12	-1.36E+00	1.77E-05	6.82E-05
ENSG00000038295	TLL1	-2.65E+00	1.78E-05	6.83E-05
ENSG00000142534	RPS11	-1.25E+00	1.84E-05	7.08E-05
ENSG00000117153	KLHL12	-1.13E+00	1.85E-05	7.11E-05
ENSG00000278619	MRM1	-1.23E+00	1.87E-05	7.17E-05
ENSG00000249867	LINC02742	-4.79E+00	1.92E-05	7.37E-05
ENSG00000171051	FPR1	-4.66E+00	1.93E-05	7.38E-05

ENSG00000228929	RPS13P2	-1.43E+00	1.94E-05	7.44E-05
ENSG00000184384	MAML2	-2.36E+00	1.95E-05	7.47E-05
ENSG00000165617	DACT1	-1.64E+00	1.96E-05	7.48E-05
ENSG00000271590	AC108463.3	-2.11E+00	1.96E-05	7.49E-05
ENSG00000124813	RUNX2	-1.28E+00	1.97E-05	7.54E-05
ENSG00000182774	RPS17	-1.90E+00	1.98E-05	7.56E-05
ENSG00000181192	DHTKD1	-1.14E+00	1.99E-05	7.59E-05
ENSG00000089091	DZANK1	-1.15E+00	2.00E-05	7.62E-05
ENSG00000197056	ZMYM1	-1.63E+00	2.04E-05	7.78E-05
ENSG00000105866	SP4	-1.05E+00	2.07E-05	7.86E-05
ENSG00000137033	IL33	-4.67E+00	2.09E-05	7.95E-05
ENSG00000277462	ZNF670	-1.67E+00	2.10E-05	7.98E-05
ENSG00000196611	MMP1	-3.82E+00	2.12E-05	8.06E-05
ENSG00000079150	FKBP7	-2.23E+00	2.17E-05	8.24E-05
ENSG00000183605	SFXN4	-1.47E+00	2.21E-05	8.36E-05
ENSG00000133704	IPO8	-1.16E+00	2.21E-05	8.38E-05
ENSG00000163584	RPL22L1	-1.55E+00	2.21E-05	8.38E-05
ENSG00000126243	LRFN3	-2.80E+00	2.22E-05	8.39E-05
ENSG00000153823	PID1	-1.59E+00	2.29E-05	8.65E-05
ENSG00000160993	ALKBH4	-1.29E+00	2.32E-05	8.74E-05
ENSG00000236552	RPL13AP5	-1.59E+00	2.34E-05	8.82E-05
ENSG00000189007	ADAT2	-1.86E+00	2.42E-05	9.10E-05
ENSG00000172534	HCFC1	-1.00E+00	2.43E-05	9.14E-05
ENSG00000148680	HTR7	-2.00E+00	2.47E-05	9.29E-05
ENSG00000110925	CSRNP2	-1.07E+00	2.49E-05	9.34E-05
ENSG00000174547	MRPL11	-1.12E+00	2.49E-05	9.35E-05
ENSG00000138018	SELENOI	-1.02E+00	2.55E-05	9.55E-05
ENSG00000183665	TRMT12	-1.01E+00	2.61E-05	9.77E-05
ENSG00000149289	ZC3H12C	-1.17E+00	2.65E-05	9.93E-05
ENSG00000143469	SYT14	-1.07E+00	2.68E-05	1.00E-04
ENSG00000077713	SLC25A43	-2.28E+00	2.69E-05	1.00E-04
ENSG00000244026	FAM86DP	-1.34E+00	2.71E-05	1.01E-04
ENSG00000196683	TOMM7	-1.11E+00	2.75E-05	1.03E-04
ENSG00000102359	SRPX2	-2.21E+00	2.79E-05	1.04E-04
ENSG00000157870	PRXL2B	-1.27E+00	2.82E-05	1.05E-04
ENSG00000138085	ATRAID	-1.15E+00	2.90E-05	1.08E-04
ENSG00000106785	TRIM14	-1.02E+00	2.93E-05	1.09E-04
ENSG00000100216	TOMM22	-1.03E+00	2.94E-05	1.09E-04
ENSG00000137726	FXYD6	-1.79E+00	2.94E-05	1.09E-04
ENSG00000132429	POPDC3	-1.14E+00	2.95E-05	1.09E-04
ENSG00000167994	RAB3IL1	-1.74E+00	2.98E-05	1.11E-04
ENSG00000185730	ZNF696	-1.72E+00	3.00E-05	1.11E-04
ENSG00000242299	AC073861.1	-1.05E+00	3.00E-05	1.11E-04
ENSG00000174606	ANGEL2	-1.35E+00	3.04E-05	1.13E-04
ENSG00000102178	UBL4A	-1.04E+00	3.06E-05	1.13E-04



ENSG00000226674	TEX41	-4.16E+00	3.07E-05	1.14E-04
ENSG00000143891	GALM	-1.27E+00	3.07E-05	1.14E-04
ENSG00000186625	KATNA1	-1.23E+00	3.20E-05	1.18E-04
ENSG00000127124	HIVEP3	-1.16E+00	3.22E-05	1.18E-04
ENSG00000172889	EGFL7	-1.12E+00	3.23E-05	1.19E-04
ENSG00000113966	ARL6	-1.28E+00	3.28E-05	1.21E-04
ENSG00000118894	EEF2KMT	-1.50E+00	3.37E-05	1.24E-04
ENSG00000165288	BRWD3	-1.23E+00	3.38E-05	1.24E-04
ENSG00000186020	ZNF529	-1.48E+00	3.41E-05	1.25E-04
ENSG00000124279	FASTKD3	-1.27E+00	3.43E-05	1.26E-04
ENSG00000067445	TRO	-2.49E+00	3.49E-05	1.28E-04
ENSG00000163482	STK36	-1.05E+00	3.49E-05	1.28E-04
ENSG00000023171	GRAMD1B	-1.88E+00	3.52E-05	1.29E-04
ENSG00000121964	GTDC1	-1.46E+00	3.54E-05	1.29E-04
ENSG00000204301	NOTCH4	-2.39E+00	3.56E-05	1.30E-04
ENSG00000081019	RSBN1	-1.01E+00	3.74E-05	1.36E-04
ENSG00000265808	SEC22B	-1.20E+00	3.74E-05	1.36E-04
ENSG00000165169	DYNLT3	-1.11E+00	3.75E-05	1.37E-04
ENSG00000118507	AKAP7	-1.68E+00	3.82E-05	1.39E-04
ENSG00000145912	NHP2	-1.20E+00	3.85E-05	1.40E-04
ENSG00000144713	RPL32	-1.45E+00	3.89E-05	1.41E-04
ENSG00000196368	NUDT11	-1.78E+00	3.95E-05	1.43E-04
ENSG00000137218	FRS3	-3.60E+00	3.98E-05	1.45E-04
ENSG00000235559	NOP56P1	-1.22E+00	4.05E-05	1.47E-04
ENSG00000151474	FRMD4A	-1.03E+00	4.16E-05	1.51E-04
ENSG00000163682	RPL9	-1.03E+00	4.21E-05	1.52E-04
ENSG00000138002	IFT172	-2.30E+00	4.30E-05	1.55E-04
ENSG00000214026	MRPL23	-1.31E+00	4.43E-05	1.60E-04
ENSG00000244306	DUXAP10	-3.49E+00	4.77E-05	1.71E-04
ENSG00000134461	ANKRD16	-2.02E+00	4.78E-05	1.72E-04
ENSG00000184117	NIPSNAP1	-1.23E+00	4.79E-05	1.72E-04
ENSG00000164953	TMEM67	-1.05E+00	4.90E-05	1.76E-04
ENSG00000146267	FAXC	-1.80E+00	4.91E-05	1.76E-04
ENSG00000145703	IQGAP2	-4.00E+00	5.19E-05	1.85E-04
ENSG00000184005	ST6GALNAC3	-2.80E+00	5.37E-05	1.91E-04
ENSG00000136732	GYPC	-1.57E+00	5.38E-05	1.91E-04
ENSG00000276368	HIST1H2AJ	-3.09E+00	5.46E-05	1.94E-04
ENSG00000104290	FZD3	-1.05E+00	5.49E-05	1.95E-04
ENSG00000146858	ZC3HAV1L	-3.51E+00	5.76E-05	2.04E-04
ENSG00000186352	ANKRD37	-1.55E+00	6.03E-05	2.13E-04
ENSG00000065802	ASB1	-1.01E+00	6.04E-05	2.13E-04
ENSG00000197208	SLC22A4	-1.17E+00	6.06E-05	2.14E-04
ENSG00000149150	SLC43A1	-1.72E+00	6.19E-05	2.18E-04
ENSG00000257698	GIHCG	-1.38E+00	6.37E-05	2.24E-04
ENSG00000110536	PTPMT1	-1.75E+00	6.43E-05	2.26E-04

ENSG00000213280	AC090114.1	-1.30E+00	6.49E-05	2.28E-04
ENSG00000119408	NEK6	-1.28E+00	6.55E-05	2.30E-04
ENSG00000173281	PPP1R3B	-2.20E+00	6.65E-05	2.33E-04
ENSG00000166886	NAB2	-1.09E+00	6.82E-05	2.38E-04
ENSG00000148297	MED22	-1.08E+00	6.92E-05	2.42E-04
ENSG00000172954	LCLAT1	-1.14E+00	7.01E-05	2.45E-04
ENSG00000166920	C15orf48	-3.34E+00	7.09E-05	2.47E-04
ENSG00000223485	LINC01615	-1.96E+00	7.31E-05	2.55E-04
ENSG00000214293	APTR	-1.25E+00	7.40E-05	2.58E-04
ENSG00000226928	RPS14P4	-1.86E+00	7.73E-05	2.68E-04
ENSG00000275464	FP565260.1	-1.61E+00	8.07E-05	2.79E-04
ENSG00000266709	AC005224.3	-1.92E+00	8.15E-05	2.82E-04
ENSG00000227372	TP73-AS1	-1.34E+00	8.29E-05	2.87E-04
ENSG00000225439	BOLA3-AS1	-1.98E+00	8.47E-05	2.92E-04
ENSG00000101132	PFDN4	-1.28E+00	8.77E-05	3.02E-04
ENSG00000164758	MED30	-1.09E+00	8.79E-05	3.03E-04
ENSG00000186469	GNG2	-2.37E+00	9.25E-05	3.18E-04
ENSG00000153814	JAZF1	-1.39E+00	9.41E-05	3.23E-04
ENSG00000141391	PRELID3A	-2.16E+00	9.57E-05	3.28E-04
ENSG00000141258	SGSM2	-1.18E+00	9.62E-05	3.29E-04
ENSG00000169855	ROBO1	-1.49E+00	9.96E-05	3.40E-04
ENSG00000105889	STEAP1B	-3.46E+00	1.02E-04	3.49E-04
ENSG00000144355	DLX1	-1.13E+00	1.03E-04	3.51E-04
ENSG00000132953	XPO4	-1.16E+00	1.03E-04	3.51E-04
ENSG00000132330	SCLY	-1.74E+00	1.05E-04	3.57E-04
ENSG00000100116	GCAT	-1.12E+00	1.07E-04	3.62E-04
ENSG00000042088	TDP1	-1.14E+00	1.08E-04	3.67E-04
ENSG00000197020	ZNF100	-1.00E+00	1.09E-04	3.71E-04
ENSG00000166441	RPL27A	-1.06E+00	1.10E-04	3.74E-04
ENSG00000204291	COL15A1	-1.48E+00	1.13E-04	3.82E-04
ENSG00000169067	ACTBL2	-1.65E+00	1.21E-04	4.07E-04
ENSG00000174705	SH3PXD2B	-1.36E+00	1.22E-04	4.10E-04
ENSG00000162998	FRZB	-1.68E+00	1.23E-04	4.14E-04
ENSG00000198298	ZNF485	-2.89E+00	1.23E-04	4.14E-04
ENSG00000197951	ZNF71	-1.26E+00	1.24E-04	4.17E-04
ENSG00000137463	MGARP	-1.60E+00	1.28E-04	4.30E-04
ENSG00000149483	TMEM138	-1.05E+00	1.29E-04	4.32E-04
ENSG00000205213	LGR4	-2.15E+00	1.29E-04	4.34E-04
ENSG00000090971	NAT14	-1.00E+00	1.32E-04	4.42E-04
ENSG00000198931	APRT	-1.39E+00	1.34E-04	4.47E-04
ENSG00000108700	CCL8	-3.96E+00	1.36E-04	4.54E-04
ENSG00000198894	CIPC	-1.07E+00	1.45E-04	4.83E-04
ENSG00000119705	SLIRP	-1.23E+00	1.46E-04	4.86E-04
ENSG00000244165	P2RY11	-1.02E+00	1.49E-04	4.96E-04
ENSG00000181751	C5orf30	-1.49E+00	1.49E-04	4.96E-04

ENSG00000120129	DUSP1	-1.11E+00	1.51E-04	5.00E-04
ENSG00000147862	NFIB	-1.03E+00	1.52E-04	5.03E-04
ENSG00000166831	RBPMS2	-1.12E+00	1.53E-04	5.07E-04
ENSG00000240771	ARHGEF25	-1.75E+00	1.53E-04	5.07E-04
ENSG00000006015	REX1BD	-1.24E+00	1.55E-04	5.13E-04
ENSG00000173272	MZT2A	-1.14E+00	1.56E-04	5.15E-04
ENSG00000240445	FOXO3B	-1.52E+00	1.58E-04	5.22E-04
ENSG00000226419	SLC16A1-AS1	-1.15E+00	1.59E-04	5.24E-04
ENSG00000186666	BCDIN3D	-1.57E+00	1.59E-04	5.25E-04
ENSG00000147138	GPR174	-1.91E+01	1.61E-04	5.32E-04
ENSG00000101670	LIPG	-2.98E+00	1.65E-04	5.44E-04
ENSG00000253958	CLDN23	-2.47E+00	1.68E-04	5.51E-04
ENSG00000163738	MTHFD2L	-1.06E+00	1.70E-04	5.56E-04
ENSG00000170049	KCNAB3	-2.01E+00	1.74E-04	5.70E-04
ENSG00000175054	ATR	-1.20E+00	1.78E-04	5.82E-04
ENSG00000116791	CRYZ	-1.25E+00	1.79E-04	5.84E-04
ENSG00000225159	NPM1P39	-2.26E+00	1.86E-04	6.07E-04
ENSG00000198455	ZXDB	-1.69E+00	2.08E-04	6.74E-04
ENSG00000163170	BOLA3	-1.10E+00	2.12E-04	6.86E-04
ENSG00000272841	AL139393.3	-1.01E+00	2.14E-04	6.91E-04
ENSG00000260862	AC099506.1	-3.65E+00	2.17E-04	6.99E-04
ENSG00000182463	TSHZ2	-2.82E+00	2.20E-04	7.07E-04
ENSG00000197358	BNIP3P1	-2.57E+00	2.20E-04	7.10E-04
ENSG00000115919	KYNU	-1.96E+00	2.31E-04	7.42E-04
ENSG00000079335	CDC14A	-1.81E+00	2.41E-04	7.71E-04
ENSG00000143494	VASH2	-1.89E+00	2.41E-04	7.71E-04
ENSG00000198874	TYW1	-1.05E+00	2.53E-04	8.07E-04
ENSG00000163050	COQ8A	-1.01E+00	2.60E-04	8.29E-04
ENSG00000145414	NAF1	-1.06E+00	2.61E-04	8.30E-04
ENSG00000136840	ST6GALNAC4	-1.30E+00	2.63E-04	8.39E-04
ENSG00000251602	AL928654.1	-2.38E+00	2.65E-04	8.45E-04
ENSG00000169621	APLF	-1.64E+00	2.85E-04	9.02E-04
ENSG00000167987	VPS37C	-1.03E+00	2.87E-04	9.08E-04
ENSG00000138613	APH1B	-1.68E+00	2.89E-04	9.15E-04
ENSG00000158402	CDC25C	-1.05E+00	2.89E-04	9.16E-04
ENSG00000156482	RPL30	-1.08E+00	3.06E-04	9.65E-04
ENSG00000175768	TOMM5	-1.40E+00	3.10E-04	9.74E-04
ENSG00000148803	FUOM	-1.79E+00	3.13E-04	9.84E-04
ENSG00000128011	LRFN1	-2.61E+00	3.13E-04	9.84E-04
ENSG00000279739	AC011369.2	-4.01E+00	3.23E-04	1.01E-03
ENSG00000167397	VKORC1	-1.16E+00	3.25E-04	1.02E-03
ENSG00000119574	ZBTB45	-1.02E+00	3.26E-04	1.02E-03
ENSG00000241852	C8orf58	-1.24E+00	3.28E-04	1.03E-03
ENSG00000127995	CASD1	-1.19E+00	3.42E-04	1.07E-03
ENSG00000108984	MAP2K6	-3.57E+00	3.42E-04	1.07E-03

ENSG00000131778	CHD1L	-3.74E+00	3.45E-04	1.08E-03
ENSG00000143977	SNRPG	-1.25E+00	3.48E-04	1.08E-03
ENSG00000087903	RFX2	-1.38E+00	3.54E-04	1.10E-03
ENSG00000173077	DEC1	-2.25E+00	3.57E-04	1.11E-03
ENSG00000160584	SIK3	-1.10E+00	3.62E-04	1.13E-03
ENSG00000185483	ROR1	-1.26E+00	3.63E-04	1.13E-03
ENSG00000133106	EPST11	-1.45E+00	3.63E-04	1.13E-03
ENSG00000163637	PRICKLE2	-1.50E+00	3.66E-04	1.14E-03
ENSG00000133640	LRRIQ1	-1.83E+00	3.76E-04	1.17E-03
ENSG00000088881	EBF4	-2.15E+00	3.81E-04	1.18E-03
ENSG00000107562	CXCL12	-2.09E+00	3.84E-04	1.19E-03
ENSG00000259953	AL138756.1	-1.98E+00	3.95E-04	1.22E-03
ENSG00000188677	PARVB	-1.10E+00	3.97E-04	1.23E-03
ENSG00000136149	RPL13AP25	-1.07E+00	4.04E-04	1.24E-03
ENSG00000180044	C3orf80	-1.85E+00	4.04E-04	1.25E-03
ENSG00000197728	RPS26	-1.05E+00	4.06E-04	1.25E-03
ENSG00000149948	HMGA2	-1.26E+00	4.07E-04	1.25E-03
ENSG00000110395	CBL	-1.11E+00	4.13E-04	1.27E-03
ENSG00000185432	METTL7A	-3.40E+00	4.15E-04	1.28E-03
ENSG00000074935	TUBE1	-1.20E+00	4.17E-04	1.28E-03
ENSG00000143224	PPOX	-1.09E+00	4.20E-04	1.29E-03
ENSG00000136783	NIPSNAP3A	-1.12E+00	4.27E-04	1.31E-03
ENSG00000112357	PEX7	-1.11E+00	4.32E-04	1.32E-03
ENSG00000171451	DSEL	-1.14E+00	4.39E-04	1.34E-03
ENSG00000135953	MFSD9	-1.18E+00	4.56E-04	1.39E-03
ENSG00000261732	AL031708.1	-3.04E+00	4.58E-04	1.40E-03
ENSG00000279483	AC090498.1	-1.76E+00	4.64E-04	1.42E-03
ENSG00000107882	SUFU	-1.24E+00	4.76E-04	1.45E-03
ENSG00000243667	WDR92	-1.45E+00	4.76E-04	1.45E-03
ENSG00000162722	TRIM58	-1.16E+00	4.79E-04	1.46E-03
ENSG00000119699	TGFB3	-1.04E+00	4.89E-04	1.48E-03
ENSG00000139998	RAB15	-1.33E+00	4.90E-04	1.49E-03
ENSG00000230615	AL139220.2	-2.41E+00	4.94E-04	1.50E-03
ENSG00000083535	PIBF1	-1.17E+00	5.00E-04	1.51E-03
ENSG00000180822	PSMG4	-1.31E+00	5.11E-04	1.54E-03
ENSG00000184178	SCFD2	-1.65E+00	5.11E-04	1.54E-03
ENSG00000088727	KIF9	-1.12E+00	5.16E-04	1.56E-03
ENSG00000213741	RPS29	-1.43E+00	5.32E-04	1.60E-03
ENSG00000188060	RAB42	-3.20E+00	5.41E-04	1.62E-03
ENSG00000137818	RPLP1	-1.37E+00	5.44E-04	1.63E-03
ENSG00000175711	B3GNTL1	-1.84E+00	5.45E-04	1.64E-03
ENSG00000185305	ARL15	-1.26E+00	5.59E-04	1.68E-03
ENSG00000100344	PNPLA3	-2.39E+00	5.70E-04	1.70E-03
ENSG00000241399	CD302	-1.77E+00	5.96E-04	1.78E-03
ENSG00000175395	ZNF25	-2.37E+00	6.00E-04	1.79E-03

ENSG00000169087	HSPBAP1	-1.11E+00	6.22E-04	1.85E-03
ENSG00000019549	SNAI2	-1.11E+00	6.25E-04	1.86E-03
ENSG00000213347	MXD3	-1.05E+00	6.28E-04	1.86E-03
ENSG00000047230	CTPS2	-1.06E+00	6.31E-04	1.87E-03
ENSG00000181666	ZNF875	-1.02E+00	6.53E-04	1.93E-03
ENSG00000179776	CDH5	-3.49E+00	6.62E-04	1.96E-03
ENSG00000185760	KCNQ5	-1.78E+00	6.81E-04	2.01E-03
ENSG00000186314	PRELID2	-1.26E+00	6.82E-04	2.01E-03
ENSG00000137944	KYAT3	-1.19E+00	6.89E-04	2.03E-03
ENSG00000125965	GDF5	-2.37E+00	7.03E-04	2.07E-03
ENSG00000186063	AIDA	-1.22E+00	7.16E-04	2.10E-03
ENSG00000242498	ARPIN	-2.01E+00	7.25E-04	2.13E-03
ENSG00000227992	AC108463.1	-2.06E+00	7.31E-04	2.14E-03
ENSG00000183474	GTF2H2C	-2.06E+00	7.44E-04	2.18E-03
ENSG00000168890	TMEM150A	-1.98E+00	7.47E-04	2.18E-03
ENSG00000234692	AL355601.1	-3.79E+00	7.60E-04	2.22E-03
ENSG00000151468	CCDC3	-1.40E+00	8.01E-04	2.33E-03
ENSG00000132749	TESMIN	-3.47E+00	8.07E-04	2.34E-03
ENSG00000227906	SNAP25-AS1	-4.00E+00	8.18E-04	2.37E-03
ENSG00000140379	BCL2A1	-3.42E+00	8.27E-04	2.40E-03
ENSG00000204131	NHSL2	-1.68E+00	8.38E-04	2.43E-03
ENSG00000213058	AL365357.1	-1.01E+00	8.45E-04	2.44E-03
ENSG00000198189	HSD17B11	-1.16E+00	8.46E-04	2.45E-03
ENSG00000279369	AC046185.3	-2.11E+00	8.52E-04	2.46E-03
ENSG00000164220	F2RL2	-2.48E+00	8.53E-04	2.46E-03
ENSG00000169193	CCDC126	-1.54E+00	8.57E-04	2.47E-03
ENSG00000198556	ZNF789	-1.49E+00	8.74E-04	2.52E-03
ENSG00000198182	ZNF607	-1.31E+00	8.78E-04	2.53E-03
ENSG00000197872	FAM49A	-3.21E+00	8.81E-04	2.54E-03
ENSG00000162959	MEMO1	-1.19E+00	8.87E-04	2.55E-03
ENSG00000179841	AKAP5	-1.94E+00	8.98E-04	2.58E-03
ENSG00000198722	UNC13B	-1.17E+00	9.13E-04	2.62E-03
ENSG00000113369	ARRDC3	-1.11E+00	9.24E-04	2.65E-03
ENSG00000063177	RPL18	-1.07E+00	9.26E-04	2.65E-03
ENSG00000152804	HHEX	-1.27E+00	9.93E-04	2.83E-03
ENSG00000153107	ANAPC1	-1.02E+00	9.94E-04	2.83E-03
ENSG00000116771	AGMAT	-2.48E+00	1.02E-03	2.88E-03
ENSG00000144362	PHOSPHO2	-1.99E+00	1.02E-03	2.90E-03
ENSG00000078098	FAP	-3.65E+00	1.03E-03	2.93E-03
ENSG00000166922	SCG5	-2.31E+00	1.03E-03	2.93E-03
ENSG00000135622	SEMA4F	-1.33E+00	1.03E-03	2.93E-03
ENSG00000174871	CNIH2	-1.48E+00	1.04E-03	2.96E-03
ENSG00000175573	C11orf68	-1.06E+00	1.07E-03	3.01E-03
ENSG00000273983	HIST1H3G	-2.88E+00	1.09E-03	3.08E-03
ENSG00000099330	OCEL1	-1.18E+00	1.11E-03	3.12E-03

ENSG00000196793	ZNF239	-2.76E+00	1.11E-03	3.13E-03
ENSG00000164400	CSF2	-1.50E+00	1.11E-03	3.13E-03
ENSG00000106415	GLCCI1	-1.45E+00	1.16E-03	3.25E-03
ENSG00000163517	HDAC11	-1.88E+00	1.17E-03	3.28E-03
ENSG00000027075	PRKCH	-1.34E+00	1.17E-03	3.29E-03
ENSG00000267508	ZNF285	-2.04E+00	1.18E-03	3.32E-03
ENSG00000271503	CCL5	-2.87E+00	1.22E-03	3.41E-03
ENSG00000073849	ST6GAL1	-1.46E+00	1.23E-03	3.44E-03
ENSG00000172785	CBWD1	-1.18E+00	1.26E-03	3.50E-03
ENSG00000214944	ARHGEF28	-1.23E+00	1.26E-03	3.51E-03
ENSG00000108515	ENO3	-1.58E+00	1.26E-03	3.51E-03
ENSG00000177283	FZD8	-1.29E+00	1.28E-03	3.56E-03
ENSG00000135124	P2RX4	-1.34E+00	1.28E-03	3.56E-03
ENSG00000165124	SVEP1	-1.15E+00	1.28E-03	3.57E-03
ENSG00000151490	PTPRO	-3.33E+00	1.29E-03	3.58E-03
ENSG00000263272	AC004148.1	-1.12E+00	1.29E-03	3.59E-03
ENSG00000235363	SNRPGP10	-2.12E+00	1.33E-03	3.69E-03
ENSG00000167528	ZNF641	-2.41E+00	1.33E-03	3.70E-03
ENSG00000254682	AP002387.2	-2.40E+00	1.34E-03	3.72E-03
ENSG00000070778	PTPN21	-1.52E+00	1.35E-03	3.74E-03
ENSG00000243680	RPL37P23	-1.51E+00	1.37E-03	3.80E-03
ENSG00000146677	AC004453.1	-1.13E+00	1.40E-03	3.87E-03
ENSG00000162407	PLPP3	-1.94E+00	1.43E-03	3.94E-03
ENSG00000159885	ZNF222	-1.32E+00	1.46E-03	4.00E-03
ENSG00000162892	IL24	-3.84E+00	1.48E-03	4.05E-03
ENSG00000119711	ALDH6A1	-1.18E+00	1.50E-03	4.12E-03
ENSG00000213442	RPL18AP3	-1.51E+00	1.53E-03	4.20E-03
ENSG00000197863	ZNF790	-1.49E+00	1.55E-03	4.23E-03
ENSG00000170390	DCLK2	-1.63E+00	1.57E-03	4.30E-03
ENSG00000128000	ZNF780B	-1.25E+00	1.61E-03	4.37E-03
ENSG00000105640	RPL18A	-1.20E+00	1.66E-03	4.51E-03
ENSG00000137720	C11orf1	-1.08E+00	1.68E-03	4.56E-03
ENSG00000138640	FAM13A	-1.02E+00	1.68E-03	4.56E-03
ENSG00000168734	PKIG	-1.08E+00	1.68E-03	4.56E-03
ENSG00000231574	LINC02015	-3.83E+00	1.69E-03	4.58E-03
ENSG00000213178	RPL22P1	-2.96E+00	1.69E-03	4.59E-03
ENSG00000026950	BTN3A1	-1.08E+00	1.71E-03	4.62E-03
ENSG00000267745	AC060766.7	-2.00E+00	1.76E-03	4.75E-03
ENSG00000100003	SEC14L2	-1.15E+00	1.78E-03	4.80E-03
ENSG00000157426	AASDH	-1.09E+00	1.82E-03	4.90E-03
ENSG00000056998	GYG2	-2.89E+00	1.82E-03	4.90E-03
ENSG00000135378	PRRG4	-1.57E+00	1.84E-03	4.94E-03
ENSG00000164929	BAALC	-2.23E+00	1.88E-03	5.05E-03
ENSG00000136942	RPL35	-1.45E+00	1.88E-03	5.05E-03
ENSG00000149380	P4HA3	-1.77E+00	1.90E-03	5.08E-03

ENSG00000225405	RPS15AP17	-1.02E+00	1.91E-03	5.12E-03
ENSG00000163322	ABRAXAS1	-1.30E+00	1.93E-03	5.16E-03
ENSG00000187479	C11orf96	-1.22E+00	1.93E-03	5.17E-03
ENSG00000274605	PCCA-DT	-1.32E+00	1.99E-03	5.31E-03
ENSG00000173163	COMMD1	-1.12E+00	2.00E-03	5.32E-03
ENSG00000048342	CC2D2A	-1.44E+00	2.01E-03	5.37E-03
ENSG00000164116	GUCY1A1	-1.88E+00	2.03E-03	5.41E-03
ENSG00000108960	MMD	-1.07E+00	2.06E-03	5.47E-03
ENSG00000266378	AC005224.2	-2.10E+00	2.13E-03	5.65E-03
ENSG00000197147	LRRC8B	-1.20E+00	2.18E-03	5.78E-03
ENSG00000249353	NPM1P27	-2.84E+00	2.22E-03	5.86E-03
ENSG00000212123	PRR22	-1.25E+00	2.22E-03	5.88E-03
ENSG00000177105	RHOG	-1.07E+00	2.27E-03	5.99E-03
ENSG00000245248	USP2-AS1	-2.75E+00	2.29E-03	6.03E-03
ENSG00000240342	RPS2P5	-2.10E+00	2.30E-03	6.06E-03
ENSG00000226532	AL022718.1	-1.18E+00	2.34E-03	6.15E-03
ENSG00000266962	AC067852.2	-1.24E+00	2.36E-03	6.20E-03
ENSG00000225377	NRSN2-AS1	-1.54E+00	2.44E-03	6.39E-03
ENSG00000228109	MELTF-AS1	-1.27E+00	2.46E-03	6.44E-03
ENSG00000117010	ZNF684	-1.17E+00	2.50E-03	6.53E-03
ENSG00000130751	NPAS1	-1.11E+00	2.54E-03	6.63E-03
ENSG00000169964	TMEM42	-1.01E+00	2.57E-03	6.70E-03
ENSG00000262814	MRPL12	-1.10E+00	2.60E-03	6.76E-03
ENSG00000124613	ZNF391	-1.70E+00	2.65E-03	6.87E-03
ENSG00000175322	ZNF519	-1.11E+00	2.71E-03	7.03E-03
ENSG00000118492	ADGB	-4.26E+00	2.75E-03	7.13E-03
ENSG00000172878	METAP1D	-1.39E+00	2.76E-03	7.14E-03
ENSG00000259727	AC103740.2	-2.40E+00	2.81E-03	7.27E-03
ENSG00000100147	CCDC134	-1.62E+00	2.84E-03	7.32E-03
ENSG00000049239	H6PD	-1.44E+00	2.84E-03	7.34E-03
ENSG00000275131	AC241952.1	-2.83E+00	2.86E-03	7.37E-03
ENSG00000230082	PRRT3-AS1	-2.97E+00	3.00E-03	7.72E-03
ENSG00000132031	MATN3	-1.48E+00	3.08E-03	7.92E-03
ENSG00000134809	TIMM10	-1.24E+00	3.15E-03	8.06E-03
ENSG00000242779	ZNF702P	-1.28E+00	3.18E-03	8.15E-03
ENSG00000154721	JAM2	-1.78E+00	3.20E-03	8.19E-03
ENSG00000164330	EBF1	-1.53E+00	3.23E-03	8.26E-03
ENSG00000272447	AL135925.1	-1.44E+00	3.26E-03	8.33E-03
ENSG00000163888	CAMK2N2	-1.09E+00	3.34E-03	8.52E-03
ENSG00000164683	HEY1	-1.16E+00	3.35E-03	8.54E-03
ENSG00000267102	AC060766.1	-2.08E+00	3.35E-03	8.54E-03
ENSG00000115525	ST3GAL5	-1.05E+00	3.38E-03	8.60E-03
ENSG00000247157	LINC01252	-2.43E+00	3.39E-03	8.63E-03
ENSG00000236088	COX10-AS1	-1.64E+00	3.41E-03	8.66E-03
ENSG00000242242	NECTIN3-AS1	-3.88E+00	3.42E-03	8.68E-03

ENSG00000276778	LINC02227	-2.83E+00	3.42E-03	8.68E-03
ENSG00000182057	OGFRP1	-2.48E+00	3.43E-03	8.71E-03
ENSG00000241494	AL355032.1	-1.03E+00	3.45E-03	8.74E-03
ENSG00000158715	SLC45A3	-1.21E+00	3.63E-03	9.14E-03
ENSG00000246985	SOCS2-AS1	-2.51E+00	3.76E-03	9.44E-03
ENSG00000062370	ZNF112	-1.32E+00	3.77E-03	9.48E-03
ENSG00000135917	SLC19A3	-3.31E+00	3.92E-03	9.81E-03
ENSG00000143942	CHAC2	-1.16E+00	3.94E-03	9.88E-03
ENSG00000156509	FBXO43	-1.80E+00	3.95E-03	9.88E-03
ENSG00000281468	AC006504.7	-1.14E+00	3.99E-03	9.98E-03
ENSG00000251003	ZFPM2-AS1	-1.29E+00	4.01E-03	1.00E-02
ENSG00000187607	ZNF286A	-1.31E+00	4.14E-03	1.03E-02
ENSG00000279191	AC068491.4	-1.26E+00	4.16E-03	1.04E-02
ENSG00000264350	SNRPGP2	-1.42E+00	4.19E-03	1.04E-02
ENSG00000250634	LINC01182	-2.97E+00	4.21E-03	1.05E-02
ENSG00000165905	LARGE2	-2.00E+00	4.44E-03	1.10E-02
ENSG00000213553	RPLP0P6	-3.28E+00	4.50E-03	1.11E-02
ENSG00000196636	SDHAF3	-1.23E+00	4.53E-03	1.12E-02
ENSG00000250562	RPL38P4	-1.46E+00	4.54E-03	1.12E-02
ENSG00000155666	KDM8	-1.50E+00	4.62E-03	1.14E-02
ENSG00000136682	CBWD2	-1.56E+00	4.63E-03	1.14E-02
ENSG00000050438	SLC4A8	-1.08E+00	4.64E-03	1.15E-02
ENSG00000090932	DLL3	-1.09E+00	4.65E-03	1.15E-02
ENSG00000134516	DOCK2	-3.05E+00	4.71E-03	1.16E-02
ENSG00000251194	AL133330.1	-1.52E+00	4.81E-03	1.18E-02
ENSG00000183798	EMILIN3	-1.83E+00	4.89E-03	1.20E-02
ENSG00000206535	LNP1	-1.56E+00	4.94E-03	1.21E-02
ENSG00000253522	MIR3142HG	-3.84E+00	5.01E-03	1.23E-02
ENSG00000150995	ITPR1	-1.28E+00	5.09E-03	1.25E-02
ENSG00000176933	TOB2P1	-2.19E+00	5.13E-03	1.26E-02
ENSG00000212588	SNORA26	-3.68E+00	5.15E-03	1.26E-02
ENSG00000197444	OGDHL	-1.74E+00	5.23E-03	1.28E-02
ENSG00000047936	ROS1	-3.28E+00	5.24E-03	1.28E-02
ENSG00000164056	SPRY1	-1.49E+00	5.34E-03	1.30E-02
ENSG00000235065	RPL24P2	-1.41E+00	5.37E-03	1.31E-02
ENSG00000217825	AC099552.1	-3.77E+00	5.42E-03	1.32E-02
ENSG00000227496	AC099066.2	-1.78E+00	5.44E-03	1.32E-02
ENSG00000205571	SMN2	-1.49E+00	5.50E-03	1.34E-02
ENSG00000196476	C20orf96	-1.28E+00	5.55E-03	1.35E-02
ENSG00000137142	IGFBPL1	-1.67E+00	5.59E-03	1.35E-02
ENSG00000160094	ZNF362	-1.06E+00	5.60E-03	1.36E-02
ENSG00000198947	DMD	-1.18E+00	5.65E-03	1.37E-02
ENSG00000109255	NMU	-1.33E+00	5.68E-03	1.37E-02
ENSG00000167912	AC090152.1	-3.33E+00	5.70E-03	1.38E-02
ENSG00000267547	AC060766.4	-2.39E+00	5.75E-03	1.39E-02



ENSG00000065413	ANKRD44	-1.16E+00	5.86E-03	1.41E-02
ENSG00000280744	LINC01173	-3.54E+00	5.91E-03	1.42E-02
ENSG00000204623	ZNRD1ASP	-1.36E+00	5.92E-03	1.43E-02
ENSG00000267152	AC093227.1	-2.02E+00	5.94E-03	1.43E-02
ENSG00000180354	MTURN	-1.17E+00	5.97E-03	1.43E-02
ENSG00000224114	AL591846.1	-1.10E+00	6.05E-03	1.45E-02
ENSG00000132688	NES	-1.36E+00	6.08E-03	1.46E-02
ENSG00000185442	FAM174B	-1.87E+00	6.09E-03	1.46E-02
ENSG00000271614	ATP2B1-AS1	-1.47E+00	6.19E-03	1.48E-02
ENSG00000111348	ARHGDI1	-2.07E+00	6.22E-03	1.49E-02
ENSG00000204767	INSYN2B	-2.02E+00	6.29E-03	1.50E-02
ENSG00000117594	HSD11B1	-3.66E+00	6.35E-03	1.52E-02
ENSG00000137752	CASP1	-1.90E+00	6.37E-03	1.52E-02
ENSG00000177990	DPY19L2	-2.34E+00	6.45E-03	1.54E-02
ENSG00000198732	SMOC1	-3.11E+00	6.53E-03	1.55E-02
ENSG00000154548	SRSF12	-1.83E+00	6.58E-03	1.57E-02
ENSG00000241942	RPS20P20	-3.18E+00	6.64E-03	1.58E-02
ENSG00000129354	AP1M2	-1.15E+00	6.67E-03	1.58E-02
ENSG00000196549	MME	-1.82E+00	6.68E-03	1.59E-02
ENSG00000196418	ZNF124	-1.60E+00	6.73E-03	1.60E-02
ENSG00000214575	CPEB1	-1.08E+00	6.74E-03	1.60E-02
ENSG00000138316	ADAMTS14	-1.87E+00	6.84E-03	1.62E-02
ENSG00000168237	GLYCTK	-1.05E+00	6.85E-03	1.62E-02
ENSG00000259571	BLID	-3.13E+00	6.99E-03	1.65E-02
ENSG00000273270	AC090114.2	-1.44E+00	7.13E-03	1.68E-02
ENSG00000107902	LHPP	-1.39E+00	7.16E-03	1.69E-02
ENSG00000269837	IPO5P1	-1.70E+00	7.27E-03	1.71E-02
ENSG00000276261	AC009509.4	-2.46E+00	7.30E-03	1.71E-02
ENSG00000267260	AC020928.1	-3.12E+00	7.34E-03	1.72E-02
ENSG00000259867	AC105411.1	-2.81E+00	7.36E-03	1.73E-02
ENSG00000242094	FOXP1-IT1	-1.84E+00	7.45E-03	1.75E-02
ENSG00000167595	PROSER3	-1.01E+00	7.51E-03	1.76E-02
ENSG00000106537	TSPAN13	-1.55E+00	7.52E-03	1.76E-02
ENSG00000236682	MAP3K2-DT	-1.24E+00	7.55E-03	1.77E-02
ENSG00000080511	RDH8	-2.82E+00	7.66E-03	1.79E-02
ENSG00000224020	MIR181A2HG	-3.40E+00	7.73E-03	1.81E-02
ENSG00000150627	WDR17	-2.06E+00	7.76E-03	1.81E-02
ENSG00000283041	AC008038.1	-1.08E+00	7.77E-03	1.81E-02
ENSG00000178878	APOLD1	-1.22E+00	7.96E-03	1.85E-02
ENSG00000188763	FZD9	-1.94E+00	8.03E-03	1.87E-02
ENSG00000161558	TMEM143	-2.66E+00	8.05E-03	1.87E-02
ENSG00000278535	DHRS11	-1.02E+00	8.12E-03	1.89E-02
ENSG00000182518	FAM104B	-1.05E+00	8.14E-03	1.89E-02
ENSG00000232346	Z74021.1	-1.40E+00	8.21E-03	1.90E-02
ENSG00000224063	AC007319.1	-2.12E+00	8.23E-03	1.91E-02

ENSG00000147894	C9orf72	-2.39E+00	8.55E-03	1.97E-02
ENSG00000168811	IL12A	-2.34E+00	8.68E-03	2.00E-02
ENSG00000241431	RPL37P6	-2.47E+00	8.76E-03	2.02E-02
ENSG00000234797	RPS3AP6	-1.51E+00	8.79E-03	2.02E-02
ENSG00000277383	AC010331.1	-2.17E+00	8.93E-03	2.05E-02
ENSG00000116117	PAR3B	-2.44E+00	9.00E-03	2.07E-02
ENSG00000183055	FAM133CP	-1.63E+00	9.02E-03	2.07E-02
ENSG00000123427	EEF1AKMT3	-1.14E+00	9.29E-03	2.13E-02
ENSG00000198478	SH3BGR2	-1.77E+00	9.37E-03	2.14E-02
ENSG00000126970	ZC4H2	-1.48E+00	9.46E-03	2.16E-02
ENSG00000247137	AP000873.2	-1.03E+00	9.55E-03	2.18E-02
ENSG00000272440	AC080013.6	-2.39E+00	9.73E-03	2.21E-02
ENSG00000226084	AC113935.1	-1.30E+00	9.75E-03	2.22E-02
ENSG00000156265	MAP3K7CL	-1.98E+00	9.79E-03	2.23E-02
ENSG00000203930	LINC00632	-1.14E+00	1.00E-02	2.27E-02
ENSG00000240376	AC010343.1	-1.49E+00	1.00E-02	2.28E-02
ENSG00000159433	STARD9	-1.12E+00	1.00E-02	2.28E-02
ENSG00000135469	COQ10A	-1.29E+00	1.02E-02	2.31E-02
ENSG00000273723	AL139089.1	-2.94E+00	1.03E-02	2.33E-02
ENSG00000274667	AC090517.2	-2.92E+00	1.03E-02	2.33E-02
ENSG00000271870	AC024060.2	-1.24E+00	1.04E-02	2.34E-02
ENSG00000174586	ZNF497	-2.96E+00	1.05E-02	2.37E-02
ENSG00000147041	SYTL5	-2.16E+00	1.06E-02	2.38E-02
ENSG00000250130	AC090519.1	-2.59E+00	1.08E-02	2.43E-02
ENSG00000134533	RERG	-3.13E+00	1.10E-02	2.47E-02
ENSG00000166707	ZCCHC18	-2.63E+00	1.10E-02	2.47E-02
ENSG00000147145	LPAR4	-2.56E+00	1.11E-02	2.49E-02
ENSG00000228696	ARL17B	-1.28E+00	1.11E-02	2.49E-02
ENSG00000169660	HEXD	-1.08E+00	1.11E-02	2.49E-02
ENSG00000144182	LIPT1	-1.28E+00	1.12E-02	2.50E-02
ENSG00000242970	AC068522.1	-3.38E+00	1.12E-02	2.51E-02
ENSG00000107719	PALD1	-1.39E+00	1.14E-02	2.54E-02
ENSG00000166046	TCP11L2	-2.76E+00	1.16E-02	2.58E-02
ENSG00000243199	AC115223.1	-3.21E+00	1.17E-02	2.60E-02
ENSG00000275457	AL117332.1	-1.10E+00	1.18E-02	2.63E-02
ENSG00000166321	NUDT13	-1.81E+00	1.19E-02	2.65E-02
ENSG00000242960	FTH1P23	-2.90E+00	1.20E-02	2.68E-02
ENSG00000138336	TET1	-1.15E+00	1.21E-02	2.68E-02
ENSG00000121895	TMEM156	-1.20E+00	1.22E-02	2.72E-02
ENSG00000133863	TEX15	-1.73E+00	1.25E-02	2.77E-02
ENSG00000173715	C11orf80	-2.00E+00	1.28E-02	2.82E-02
ENSG00000162745	OLFML2B	-1.55E+00	1.30E-02	2.87E-02
ENSG00000062582	MRPS24	-2.11E+00	1.30E-02	2.87E-02
ENSG00000214029	ZNF891	-1.23E+00	1.31E-02	2.89E-02
ENSG00000239227	AC069439.1	-2.09E+00	1.32E-02	2.91E-02

ENSG00000286132	AC022415.2	-2.57E+00	1.32E-02	2.92E-02
ENSG00000008277	ADAM22	-1.63E+00	1.36E-02	2.98E-02
ENSG00000256061	DNAAF4	-1.79E+00	1.37E-02	3.01E-02
ENSG00000180537	RNF182	-1.62E+00	1.38E-02	3.02E-02
ENSG00000244586	WNT5A-AS1	-2.87E+00	1.38E-02	3.02E-02
ENSG00000247809	NR2F2-AS1	-1.96E+00	1.38E-02	3.03E-02
ENSG00000182179	UBA7	-1.00E+00	1.40E-02	3.06E-02
ENSG00000234779	BNC2-AS1	-2.06E+00	1.40E-02	3.07E-02
ENSG00000079263	SP140	-2.78E+00	1.42E-02	3.10E-02
ENSG00000233264	AC006042.3	-2.96E+00	1.42E-02	3.10E-02
ENSG00000237943	PRKCQ-AS1	-1.09E+00	1.43E-02	3.12E-02
ENSG00000171766	GATM	-1.93E+00	1.44E-02	3.13E-02
ENSG00000151692	RNF144A	-1.08E+00	1.44E-02	3.14E-02
ENSG00000224043	CCNT2-AS1	-1.06E+00	1.44E-02	3.15E-02
ENSG00000254510	AP001107.5	-1.79E+00	1.46E-02	3.17E-02
ENSG00000101986	ABCD1	-1.07E+00	1.49E-02	3.23E-02
ENSG00000230844	ZNF674-AS1	-1.27E+00	1.53E-02	3.32E-02
ENSG00000111696	NT5DC3	-1.38E+00	1.54E-02	3.32E-02
ENSG00000260920	AL031985.3	-1.23E+00	1.54E-02	3.33E-02
ENSG00000231167	YBX1P2	-3.03E+00	1.55E-02	3.35E-02
ENSG00000222489	SNORA79B	-2.56E+00	1.56E-02	3.37E-02
ENSG00000147996	CBWD5	-1.57E+00	1.57E-02	3.39E-02
ENSG00000269927	AC004817.3	-3.02E+00	1.59E-02	3.43E-02
ENSG00000230979	AC079250.1	-1.44E+00	1.61E-02	3.46E-02
ENSG00000274997	HIST1H2AH	-2.61E+00	1.61E-02	3.47E-02
ENSG00000270019	AC110769.2	-1.21E+00	1.62E-02	3.48E-02
ENSG00000279673	AC092919.2	-2.94E+00	1.62E-02	3.48E-02
ENSG00000224895	VPS26BP1	-2.84E+00	1.62E-02	3.49E-02
ENSG00000181619	GPR135	-1.27E+00	1.66E-02	3.56E-02
ENSG00000180596	HIST1H2BC	-1.67E+00	1.66E-02	3.57E-02
ENSG00000174516	PELI3	-1.12E+00	1.68E-02	3.59E-02
ENSG00000279166	AC009951.4	-1.82E+00	1.68E-02	3.59E-02
ENSG00000280106	AC008555.7	-3.37E+00	1.69E-02	3.61E-02
ENSG00000128039	SRD5A3	-1.01E+00	1.70E-02	3.64E-02
ENSG00000170522	ELOVL6	-1.02E+00	1.72E-02	3.67E-02
ENSG00000138738	PRDM5	-1.18E+00	1.75E-02	3.72E-02
ENSG00000171044	XKR6	-1.07E+00	1.75E-02	3.72E-02
ENSG00000137673	MMP7	-3.28E+00	1.79E-02	3.79E-02
ENSG00000225224	RPS27AP12	-1.41E+00	1.80E-02	3.82E-02
ENSG00000261051	AC107021.2	-1.72E+00	1.81E-02	3.83E-02
ENSG00000196081	ZNF724	-1.01E+00	1.82E-02	3.86E-02
ENSG00000254337	AC083967.1	-3.01E+00	1.83E-02	3.86E-02
ENSG00000279133	AC018628.1	-1.11E+00	1.83E-02	3.87E-02
ENSG00000220744	RPL5P18	-2.41E+00	1.85E-02	3.90E-02
ENSG00000102221	JADE3	-1.01E+00	1.87E-02	3.94E-02

ENSG00000007255	TRAPPC6A	-1.36E+00	1.88E-02	3.96E-02
ENSG00000116852	KIF21B	-1.41E+00	1.89E-02	3.98E-02
ENSG00000286808	AC092338.3	-3.17E+00	1.92E-02	4.04E-02
ENSG00000106631	MYL7	-1.16E+00	1.93E-02	4.06E-02
ENSG00000248927	AC114284.1	-2.70E+00	1.97E-02	4.14E-02
ENSG00000225616	AL138785.1	-1.29E+00	2.01E-02	4.21E-02
ENSG00000213598	AL049873.1	-2.13E+00	2.01E-02	4.21E-02
ENSG00000272711	AC019069.1	-1.66E+00	2.01E-02	4.22E-02
ENSG00000227598	Z94721.1	-2.71E+00	2.03E-02	4.24E-02
ENSG00000268471	MIR4453HG	-2.07E+00	2.04E-02	4.26E-02
ENSG00000178233	TMEM151B	-2.84E+00	2.04E-02	4.26E-02
ENSG00000152926	ZNF117	-1.21E+00	2.06E-02	4.29E-02
ENSG00000268895	A1BG-AS1	-1.02E+00	2.06E-02	4.30E-02
ENSG00000126785	RHOJ	-2.37E+00	2.08E-02	4.34E-02
ENSG00000250571	GLI4	-1.05E+00	2.11E-02	4.40E-02
ENSG00000223949	ROR1-AS1	-3.46E+00	2.12E-02	4.42E-02
ENSG00000054277	OPN3	-1.21E+00	2.15E-02	4.46E-02
ENSG00000167925	GHDC	-1.13E+00	2.16E-02	4.49E-02
ENSG00000276174	AC087683.2	-2.44E+00	2.16E-02	4.49E-02
ENSG00000225933	AC133965.1	-2.07E+00	2.17E-02	4.50E-02
ENSG00000277342	AC048344.4	-1.95E+00	2.17E-02	4.51E-02
ENSG00000263072	ZNF213-AS1	-1.07E+00	2.20E-02	4.56E-02
ENSG00000079215	SLC1A3	-1.63E+00	2.20E-02	4.56E-02
ENSG00000270072	AC090559.2	-2.58E+00	2.21E-02	4.57E-02
ENSG00000266944	AC005262.1	-1.11E+00	2.23E-02	4.60E-02
ENSG00000179240	GVQW3	-1.72E+00	2.24E-02	4.62E-02
ENSG00000173898	SPTBN2	-1.10E+00	2.24E-02	4.63E-02
ENSG00000165449	SLC16A9	-1.04E+00	2.28E-02	4.71E-02
ENSG00000144227	NXPH2	-1.82E+00	2.29E-02	4.71E-02
ENSG00000214455	RCN1P2	-2.35E+00	2.30E-02	4.73E-02
ENSG00000164935	DCSTAMP	-2.14E+00	2.31E-02	4.76E-02
ENSG00000270190	AC068491.3	-1.66E+00	2.36E-02	4.84E-02
ENSG00000239719	AC004890.1	-1.08E+00	2.37E-02	4.86E-02
ENSG00000151743	AMN1	-1.11E+00	2.39E-02	4.90E-02
ENSG00000169083	AR	-1.28E+00	2.41E-02	4.93E-02
ENSG00000185065	AC000068.1	-1.96E+00	2.44E-02	4.99E-02

**Supplementary table 11. KEGG pathway analysis for significant URGs with and without IL-1 $\beta$  stimulation in non-transduced samples.**

Pathway	P value	FDR	Enriched genes
TNF signaling pathway	2.70E-21	4.59E-19	CSF2, TNFAIP3, PIK3CD, CXCL1, CXCL3, PTGS2, CXCL2, ICAM1, CCL5, CCL2, MAP3K8, MAP3K5, MAP2K3, JUN, VCAM1, JAG1, CCL20, MMP3, LIF, CFLAR, TRAF1, MMP9, NFKB1, NFKBIA, IL6, IL1B, BIRC2, BIRC3, CREB5
Cytokine-cytokine receptor interaction	2.34E-12	1.98E-10	CXCL6, CSF3, CCL11, CSF2, CXCL8, IL24, CXCL1, TNFRSF11B, CXCL3, CXCL2, CCL8, CCL7, CCL5, CCL2, IL6R, IL11, TGFB2, IL4R, CD70, CCL20, IL1R1, TNFSF15, TNFRSF9, LIF, INHBA, TNFRSF10D, IL6, IL1B, LTB, IL7R
NF-kappa B signaling pathway	4.54E-11	2.58E-09	LYN, VCAM1, CXCL8, BCL2A1, IL1R1, TNFAIP3, CFLAR, TRAF1, PTGS2, NFKB1, RELB, NFKB2, ICAM1, NFKBIA, IL1B, LTB, BIRC2, BIRC3
Pathways in cancer	1.48E-08	6.30E-07	PTGER4, CXCL8, EPAS1, LPAR1, PIK3CD, PTGS2, ETS1, FGF2, EGFR, BDKRB2, BDKRB1, BID, NKX3-1, WNT4, STAT5A, TGFB2, JUN, LAMB3, ITGA2, WNT7B, WNT5A, VEGFC, FZD8, TRAF1, MMP9, NFKB1, NFKB2, NFKBIA, IL6, CDK6, BIRC2, BIRC3
Rheumatoid arthritis	4.08E-08	1.39E-06	CXCL6, IL11, TGFB2, JUN, FLT1, CXCL8, CSF2, CCL20, MMP3, ICAM1, IL6, IL1B, CCL5, CCL2, LTB
Legionellosis	8.78E-08	2.49E-06	NFKBIA, C3, IL6, ITGAM, CXCL8, IL1B, CXCL1, SEC22B, CXCL3, CXCL2, NFKB1, NFKB2
NOD-like receptor signaling pathway	1.31E-07	3.17E-06	NFKBIA, IL6, CXCL8, CCL5, IL1B, TNFAIP3, CCL2, CXCL1, CXCL2, NFKB1, BIRC2, BIRC3
Chagas disease (American trypanosomiasis)	3.52E-07	7.48E-06	TGFB2, JUN, CXCL8, SERPINE1, PIK3CD, CFLAR, NFKB1, C3, NFKBIA, GNA15, IL6, IL1B, CCL5, BDKRB2, CCL2
Hematopoietic cell lineage	1.92E-06	3.62E-05	IL11, CSF3, ITGAM, IL4R, CSF2, TFRC, IL1R1, ITGA2, IL6, IL1B, IL7R, IL6R, CD44
HTLV-I infection	7.13E-06	1.21E-04	STAT5A, TGFB2, JUN, VCAM1, CSF2, MSX2, IL1R1, WNT7B, WNT5A, FZD8, PIK3CD, ETS1, ETS2, NFKB1, RELB, NFKB2, ICAM1, NFKBIA, FOSL1, IL6, WNT4
Amoebiasis	1.55E-05	2.40E-04	SERPINE3, TGFB2, ITGAM, CXCL8, CSF2, SERPINB2, LAMB3, IL1R1, PIK3CD, NFKB1, GNA15, IL6, IL1B
Chemokine signaling pathway	2.08E-05	2.95E-04	LYN, CXCL6, SHC3, CCL11, CXCL8, CCL20, PIK3CD, CXCL1, CXCL3, CXCL2, NFKB1, NFKBIA, CCL8, CCL7, CCL5, PTK2B, CCL2
Malaria	3.00E-05	3.93E-04	CSF3, IL6, TGFB2, VCAM1, CXCL8, IL1B, CCL2, THBS2, ICAM1
Proteoglycans in cancer	5.11E-05	6.20E-04	TGFB2, SDC4, CAV2, WNT7B, ITGA2, CAV1, WNT5A, PLAUR, FZD8, PIK3CD, FGF2, MMP9, EGFR, TIMP3, CD44, HBEGF, WNT4
Transcriptional misregulation in cancer	9.26E-05	1.05E-03	ITGAM, FLT1, CXCL8, CSF2, BCL2A1, MMP3, TMPRSS2, HMGA2, PLAT, TRAF1, MMP9, NFKB1, RUNX2, IL6, NFKBIZ
Apoptosis	1.69E-04	1.80E-03	NFKBIA, PIK3CD, CFLAR, NGF, BID, NFKB1, BIRC2, TNFRSF10D, BIRC3
PI3K-Akt signaling pathway	1.92E-04	1.84E-03	CSF3, IL4R, FLT1, LAMB3, ITGA2, TNC, LPAR1, VEGFC, PIK3CD, NGF, THBS2, FGF2, EGFR, NFKB1, IL6, RELN, CDK6, ITGB8, SGK1, IL7R, IL6R, CREB5
Inflammatory mediator regulation of TRP channels	1.95E-04	1.84E-03	PTGER4, MAP2K3, IL1R1, IL1B, PLA2G4C, BDKRB2, F2RL1, PLA2G4A, PIK3CD, BDKRB1, NGF
Focal adhesion	2.52E-04	2.18E-03	JUN, SHC3, FLT1, LAMB3, CAV2, ITGA2, CAV1, TNC, VEGFC, PIK3CD, THBS2, EGFR, RELN, ITGB8, BIRC2, BIRC3
MAPK signaling pathway	2.56E-04	2.18E-03	MAP2K3, TGFB2, JUN, IL1R1, GADD45A, PLA2G4C, PLA2G4A, NGF, DUSP8, FGF2, EGFR, NFKB1, RELB, NFKB2, DUSP10, IL1B, MAP3K8, MAP3K5
Small cell lung cancer	3.09E-04	2.50E-03	NFKBIA, CDK6, LAMB3, ITGA2, PIK3CD, TRAF1, PTGS2, NFKB1, BIRC2, BIRC3
Influenza A	5.13E-04	3.86E-03	MAP2K3, IL33, JUN, CXCL8, TMPRSS2, PIK3CD, NFKB1, ICAM1, TNFRSF10D, NFKBIA, IL6, IL1B, CCL5, CCL2
Osteoclast differentiation	5.22E-04	3.86E-03	NFKBIA, FOSL1, TGFB2, JUN, IL1R1, IL1B, PIK3CD, TNFRSF11B, NFKB1, FOSL2, RELB, NFKB2
Epstein-Barr virus infection	1.13E-03	7.99E-03	LYN, MAP2K3, NFKBIA, JUN, TNFAIP3, PIK3CD, CD44, NFKB1, RELB, NFKB2, ICAM1
Hepatitis B	1.22E-03	8.16E-03	STAT5A, NFKBIA, IL6, TGFB2, JUN, CXCL8, CDK6, PTK2B, PIK3CD, MMP9, NFKB1, CREB5
Salmonella infection	1.25E-03	8.16E-03	IL6, JUN, CXCL8, CSF2, IL1B, CXCL1, CXCL3, CXCL2, NFKB1
Toll-like receptor signaling pathway	1.55E-03	9.53E-03	MAP2K3, NFKBIA, IL6, JUN, CXCL8, CCL5, IL1B, PIK3CD, MAP3K8, NFKB1
Epithelial cell signaling in Helicobacter pylori infection	1.57E-03	9.53E-03	LYN, NFKBIA, JUN, CXCL8, CCL5, EGFR, NFKB1, HBEGF
Leishmaniasis	2.20E-03	1.29E-02	NFKBIA, C3, TGFB2, JUN, ITGAM, IL1B, PTGS2, NFKB1
Pertussis	3.02E-03	1.71E-02	C3, CXCL6, IL6, JUN, ITGAM, CXCL8, IL1B, NFKB1
HIF-1 signaling pathway	3.16E-03	1.74E-02	IL6, FLT1, TFRC, SERPINE1, PIK3CD, IL6R, EGFR, NFKB1, HK2
Jak-STAT signaling pathway	4.06E-03	2.16E-02	STAT5A, IL11, CSF3, IL6, CSF2, IL4R, IL24, LIF, PIK3CD, IL7R, IL6R
ECM-receptor interaction	6.87E-03	3.54E-02	RELN, SDC4, LAMB3, ITGA2, TNC, ITGB8, THBS2, CD44
Complement and coagulation cascades	8.36E-03	4.18E-02	C3, SERPINA1, SERPINE1, BDKRB2, PLAUR, BDKRB1, PLAT
African trypanosomiasis	9.68E-03	4.70E-02	IL6, VCAM1, IL1B, F2RL1, ICAM1
Chronic myeloid leukemia	1.02E-02	4.83E-02	STAT5A, NFKBIA, TGFB2, CDK6, SHC3, PIK3CD, NFKB1
Cell adhesion molecules (CAMs)	1.08E-02	4.94E-02	ITGAM, VCAM1, ALCAM, SDC4, CADM1, ITGB8, PDCD1LG2, CLDN1, ICOSLG, ICAM1

**Supplementary table 12. KEGG pathway analysis for significant URGs with and without IL-1 $\beta$  stimulation in Ad-EGFP transduced samples.**

Pathway	P value	FDR	Enriched genes
TNF signaling pathway	5.43E-18	8.85E-16	MAP2K3, JUN, VCAM1, JAG1, CSF2, CCL20, MMP3, LIF, PIK3CD, TNFAIP3, CXCL1, CFLAR, TRAF1, CXCL3, PTGS2, CXCL2, MMP9, ICAM1, IL6, IL1B, CCL2, BIRC2, BIRC3, CREB5
Cytokine-cytokine receptor interaction	6.64E-11	5.41E-09	CXCL6, CSF3, CCL11, CSF2, CXCL8, IL24, CXCL1, CXCL3, CXCL2, CCL8, CCL7, CCL2, IL6R, IL11, TGFB2, IL4R, CCL20, IL1R1, TNFSF15, TNFRSF9, LIF, INHBA, IL6, IL1B, IL7R
Proteoglycans in cancer	1.51E-08	8.19E-07	TGFB2, WNT5B, SDC4, WNT7B, ITGA2, CAV1, WNT5A, TWIST2, PLAUR, FZD8, PIK3CD, WNT9A, FGF2, THBS1, MMP9, EGFR, PLAU, TIMP3, CD44, HBEGF
NF-kappa B signaling pathway	1.40E-07	5.19E-06	VCAM1, CXCL8, BCL2A1, IL1R1, TNFAIP3, CFLAR, TRAF1, PTGS2, ICAM1, PLAU, IL1B, BIRC2, BIRC3
Rheumatoid arthritis	1.59E-07	5.19E-06	CXCL6, IL11, TGFB2, JUN, FLT1, CXCL8, CSF2, CCL20, MMP3, ICAM1, IL6, IL1B, CCL2
Malaria	4.48E-07	1.22E-05	CSF3, IL6, TGFB2, VCAM1, CXCL8, IL1B, CCL2, THBS2, THBS1, ICAM1
Hematopoietic cell lineage	1.16E-06	2.71E-05	IL11, CSF3, IL6, CSF2, IL4R, TFRC, IL1R1, IL1B, ITGA2, IL7R, IL6R, CD44
Pathways in cancer	3.16E-06	6.43E-05	PTGER4, TGFB2, JUN, CXCL8, WNT5B, LAMB3, WNT7B, ITGA2, WNT5A, VEGFC, FZD8, PIK3CD, TRAF1, WNT9A, PTGS2, ETS1, FGF2, MMP9, EGFR, IL6, BDKRB1, BIRC2, BIRC3, NKX3-1
NOD-like receptor signaling pathway	1.42E-05	2.58E-04	IL6, CXCL8, IL1B, TNFAIP3, CCL2, CXCL1, CXCL2, BIRC2, BIRC3
Transcriptional misregulation in cancer	2.92E-05	4.76E-04	FLT1, CXCL8, CSF2, BCL2A1, MMP3, TMPRSS2, HMG2, TRAF1, MMP9, IL6, MEIS1, PLAU, ID2, NFKBIZ
Focal adhesion	6.46E-05	9.58E-04	SHC4, JUN, FLT1, LAMB3, ITGA2, CAV1, TNC, VEGFC, PIK3CD, THBS2, THBS1, EGFR, ITGB8, BIRC2, BIRC3
HTLV-I infection	1.73E-04	2.34E-03	TGFB2, JUN, VCAM1, CSF2, WNT5B, IL1R1, WNT7B, WNT5A, FZD8, PIK3CD, WNT9A, ETS1, ETS2, ICAM1, FOXL1, IL6
Chagas disease (American trypanosomiasis)	2.34E-04	2.93E-03	C3, IL6, TGFB2, JUN, CXCL8, IL1B, SERPINE1, CCL2, PIK3CD, CFLAR
Chemokine signaling pathway	3.56E-04	4.15E-03	SHC4, CXCL6, CCL11, CXCL8, CCL20, PIK3CD, CXCL1, CXCL3, CXCL2, CCL8, CCL7, PTK2B, CCL2
Signaling pathways regulating pluripotency of stem cells	5.04E-04	5.47E-03	MEIS1, WNT5B, WNT7B, ID2, WNT5A, LIF, FZD8, PIK3CD, INHBA, WNT9A, FGF2
PI3K-Akt signaling pathway	5.45E-04	5.55E-03	CSF3, IL4R, FLT1, LAMB3, ITGA2, TNC, VEGFC, PIK3CD, THBS2, FGF2, THBS1, EGFR, IL6, ITGB8, SGK1, IL7R, IL6R, CREB5
Legionellosis	7.11E-04	6.82E-03	C3, IL6, CXCL8, IL1B, CXCL1, CXCL3, CXCL2
Amoebiasis	1.30E-03	1.17E-02	IL6, TGFB2, CXCL8, CSF2, SERPINB2, LAMB3, IL1R1, IL1B, PIK3CD
Salmonella infection	1.37E-03	1.17E-02	IL6, JUN, CXCL8, CSF2, IL1B, CXCL1, CXCL3, CXCL2
ECM-receptor interaction	1.80E-03	1.47E-02	SDC4, LAMB3, ITGA2, TNC, ITGB8, THBS2, THBS1, CD44
Jak-STAT signaling pathway	2.57E-03	1.91E-02	IL11, CSF3, IL6, CSF2, IL4R, IL24, LIF, PIK3CD, IL7R, IL6R
Complement and coagulation cascades	2.58E-03	1.91E-02	C3, THBD, PLAU, SERPINE1, PLAUR, BDKRB1, F3
HIF-1 signaling pathway	3.16E-03	2.24E-02	IL6, FLT1, TFRC, SERPINE1, PIK3CD, IL6R, EGFR, HK2
African trypanosomiasis	4.15E-03	2.82E-02	IL6, VCAM1, IL1B, F2RL1, ICAM1
Small cell lung cancer	7.23E-03	4.72E-02	LAMB3, ITGA2, PIK3CD, TRAF1, PTGS2, BIRC2, BIRC3
Cell adhesion molecules (CAMs)	7.86E-03	4.93E-02	CD274, CDH4, VCAM1, ALCAM, SDC4, ITGB8, PDCD1LG2, CLDN1, ICAM1

Supplementary table 13. KEGG pathway analysis for significant URGs in Ad-KLF4 versus Ad-EGFP transduced samples.

Pathway	P value	FDR	Enriched genes
Rap1 signaling pathway	1.09E-06	2.66E-04	FLT1, ITGAM, CSF1, CALML5, CALML6, FLT4, ITGA2B, ITGB2, FGF3, FGF4, CDH1, RASSF5, RAC2, PLCE1, PRKCG, MAP2K3, MAGI2, PGF, TIAM1, PLCB3, MRAS, ADCY9, RAPGEF2, PRKD2, RAPGEF5, PLCB1, PLCB2, RAPGEF3, EPHA2, SRC, PDGFB, PDGFA, EFNA5, RASGRP2, PRKCZ, RAP1GAP, GNAI2, ADCY5, PARD6B, PARD6A, DRD2, FGF22, ANGPT4, NGFR, INSR, GRIN1, VEGFA, FGF17, AFDN, EFNA3, EFNA2, LPAR5, FGF19, ID1, FGF18, KRAS, TEK, FGFR3, FGFR2, BCAR1
Endocytosis	1.37E-05	1.07E-03	SH3KBP1, CLTB, WASL, AP2A2, PSD2, PSD4, KIF5A, GIT1, PSD, VPS37B, ARAP1, DNMT1, EPN1, TGFBR2, EPN2, EPN3, ACAP3, BIN1, CHMP4C, CHMP4B, STAM2, RAB7A, SRC, VPS4B, AGAP2, NEDD4L, AGAP1, ASAP2, AGAP3, PRKCZ, CYTH2, PARD6B, GRK3, PARD6A, RAB11FIP1, CYTH4, GRK5, CXCR1, CXCR2, MVB12B, MVB12A, PIP5K1C, RAB11FIP3, CYTH1, RAB11FIP4, RAB11FIP5, IQSEC2, IQSEC1, CAV2, CAV1, IQSEC3, HSPA6, AP2B1, IGF2R, RAB10, EHD1, MDM2, FOLR3, FOLR1, FGFR3, FGFR2, HSPA1B, HSPA1A
Calcium signaling pathway	1.92E-05	1.07E-03	RYR1, OXTR, CALML5, CALML6, ATP2A3, ATP2A1, MYLK3, SLC8A2, PPP3CA, BDKRB1, PLCE1, PRKCG, TNNC1, TNNC2, ITPK3, PLCB3, ADCY9, ORAI3, ITPKA, PLCB1, PLCB2, CAMK2B, CAMK2D, PTAFR, CACNA1B, CACNA1A, ADRB1, ITPR3, CACNA1C, ADRB2, CACNA1H, CACNA1G, CACNA1I, GNA15, ERBB3, HRH2, PLCG2, PTK2B, NTSR1, NOS3, ATP2B4, ATP2B2, GRIN2C, GRIN1, GRIN2D, SLC8A3, P2RX5, GNAL, P2RX1, PLCD3
ECM-receptor interaction	2.02E-05	1.07E-03	LAMA5, TNXB, SDC4, ITGB4, COL11A1, LAMA3, COL11A2, ITGA2B, LAMC2, COMP, CHAD, ITGB8, ITGB7, LAMB3, VWF, ITGA3, ITGA2, HSPG2, GP9, COL2A1, COL1A2, COL4A2, COL5A1, COL6A2, COL4A3, COL6A1, SDC1, ITGA6, ITGA5, AGRN
Hippo signaling pathway	2.19E-05	1.07E-03	CRB2, WNT2B, TCF7, LEF1, ITGB2, PRKCZ, AREG, SAV1, AMOT, WNT6, CCND3, PARD6B, RASSF1, PARD6A, WNT11, CCND2, CCND1, YWHAQ, CDH1, DVL1, WNT1, BTRC, WNT4, APC2, WNT10A, WNT3A, WNT7B, BMP8A, WNT9B, SCRIB, AXIN2, WNT9A, BMP6, FRMD1, TGFBR2, BMP4, BMP2, LATS2, PPP2R2C, PPP2R2B, ID2, ID1, PPP2R2D, TP73
PI3K-Akt signaling pathway	5.01E-05	2.01E-03	CDKN1A, CSF3, CRTC2, FLT1, CSF1, ITGB4, FLT4, ITGA2B, LAMC2, FGF3, FGF4, COMP, CASP9, CCND3, STK11, GNGT2, CCND2, CCND1, YWHAQ, ITGB8, ITGB7, IL6R, VWF, SYK, ITGA3, ITGA2, PPP2R5B, PPP2R5A, PGF, CREB3, COL2A1, COL4A2, COL6A2, COL4A3, COL6A1, IL3RA, ITGA6, ITGA5, SGK2, EPHA2, LAMA5, PHLPP1, TNXB, ATF6B, COL11A1, COL11A2, LAMA3, PDGFB, PDGFA, FOXO3, EFNA5, RXRA, CHAD, GNG8, FGF22, ANGPT4, NGFR, LAMB3, NOS3, INSR, VEGFA, FGF17, NR4A1, EFNA3, EFNA2, COL1A2, COL5A1, PPP2R2C, LPAR5, PPP2R2B, LPAR6, FGF19, PPP2R2D, FGF18, MDM2, KRAS, TEK, PIK3AP1, FGFR3, FGFR2, BCL2L1
Focal adhesion	5.75E-05	2.01E-03	FLT1, ITGB4, FLT4, ITGA2B, LAMC2, MYLK3, COMP, CCND3, CCND2, CCND1, CAPN2, RAC2, ITGB8, ITGB7, PRKCG, VWF, ITGA3, ITGA2, ACTN4, PGF, VAV1, VAV2, COL2A1, COL4A2, COL6A2, COL4A3, COL6A1, ITGA6, ITGA5, LAMA5, TNXB, SRC, SHC1, COL11A1, COL11A2, PXN, LAMA3, PDGFB, PDGFA, CHAD, PAK6, FLNB, FLNC, PAK4, LAMB3, CAV2, CAV1, VEGFA, MYLPP, DIAPH1, COL1A2, COL5A1, PARVG, BCAR1
MAPK signaling pathway	6.70E-05	2.05E-03	FGF3, FGF4, PPP3CA, RPS6KA5, RPS6KA2, RPS6KA1, RAC2, MAP3K8, MAP4K1, DUSP4, PRKCG, MAP2K3, DUSP5, DUSP2, PLA2G4F, PLA2G4D, PLA2G4C, CACNA2D3, RRAS2, CACNA2D2, DUSP8, DUSP9, MAPK8IP3, TGFBR2, DUSP7, CACNB1, CACNB4, MRAS, DDIT3, RAPGEF2, CACNA1B, PDGFB, CACNA1A, PDGFA, CACNA1C, RASGRP2, CACNA1H, CACNA1G, CACNA1I, MAPK7, MKNK2, FLNB, FLNC, FGF22, GADD45B, GADD45A, HSPA6, NFATC1, GADD45G, FGF17, NR4A1, TAOK3, FGF19, FGF18, FAS, KRAS, PTPN7, LAMTOR3, FGFR3, MAP3K11, FGFR2, HSPA1B, HSPA1A
p53 signaling pathway	8.57E-05	2.20E-03	CDKN1A, GADD45B, CD82, APAF1, GADD45A, PPM1D, SERPINB5, GADD45G, DDB2, CASP9, CCND3, CCND2, CCND1, RRM2B, ZMAT3, PERP, SESN1, SESN2, ADGRB1, MDM2, FAS, PMAIP1, SFN, TP73
Phosphatidylinositol signaling system	8.99E-05	2.20E-03	CD51, CALML5, CALML6, INPP1, DGKA, ITPR3, PIK3C2B, INPP5B, INPP5A, PIP5K1, IMPA2, INPP5D, INPP5E, PLCG2, INPP5K, PLCE1, PIP4K2C, PIP5K1C, IP6K3, PRKCG, ITPK1, DGK2, INPP4A, ITPKC, PLCB3, SYNJ1, ITPKA, PLCD3, PLCB1, PLCB2, DGKH
Regulation of actin cytoskeleton	9.95E-05	2.22E-03	CYFIP2, CYFIP1, ITGAM, ITGB4, ITGA2B, ITGB2, WASL, MYLK3, FGF3, FGF4, ITGAX, RAC2, BDKRB1, ITGB8, ITGB7, PIP4K2C, GIT1, APC2, ITGA3, ITGA2, RRAS2, ACTN4, VAV1, VAV2, TIAM1, MRAS, ARHGEF4, ARHGEF1, ITGA6, ITGA5, EZR, SRC, PXN, PDGFB, PDGFA, FGD1, SLC9A1, PAK6, PIP5K1C, FGF22, PAK4, GSN, SSH2, BAIAP2, SSH3, MYLPP, FGF17, DIAPH1, FGF19, FGF18, KRAS, FGFR3, FGFR2, BCAR1
Axon guidance	2.52E-04	5.15E-03	SEMA7A, SEMA3B, NTN4, SEMA3G, SEMA3F, EFNA5, GNAI2, EFNB2, PPP3CA, EFNB1, ABLIM1, ABLIM2, ABLIM3, PLXNA2, RAC2, SLIT1, PAK6, SLIT3, SRGAP3, EPHB3, PAK4, NTNG2, SEMA4D, UNC5B, SEMA4B, NFATC2, SEMA4G, RHOD, NFATC4, EFNA3, EFNA2, PLXNB2, KRAS, PLXNB1, NGEF, EPHA2
Proteoglycans in cancer	3.84E-04	7.24E-03	CDKN1A, WNT2B, CCND1, CTSL, TIMP3, PLCE1, PRKCG, MMP2, ITGA2, WNT9B, PLAUR, RRAS2, FRS2, WNT9A, HSPG2, MMP9, TIAM1, MRAS, ARHGEF1, ITGA5, EZR, HBEGF, CAMK2B, CAMK2D, SDC4, SRC, PXN, ITPR3, SLC9A1, WNT6, WNT11, ERBB3, GPC1, PLCG2, FLNB, FLNC, WNT1, WNT4, WNT10A, WNT3A, CAV2, WNT7B, CAV1, VEGFA, MDM2, FAS, SDC1, KRAS, PTPN6, HPSE
Oxytocin signaling pathway	4.25E-04	7.44E-03	CAMK2B, RYR1, CDKN1A, OXTR, CAMK2D, CALML5, NPR1, CALML6, SRC, OXT, ITPR3, CACNA1C, MYLK3, GNAI2, ADCY5, PPP3CA, RGS2, MAPK7, CCND1, PRKCG, PLA2G4F, CAMK1D, PLA2G4D, NOS3, KCNJ12, PLA2G4C, KCNJ14, CACNA2D3, NFATC2, CACNA2D2, NFATC1, PRKAB1, NFATC4, CACNB1, PLCB3, CACNB4, ADCY9, KRAS, PLCB1, PLCB2
Inositol phosphate metabolism	6.30E-04	1.01E-02	ISYNA1, INPP1, ITPK1, PIK3C2B, INPP4A, INPP5B, ITPKC, PLCB3, INPP5A, SYNJ1, IMPA2, INPP5D, INPP5E, ITPKA, PLCG2, INPP5K, PLCE1, PIP5K1C, PLCH2, PIP4K2C, PLCD3, PLCB1, PLCB2
Arrhythmic right ventricular cardiomyopathy (ARVC)	7.02E-04	1.01E-02	DSP, JUP, ITGB4, ITGA3, ITGA2, LEF1, TCF7, ITGA2B, CACNA2D3, CACNA1C, CACNB1, GJA1, DES, CACNB4, SGCA, LMNA, ITGB8, ITGA6, ITGB7, ITGA5, SGCG
Glutamatergic synapse	7.16E-04	1.01E-02	GLS2, GRIK5, SLC1A2, CACNA1A, ITPR3, CACNA1C, SLC1A6, SLC1A7, GNAI2, ADCY5, PPP3CA, GRM2, GRK3, GRM4, GNGT2, GNG8, SLC17A7, SLC38A3, PRKCG, PLA2G4F, PLA2G4D, PLA2G4C, GRIN2C, GRIN1, GRIN2D, PLCB3, GRIN3B, ADCY9, PLCB1, PLCB2, SHANK3, SHANK2
Basal cell carcinoma	7.40E-04	1.01E-02	APC2, WNT10A, WNT2B, WNT3A, WNT7B, LEF1, TCF7, WNT9B, AXIN2, WNT9A, GLI1, BMP4, WNT6, SHH, BMP2, WNT11, DVL1, WNT1, WNT4
Amphetamine addiction	1.49E-03	1.92E-02	PRKCG, CAMK2B, CAMK2D, ATF6B, CALML5, MAOA, CALML6, CACNA1C, GRIN2C, SLC6A3, ADCY5, GRIN1, GRIN2D, CREB3, PPP3CA, ARC, GRIN3B, TH, PPP1R1B, FOSB, STX1A
Aldosterone synthesis and secretion	1.81E-03	2.14E-02	PRKCG, CAMK2B, CAMK2D, DAGLA, CAMK1D, ATF6B, CALML5, CALML6, NPR1, PDE2A, ITPR3, CACNA1C, CACNA1H, ADCY5, CACNA1G, NR4A2, CACNA1I, CREB3, NR4A1, PLCB3, ADCY9, PRKD2, PLCB1, PLCB2
Cocaine addiction	1.84E-03	2.14E-02	GPSM1, ATF6B, MAOA, GRIN2C, SLC6A3, ADCY5, GNAI2, GRIN1, GRIN2D, GRM2, CREB3, GRIN3B, TH, PPP1R1B, FOSB, DRD2, RGS9
Ras signaling pathway	2.15E-03	2.39E-02	FLT1, CSF1, CALML5, CALML6, FLT4, FGF3, FGF4, RASSF1, GNGT2, SYNAP1, RASSF5, RAC2, PLCE1, PRKCG, PLA2G4F, PLA2G4D, PLA2G4C, RRAS2, PGF, TIAM1, MRAS, RIN1, RAPGEF5, EPHA2, SHC1, PDGFB, PDGFA, PLA2G3, RASAL1, EFNA5, RASGRP2, PLCG2, GNG8, PAK6, FGF22, PAK4, ANGPT4, NGFR, INSR, GRIN1, VEGFA, FGF17, AFDN, EFNA3, EFNA2, FGF19, FGF18, KRAS, TEK, FGFR3, FGFR2, BCL2L1
cGMP-PKG signaling pathway	2.39E-03	2.53E-02	CALML5, ATF6B, NPR1, CALML6, ATP2A3, ATP1A3, IRS2, ADRB1, ITPR3, CACNA1C, ADRB2, MYLK3, SLC8A2, GNAI2, ADCY5, PPP3CA, RGS2, CNGA1, KCNB4, MEF2D, MEF2A, NOS3, INSR, PDE2A, ATP2B4, NFATC2, NFATC1, ATP2B2, ADRA2C, NFATC4, SLC8A3, CREB3, PLCB3, ADCY9, PDE5A, PLCB1, PLCB2, CNGB1
Adrenergic signaling in cardiomyocytes	2.60E-03	2.53E-02	CAMK2B, CAMK2D, CALML5, ATF6B, CALML6, ATP1A3, ADRB1, CACNA1C, ADRB2, GNAI2, SLC9A1, ADCY5, RPS6KA5, TNNI3, SCN5A, TNNC1, PPP2R5B, ATP2B4, CACNA2D3, PPP2R5A, CACNA2D2, ATP2B2, CACNB1, CREB3, PLCB3, CACNB4, ADCY9, PPP2R2C, PPP2R2B, PPP2R2D, PLCB1, PLCB2, MYH6, RAPGEF3, MYH7
Protein digestion and absorption	2.63E-03	2.53E-02	KCNK5, COL17A1, COL13A1, COL11A1, ELN, COL11A2, ATP1A3, SLC1A5, SLC8A2, KCNN4, PRSS3, SLC8A3, SLC9A3, COL2A1, SLC7A7, COL1A2, COL4A2, SLC7A8, COL5A1, SLC7A9, COL6A2, COL4A3, COL6A1, COL9A3, COL9A2
Dopaminergic synapse	2.68E-03	2.53E-02	CAMK2B, CAMK2D, CALML5, ATF6B, MAOA, CALML6, CACNA1B, CACNA1A, ITPR3, CACNA1C, SLC6A3, GNAI2, ARNTL, ADCY5, PPP3CA, GNGT2, KIF5A, GNG8, DRD2, PRKCG, PPP2R5B, PPP2R5A, CREB3, PLCB3, GNAL, CALY, TH, PPP2R2C, PPP2R2B, PPP2R2D, PPP1R1B, PLCB1, PLCB2
Platelet activation	3.48E-03	3.15E-02	SRC, COL11A1, COL11A2, ITGA2B, ITPR3, RASGRP2, PRKCZ, MYLK3, GNAI2, PTGS1, ADCY5, PLCG2, PLA2G4F, PTGIR, SYK, VWF, PLA2G4D, NOS3, ITGA2, PLA2G4C, VAMP8, GP9, PLCB3, COL2A1, FCG2R2A, ADCY9, COL1A2, COL5A1, P2RX1, ARHGEF1, PLCB1, PLCB2, FERMT3

Melanogenesis	3.68E-03	3.22E-02	CAMK2B, CAMK2D, WNT2B, CALML5, CALML6, TCF7, LEF1, GNAI2, ADCY5, WNT6, WNT11, DVL1, WNT1, WNT4, PRKCG, WNT10A, WNT3A, WNT7B, WNT9B, WNT9A, CREB3, PLCB3, ADCY9, MC1R, KRAS, PLCB1, PLCB2
Amoebiasis	4.23E-03	3.57E-02	LAMA5, CSF2, ITGAM, COL11A1, LAMA3, COL11A2, ITGB2, LAMC2, GNA15, MUC2, PRKCG, SERPINB3, SERPINB1, SERPINB2, LAMB3, ACTN4, SERPINB6, PLCB3, COL2A1, GNAL, COL1A2, COL4A2, COL5A1, COL4A3, PLCB1, RAB7B, PLCB2, RAB7A
Wnt signaling pathway	4.91E-03	4.00E-02	CAMK2B, CAMK2D, WNT2B, TCF7, LEF1, PPP3CA, WNT6, CCND3, PORCN, WNT11, CCND2, CCND1, DVL1, RAC2, SOST, WNT1, BTRC, WNT4, PRKCG, APC2, WNT10A, WNT3A, WNT7B, WNT9B, NFATC2, NFATC1, AXIN2, WNT9A, NFATC4, FOSL1, PLCB3, DAAM1, PLCB1, PLCB2
Pathways in cancer	5.07E-03	4.00E-02	RET, CDKN1A, WNT2B, ITGA2B, LAMC2, GLI1, FGF3, FGF4, CASP9, RASSF1, SHH, GNGT2, CCND1, CDH1, RASSF5, RAC2, BDKRB1, APC2, PRKCG, DAPK1, ITGA3, MMP2, ITGA2, NCOA4, WNT9B, WNT9A, AXIN2, MMP9, PGF, TGFBR2, BCR, PLCB3, ADCY9, COL4A2, COL4A3, RARA, ARHGEF1, ITGA6, PLCB1, PLCB2, CEBPA, LAMA5, TCF7, LAMA3, LEF1, PDGFB, PDGFA, RASGRP2, CSF2RA, FOXO1, GNAI2, ADCY5, WNT6, WNT11, RXRA, DVL1, PLCG2, GNG8, WNT1, FGF22, WNT4, WNT10A, JUP, LAMB3, WNT3A, WNT7B, VEGFA, BMP4, FGF17, BMP2, LPAR5, LPAR6, FGF19, FGF18, MDM2, FAS, KRAS, FGFR3, FGFR2, BCL2L1
Hypertrophic cardiomyopathy (HCM)	5.57E-03	4.27E-02	MYBPC3, ACE, ITGB4, ITGA3, ITGA2, TNNC1, ITGA2B, CACNA2D3, CACNA2D2, CACNA1C, PRKAB1, CACNB1, DES, CACNB4, SGCA, LMNA, ITGB8, TNNI3, ITGA6, ITGB7, ITGA5, SGCG
Bladder cancer	6.35E-03	4.71E-02	CDKN1A, DAPK1, SRC, MMP2, MMP9, VEGFA, RASSF1, RPS6KA5, CCND1, CDH1, MDM2, KRAS, FGFR3, HBEGF
Dilated cardiomyopathy	6.58E-03	4.74E-02	MYBPC3, ITGB4, ITGA3, ITGA2, TNNC1, ITGA2B, CACNA2D3, CACNA2D2, ADRB1, CACNA1C, ADCY5, CACNB1, DES, CACNB4, ADCY9, SGCA, LMNA, ITGB8, TNNI3, ITGA6, ITGB7, ITGA5, SGCG
Leukocyte transendothelial migration	7.07E-03	4.95E-02	ITGAM, NCF2, PXN, ITGB2, F11R, CLDN1, GNAI2, ICAM1, RASSF5, PLCG2, RAC2, PTK2B, JAM3, PRKCG, MMP2, ACTN4, MMP9, VAV1, VAV2, MYLPP, AFDN, CLDN5, CLDN4, CLDN7, PECAM1, ESAM, EZR, BCAR1, RAPGEF3



Supplementary table 14. KEGG pathway analysis for significant DRGs in Ad-KLF4 versus Ad-EGFP transduced samples.

Pathway	P value	FDR	Enriched genes
Ribosome	7.96E-40	2.20E-37	RPL5, RPL30, RPL3, RPL32, RPL31, RPL34, RPLP1, RPLP0, MRPS12, RPL10A, RPL9, RPL6, MRPL33, RPL7, RPS4X, RPS14, MRPL3, RPL7A, RPS16, MRPL1, RPL18A, RPS18, RPL35, RPL38, RPL37, RPS11, RPL39, RPS10, RPS13, RPS12, RPS9, RPL21, RPS7, RPS8, RPL23, RPS5, RPL22, RPS6, RPL13A, RPS3A, RPSA, RPL37A, RPL24, RPL27, RPL26, RPL29, RPL12, MRPL19, RPL11, MRPL17, MRPL15, MRPL12, MRPL11, RPS15A, RPS3, RPL14, RPL13, RPS2, RPL15, RPS27A, RPL18, RPL41, RPL35A, RPL23A, MRPL24, MRPL22, RPS26, RPS25, RPS28, RPS27, RPS29, RPL27A, RPL22L1, RPS21, RPS24, RPS23
Ribosome biogenesis in eukaryotes	1.24E-05	1.71E-03	NOP56, UTP15, POP5, NOP58, WDR36, POP7, NXT1, POP1, WDR3, HEATR1, WDR75, NAT10, SPATA5, PWP2, GNL3, RCL1, FBL, EMG1, DKC1, NHP2, DROSHA, RIOK1, RAN, MDN1
Purine metabolism	3.61E-04	3.32E-02	PDE1C, PRIM1, PRUNE1, ADK, AK2, AK4, PFAS, ZNRD1, PPAT, POLD1, TWISTNB, PDE4A, ENPP1, POLR2G, NUDT16, ADSL, PNPT1, POLR3GL, PDE4D, AMPD2, NME4, PAICS, NME1, APRT, POLE4, NME7, IMPDH2, POLR3E, POLR1C, POLR1E, POLR3G, POLR3H, HPRT1, GART

**Supplementary table 15. KEGG pathway analysis for significant URGs in Ad-KLF4 versus Ad-EGFP transduced samples on IL-1 $\beta$  stimulation.**

Pathway	P value	FDR	Enriched genes
Rap1 signaling pathway	1.80E-06	4.59E-04	FLT1, ITGAM, CSF1, CALML5, CALML6, FLT4, ITGA2B, ITGB2, SIPA1L2, ITGAL, FGF3, FGF4, FGF7, CDH1, RASSF5, RAC2, PLCE1, PRKCG, MAP2K3, PGF, TIAM1, PLCB3, MRAS, ABCY9, PRKD2, TLN2, PLCB1, PLCB2, RAPGEF3, EPHA2, RAPGEF4, RGS14, SRC, PDGFB, PDGFA, PARD6G, LPAR3, EFNA5, RASGRP2, PRKCC, RAP1GAP, GNAI2, ADCY5, PARD6A, DRD2, RALGDS, FGF22, VASP, ANGPT4, NGFR, GRIN1, MAPK13, EFNA1, FGF17, AFDN, EFNA3, EFNA2, LPAR5, FGF19, ID1, FGF18, TEK, FGFR3, FGFR2
Endocytosis	7.59E-06	9.68E-04	CLTB, ARPC5L, PSD2, PIP5K1L, PSD4, KIF5A, LDLRAP1, GIT1, PSD, SH3GLB2, VPS37D, VPS37B, ARAP1, HLA-F, DNMI1, EPN1, DNMI2, EPN2, EPN3, ACAP3, ACAP1, BIN1, TRAF6, CHMP4C, CHMP4B, STAM2, SRC, VPS4B, ASAP3, AGAP2, CXCR4, PARD6G, ASAP2, AGAP3, PRKCC, PLD2, CYTH2, GRK3, PARD6A, RAB11FIP1, CYTH4, GRK5, CXCR1, CXCR2, MVB12B, MVB12A, PIP5K1C, RAB11FIP3, CYTH1, RAB11FIP4, RAB11FIP5, RAB4A, IQSEC2, IQSEC1, IQSEC3, HSPA6, AP2B1, EHD1, IL2RB, CHMP2B, MDM2, CHMP2A, FOLR3, FOLR2, SMAP1, FOLR1, FGFR3, FGFR2, HSPA1A
Lysosome	2.86E-05	1.75E-03	IDUA, CLTB, CTSW, ABCB9, CTSV, NAGPA, CTSS, LAPTM4A, GM2A, LAMP1, CTSL, LAMP3, SMPD1, CTSK, PSAP, SLC17A5, CTSB, ACP5, ACP2, AP1S3, CTSE, CTSD, ATP6V0A1, ABCA2, ARSA, PSAPL1, ATP6AP1, AP1B1, AP3D1, LAPTM5, CTNS, MCOLN1, PLA2G15, GNPTG, NPC1, NPC2, TPP1, DNCE2, PPT2, ATP6V0D1
Hippo signaling pathway	2.90E-05	1.75E-03	CRB2, WNT2B, TCF7, LEF1, ITGB2, PARD6G, PRKCC, AREG, SAV1, AMOT, GLI2, WNT6, CCND3, PARD6A, WNT11, CCND2, CCND1, YWHAQ, CDH1, WNT1, BTRC, WNT4, TEAD3, FZD1, APC2, WNT10A, WNT3A, WNT7B, BMP8A, WNT9B, SCRB, AXIN2, WNT9A, WNT16, BMP6, FRMD1, BMP4, BMP2, LPTC2, DLG3, PPP2R2C, PPP2R2B, ID2, ID1, PPP2R2D, LLGL2, TP73
Calcium signaling pathway	3.82E-05	1.75E-03	RYR1, MYLK2, OXTR, CALML5, CALML6, ATP2A3, ATP2A1, MYLK3, SLC8A2, PPP3CA, PLCE1, PRKCG, TNNC1, TNNC2, ITPKB, ITPKC, PLCB3, ADCY9, STIM1, ORAI3, PLCB1, PLCB2, CAMK2B, CAMK2D, CAMK2A, PTAFR, CACNA1B, CACNA1A, ADRB1, ITPR3, CACNA1C, ADRB2, CACNA1H, CACNA1G, CACNA1I, GNA15, ERBB3, HRH2, ERBB2, PLCG2, PTK2B, NTSR1, NOS3, ATP2B4, ATP2B2, GRIN2C, GRIN1, GRIN2D, SLC8A3, P2RX5, P2RX1, PLCD3, PLCD1
Axon guidance	4.12E-05	1.75E-03	SEMA5A, ROBO3, SEMA7A, SEMA3B, NTN4, SEMA3G, CXCR4, SEMA3F, EFNA5, GNAI2, PPP3CA, EFNB1, ABLIM1, ABLIM2, DPYSL2, PLXNA2, RAC2, SLIT1, PAK6, SLIT3, PLXNC1, SRGAP3, EPHB3, PAK4, SEMA6C, NTNG2, SEMA4D, UNC5B, EPHA8, SEMA4B, NFATC2, SEMA4G, RHOD, NFATC4, EFNA1, EFNA3, EFNA2, PLXNB2, PLXNB1, NGEF, EPHA2
Wnt signaling pathway	1.44E-04	4.70E-03	CAMK2B, CAMK2D, WNT2B, TCF7, LEF1, CAMK2A, PSEN1, PRICKLE1, NKD2, PPP3CA, WNT6, CCND3, PORCN, WNT11, CCND2, CCND1, RAC2, SOST, WNT1, BTRC, WNT4, FZD1, PRKCG, APC2, WNT10A, WNT3A, WNT7B, CTNINBIP1, WNT9B, NFATC2, NFATC1, AXIN2, WNT9A, WNT16, NFATC4, PLCB3, VANGL2, DAAM1, DAAM2, PLCB1, PLCB2, PPARD
MAPK signaling pathway	1.47E-04	4.70E-03	HSPB1, FGF3, FGF4, PPP3CA, RPS6KA6, FGF7, RPS6KA5, RPS6KA2, RPS6KA1, RAC2, MAP3K8, MAP3K6, DUSP4, PRKCG, MAP2K3, DUSP5, MAP4K2, DUSP2, PLA2G4F, PLA2G4C, CACNA2D3, CACNA2D2, DUSP8, MAPK8IP2, DUSP9, MAPK8IP3, DUSP7, CACNB1, CACNB4, MRAS, MAPKAPK3, TRAF6, DDIT3, MAPT, CACNA1B, PDGFB, CACNA1A, PDGFA, CACNA1C, RASGRP2, RASGRP1, CACNA1H, CACNA1G, CACNA1I, CACNG8, MAPK7, NTF3, MKNK2, FLNB, FLNC, FGF22, GADD45B, HSPA6, NFATC1, GADD45G, MAPK13, FGF17, NR4A1, FGF19, FGF18, FAS, PTPN7, LAMTOR3, FGFR3, MAP3K11, FGFR2, HSPA1A
PI3K-Akt signaling pathway	2.54E-04	7.19E-03	CDKN1A, CRCC2, FLT1, CSF1, EPO, ITGB4, FLT4, ITGA2B, LAMC2, FGF3, FGF4, COMP, CASP9, CCND3, STK11, FGF7, GNGT2, CCND2, CCND1, CREB3L3, YWHAQ, ITGB7, IL6R, VWF, SYK, ITGA2, PPP2R5B, PPP2R5A, PGF, CREB3, COL2A1, COL4A3, COL6A1, IL3RA, MTCP1, ITGA7, ITGA6, SGK3, ITGA5, SGK2, EPHA2, LAMA5, PHLPP1, TNXB, ATF6B, PKN3, COL11A2, LAMA3, PDGFB, PDGFA, LPAR3, FOXO3, EFNA5, RXRA, GNG7, CHAD, GNG8, PCK1, FGF22, ANGPT4, NGFR, LAMB3, NOS3, EFNA1, FGF17, NR4A1, EFNA3, EFNA2, COL1A2, COL5A1, PPP2R2C, LPAR5, PPP2R2B, LPAR6, GNB2, FGF19, PPP2R2D, IL2RB, FGF18, MDM2, TEK, PIK3AP1, FGFR3, FGFR2, BCL2L1
Basal cell carcinoma	3.35E-04	8.55E-03	FZD1, APC2, WNT10A, WNT2B, WNT3A, WNT7B, LEF1, TCF7, WNT9B, AXIN2, WNT9A, GLI1, WNT16, GLI2, BMP4, WNT6, SHH, BMP2, WNT11, WNT1, WNT4
p53 signaling pathway	4.47E-04	1.04E-02	CDKN1A, GADD45B, APAF1, IGFBP3, PPM1D, SERPINB5, GADD45G, DDB2, CASP9, PIDD1, CCND3, CCND2, SESN3, CCND1, RRM2B, ZMAT3, PERP, SESN1, SESN2, ADGRB1, MDM2, FAS, SFN, TP73
Leukocyte transendothelial migration	5.73E-04	1.17E-02	ITGAM, NCF2, PXN, ITGB2, CXCR4, F11R, ITGAL, CLDN1, GNAI2, ICAM1, RASSF5, PLCG2, RAC2, PTK2B, JAM3, PRKCG, VAV3, VASP, MMP2, ACTN4, VAV1, MAPK13, VAV2, MYLPP, AFDN, CLDN5, CLDN4, OCLN, CLDN15, CLDN7, PECAM1, ESAM, EZR, RAPGEF3, RAPGEF4
Adrenergic signaling in cardiomyocytes	6.34E-04	1.17E-02	CAMK2B, CAMK2D, CALML5, ATF6B, CALML6, CAMK2A, ATP1A3, ADRB1, CACNA1C, ADRB2, GNAI2, ADCY5, CACNG8, RPS6KA5, CREB3L3, TNNC1, TNNC1, PPP2R5B, ATP2B4, CACNA2D3, PPP2R5A, CACNA2D2, ATP2B2, MAPK13, CACNB1, CREB3, PLCB3, CACNB4, ADCY9, PPP2R2C, PPP1R1A, PPP2R2B, KCNQ1, PPP2R2D, PLCB1, PLCB2, MYH6, RAPGEF3, MYH7, RAPGEF4
Aldosterone synthesis and secretion	6.41E-04	1.17E-02	CAMK2B, CAMK2D, DAGLA, CALML5, ATF6B, NPR1, CALML6, CAMK2A, ITPR3, CACNA1C, CACNA1H, CACNA1G, ADCY5, CACNA1I, CREB3L3, PRKCG, CAMK1D, PDE2A, NR4A2, NR4A1, CREB3, PLCB3, ADCY9, PRKD2, PLCB1, PLCB2, KCNK3
Glutamatergic synapse	1.03E-03	1.68E-02	GLS2, GRIK5, CACNA1A, ITPR3, CACNA1C, SLC1A6, SLC1A7, GNAI2, PLD2, ADCY5, PPP3CA, GRM2, GRK3, GRM4, GNGT2, GNG7, GNG8, SLC17A7, HOMER3, SLC38A3, PRKCG, PLA2G4F, PLA2G4C, GRIN2C, GRIN1, GRIN2D, PLCB3, GRIN3B, ADCY9, GNB2, PLCB1, PLCB2, SHANK3, SHANK2
Dopaminergic synapse	1.11E-03	1.68E-02	CAMK2B, CAMK2D, CALML5, ATF6B, MAOA, CALML6, CAMK2A, CACNA1B, CACNA1A, ITPR3, CACNA1C, SLC6A3, GNAI2, ARNTL, ADCY5, PPP3CA, GNGT2, CREB3L3, GNG7, KIF5A, GNG8, DRD2, PRKCG, PPP2R5B, PPP2R5A, MAPK13, CREB3, PLCB3, CALY, TH, PPP2R2C, PPP2R2B, GNB2, PPP2R2D, INPP1R1B, PLCB1, PLCB2
Inositol phosphate metabolism	1.12E-03	1.68E-02	MIOX, ISYNA1, INPP1, ITPK1, PIK3C2B, INPP5B, ITPKB, ITPKC, PLCB3, INPP5A, IMPA2, INPP5D, PIP5K1L, INPP5E, INPP5J, PLCG2, INPP5K, PLCE1, PIP5K1C, PIP4K2C, PLCD3, PLCB1, PLCB2, PLCD1
Phosphatidylinositol signaling system	1.39E-03	1.97E-02	CDS1, CALML5, CALML6, INPP1, DGKA, ITPR3, PIK3C2B, INPP5B, INPP5A, PIP5K1, IMPA2, INPP5D, INPP5E, PLCG2, INPP5J, INPP5K, PLCE1, PIP4K2C, PIP5K1C, IP6K3, PRKCG, ITPK1, ITPKB, ITPKC, PLCB3, DGKQ, PLCD3, PLCB1, PLCB2, PLCD1
Platelet activation	1.50E-03	2.02E-02	MYLK2, SRC, COL11A2, ITGA2B, ITPR3, RASGRP2, RASGRP1, PRKCC, MYLK3, GNAI2, PTGS1, ADCY5, PLCG2, VASP, PLA2G4F, PTGIR, SYK, VWF, NOS3, ITGA2, PLA2G4C, MAPK13, VAMP8, GP9, PLCB3, COL2A1, FCGR2A, ADCY9, COL1A2, STIM1, COL5A1, P2RX1, ARHGEF1, TLN2, PLCB1, PLCB2, FERMT3
Ras signaling pathway	1.73E-03	2.20E-02	FLT1, CSF1, CALML5, CALML6, FLT4, FGF3, FGF4, FGF7, GNGT2, SYNGAP1, RASSF5, RAC2, PLCE1, PRKCG, PLA2G4F, PLA2G4C, PGF, TIAM1, MRAS, PLA2G10, RIN1, EXOC2, EPHA2, SHC1, PDGFB, PDGFA, PLA2G3, RASAL1, FOXO4, EFNA5, PLA2G6, RASGRP2, RASGRP1, PLD2, GNG7, PLCG2, GNG8, PAK6, RALGDS, FGF22, PAK4, ANGPT4, NGFR, GRIN1, EFNA1, FGF17, AFDN, EFNA3, EFNA2, GNB2, FGF19, FGF18, TEK, RGL1, FGFR3, FGFR2, BCL2L1
Oxytocin signaling pathway	1.85E-03	2.24E-02	CAMK2B, RYR1, MYLK2, CDKN1A, OXTR, CAMK2D, CALML5, NPR1, CALML6, SRC, CAMK2A, PRKAG2, OXT, ITPR3, CACNA1C, MYLK3, GNAI2, ADCY5, PPP3CA, CACNG8, MAPK7, CCND1, PRKCG, KCNJ4, PLA2G4F, CAMK1D, NOS3, KCNJ12, PLA2G4C, CACNA2D3, NFATC2, CACNA2D2, NFATC1, PRKAB1, NFATC4, CACNB1, PLCB3, CACNB4, ADCY9, PLCB1, PLCB2
Melanogenesis	1.96E-03	2.28E-02	CAMK2B, CAMK2D, WNT2B, CALML5, CALML6, TCF7, LEF1, CAMK2A, GNAI2, ADCY5, WNT6, WNT11, CREB3L3, WNT1, WNT4, FZD1, PRKCG, WNT10A, WNT3A, WNT7B, WNT9B, MITF, WNT9A, WNT16, CREB3, PLCB3, ADCY9, MC1R, PLCB1, PLCB2
Arrhythmogenic right ventricular cardiomyopathy (ARVC)	2.86E-03	3.17E-02	DSP, JUP, ITGB4, ITGA2, LEF1, TCF7, ITGA2B, CACNA2D3, CACNA2D2, CACNA1C, CACNB1, GJA1, CACNG8, DES, CACNB4, SGCA, LMNA, ITGA7, ITGA6, ITGB7, ITGA5, SGCG
Cell adhesion molecules (CAMs)	4.11E-03	4.37E-02	SELPLG, ITGAM, ITGB2, NRXN2, F11R, ITGAL, CLDN1, ICAM1, SPN, HLA-DMA, CDH4, CDH3, CDH1, NRCAM, MADCAM1, ITGB7, NEO1, LRRRC4B, HLA-DPA1, JAM3, NTNG2, CADM3, HLA-F, CLDN5, NFASC, CLDN4, OCLN, VCAN, CLDN15, CD6, CLDN7, PECAM1, SDC1, ITGA6, ESAM, CDH15, CD22, NECTIN1

**Supplementary table 16. KEGG pathway analysis for significant DRGs in Ad-KLF4 versus Ad-EGFP transduced samples on IL-1 $\beta$  stimulation.**

Pathway	P value	FDR	Enriched genes
Ribosome	8.52E-22	2.22E-19	RPL5, RPL30, RPL32, RPL31, RPL34, RPLP1, RPLP0, RPL10A, RPL9, RPL6, RPS4X, RPS14, MRPL3, RPL7A, RPS17, RPL18A, RPS18, RPL35, RPL37, RPS11, RPL39, RPS10, RPS13, RPS7, RPL23, RPS5, RPL22, RPS6, RPL13A, RPS3A, RPSA, RPL37A, RPL24, RPL27, RPL29, RPL12, RPL11, RPL36A, MRPL15, MRPL12, MRPL11, RPS3, RPL14, RPL15, RPS27A, RPL18, RPL41, MRPL23, MRPL24, RPS26, RPS25, RPS29, RPL27A, RPL22L1, RPS23
TNF signaling pathway	3.48E-07	4.54E-05	CSF2, TNFAIP3, CXCL1, CXCL3, PTGS2, CXCL2, BAG4, CASP3, CCL5, AKT3, CCL2, MAP2K6, MAP3K5, EDN1, VCAM1, JAG1, CCL20, MMP3, LIF, TRAF1, MAPK12, NFKB1, IL6, PIK3CA, IL1B, TRAF5, BIRC2, BIRC3, CREB5
Ribosome biogenesis in eukaryotes	8.52E-07	7.41E-05	RBM28, POP5, POP1, WDR3, HEATR1, NAT10, SNU13, SPATA5, WDR43, NOL6, FBL, EMG1, RIOK1, MDN1, NOP56, UTP15, UTP6, NOP58, WDR36, WDR75, GNL3, RCL1, DKC1, NHP2, RAN
Pathways in cancer	8.76E-05	4.69E-03	CXCL8, CBLB, ETS1, FGF2, IGF1R, MYC, CASP3, SUFU, AKT3, BDKRB2, ITGAV, SKP2, APPL1, PDGFRB, WNT5B, MMP1, WNT5A, F2R, TRAF1, TGFB1, RUNX1, AR, PIK3CA, SMO, TRAF5, CKS2, BIRC5, BIRC2, BIRC3, LPAR1, LPAR4, CBL, PTGS2, HIF1A, EGFR, GNG2, GNA12, BID, SMAD2, ARNT2, STAT5B, TGFB2, FZD3, FZD2, SMAD3, TGFB3, CDKN2A, FZD9, FN1, VEGFB, VEGFC, FZD8, GNG12, GNG11, NFKB1, NFKB2, IL6, CXCL12, CDK6, CDK4, GNB4
Legionellosis	8.98E-05	4.69E-03	HSPA8, CXCL8, BNIP3, CXCL1, CXCL3, CXCL2, NFKB1, HSPD1, NFKB2, EEF1A1, IL6, IL1B, CASP3, CASP1, IL12A, SEC22B
Cell cycle	1.78E-04	7.73E-03	CCNH, BUB1B, TTK, CDC14A, CCNB1, PTTG1, MYC, BUB3, E2F5, SKP2, SMAD2, TGFB2, SMAD3, TGFB3, CDKN2A, PLK1, CDC25C, CCNA2, DBF4, TFDP1, CDK6, CDK4, ANAPC1, MCM2, ATR, MAD2L1

**Supplementary table 17. Summary of ChIP-seq samples.**

Type of cell sample	Sample name	Read count	Peak count
HA-KLF4 transfected cells	HA-KLF4_CHIP_1	162,353,773	111,486
	HA-KLF4_CHIP_2	87,796,065	133,050
	HA-KLF4_IgG-control	95,566,666	253
	HA-KLF4_input	103,260,354	-
Empty vector transfected cells	Empty_CHIP	120,358,677	800
	Empty_input	107,266,691	-

**Supplementary table 18. Gene ontology analysis for ChIP-seq peaks.**

Gene ontology term (GO Biological Process)	Binomial <i>P</i> -value	Binomial FDR
regulation of generation of precursor metabolites and energy	2.20432e-186	4.46086e-184
negative regulation of phospholipid metabolic process	1.13969e-179	2.11148e-177
negative regulation of phospholipid biosynthetic process	2.79295e-170	4.83401e-168
regulation of myotube differentiation	3.97078e-167	6.52896e-165
positive regulation of vascular permeability	1.62615e-155	2.43072e-153
platelet-derived growth factor receptor-beta signaling pathway	1.27942e-152	1.71729e-150
apoptotic cell clearance	2.47582e-139	2.75991e-137
endoplasmic reticulum unfolded protein response	2.49979e-137	2.74019e-135
regulation of vascular permeability	2.13695e-135	2.28532e-133
negative regulation of intrinsic apoptotic signaling pathway	1.93118e-130	1.93914e-128
positive regulation of metanephric mesenchymal cell migration by platelet-derived growth factor receptor-beta signaling pathway	2.13149e-124	2.03171e-122
adhesion of symbiont to host	5.14010e-123	4.79524e-121
negative regulation of protein import into nucleus, translocation	1.53306e-120	1.36256e-118
regulation of metanephric mesenchymal cell migration	5.17985e-120	4.54238e-118
negative regulation of glycolytic process	1.03732e-119	8.97690e-118
regulation of ARF protein signal transduction	3.78675e-117	3.09385e-115
negative regulation of phosphatidylinositol biosynthetic process	1.73564e-115	1.36710e-113
integrin biosynthetic process	4.15618e-114	3.19710e-112
liver regeneration	7.20208e-114	5.47608e-112
positive regulation of protein sumoylation	5.22365e-113	3.86022e-111
negative regulation of Notch signaling pathway	3.44071e-112	2.45973e-110
osteoblast development	2.01748e-104	1.31376e-102
cerebellar Purkinje cell-granule cell precursor cell signaling involved in regulation of granule cell precursor cell proliferation	5.19671e-104	3.31833e-102
positive regulation of cerebellar granule cell precursor proliferation	5.70945e-104	3.62812e-102
sarcosine catabolic process	3.79472e-103	2.37694e-101
negative regulation of carbohydrate metabolic process	8.12772e-103	5.06692e-101
anatomical structure regression	1.81360e-101	1.10445e-99
regulation of necrotic cell death	3.12533e-101	1.89450e-99
positive regulation of translational initiation by iron	7.45355e-101	4.41639e-99
regulation of cerebellar granule cell precursor proliferation	1.00956e-100	5.92849e-99
nuclear-transcribed mRNA catabolic process, nonsense-mediated decay	1.38710e-100	8.10931e-99
positive regulation of nuclease activity	9.90067e-99	5.66232e-97
recognition of apoptotic cell	1.88701e-97	1.04733e-95
negative regulation of cellular carbohydrate metabolic process	1.25214e-96	6.86278e-95
peroxisome proliferator activated receptor signaling pathway	2.09241e-96	1.14206e-94
regulation of metaphase plate congression	8.93726e-96	4.81806e-94
positive regulation of mRNA catabolic process	2.95387e-95	1.58593e-93
positive regulation of mRNA metabolic process	3.38428e-95	1.80963e-93
regulation of translational initiation by iron	2.66985e-94	1.39917e-92
compartment pattern specification	1.15556e-93	6.03185e-92
positive regulation of myotube differentiation	6.87816e-93	3.54805e-91
regulation of branching involved in salivary gland morphogenesis by epithelial-mesenchymal signaling	6.92287e-92	3.46249e-90
embryonic lung development	6.92287e-92	3.46249e-90
regulation of glycolytic process	1.00857e-91	5.00633e-90
N-terminal peptidyl-alanine trimethylation	4.26710e-91	2.09438e-89
N-terminal peptidyl-glycine methylation	4.26710e-91	2.09438e-89
N-terminal peptidyl-proline dimethylation	4.26710e-91	2.09438e-89
N-terminal peptidyl-serine dimethylation	4.26710e-91	2.09438e-89
N-terminal peptidyl-serine trimethylation	4.26710e-91	2.09438e-89
virion attachment to host cell	8.54443e-91	4.11697e-89
positive regulation of transcription from RNA polymerase II promoter in response to stress	1.69622e-90	8.14308e-89
mitotic spindle organization in nucleus	1.78104e-90	8.51920e-89
regulation of mitochondrial membrane permeability involved in programmed necrotic cell death	4.55689e-90	2.15616e-88
positive regulation of nuclear-transcribed mRNA catabolic process, deadenylation-dependent decay	4.98083e-90	2.34831e-88
regulation of cellular ketone metabolic process by regulation of transcription from RNA polymerase II promoter	6.88578e-90	3.23484e-88
corpus callosum development	9.32334e-90	4.36439e-88
regulation of proton-transporting ATPase activity, rotational mechanism	1.91752e-89	8.94433e-88
lobar bronchus development	1.00114e-88	4.58851e-87
negative regulation of ATP metabolic process	1.23389e-88	5.63564e-87
coronary vein morphogenesis	2.69783e-87	1.21117e-85
negative regulation of myeloid leukocyte mediated immunity	1.09748e-85	4.79609e-84
negative regulation of blood vessel remodeling	6.33181e-85	2.73976e-83
cytoplasmic sequestering of protein	7.00954e-85	3.02307e-83
phagocytosis, recognition	9.84212e-85	4.21705e-83

primitive erythrocyte differentiation	1.11134e-84	4.74629e-83
regulation of gene expression by genetic imprinting	3.04124e-84	1.29464e-82
negative regulation of myotube differentiation	2.60085e-83	1.08608e-81
negative regulation of neutrophil activation	2.96659e-83	1.23489e-81
negative regulation of neutrophil degranulation	1.02851e-82	4.24109e-81
positive regulation of triglyceride biosynthetic process	1.46280e-82	6.01301e-81
negative regulation of leukocyte degranulation	3.14594e-82	1.27721e-80
positive regulation of lamellipodium assembly	5.37804e-81	2.15023e-79
notochord regression	6.59551e-81	2.62901e-79
positive regulation of lamellipodium organization	1.19506e-80	4.74921e-79
negative regulation of peptidyl-tyrosine phosphorylation	2.47096e-80	9.76065e-79
regulation of leukocyte degranulation	2.65240e-80	1.04460e-78
regulation of cell projection size	3.81719e-80	1.49884e-78
regulation of mRNA catabolic process	3.88732e-80	1.52184e-78
peptidyl-glycine modification	4.35079e-80	1.69823e-78
regulation of somitogenesis	8.72363e-80	3.38497e-78
floor plate morphogenesis	1.78107e-79	6.87042e-78
negative regulation of inner ear receptor cell differentiation	1.85942e-79	7.15171e-78
regulation of triglyceride biosynthetic process	2.27697e-79	8.73215e-78
negative regulation of very-low-density lipoprotein particle clearance	3.61769e-79	1.37139e-77
protein trimerization	2.76184e-78	1.03798e-76
activation of signaling protein activity involved in unfolded protein response	4.07016e-78	1.52532e-76
negative regulation of endodermal cell differentiation	1.09043e-77	4.05183e-76
positive regulation of beta-amyloid clearance	1.24303e-77	4.58007e-76
negative regulation of tumor necrosis factor production	7.08072e-77	2.56583e-75
negative regulation of toll-like receptor 9 signaling pathway	8.79796e-77	3.17935e-75
regulation of neutrophil activation	1.27049e-76	4.57863e-75
inhibition of neuroepithelial cell differentiation	2.67657e-76	9.56727e-75
negative regulation of tumor necrosis factor superfamily cytokine production	6.69259e-76	2.37289e-74
regulation of myeloid leukocyte mediated immunity	6.78810e-76	2.40029e-74
negative regulation of dendritic cell apoptotic process	1.96416e-75	6.90816e-74
floor plate formation	2.12125e-75	7.44078e-74
receptor-mediated virion attachment to host cell	8.16361e-75	2.83335e-73
regulation of phospholipid catabolic process	2.05595e-74	7.04270e-73
regulation of neutrophil degranulation	2.19433e-73	7.38215e-72
negative regulation of interferon-beta production	2.24847e-73	7.54499e-72
negative regulation of oligodendrocyte apoptotic process	5.15471e-73	1.72094e-71
negative regulation of renal albumin absorption	5.15471e-73	1.72094e-71
tRNA thio-modification	1.06257e-72	3.52954e-71
negative regulation of auditory receptor cell differentiation	3.31206e-72	1.09190e-70
regulation of vascular endothelial growth factor signaling pathway	8.82886e-72	2.88892e-70
nucleus localization	2.54198e-71	8.23578e-70
IRE1-mediated unfolded protein response	4.39152e-71	1.41931e-69
regulation of pri-miRNA transcription from RNA polymerase II promoter	4.82381e-71	1.55521e-69
response to hydrostatic pressure	5.28959e-71	1.69705e-69
response to muscle inactivity	6.72715e-71	2.15302e-69
inner medullary collecting duct development	9.26247e-71	2.95008e-69
response to denervation involved in regulation of muscle adaptation	1.11060e-70	3.52871e-69
ventral midline development	3.25850e-70	1.02787e-68
smoothened signaling pathway involved in regulation of cerebellar granule cell precursor cell proliferation	3.25850e-70	1.02787e-68
regulation of blood vessel remodeling	9.56045e-70	2.98713e-68
transcytosis	1.55947e-69	4.84948e-68
regulation of renal albumin absorption	3.60216e-69	1.11227e-67
regulation of platelet-derived growth factor receptor signaling pathway	4.86712e-69	1.49584e-67
positive regulation of transcription from RNA polymerase II promoter in response to endoplasmic reticulum stress	1.30941e-68	4.01490e-67
negative regulation of interferon-alpha production	6.83223e-68	2.06600e-66
response to water	7.66508e-68	2.30724e-66
regulation of cellular ketone metabolic process by negative regulation of transcription from RNA polymerase II promoter	1.81972e-66	5.44012e-65
vascular smooth muscle cell development	3.41791e-66	1.01488e-64
positive regulation of myoblast fusion	1.02513e-65	3.03025e-64
ventral spinal cord interneuron specification	1.21662e-65	3.58820e-64
atrioventricular valve formation	1.71557e-65	5.03718e-64
negative regulation of pri-miRNA transcription from RNA polymerase II promoter	2.88157e-65	8.44190e-64
positive regulation of cholesterol metabolic process	3.07795e-65	8.99720e-64
regulation of myoblast fusion	4.14273e-65	1.20828e-63
re-entry into mitotic cell cycle	1.35478e-64	3.92528e-63
response to inactivity	1.38241e-64	3.99653e-63

regulation of platelet-derived growth factor receptor-beta signaling pathway	2.27324e-64	6.52888e-63
regulation of cellular response to vascular endothelial growth factor stimulus	3.02431e-64	8.64820e-63
paramesonephric duct development	3.67911e-64	1.04978e-62
negative regulation of endoplasmic reticulum unfolded protein response	1.02167e-63	2.87775e-62
histone H3 deacetylation	1.18189e-63	3.31482e-62
negative regulation of type I interferon production	1.51230e-63	4.22351e-62
negative regulation of vascular endothelial growth factor receptor signaling pathway	5.14403e-63	1.43357e-61
positive regulation of triglyceride metabolic process	5.20216e-63	1.44671e-61
hematopoietic stem cell migration to bone marrow	9.57076e-63	2.65599e-61
cellular protein complex localization	4.01714e-62	1.10547e-60
positive regulation of protein maturation	9.21885e-62	2.51587e-60
dentinogenesis	1.43013e-61	3.88677e-60
regulation of lamellipodium assembly	2.22773e-61	6.01716e-60
secretory columnar luminal epithelial cell differentiation involved in prostate glandular acinus development	2.25424e-61	6.07628e-60
genetic imprinting	3.22360e-61	8.65371e-60
platelet aggregation	6.34974e-61	1.70111e-59
osteoclast maturation	1.17357e-60	3.13762e-59
dorsal spinal cord development	1.31134e-60	3.49178e-59
regulation of nuclease activity	7.28940e-60	1.91769e-58
multi-organism membrane organization	9.59867e-60	2.52018e-58
tRNA wobble position uridine thiolation	1.12074e-59	2.93670e-58
positive regulation of release of cytochrome c from mitochondria	1.25947e-59	3.29366e-58
negative regulation of glial cell apoptotic process	1.74307e-59	4.54027e-58
cardiac vascular smooth muscle cell development	2.45658e-59	6.36099e-58
protein kinase C signaling	2.82976e-59	7.29857e-58
positive regulation of protein processing	3.64294e-59	9.35921e-58
regulation of protein sumoylation	4.70456e-59	1.20396e-57
positive regulation of viral entry into host cell	4.91672e-59	1.25582e-57
wound healing, spreading of epidermal cells	8.03168e-59	2.03955e-57
cytoplasm organization	9.81080e-59	2.48654e-57
mitral valve formation	1.27533e-58	3.21991e-57
ventral spinal cord interneuron fate commitment	1.34800e-58	3.39685e-57
proximal tubule development	1.73479e-58	4.36317e-57
negative regulation of cell growth involved in cardiac muscle cell development	4.57644e-58	1.14012e-56
argininosuccinate metabolic process	5.12109e-58	1.27340e-56
chorio-allantoic fusion	7.12944e-58	1.76945e-56
glomerular mesangial cell development	8.26018e-58	2.04622e-56
negative regulation of platelet-derived growth factor receptor-beta signaling pathway	8.93351e-58	2.20886e-56
Golgi vesicle fusion to target membrane	1.47627e-57	3.64332e-56
retinoic acid receptor signaling pathway	2.72735e-57	6.69319e-56
positive regulation of nuclear-transcribed mRNA poly(A) tail shortening	1.53361e-56	3.71513e-55
positive regulation of protein kinase D signaling	1.79358e-56	4.32894e-55
protein heterotrimerization	4.36372e-56	1.04745e-54
exit from mitosis	4.47671e-56	1.07262e-54
N-terminal protein amino acid methylation	4.90656e-56	1.17347e-54
glomerular mesangium development	5.70616e-56	1.36223e-54
negative regulation of uterine smooth muscle contraction	8.16051e-56	1.94111e-54
positive regulation of cholesterol biosynthetic process	1.64559e-55	3.90020e-54
positive regulation of anterior head development	2.00508e-55	4.74366e-54
regulation of mitophagy	3.97376e-55	9.35077e-54
regulation of cell growth by extracellular stimulus	8.73138e-55	2.03639e-53
positive regulation of receptor catabolic process	2.34878e-54	5.44900e-53
miRNA mediated inhibition of translation	2.78896e-54	6.45881e-53
regulation of phosphatidylcholine catabolic process	3.04712e-54	7.04426e-53
positive regulation of dendritic cell chemotaxis	5.51340e-54	1.27234e-52
establishment or maintenance of polarity of embryonic epithelium	5.72688e-54	1.31929e-52
outer medullary collecting duct development	5.72688e-54	1.31929e-52
positive regulation of mitochondrial membrane permeability	7.02812e-54	1.61340e-52
macrophage cytokine production	8.45507e-54	1.93760e-52
regulation of toll-like receptor 9 signaling pathway	8.60393e-54	1.96486e-52
positive regulation of epidermal growth factor receptor signaling pathway	1.47727e-53	3.35613e-52
negative regulation of lipoprotein particle clearance	2.52446e-53	5.69584e-52
heparan sulfate proteoglycan catabolic process	3.66696e-53	8.24534e-52
potassium ion export across plasma membrane	3.70744e-53	8.32213e-52
mRNA transcription	6.68500e-53	1.49803e-51
mRNA transcription from RNA polymerase II promoter	1.04293e-52	2.31736e-51

positive regulation of keratinocyte differentiation	1.36364e-52	3.01974e-51
nuclear membrane organization	1.51460e-52	3.34841e-51
positive regulation of metanephros development	2.35137e-52	5.17224e-51
mitochondrial outer membrane permeabilization involved in programmed cell death	4.92041e-52	1.07692e-50
cellular response to pH	2.75517e-51	5.96076e-50
regulation of beta-amyloid clearance	5.30954e-51	1.14494e-49
negative regulation of phosphatidylcholine biosynthetic process	6.97090e-51	1.49584e-49
positive regulation of interleukin-10 secretion	7.22663e-51	1.54819e-49
fibroblast proliferation	1.17591e-50	2.50291e-49
plasma membrane repair	1.48144e-50	3.14812e-49
collecting duct development	1.69166e-50	3.58327e-49
regulation of lipoprotein particle clearance	1.70808e-50	3.61223e-49
maintenance of protein localization in organelle	3.29609e-50	6.91496e-49
collagen biosynthetic process	5.39323e-50	1.12429e-48
cellular response to arsenic-containing substance	7.75391e-50	1.60875e-48
regulation of Schwann cell proliferation	9.26767e-50	1.91980e-48
cerebellar molecular layer formation	2.12073e-49	4.36558e-48
Notch signaling pathway involved in arterial endothelial cell fate commitment	2.12073e-49	4.36558e-48
axial mesoderm formation	3.08131e-49	6.31332e-48
negative regulation of membrane hyperpolarization	3.55984e-49	7.28246e-48
response to vitamin E	3.60477e-49	7.36290e-48
positive regulation of transcription from RNA polymerase II promoter in response to hypoxia	3.67351e-49	7.49168e-48
ribosomal small subunit assembly	4.74926e-49	9.65562e-48
spinal cord association neuron differentiation	6.93810e-49	1.40839e-47
positive regulation of membrane permeability	8.87920e-49	1.79965e-47
granulocyte differentiation	1.72557e-48	3.46537e-47
negative regulation of endoplasmic reticulum stress-induced intrinsic apoptotic signaling pathway	2.13304e-48	4.25766e-47
positive regulation of cell fate commitment	3.74468e-48	7.41831e-47
negative regulation of toll-like receptor signaling pathway	5.00274e-48	9.86597e-47
regulation of IRE1-mediated unfolded protein response	1.58401e-47	3.07770e-46
response to vitamin K	1.96617e-47	3.80897e-46
negative regulation of inclusion body assembly	2.87620e-47	5.54744e-46
aldehyde biosynthetic process	3.29246e-47	6.33173e-46
malonate catabolic process	4.47751e-47	8.56064e-46
glomerular mesangial cell differentiation	5.49351e-47	1.04727e-45
negative regulation of protein tyrosine kinase activity	6.98521e-47	1.32779e-45
Peyer's patch development	7.59796e-47	1.44219e-45
lateral inhibition	7.66270e-47	1.45238e-45
dichotomous subdivision of terminal units involved in lung branching	4.77898e-46	8.89146e-45
cardiac vascular smooth muscle cell differentiation	6.89691e-46	1.27419e-44
primitive hemopoiesis	7.60355e-46	1.40276e-44
regulation of aerobic respiration	7.67487e-46	1.41394e-44
endocytic recycling	1.14517e-45	2.10680e-44
peptidyl-lysine deacetylation	1.29852e-45	2.38558e-44
comma-shaped body morphogenesis	1.43971e-45	2.63392e-44
regulation of non-motile cilium assembly	1.57525e-45	2.87790e-44
protein localization involved in establishment of planar polarity	1.59884e-45	2.91694e-44
negative regulation of hepatocyte growth factor biosynthetic process	3.36058e-45	6.09725e-44
diacylglycerol metabolic process	7.33821e-45	1.32592e-43
protein import into peroxisome matrix, translocation	1.49279e-44	2.68989e-43
regulation of viral entry into host cell	2.27208e-44	4.05521e-43
behavioral response to nicotine	2.49312e-44	4.44369e-43
positive regulation of IRE1-mediated unfolded protein response	2.64001e-44	4.69914e-43
prostaglandin metabolic process	2.67760e-44	4.75961e-43
heterochromatin organization	2.87789e-44	5.10873e-43
histone H3-K9 demethylation	6.67453e-44	1.17533e-42
regulation of oxidative phosphorylation	6.86593e-44	1.20741e-42
negative regulation of Schwann cell proliferation	8.16446e-44	1.43194e-42
metanephric tubule morphogenesis	8.64711e-44	1.51457e-42
intermediate filament organization	1.32309e-43	2.31128e-42
nuclear migration	1.88803e-43	3.28942e-42
dephosphorylation of RNA polymerase II C-terminal domain	2.57477e-43	4.46814e-42
entrainment of circadian clock by photoperiod	3.36894e-43	5.83860e-42
maturation of SSU-rRNA from tricistronic rRNA transcript (SSU-rRNA, 5.8S rRNA, LSU-rRNA)	3.39068e-43	5.86856e-42
positive regulation of syncytium formation by plasma membrane fusion	4.00967e-43	6.93077e-42
prostaglandin biosynthetic process	4.48546e-43	7.74301e-42
regulation of syncytium formation by plasma membrane fusion	4.77461e-43	8.23136e-42
D-serine transport	6.40325e-43	1.09959e-41
inositol phosphate catabolic process	7.08563e-43	1.21518e-41



negative regulation of PERK-mediated unfolded protein response	1.07747e-42	1.83588e-41
photoperiodism	1.08775e-42	1.85100e-41
Peyer's patch morphogenesis	1.21035e-42	2.05697e-41
positive regulation of protein kinase C signaling	1.54397e-42	2.61718e-41
negative regulation of mRNA splicing, via spliceosome	1.71916e-42	2.91040e-41
TORC1 signaling	2.18050e-42	3.68194e-41
positive regulation of Wnt-mediated midbrain dopaminergic neuron differentiation	2.23496e-42	3.76906e-41
bone marrow development	2.53788e-42	4.26895e-41
negative regulation of Notch signaling pathway involved in somitogenesis	3.22780e-42	5.41563e-41
heterochromatin assembly	7.61208e-42	1.26586e-40
positive regulation of skeletal muscle tissue growth	1.09202e-41	1.81141e-40
negative regulation of platelet-derived growth factor receptor signaling pathway	1.10983e-41	1.83863e-40
transition between slow and fast fiber	1.11726e-41	1.84860e-40
fusion of virus membrane with host plasma membrane	1.30693e-41	2.15161e-40
positive regulation of dermatome development	1.51085e-41	2.47802e-40
death-inducing signaling complex assembly	1.96137e-41	3.20496e-40
regulation of transcription of nuclear large rRNA transcript from RNA polymerase I promoter	3.21641e-41	5.24271e-40
cysteinyl-tRNA aminoacylation	4.32126e-41	7.01750e-40
sucrose transport	7.20445e-41	1.16422e-39
negative regulation of G1/S transition of mitotic cell cycle by negative regulation of transcription from RNA polymerase II promoter	9.53129e-41	1.53834e-39
peroxisome transport along microtubule	1.00728e-40	1.62374e-39
protein import into peroxisome matrix, substrate release	1.00728e-40	1.62374e-39
calcium ion regulated lysosome exocytosis	1.10791e-40	1.78160e-39
positive regulation of intrinsic apoptotic signaling pathway in response to DNA damage	1.29096e-40	2.07088e-39
regulation of atrial cardiac muscle cell membrane repolarization	1.30810e-40	2.09583e-39
regulation of exit from mitosis	1.54097e-40	2.46293e-39
positive regulation of platelet-derived growth factor receptor signaling pathway	1.82639e-40	2.90852e-39
negative regulation of NIK/NF-kappaB signaling	2.94673e-40	4.66441e-39
virion assembly	3.21012e-40	5.06914e-39
negative regulation of mesenchymal cell apoptotic process involved in nephron morphogenesis	3.64399e-40	5.74736e-39
negative regulation of RIG-I signaling pathway	4.99963e-40	7.87606e-39
cytoplasmic sequestering of transcription factor	5.02367e-40	7.90447e-39
surfactant homeostasis	5.72172e-40	8.99206e-39
DNA methylation involved in embryo development	6.09945e-40	9.57424e-39
sphingomyelin catabolic process	7.36564e-40	1.15480e-38
regulation of oxidative phosphorylation uncoupler activity	1.16080e-39	1.81776e-38
negative regulation of oxidative phosphorylation uncoupler activity	1.21649e-39	1.90270e-38
regulation of inclusion body assembly	1.25988e-39	1.96822e-38
renal filtration	1.35508e-39	2.11444e-38
positive regulation of lysosomal protein catabolic process	3.35125e-39	5.16187e-38
neuronal signal transduction	3.45335e-39	5.31291e-38
central nervous system vasculogenesis	3.48656e-39	5.35774e-38
choline catabolic process	3.94859e-39	6.05358e-38
negative regulation of platelet activation	4.54144e-39	6.94629e-38
neuromuscular synaptic transmission	4.60425e-39	7.03418e-38
cell-cell signaling involved in mammary gland development	4.61572e-39	7.04352e-38
ESCRT III complex assembly	5.01389e-39	7.64225e-38
inositol trisphosphate metabolic process	8.97736e-39	1.35578e-37
low-density lipoprotein particle clearance	9.33192e-39	1.40771e-37
protein polyglycylation	1.36829e-38	2.05932e-37
renal system process involved in regulation of blood volume	1.90266e-38	2.85052e-37
negative regulation of gluconeogenesis	2.05097e-38	3.06923e-37
regulation of skeletal muscle adaptation	2.49012e-38	3.71794e-37
diacylglycerol catabolic process	2.52473e-38	3.76107e-37
orthogonal dichotomous subdivision of terminal units involved in lung branching morphogenesis	3.44407e-38	5.11901e-37
planar dichotomous subdivision of terminal units involved in lung branching morphogenesis	3.44407e-38	5.11901e-37
lateral sprouting involved in lung morphogenesis	3.44407e-38	5.11901e-37
metanephric comma-shaped body morphogenesis	4.23291e-38	6.26318e-37
establishment of blood-brain barrier	4.82305e-38	7.12036e-37
negative regulation of stem cell population maintenance	5.04148e-38	7.43449e-37
regulation of proton transport	6.78473e-38	9.96053e-37
cerebellar Purkinje cell layer structural organization	9.19834e-38	1.34588e-36
D-alanine transport	9.86154e-38	1.43972e-36
histone H4 deacetylation	1.58308e-37	2.29591e-36
notochord cell development	2.22514e-37	3.21996e-36

mitotic DNA replication	2.54881e-37	3.68429e-36
base-excision repair, AP site formation	3.26719e-37	4.70204e-36
phosphatidylcholine acyl-chain remodeling	3.76946e-37	5.41304e-36
positive regulation of brown fat cell differentiation	6.42887e-37	9.18190e-36
positive regulation of non-motile cilium assembly	7.03428e-37	1.00357e-35
lobar bronchus epithelium development	7.24152e-37	1.03201e-35
regulation of PERK-mediated unfolded protein response	7.40793e-37	1.05459e-35
negative regulation of apoptotic process involved in morphogenesis	9.26660e-37	1.30927e-35
oxalic acid secretion	1.25481e-36	1.76910e-35
proline metabolic process	1.40822e-36	1.98327e-35
phagolysosome assembly	1.61875e-36	2.27734e-35
positive regulation of cell proliferation by VEGF-activated platelet derived growth factor receptor signaling pathway	4.77413e-36	6.67364e-35
positive regulation of anoikis	5.38776e-36	7.52342e-35
positive regulation of glutamate receptor signaling pathway	1.02083e-35	1.41646e-34
cellular component disassembly involved in execution phase of apoptosis	1.05536e-35	1.46282e-34
negative regulation of protein homotetramerization	1.31835e-35	1.82543e-34
regulation of dendritic cell chemotaxis	1.41482e-35	1.95489e-34
response to stimulus involved in regulation of muscle adaptation	1.43765e-35	1.98019e-34
positive regulation of protein catabolic process in the vacuole	2.16058e-35	2.96044e-34
cholesterol catabolic process	2.48064e-35	3.39193e-34
metanephric collecting duct development	3.24487e-35	4.43230e-34
kidney rudiment formation	5.31573e-35	7.20856e-34
synaptic vesicle membrane organization	5.79134e-35	7.83738e-34
negative regulation of viral-induced cytoplasmic pattern recognition receptor signaling pathway	5.79772e-35	7.83795e-34
C21-steroid hormone biosynthetic process	6.30194e-35	8.51086e-34
smoothened signaling pathway involved in ventral spinal cord patterning	7.50878e-35	1.01199e-33
positive regulation of tongue muscle cell differentiation	9.23062e-35	1.23898e-33
establishment of planar polarity of embryonic epithelium	9.71818e-35	1.30176e-33
negative regulation of pro-B cell differentiation	1.16419e-34	1.55312e-33
motor neuron apoptotic process	1.26535e-34	1.68636e-33
negative regulation of defense response to virus	1.26912e-34	1.68968e-33
mature B cell differentiation involved in immune response	1.44269e-34	1.91882e-33
odontoblast differentiation	1.46015e-34	1.94008e-33
lipopolysaccharide transport	1.74521e-34	2.31417e-33
sphingomyelin metabolic process	1.98942e-34	2.63003e-33
skeletal muscle tissue growth	2.49497e-34	3.28846e-33
regulation of collagen fibril organization	2.59555e-34	3.41761e-33
positive regulation of glomerular filtration	2.67925e-34	3.52076e-33
regulation of muscle filament sliding	3.26487e-34	4.27750e-33
vitellogenesis	3.28009e-34	4.29316e-33
rhodopsin mediated signaling pathway	3.30495e-34	4.32140e-33
positive regulation of phosphorylation of RNA polymerase II C-terminal domain serine 2 residues	3.47719e-34	4.54211e-33
response to carbon dioxide	3.76597e-34	4.91444e-33
response to anticoagulant	3.76597e-34	4.91444e-33
response to Thyroid stimulating hormone	3.76597e-34	4.91444e-33
response to 2,3,7,8-tetrachlorodibenzodioxine	3.76597e-34	4.91444e-33
response to astaxanthin	3.76597e-34	4.91444e-33
pericyte cell differentiation	4.23641e-34	5.49022e-33
anterograde axonal transport	4.39423e-34	5.68355e-33
depyrimidination	7.33566e-34	9.45085e-33
smoothened signaling pathway involved in ventral spinal cord interneuron specification	8.56558e-34	1.09924e-32
smoothened signaling pathway involved in spinal cord motor neuron cell fate specification	8.56558e-34	1.09924e-32
ubiquitin-dependent endocytosis	9.38099e-34	1.20153e-32
regulation of glomerular filtration	1.29518e-33	1.65245e-32
positive regulation of mitochondrial membrane potential	1.62712e-33	2.06994e-32
cell-cell junction maintenance	1.65361e-33	2.10161e-32
positive regulation of T cell differentiation in thymus	1.70557e-33	2.16345e-32
regulation of protein homooligomerization	2.06044e-33	2.60856e-32
regulation of protein catabolic process in the vacuole	3.30043e-33	4.16241e-32
defense response to fungus	3.61812e-33	4.55869e-32
mRNA cis splicing, via spliceosome	3.81228e-33	4.79873e-32
negative regulation of viral entry into host cell	4.12370e-33	5.18577e-32
podosome assembly	4.27840e-33	5.37517e-32
regulation of necroptotic process	5.28573e-33	6.61546e-32
Notch signaling pathway involved in regulation of secondary heart field cardioblast proliferation	5.37262e-33	6.71781e-32
venous endothelial cell differentiation	5.37262e-33	6.71781e-32

mRNA localization resulting in posttranscriptional regulation of gene expression	6.37996e-33	7.95469e-32
glomerular filtration	6.51859e-33	8.11984e-32
positive regulation of female gonad development	7.97050e-33	9.90028e-32
myeloid leukocyte cytokine production	9.88293e-33	1.22411e-31
phagosome-lysosome fusion	1.21521e-32	1.50234e-31
DNA deamination	1.29291e-32	1.59540e-31
regulation of lysosomal protein catabolic process	1.31361e-32	1.61942e-31
mismatch repair	1.32715e-32	1.63458e-31
positive regulation of I-kappaB phosphorylation	1.70580e-32	2.09701e-31
negative regulation of histone deacetylation	1.94367e-32	2.38721e-31
NADPH oxidation	2.24946e-32	2.76021e-31
receptor transactivation	3.52964e-32	4.31495e-31
medial motor column neuron differentiation	3.62242e-32	4.42426e-31
protein localization to bicellular tight junction	5.33317e-32	6.49560e-31
methotrexate transport	5.50666e-32	6.70071e-31
mitochondrial tRNA thio-modification	5.64450e-32	6.86208e-31
epinephrine biosynthetic process	5.93574e-32	7.20283e-31
chemical homeostasis within a tissue	6.41740e-32	7.77297e-31
positive regulation of integrin-mediated signaling pathway	8.65624e-32	1.04751e-30
reduced folate transmembrane transport	1.11915e-31	1.35058e-30
atrioventricular node development	1.45366e-31	1.75105e-30
regulation of sodium:proton antiporter activity	1.68962e-31	2.02416e-30
attachment of mitotic spindle microtubules to kinetochore	2.33879e-31	2.79423e-30
negative regulation of cargo loading into COPII-coated vesicle	2.34047e-31	2.79370e-30
endocannabinoid signaling pathway	2.72413e-31	3.23404e-30
retrograde trans-synaptic signaling by endocannabinoid	2.72413e-31	3.23404e-30
isopentenyl diphosphate biosynthetic process, mevalonate pathway	3.61356e-31	4.26685e-30
regulation of vascular smooth muscle cell dedifferentiation	3.68432e-31	4.34261e-30
glucose catabolic process	4.80204e-31	5.63479e-30
metanephric tubule formation	5.21880e-31	6.11837e-30
peptidyl-serine dephosphorylation	5.24728e-31	6.14628e-30
regulation of gastric acid secretion	7.88132e-31	9.20700e-30
neurotransmitter biosynthetic process	8.12796e-31	9.48670e-30
regulation of systemic arterial blood pressure by endothelin	1.05298e-30	1.22358e-29
negative regulation of interleukin-4 biosynthetic process	1.22562e-30	1.42042e-29
negative regulation of mast cell differentiation	1.22562e-30	1.42042e-29
mitochondrial respiratory chain complex III assembly	1.36484e-30	1.57899e-29
aldosterone biosynthetic process	1.41269e-30	1.63291e-29
cortisol biosynthetic process	1.41269e-30	1.63291e-29
cell migration involved in endocardial cushion formation	1.52830e-30	1.76344e-29
proteoglycan catabolic process	1.68514e-30	1.93931e-29
pronephric field specification	2.42989e-30	2.78421e-29
negative regulation of mesenchymal cell apoptotic process involved in metanephric nephron morphogenesis	2.42989e-30	2.78421e-29
negative regulation of apoptotic process involved in metanephric collecting duct development	2.42989e-30	2.78421e-29
negative regulation of apoptotic process involved in metanephric nephron tubule development	2.42989e-30	2.78421e-29
positive regulation of metanephric DCT cell differentiation	2.42989e-30	2.78421e-29
proline catabolic process to glutamate	2.45850e-30	2.80478e-29
skeletal muscle contraction	2.88733e-30	3.28831e-29
syncytiotrophoblast cell differentiation involved in labyrinthine layer development	2.93991e-30	3.34530e-29
positive regulation of chemokine (C-X-C motif) ligand 1 production	3.37932e-30	3.83534e-29
positive regulation of protein localization to presynapse	3.52767e-30	4.00026e-29
histidine catabolic process to glutamate and formamide	4.52703e-30	5.12467e-29
histidine catabolic process to glutamate and formate	4.52703e-30	5.12467e-29
positive regulation of synaptic plasticity	4.73440e-30	5.35019e-29
response to nickel cation	5.63619e-30	6.35835e-29
regulation of interleukin-10 secretion	7.53223e-30	8.47553e-29
blood vessel endothelial cell delamination	8.55844e-30	9.59742e-29
negative regulation of brown fat cell differentiation	8.55844e-30	9.59742e-29
signal transduction involved in regulation of aerobic respiration	8.55844e-30	9.59742e-29
midbrain-hindbrain boundary development	9.05583e-30	1.01293e-28
hormonal regulation of the force of heart contraction	9.45437e-30	1.05661e-28
inositol phosphate biosynthetic process	9.69632e-30	1.08273e-28
negative regulation of microvillus assembly	9.85385e-30	1.09938e-28
immunoglobulin secretion involved in immune response	1.22886e-29	1.36639e-28
positive regulation of mammary gland epithelial cell proliferation	1.33910e-29	1.48772e-28
regulation of mast cell differentiation	1.37422e-29	1.52544e-28
pyrimidine nucleotide catabolic process	1.59556e-29	1.76815e-28
SNARE complex assembly	1.77465e-29	1.95837e-28
high-density lipoprotein particle remodeling	1.86785e-29	2.05776e-28
negative regulation of mast cell degranulation	2.04870e-29	2.25134e-28

mitochondrial respiratory chain complex III biogenesis	2.28659e-29	2.51067e-28
regulation of ceramide biosynthetic process	2.53751e-29	2.77922e-28
pyrimidine deoxyribonucleotide catabolic process	2.70489e-29	2.96008e-28
insulin secretion involved in cellular response to glucose stimulus	2.82771e-29	3.09191e-28
positive regulation of relaxation of muscle	3.16948e-29	3.45986e-28
regulation of skeletal muscle fiber differentiation	4.43024e-29	4.82013e-28
uterine epithelium development	5.17176e-29	5.59912e-28
nephric duct elongation	5.17176e-29	5.59912e-28
horizontal cell localization	5.17176e-29	5.59912e-28
nuclear fragmentation involved in apoptotic nuclear change	5.26304e-29	5.68391e-28
cellular response to progesterone stimulus	5.67616e-29	6.12002e-28
monoubiquitinated histone H2A deubiquitination	5.96242e-29	6.42340e-28
positive regulation of phospholipid catabolic process	6.18552e-29	6.65829e-28
positive regulation of sodium:proton antiporter activity	6.48668e-29	6.97676e-28
isopentenyl diphosphate biosynthetic process	6.71481e-29	7.21623e-28
potassium ion export	8.79193e-29	9.43304e-28
cellular response to vitamin K	9.06399e-29	9.71701e-28
metanephric loop of Henle development	9.33332e-29	9.98946e-28
negative regulation of ATPase activity	9.55661e-29	1.02201e-27
DNA cytosine deamination	1.17699e-28	1.25666e-27
gas homeostasis	1.23615e-28	1.31876e-27
optic chiasma development	2.08066e-28	2.20362e-27
positive regulation of optic nerve formation	2.08066e-28	2.20362e-27
corticotropin secretion	2.35606e-28	2.47932e-27
arterial endothelial cell fate commitment	2.37278e-28	2.49493e-27
DNA methylation involved in gamete generation	2.45225e-28	2.57643e-27
pyruvate biosynthetic process	2.66033e-28	2.78614e-27
prechordal plate formation	3.27945e-28	3.42364e-27
midbrain-hindbrain boundary initiation	3.27945e-28	3.42364e-27
mitochondrial calcium release	3.65787e-28	3.81264e-27
osteoclast development	4.57396e-28	4.75244e-27
nuclear inner membrane organization	4.93682e-28	5.12541e-27
central nervous system myelin maintenance	5.01802e-28	5.20560e-27
positive regulation of interferon-gamma biosynthetic process	5.08518e-28	5.27112e-27
positive regulation of dendritic cell differentiation	5.39482e-28	5.58767e-27
deoxyribonucleotide catabolic process	5.50224e-28	5.69445e-27
polyamine biosynthetic process	5.50692e-28	5.69482e-27
negative regulation of fat cell proliferation	5.85801e-28	6.05312e-27
transcriptional activation by promoter-enhancer looping	6.44636e-28	6.65584e-27
pyridoxal phosphate metabolic process	6.76508e-28	6.97397e-27
regulation of apoptotic process involved in morphogenesis	9.69346e-28	9.95376e-27
negative regulation of renal sodium excretion	9.90069e-28	1.01586e-26
optic nerve structural organization	1.16891e-27	1.19749e-26
medium-chain fatty-acyl-CoA catabolic process	1.22995e-27	1.25905e-26
long-chain fatty-acyl-CoA catabolic process	1.22995e-27	1.25905e-26
palmitic acid biosynthetic process	1.22995e-27	1.25905e-26
positive regulation of gamma-aminobutyric acid secretion	1.23238e-27	1.25859e-26
constitutive secretory pathway	1.26218e-27	1.28704e-26
base-excision repair, gap-filling	1.28892e-27	1.31328e-26
regulation of gamma-aminobutyric acid secretion	1.33491e-27	1.35804e-26
positive regulation of CD8-positive, alpha-beta cytotoxic T cell extravasation	1.38624e-27	1.40916e-26
cytidine deamination	1.82902e-27	1.85069e-26
positive regulation of metanephric glomerulus development	2.18461e-27	2.20033e-26
cilium movement involved in cell motility	2.55510e-27	2.57153e-26
positive regulation of tumor necrosis factor secretion	2.59181e-27	2.60647e-26
positive regulation of deoxyribonuclease activity	2.85190e-27	2.86366e-26
regulation of neurotrophin production	2.91299e-27	2.91831e-26
arterial endothelial cell differentiation	3.30666e-27	3.30014e-26
calcium-mediated signaling using extracellular calcium source	3.91051e-27	3.89393e-26
lymphocyte migration into lymphoid organs	4.40280e-27	4.37420e-26
S-shaped body morphogenesis	4.98749e-27	4.94390e-26
esophagus smooth muscle contraction	5.59189e-27	5.53050e-26
regulation of phosphatidylcholine biosynthetic process	6.24097e-27	6.16319e-26
polyamine metabolic process	6.68101e-27	6.59280e-26
cellular response to granulocyte macrophage colony-stimulating factor stimulus	8.09850e-27	7.95576e-26
negative regulation of lymphangiogenesis	8.29952e-27	8.14716e-26
negative regulation of cell differentiation involved in embryonic placenta development	1.00681e-26	9.87590e-26
positive regulation of endodeoxyribonuclease activity	1.06484e-26	1.04374e-25
apoptotic nuclear changes	1.08018e-26	1.05799e-25
actin filament depolymerization	1.20516e-26	1.17864e-25
viral budding	1.27002e-26	1.24023e-25
regulation of dendritic cell differentiation	1.27930e-26	1.24836e-25

metanephric nephron tubule morphogenesis	1.32087e-26	1.28797e-25
growth plate cartilage chondrocyte differentiation	1.37600e-26	1.33974e-25
negative regulation of nodal signaling pathway	1.43373e-26	1.39492e-25
growth plate cartilage chondrocyte morphogenesis	1.53399e-26	1.49026e-25
chondrocyte development involved in endochondral bone morphogenesis	1.67285e-26	1.62277e-25
Wnt signaling pathway involved in wound healing, spreading of epidermal cells	2.05521e-26	1.98781e-25
positive regulation of excitatory synapse assembly	2.05521e-26	1.98781e-25
isocitrate metabolic process	2.10326e-26	2.03129e-25
vascular endothelial growth factor receptor-2 signaling pathway	2.73088e-26	2.63358e-25
positive regulation of gluconeogenesis by positive regulation of transcription from RNA polymerase II promoter	2.92842e-26	2.81995e-25
cellular response to acidic pH	2.96100e-26	2.84923e-25
aflatoxin B1 metabolic process	3.42384e-26	3.29219e-25
activation of phospholipase D activity	3.66534e-26	3.51926e-25
uropod organization	3.91419e-26	3.75546e-25
spinal cord ventral commissure morphogenesis	4.21176e-26	4.03507e-25
smooth muscle hyperplasia	4.26189e-26	4.07716e-25
response to acidic pH	4.34939e-26	4.15784e-25
positive regulation of epithelial cell differentiation involved in kidney development	4.71122e-26	4.50046e-25
serine transport	6.18769e-26	5.89803e-25
actin filament reorganization involved in cell cycle	6.20786e-26	5.91298e-25
establishment of protein localization to chromatin	6.95570e-26	6.61571e-25
negative regulation of phosphoprotein phosphatase activity	8.20002e-26	7.77671e-25
metanephric glomerular mesangial cell development	8.65987e-26	8.20691e-25
positive regulation of vascular smooth muscle cell dedifferentiation	8.65987e-26	8.20691e-25
oxygen homeostasis	9.22289e-26	8.72163e-25
calcineurin-NFAT signaling cascade	9.29772e-26	8.78608e-25
regulation of RNA polymerase II regulatory region sequence-specific DNA binding	9.62177e-26	9.08577e-25
taurine transport	1.02981e-25	9.71745e-25
cellular response to mycophenolic acid	1.14934e-25	1.08298e-24
vesicle-mediated cholesterol transport	2.15987e-25	2.02935e-24
regulation of CD8-positive, alpha-beta cytotoxic T cell extravasation	2.26326e-25	2.12346e-24
regulation of glycolytic process by positive regulation of transcription from RNA polymerase II promoter	2.41783e-25	2.26686e-24
regulation of cellular ketone metabolic process by positive regulation of transcription from RNA polymerase II promoter	2.41783e-25	2.26686e-24
negative regulation of necrotic cell death	2.64397e-25	2.47184e-24
dopamine biosynthetic process from tyrosine	2.93433e-25	2.73552e-24
positive regulation of ceramide biosynthetic process	3.45796e-25	3.21002e-24
phytosteroid biosynthetic process	3.96875e-25	3.67381e-24
positive regulation of ovarian follicle development	3.99504e-25	3.69556e-24
regulation of lipid transport by positive regulation of transcription from RNA polymerase II promoter	4.12155e-25	3.80722e-24
establishment of lymphocyte polarity	4.38914e-25	4.04589e-24
negative regulation of mesenchymal cell apoptotic process involved in metanephros development	4.45883e-25	4.10437e-24
macrophage homeostasis	4.49470e-25	4.13450e-24
response to UV-A	4.67764e-25	4.29977e-24
positive regulation of SUMO transferase activity	5.06532e-25	4.65288e-24
cerebellar molecular layer morphogenesis	5.69125e-25	5.22055e-24
negative regulation of reactive oxygen species biosynthetic process	5.69684e-25	5.22204e-24
deoxyribose phosphate catabolic process	5.72318e-25	5.24253e-24
high-density lipoprotein particle clearance	5.97832e-25	5.46482e-24
epinephrine metabolic process	6.22651e-25	5.67986e-24
marginal zone B cell differentiation	6.71289e-25	6.10659e-24
embryonic ectodermal digestive tract development	6.80316e-25	6.18017e-24
inositol phosphate dephosphorylation	7.25913e-25	6.58983e-24
response to vitamin B2	7.34396e-25	6.66224e-24
heterochromatin maintenance	7.34396e-25	6.66224e-24
coenzyme A biosynthetic process	8.38781e-25	7.58304e-24
cleavage furrow ingression	9.21255e-25	8.32294e-24
CD4-positive, alpha-beta T cell lineage commitment	1.07904e-24	9.72167e-24
negative regulation of phosphatidylinositol 3-kinase activity	1.09164e-24	9.82851e-24
negative regulation of actin filament severing	1.19311e-24	1.07274e-23
sensory perception of sweet taste	1.46170e-24	1.31064e-23
brush border assembly	1.46884e-24	1.31615e-23
regulation of uterine smooth muscle contraction	1.61194e-24	1.44143e-23
response to fungicide	1.66198e-24	1.48517e-23
positive regulation of protein processing in phagocytic vesicle	1.98872e-24	1.77114e-23
positive regulation of heterotypic cell-cell adhesion	2.01163e-24	1.79032e-23
cortical microtubule organization	2.02517e-24	1.80116e-23

pyrimidine ribonucleoside catabolic process	2.27300e-24	2.01748e-23
metanephric glomerular mesangium development	2.55674e-24	2.26626e-23
cellular response to interleukin-11	2.85053e-24	2.52327e-23
regulation of pinocytosis	3.79525e-24	3.34827e-23
positive regulation of phospholipid scramblase activity	4.08105e-24	3.59800e-23
positive regulation of glucosylceramide catabolic process	4.08105e-24	3.59800e-23
positive regulation of sphingomyelin catabolic process	4.08105e-24	3.59800e-23
putrescine biosynthetic process from ornithine	4.73892e-24	4.15571e-23
regulation of skeletal muscle tissue growth	5.19644e-24	4.55390e-23
lung vasculature development	5.44159e-24	4.75922e-23
mitotic DNA replication initiation	8.09750e-24	7.04927e-23
desmosome organization	9.36739e-24	8.13862e-23
positive regulation of phospholipid efflux	9.85004e-24	8.54667e-23
hypoglossal nerve morphogenesis	1.31689e-23	1.13514e-22
Sertoli cell fate commitment	1.33075e-23	1.14635e-22
phosphorylated carbohydrate dephosphorylation	1.37529e-23	1.18394e-22
GDP-mannose biosynthetic process	1.42482e-23	1.22578e-22
cellular hypotonic salinity response	1.72508e-23	1.48022e-22
L-serine transport	1.87249e-23	1.60461e-22
right lung development	2.07113e-23	1.77137e-22
citrate transport	2.16527e-23	1.84948e-22
response to mercury ion	2.37209e-23	2.02351e-22
negative regulation of actin nucleation	2.65923e-23	2.26698e-22
xylulose metabolic process	3.12432e-23	2.65830e-22
vasopressin secretion	3.82367e-23	3.23867e-22
thymus epithelium morphogenesis	4.67482e-23	3.94943e-22
positive regulation of relaxation of cardiac muscle	5.39050e-23	4.54821e-22
negative regulation of cytolysis	5.48809e-23	4.62462e-22
brassinosteroid biosynthetic process	5.66582e-23	4.77133e-22
T-helper cell lineage commitment	5.87670e-23	4.94575e-22
zonula adherens maintenance	5.99192e-23	5.03627e-22
positive regulation of arachidonic acid secretion	5.99686e-23	5.03721e-22
regulation of lymphoid progenitor cell differentiation	6.41116e-23	5.37834e-22
cellular response to fluoride	7.47144e-23	6.25584e-22
delamination	8.65943e-23	7.23214e-22
anterograde axonal protein transport	1.13341e-22	9.44199e-22
regulation of microtubule nucleation	1.14986e-22	9.57296e-22
negative regulation of transcription of nuclear large rRNA transcript from RNA polymerase I promoter	1.36384e-22	1.13472e-21
cellular response to carbon monoxide	1.55855e-22	1.29426e-21
positive regulation of sodium:potassium-exchanging ATPase activity	1.55855e-22	1.29426e-21
negative regulation of protein homooligomerization	1.56368e-22	1.29689e-21
regulation of myosin II filament organization	1.57296e-22	1.30376e-21
terpene metabolic process	1.76259e-22	1.45910e-21
epithelial cell apoptotic process involved in palatal shelf morphogenesis	1.89231e-22	1.56550e-21
macrophage colony-stimulating factor signaling pathway	2.11270e-22	1.74454e-21
apoptotic chromosome condensation	2.16713e-22	1.78836e-21
interleukin-18-mediated signaling pathway	2.57420e-22	2.12029e-21
lipid tube assembly	2.62464e-22	2.16048e-21
positive regulation of macrophage inflammatory protein 1 alpha production	2.65909e-22	2.18611e-21
cellular lactam catabolic process	3.21722e-22	2.64165e-21
axial mesoderm morphogenesis	3.34900e-22	2.74643e-21
positive regulation of cardiac muscle contraction	3.46438e-22	2.83928e-21
regulation of dendritic cell apoptotic process	3.60600e-22	2.94983e-21
negative regulation of testosterone biosynthetic process	3.71636e-22	3.03822e-21
phosphatidylglycerol acyl-chain remodeling	3.71880e-22	3.03833e-21
negative regulation of T-helper 17 cell differentiation	4.04916e-22	3.30209e-21
detection of chemical stimulus involved in sensory perception of sweet taste	4.20990e-22	3.43104e-21
negative regulation of beta-amyloid clearance	4.36446e-22	3.55480e-21
negative regulation of membrane depolarization	4.49771e-22	3.66107e-21
metanephric distal tubule morphogenesis	4.68225e-22	3.80892e-21
positive regulation of interleukin-13 secretion	4.72520e-22	3.84149e-21
peptidyl-histidine hydroxylation	4.75853e-22	3.86620e-21
peptidyl-asparagine hydroxylation	4.75853e-22	3.86620e-21
regulation of MyD88-dependent toll-like receptor signaling pathway	5.37710e-22	4.36069e-21
clathrin-coated pit assembly	5.79615e-22	4.69763e-21
cellular response to mercury ion	6.00636e-22	4.86501e-21
positive regulation of fibronectin-dependent thymocyte migration	6.41386e-22	5.18549e-21
uterus morphogenesis	6.43268e-22	5.19751e-21
sensory perception of umami taste	6.53775e-22	5.27916e-21
mRNA 5'-splice site recognition	6.55902e-22	5.29309e-21
midbrain-hindbrain boundary morphogenesis	7.32642e-22	5.90151e-21

regulation of axon diameter	7.44857e-22	5.99624e-21
oligosaccharide catabolic process	7.45334e-22	5.99640e-21
regulation of lipid transport by regulation of transcription from RNA polymerase II promoter	8.12977e-22	6.52465e-21
multicellular organismal lipid catabolic process	8.44697e-22	6.77096e-21
regulation of muscle filament sliding speed	8.75535e-22	7.00961e-21
establishment of T cell polarity	8.90813e-22	7.12759e-21
smooth muscle adaptation	9.29381e-22	7.43166e-21
reverse cholesterol transport	9.32427e-22	7.45148e-21
putrescine biosynthetic process	9.47416e-22	7.56667e-21
proline catabolic process	9.98262e-22	7.96310e-21
regulation of ovarian follicle development	1.02362e-21	8.16039e-21
epidermal growth factor-activated receptor transactivation by G-protein coupled receptor signaling pathway	1.16733e-21	9.29487e-21
intracellular cholesterol transport	1.18161e-21	9.40286e-21
tRNA wobble uridine modification	1.19495e-21	9.50324e-21
phenol-containing compound catabolic process	1.26823e-21	1.00799e-20
negative regulation of transcription from RNA polymerase III promoter	1.31494e-21	1.04449e-20
apoptotic process involved in blood vessel morphogenesis	1.37553e-21	1.09130e-20
establishment or maintenance of cytoskeleton polarity	1.40254e-21	1.11139e-20
immature T cell proliferation in thymus	1.57481e-21	1.24490e-20
negative regulation of testicular blood vessel morphogenesis	1.57481e-21	1.24490e-20
negative regulation of male gonad development	1.57481e-21	1.24490e-20
positive regulation of cortisol biosynthetic process	1.57481e-21	1.24490e-20
cardiolipin biosynthetic process	1.62628e-21	1.28250e-20
detection of wounding	1.70725e-21	1.34554e-20
lateral mesodermal cell differentiation	1.70725e-21	1.34554e-20
embryonic ectodermal digestive tract morphogenesis	1.70725e-21	1.34554e-20
branching involved in open tracheal system development	1.70725e-21	1.34554e-20
right lung morphogenesis	1.70725e-21	1.34554e-20
response to pyrethroid	1.71207e-21	1.34531e-20
positive regulation of insulin receptor signaling pathway	1.83141e-21	1.43737e-20
actin filament severing	1.88899e-21	1.48080e-20
negative regulation of lipid kinase activity	1.98358e-21	1.55217e-20
pyridoxal 5'-phosphate salvage	2.34012e-21	1.82573e-20
histone H3-K79 methylation	2.47289e-21	1.92590e-20
positive regulation of cyclic-nucleotide phosphodiesterase activity	2.71746e-21	2.11262e-20
inositol trisphosphate biosynthetic process	2.72731e-21	2.11902e-20
histone H3-K27 methylation	2.94047e-21	2.28195e-20
alveolar primary septum development	2.98149e-21	2.31105e-20
positive regulation of peptidyl-tyrosine autophosphorylation	3.12724e-21	2.41833e-20
chromatin reprogramming in the zygote	3.44136e-21	2.65967e-20
regulation of receptor catabolic process	3.56325e-21	2.75064e-20
protein esterification	3.59274e-21	2.77178e-20
intestinal lipid catabolic process	3.59274e-21	2.77178e-20
transcription, RNA-templated	3.69908e-21	2.85048e-20
positive regulation of transcription of nuclear large rRNA transcript from RNA polymerase I promoter	3.77461e-21	2.90698e-20
fibroblast growth factor receptor apoptotic signaling pathway	3.83900e-21	2.95484e-20
interleukin-12 production	4.12567e-21	3.16807e-20
negative regulation of necroptotic process	4.73056e-21	3.62410e-20
regulation of chromatin silencing at telomere	4.85798e-21	3.71955e-20
regulation of macrophage inflammatory protein 1 alpha production	4.86762e-21	3.72477e-20
lipid glycosylation	4.98088e-21	3.80921e-20
xylulose biosynthetic process	5.00722e-21	3.82714e-20
embryonic cleavage	5.22505e-21	3.98899e-20
positive regulation of DNA demethylation	5.30169e-21	4.04515e-20
tail-anchored membrane protein insertion into ER membrane	5.85584e-21	4.45763e-20
negative regulation of matrix metalloproteinase secretion	5.88195e-21	4.47491e-20
hepoxilin biosynthetic process	6.01273e-21	4.56912e-20
negative regulation of Arp2/3 complex-mediated actin nucleation	6.86002e-21	5.20696e-20
modulation by virus of host immune response	7.41601e-21	5.61925e-20
chronological cell aging	7.54344e-21	5.71252e-20
semaphorin-plexin signaling pathway involved in bone trabecula morphogenesis	7.89960e-21	5.97535e-20
positive regulation of opsonization	7.94469e-21	6.00600e-20
cellular response to electrical stimulus	7.98259e-21	6.03119e-20
regulation of pro-B cell differentiation	9.05885e-21	6.82866e-20
RNA folding	1.16825e-20	8.79132e-20
TORC2 signaling	1.21044e-20	9.09839e-20
regulation of synaptic vesicle fusion to presynaptic membrane	1.26871e-20	9.53092e-20
iodide transport	1.38115e-20	1.03519e-19
positive regulation of superoxide anion generation	1.48135e-20	1.10840e-19
protein hexamerization	1.94136e-20	1.44766e-19
maintenance of protein location in nucleus	1.95690e-20	1.45842e-19

DNA demethylation of male pronucleus	2.09505e-20	1.55961e-19
cellular amide catabolic process	2.09553e-20	1.55909e-19
AV node cell action potential	2.18947e-20	1.62805e-19
rhythmic synaptic transmission	2.32184e-20	1.72551e-19
termination of signal transduction	2.58594e-20	1.91421e-19
histone H4-K16 acetylation	2.73428e-20	2.02174e-19
putrescine metabolic process	2.76609e-20	2.04411e-19
response to genistein	2.81424e-20	2.07853e-19
negative regulation of cholesterol storage	3.00383e-20	2.21731e-19
neuropeptide catabolic process	3.27243e-20	2.41287e-19
regulation of histone ubiquitination	3.91684e-20	2.87672e-19
maintenance of protein location in mitochondrion	4.03277e-20	2.96022e-19
negative regulation of mitochondrial depolarization	4.79227e-20	3.51576e-19
negative regulation of hematopoietic progenitor cell differentiation	4.82856e-20	3.54040e-19
rRNA 2'-O-methylation	5.32155e-20	3.89753e-19
protein deamination	6.17895e-20	4.51293e-19
B cell chemotaxis	6.43031e-20	4.68871e-19
synaptic vesicle budding from endosome	6.54206e-20	4.76755e-19
DNA replication-dependent nucleosome assembly	6.61865e-20	4.81803e-19
sperm axoneme assembly	9.60620e-20	6.97351e-19
mitochondrial tRNA modification	1.00356e-19	7.27719e-19
follicular B cell differentiation	1.03094e-19	7.47162e-19
metanephric proximal tubule development	1.17950e-19	8.54355e-19
positive regulation of transdifferentiation	1.22310e-19	8.84478e-19
negative regulation of production of siRNA involved in RNA interference	1.22310e-19	8.84478e-19
response to caloric restriction	1.24167e-19	8.95936e-19
spongiotrophoblast differentiation	1.28966e-19	9.30052e-19
neurotransmitter receptor transport	1.32447e-19	9.54112e-19
negative regulation of nitric oxide biosynthetic process	1.59658e-19	1.14636e-18
tRNA wobble base modification	1.67478e-19	1.20055e-18
regulation of lens fiber cell differentiation	1.67710e-19	1.20156e-18
maintenance of presynaptic active zone structure	1.74865e-19	1.25077e-18
evoked neurotransmitter secretion	1.74865e-19	1.25077e-18
cellular response to nicotine	1.89472e-19	1.35305e-18
female sex determination	1.90638e-19	1.35990e-18
vitamin transmembrane transport	1.94841e-19	1.38837e-18
membrane depolarization during AV node cell action potential	2.23195e-19	1.58698e-18
signal complex assembly	2.26275e-19	1.60627e-18
positive regulation of collagen fibril organization	2.39985e-19	1.70268e-18
negative regulation of epinephrine secretion	2.76216e-19	1.95446e-18
negative regulation of interleukin-6 secretion	2.88356e-19	2.03708e-18
microtubule severing	2.91139e-19	2.05563e-18
paraxial mesodermal cell fate commitment	2.93229e-19	2.06928e-18
regulation of microvillus length	3.01152e-19	2.12405e-18
regulation of cargo loading into COPII-coated vesicle	3.34473e-19	2.35654e-18
enzyme-directed rRNA 2'-O-methylation	3.49734e-19	2.46142e-18
protein import into mitochondrial matrix	3.99839e-19	2.80805e-18
fatty acid beta-oxidation using acyl-CoA dehydrogenase	4.06898e-19	2.85610e-18
histone H4-K5 acetylation	4.42787e-19	3.10470e-18
histone H4-K8 acetylation	4.42787e-19	3.10470e-18
regulation of cyclic-nucleotide phosphodiesterase activity	4.57126e-19	3.20183e-18
positive regulation of interleukin-12 secretion	4.83944e-19	3.38787e-18
notochord formation	4.94013e-19	3.45652e-18
pyridoxal phosphate biosynthetic process	5.96421e-19	4.15977e-18
visceral mesoderm-endoderm interaction involved in midgut development	6.72535e-19	4.68566e-18
neurotransmitter receptor transport, postsynaptic endosome to lysosome	7.21210e-19	5.01947e-18
dADP catabolic process	7.26943e-19	5.05669e-18
dGDP catabolic process	7.26943e-19	5.05669e-18
GDP catabolic process	7.26943e-19	5.05669e-18
regulation of carbohydrate metabolic process by regulation of transcription from RNA polymerase II promoter	8.93057e-19	6.18603e-18
negative regulation of urine volume	9.32926e-19	6.45540e-18
trans-synaptic signaling by trans-synaptic complex, modulating synaptic transmission	9.44816e-19	6.53080e-18
negative regulation of NMDA glutamate receptor activity	9.44816e-19	6.53080e-18
positive regulation of NMDA glutamate receptor activity	9.44816e-19	6.53080e-18
protein retention in ER lumen	1.07018e-18	7.37407e-18
mitochondria-nucleus signaling pathway	1.09730e-18	7.55704e-18
cellular response to laminar fluid shear stress	1.21838e-18	8.38210e-18
positive regulation of pinocytosis	1.22768e-18	8.44166e-18
regulation of peptidyl-tyrosine autophosphorylation	1.23044e-18	8.45181e-18
positive regulation of mitochondrial translation	1.30899e-18	8.97728e-18



oviduct development	1.31320e-18	9.00147e-18
attachment of spindle microtubules to kinetochore involved in meiotic sister chromatid segregation	1.71569e-18	1.17176e-17
negative regulation of ATF6-mediated unfolded protein response	1.76268e-18	1.20323e-17
cyclooxygenase pathway	1.82333e-18	1.24398e-17
negative regulation of natural killer cell mediated cytotoxicity	1.94214e-18	1.32094e-17
regulation of ventricular cardiac muscle cell membrane depolarization	2.03285e-18	1.38192e-17
monoacylglycerol catabolic process	2.29314e-18	1.55645e-17
regulation of dermatome development	2.47324e-18	1.67782e-17
regulation of mitochondrial translation	2.84140e-18	1.92262e-17
intermicrovillar adhesion	2.84399e-18	1.92339e-17
positive regulation of CD8-positive, alpha-beta T cell extravasation	2.85340e-18	1.92875e-17
regulation of atrial cardiac muscle cell membrane depolarization	3.62471e-18	2.44385e-17
cyanate catabolic process	3.71357e-18	2.49863e-17
positive regulation of TRAIL biosynthetic process	4.03955e-18	2.71380e-17
short-term synaptic potentiation	4.22668e-18	2.83662e-17
positive regulation of steroid hormone biosynthetic process	4.50852e-18	3.02268e-17
negative regulation of blood vessel endothelial cell proliferation involved in sprouting angiogenesis	4.53309e-18	3.03761e-17
mineralocorticoid biosynthetic process	4.98256e-18	3.33370e-17
regulation of metanephric glomerulus development	5.10590e-18	3.41449e-17
negative regulation of heart induction by canonical Wnt signaling pathway	5.82202e-18	3.88746e-17
Wnt signaling pathway involved in forebrain neuroblast division	5.82202e-18	3.88746e-17
positive regulation of mesodermal cell fate specification	5.82202e-18	3.88746e-17
calcium ion transmembrane transport via low voltage-gated calcium channel	5.82202e-18	3.88746e-17
positive regulation of canonical Wnt signaling pathway involved in controlling type B pancreatic cell proliferation	5.82202e-18	3.88746e-17
iron-sulfur cluster assembly	6.60442e-18	4.38539e-17
regulation of histone H3-K9 dimethylation	6.63973e-18	4.40661e-17
cellular response to salt stress	6.72520e-18	4.46108e-17
tRNA threonylcarbamoyladenosine metabolic process	6.83890e-18	4.53422e-17
metanephric glomerular mesangial cell differentiation	7.14962e-18	4.72831e-17
regulation of interleukin-4 biosynthetic process	7.25382e-18	4.79000e-17
mitotic cytokinetic process	8.14417e-18	5.37253e-17
maintenance of protein localization in endoplasmic reticulum	8.45254e-18	5.57317e-17
cholesterol biosynthetic process via desmosterol	8.92961e-18	5.88183e-17
cholesterol biosynthetic process via lathosterol	8.92961e-18	5.88183e-17
negative regulation of circadian sleep/wake cycle, non-REM sleep	1.07761e-17	7.07683e-17
negative regulation of mucus secretion	1.07761e-17	7.07683e-17
Golgi to transport vesicle transport	1.12776e-17	7.39141e-17
mitotic cleavage furrow ingression	1.12776e-17	7.39141e-17
positive regulation of neurotrophin production	1.35760e-17	8.85369e-17
globoside metabolic process	1.38515e-17	9.02440e-17
positive regulation of exit from mitosis	1.44238e-17	9.38331e-17
regulation of transcription from RNA polymerase II promoter involved in spinal cord motor neuron fate specification	1.51056e-17	9.81715e-17
regulation of tumor necrosis factor secretion	1.66414e-17	1.08046e-16
retinol transport	1.99981e-17	1.29520e-16
regulation of organelle transport along microtubule	2.03821e-17	1.31942e-16
mRNA 3'-splice site recognition	2.21492e-17	1.43100e-16
response to cisplatin	2.22352e-17	1.43585e-16
positive regulation of long-term neuronal synaptic plasticity	2.36057e-17	1.52211e-16
negative regulation of oxidative phosphorylation	2.50303e-17	1.61080e-16
olfactory learning	2.53051e-17	1.62769e-16
positive regulation of activated T cell autonomous cell death	2.60049e-17	1.67189e-16
TRAIL-activated apoptotic signaling pathway	2.60976e-17	1.67703e-16
positive regulation of lamellipodium morphogenesis	2.74323e-17	1.76193e-16
regulation of glycolytic process by regulation of transcription from RNA polymerase II promoter	2.91219e-17	1.86954e-16
riboflavin transport	3.05869e-17	1.96264e-16
negative regulation of receptor biosynthetic process	3.07397e-17	1.97148e-16
regulation of engulfment of apoptotic cell	3.07920e-17	1.97387e-16
L-proline biosynthetic process	3.09661e-17	1.98310e-16
erythrocyte maturation	3.10510e-17	1.98756e-16
negative regulation of collagen fibril organization	3.45025e-17	2.20527e-16
regulation of hepatocyte growth factor receptor signaling pathway	3.53209e-17	2.25430e-16
positive regulation of collateral sprouting in absence of injury	3.89539e-17	2.48135e-16
regulation of microtubule binding	3.94302e-17	2.51048e-16
mesangial cell differentiation	3.98920e-17	2.53865e-16
positive regulation of glucose mediated signaling pathway	4.05294e-17	2.57672e-16
protein refolding	4.52382e-17	2.87192e-16
postsynaptic actin cytoskeleton organization	4.66569e-17	2.96056e-16
regulation of CD8-positive, alpha-beta T cell extravasation	4.87560e-17	3.08929e-16

regulation of natural killer cell apoptotic process	4.92166e-17	3.11697e-16
steroid hormone receptor complex assembly	5.58206e-17	3.52334e-16
slow-twitch skeletal muscle fiber contraction	5.69382e-17	3.59044e-16
glycerol transport	6.47937e-17	4.07797e-16
positive regulation of keratinocyte apoptotic process	6.93319e-17	4.35942e-16
regulation of muscle atrophy	7.21827e-17	4.53651e-16
glyoxylate cycle	7.40880e-17	4.65181e-16
proline biosynthetic process	8.28170e-17	5.18997e-16
chromatin maintenance	8.88995e-17	5.56320e-16
regulation of blood volume by renal aldosterone	9.09149e-17	5.68661e-16
regulation of Golgi inheritance	9.57379e-17	5.98260e-16
regulation of growth plate cartilage chondrocyte proliferation	9.90898e-17	6.18911e-16
cementum mineralization	1.00742e-16	6.28635e-16
negative regulation of cell growth involved in contact inhibition	1.07464e-16	6.70259e-16
nerve growth factor production	1.15773e-16	7.21399e-16
IRES-dependent translational initiation	1.27128e-16	7.91404e-16
regulation of opioid receptor signaling pathway	1.27390e-16	7.92664e-16
establishment of animal organ orientation	1.58834e-16	9.86452e-16
positive regulation of antibacterial peptide production	1.59636e-16	9.90966e-16
cellular response to leucine	1.70073e-16	1.05426e-15
dermatan sulfate proteoglycan biosynthetic process, polysaccharide chain biosynthetic process	1.71183e-16	1.06014e-15
lung goblet cell differentiation	1.72660e-16	1.06878e-15
cell surface pattern recognition receptor signaling pathway	1.83172e-16	1.13226e-15
negative regulation of T cell cytokine production	1.92401e-16	1.18819e-15
trachea cartilage morphogenesis	1.94605e-16	1.20123e-15
DNA replication proofreading	2.10153e-16	1.29599e-15
regulation of heart rate by hormone	2.11612e-16	1.30438e-15
ER-associated misfolded protein catabolic process	2.27039e-16	1.39751e-15
UV-damage excision repair	2.52020e-16	1.54910e-15
negative regulation of macrophage derived foam cell differentiation	2.91059e-16	1.78157e-15
regulation of establishment of blood-brain barrier	2.91254e-16	1.78193e-15
metanephric S-shaped body morphogenesis	3.61838e-16	2.20659e-15
catecholamine catabolic process	3.77654e-16	2.30198e-15
sterol regulatory element binding protein import into nucleus	4.19622e-16	2.55069e-15
synaptic transmission involved in micturition	4.20397e-16	2.55423e-15
cellular alkene metabolic process	4.46425e-16	2.70861e-15
regulation of ATF6-mediated unfolded protein response	4.62652e-16	2.80577e-15
protein insertion into ER membrane	4.67530e-16	2.83405e-15
positive regulation of intermediate filament depolymerization	4.70945e-16	2.85344e-15
positive regulation of termination of RNA polymerase II transcription, poly(A)-coupled	4.85469e-16	2.93603e-15
histone citrullination	5.85020e-16	3.52351e-15
post-embryonic cardiac muscle cell growth involved in heart morphogenesis	6.17722e-16	3.71537e-15
positive regulation of chromatin silencing at telomere	6.17722e-16	3.71537e-15
positive regulation of telomeric heterochromatin assembly	6.17722e-16	3.71537e-15
modification of synaptic structure	6.29917e-16	3.78353e-15
response to high light intensity	6.40490e-16	3.84528e-15
metanephric mesenchymal cell proliferation involved in metanephros development	6.56602e-16	3.93842e-15
chaperone mediated protein folding requiring cofactor	6.78788e-16	4.06964e-15
mesangial cell development	7.28226e-16	4.35809e-15
positive regulation of late endosome to lysosome transport	7.35978e-16	4.40048e-15
negative regulation of neuronal action potential	7.53728e-16	4.50456e-15
cellular response to interferon-alpha	8.11411e-16	4.84270e-15
positive regulation of mesenchymal to epithelial transition involved in metanephros morphogenesis	8.60332e-16	5.13001e-15
positive regulation of gastric acid secretion	8.86021e-16	5.27841e-15
neural plate regionalization	9.70282e-16	5.76993e-15
glucocorticoid biosynthetic process	9.72667e-16	5.78150e-15
establishment or maintenance of microtubule cytoskeleton polarity	1.02490e-15	6.08097e-15
somite rostral/caudal axis specification	1.07782e-15	6.38059e-15
regulation of keratinocyte apoptotic process	1.08615e-15	6.42408e-15
hypochlorous acid biosynthetic process	1.16694e-15	6.88955e-15
response to gold nanoparticle	1.16694e-15	6.88955e-15
positive regulation of engulfment of apoptotic cell	1.33977e-15	7.88870e-15
glycogen cell differentiation involved in embryonic placenta development	1.41362e-15	8.30863e-15
negative regulation of protein kinase activity by protein phosphorylation	1.41362e-15	8.30863e-15
protein import into mitochondrial inner membrane	1.41605e-15	8.31552e-15
positive regulation of apoptotic DNA fragmentation	1.49003e-15	8.74605e-15
proteasome assembly	1.54806e-15	9.07447e-15
interleukin-3-mediated signaling pathway	1.56129e-15	9.14798e-15

SREBP signaling pathway	1.57294e-15	9.21212e-15
caveolin-mediated endocytosis	1.63137e-15	9.54585e-15
IRES-dependent viral translational initiation	1.64020e-15	9.59326e-15
nuclear-transcribed mRNA catabolic process, endonucleolytic cleavage-dependent decay	1.80477e-15	1.05277e-14
negative regulation of toll-like receptor 4 signaling pathway	1.88067e-15	1.09559e-14
90S preribosome assembly	1.90719e-15	1.11054e-14
somatic motor neuron differentiation	2.05752e-15	1.19755e-14
positive regulation of T-helper 2 cell differentiation	2.16075e-15	1.25652e-14
evasion or tolerance of host defenses by virus	2.20506e-15	1.28115e-14
active induction of host immune response by virus	2.79724e-15	1.62020e-14
regulation of adenosine receptor signaling pathway	2.86223e-15	1.65566e-14
immune response to tumor cell	3.08195e-15	1.78120e-14
positive regulation of transcription from RNA polymerase II promoter in response to acidic pH	3.45663e-15	1.99598e-14
glyceraldehyde-3-phosphate biosynthetic process	3.52465e-15	2.03437e-14
adrenergic receptor signaling pathway involved in cardiac muscle relaxation	3.88382e-15	2.23774e-14
U2 snRNA 3'-end processing	3.94421e-15	2.26956e-14
gamma-delta T cell differentiation	4.07539e-15	2.34402e-14
angiotensin-activated signaling pathway involved in heart process	4.08575e-15	2.34895e-14
virus maturation	4.21418e-15	2.41750e-14
viral translation	4.24013e-15	2.43133e-14
negative regulation of type I interferon-mediated signaling pathway	4.45520e-15	2.55132e-14
ciliary basal body organization	4.93297e-15	2.82368e-14
regulation of glucagon secretion	4.94805e-15	2.83109e-14
negative regulation of synaptic vesicle recycling	5.05703e-15	2.89218e-14
cellular response to copper ion starvation	6.14041e-15	3.50721e-14
cellular response to azide	6.14041e-15	3.50721e-14
single stranded viral RNA replication via double stranded DNA intermediate	6.16116e-15	3.51601e-14
regulation of the force of heart contraction by chemical signal	6.40562e-15	3.65393e-14
positive regulation of transcription elongation from RNA polymerase II promoter	6.43421e-15	3.66864e-14
thiosulfate transport	6.45735e-15	3.68024e-14
malate transmembrane transport	6.45735e-15	3.68024e-14
oxaloacetate(2-) transmembrane transport	6.45735e-15	3.68024e-14
negative regulation of growth rate	6.64633e-15	3.78139e-14
glucose mediated signaling pathway	6.80034e-15	3.86734e-14
negative regulation of CREB transcription factor activity	6.98237e-15	3.96572e-14
axonemal microtubule depolymerization	7.31651e-15	4.15191e-14
plus-end specific microtubule depolymerization	7.31651e-15	4.15191e-14
propylene metabolic process	7.58640e-15	4.29580e-14
response to glycine	7.58640e-15	4.29580e-14
growth plate cartilage morphogenesis	8.21268e-15	4.64443e-14
positive regulation of protein localization to nucleolus	8.47838e-15	4.79263e-14
epoxide metabolic process	8.67076e-15	4.89717e-14
response to thyrotropin-releasing hormone	9.01475e-15	5.08709e-14
cellular response to alkaline pH	9.35830e-15	5.27643e-14
globoside biosynthetic process	1.00640e-14	5.66461e-14
phosphatidylserine catabolic process	1.10366e-14	6.19879e-14
detection of hormone stimulus	1.11844e-14	6.27914e-14
metanephric descending thin limb development	1.15236e-14	6.46402e-14
metanephric proximal straight tubule development	1.15236e-14	6.46402e-14
metanephric proximal convoluted tubule segment 2 development	1.15236e-14	6.46402e-14
maintenance of symbiont-containing vacuole by host	1.15236e-14	6.46402e-14
protein de-ADP-ribosylation	1.15723e-14	6.48032e-14
regulation of eye pigmentation	1.18986e-14	6.64885e-14
regulation of testosterone biosynthetic process	1.33341e-14	7.42890e-14
spliceosomal tri-snRNP complex assembly	1.39120e-14	7.74435e-14
homoiothermy	1.48919e-14	8.27578e-14
isoquinoline alkaloid metabolic process	1.72184e-14	9.54850e-14
positive regulation of synaptic growth at neuromuscular junction	1.89699e-14	1.05021e-13
spine apparatus assembly	1.96644e-14	1.08775e-13
cell-abiotic substrate adhesion	1.96894e-14	1.08867e-13
regulation of endocytic recycling	1.98207e-14	1.09547e-13
heme oxidation	2.00104e-14	1.10549e-13
neuroblast division in subventricular zone	2.05227e-14	1.13236e-13
endonucleolytic cleavage of tricistronic rRNA transcript (SSU-rRNA, 5.8S rRNA, LSU-rRNA)	2.09947e-14	1.15792e-13
transcription from mitochondrial promoter	2.22325e-14	1.22465e-13
cellular response to phosphate starvation	2.23233e-14	1.22914e-13
positive regulation of homocysteine metabolic process	2.23233e-14	1.22914e-13
renal phosphate ion absorption	2.29494e-14	1.26202e-13
cellular response to salt	2.32009e-14	1.27532e-13

myoblast fusion involved in skeletal muscle regeneration	2.36432e-14	1.29909e-13
regulation of chromatin disassembly	2.39500e-14	1.31540e-13
hypermethylation of CpG island	2.46441e-14	1.35127e-13
epiboly involved in gastrulation with mouth forming second	2.47586e-14	1.35698e-13
negative regulation of RNA interference	2.57575e-14	1.41113e-13
positive regulation of hyaluronan cable assembly	2.64944e-14	1.45090e-13
positive regulation of monocyte chemotactic protein-1 production	2.67889e-14	1.46642e-13
natural killer cell tolerance induction	2.77602e-14	1.51581e-13
positive regulation of T cell activation via T cell receptor contact with antigen bound to MHC molecule on antigen presenting cell	2.92487e-14	1.59510e-13
positive regulation of microtubule nucleation	3.04786e-14	1.66079e-13
DNA methylation on cytosine	3.33505e-14	1.81353e-13
coreceptor-mediated virion attachment to host cell	3.40613e-14	1.85065e-13
vitamin D receptor signaling pathway	3.41808e-14	1.85637e-13
response to water deprivation	3.90564e-14	2.11419e-13
positive regulation of histone ubiquitination	4.00146e-14	2.16517e-13
chondroblast differentiation	4.09389e-14	2.21336e-13
negative regulation of protein targeting to membrane	4.10621e-14	2.21911e-13
granuloma formation	5.18610e-14	2.79010e-13
L-alanine catabolic process	5.22895e-14	2.81200e-13
regulation of hydrogen peroxide biosynthetic process	5.25382e-14	2.82422e-13
D-amino acid transport	5.63133e-14	3.02222e-13
ectoderm formation	5.70148e-14	3.05862e-13
regulation of arachidonic acid secretion	5.93243e-14	3.17862e-13
positive regulation of cytotoxic T cell differentiation	6.34186e-14	3.39385e-13
positive regulation of neutrophil degranulation	6.93414e-14	3.70629e-13
interferon-beta production	7.21541e-14	3.85193e-13
response to cobalamin	7.59380e-14	4.04572e-13
negative regulation of phosphatidylcholine catabolic process	7.69627e-14	4.09865e-13
regulation of deoxyribonuclease activity	8.27286e-14	4.39504e-13
positive regulation blood vessel branching	8.49654e-14	4.51205e-13
positive regulation of chromatin assembly or disassembly	8.53617e-14	4.53127e-13
pentose biosynthetic process	8.89289e-14	4.71682e-13
anterograde dendritic transport of neurotransmitter receptor complex	9.15720e-14	4.85310e-13
eosinophil differentiation	9.25440e-14	4.90263e-13
glycolipid transport	9.84147e-14	5.20526e-13
regulation of RNA interference	1.06460e-13	5.62401e-13
negative regulation of hypoxia-induced intrinsic apoptotic signaling pathway	1.07423e-13	5.67034e-13
response to isolation stress	1.11824e-13	5.89314e-13
TCR signalosome assembly	1.21563e-13	6.39872e-13
vestibulocochlear nerve formation	1.24886e-13	6.56835e-13
negative regulation of autophagosome maturation	1.27055e-13	6.67977e-13
growth involved in heart morphogenesis	1.37471e-13	7.21875e-13
cellular response to vasopressin	1.40975e-13	7.39683e-13
polyamine transport	1.60194e-13	8.38851e-13
smooth muscle cell-matrix adhesion	1.70061e-13	8.89101e-13
purine nucleobase salvage	1.78244e-13	9.30036e-13
hyaloid vascular plexus regression	1.82806e-13	9.53083e-13
negative regulation of sperm capacitation	1.84149e-13	9.59325e-13
regulation of chondrocyte development	1.88793e-13	9.83131e-13
respiratory burst involved in defense response	2.12843e-13	1.10662e-12
negative regulation of dendritic cell differentiation	2.14841e-13	1.11656e-12
negative regulation of adiponectin secretion	2.28582e-13	1.18610e-12
positive regulation of glycogen (starch) synthase activity	2.31108e-13	1.19874e-12
regulation of protein localization to nucleolus	2.54012e-13	1.31443e-12
positive regulation of eosinophil migration	2.55976e-13	1.32407e-12
disaccharide metabolic process	2.57112e-13	1.32942e-12
response to brefeldin A	2.75406e-13	1.42178e-12
response to alkaline pH	2.78914e-13	1.43876e-12
response to host defenses	2.81259e-13	1.45028e-12
transforming growth factor beta activation	2.81769e-13	1.45235e-12
positive regulation of mesenchymal stem cell proliferation	2.81769e-13	1.45235e-12
atrioventricular canal morphogenesis	3.42447e-13	1.75753e-12
neural plate anterior/posterior regionalization	3.56225e-13	1.82753e-12
regulation of endodeoxyribonuclease activity	3.59422e-13	1.84321e-12
olefin metabolic process	3.69224e-13	1.89274e-12
immunoglobulin transcytosis in epithelial cells	3.88796e-13	1.98997e-12
hypomethylation of CpG island	4.01755e-13	2.05470e-12
septum secundum development	4.09006e-13	2.08935e-12
ammon gyrus development	4.09864e-13	2.09291e-12
positive regulation of aldosterone biosynthetic process	4.13078e-13	2.10851e-12
endonucleolytic cleavage involved in rRNA processing	4.38571e-13	2.23517e-12
germline cell cycle switching, mitotic to meiotic cell cycle	4.47995e-13	2.28143e-12
chromosome passenger complex localization to kinetochore	4.57345e-13	2.32724e-12

diaphragm contraction	4.68482e-13	2.38207e-12
receptor-mediated endocytosis involved in cholesterol transport	5.06686e-13	2.57334e-12
endothelial cell apoptotic process	5.14014e-13	2.60955e-12
cellular response to menadione	5.87475e-13	2.97561e-12
siderophore transport	6.13389e-13	3.10567e-12
regulation of translational initiation by eIF2 alpha dephosphorylation	6.46382e-13	3.27020e-12
succinate transmembrane transport	6.49559e-13	3.28501e-12
negative regulation of non-motile cilium assembly	7.08836e-13	3.57791e-12
membrane depolarization during Purkinje myocyte cell action potential	7.20805e-13	3.63693e-12
rRNA (guanine-N7)-methylation	7.34364e-13	3.70392e-12
positive regulation of lipoprotein lipase activity	7.38579e-13	3.72375e-12
thrombopoietin-mediated signaling pathway	7.46915e-13	3.76434e-12
regulation of smooth muscle cell-matrix adhesion	7.48916e-13	3.77298e-12
positive regulation of inositol 1,4,5-trisphosphate-sensitive calcium-release channel activity	7.78716e-13	3.91860e-12
regulation of primitive erythrocyte differentiation	8.09306e-13	4.06942e-12
eosinophil fate commitment	8.09306e-13	4.06942e-12
deoxyribonucleoside monophosphate catabolic process	8.88485e-13	4.45903e-12
response to ketamine	9.06734e-13	4.54888e-12
cellular response to monosodium glutamate	9.06734e-13	4.54888e-12
response to Aroclor 1254	9.06734e-13	4.54888e-12
peripheral nervous system myelin maintenance	9.33622e-13	4.67842e-12
regulation of transcription from RNA polymerase II promoter involved in spinal cord association neuron specification	9.79206e-13	4.90311e-12
synaptic vesicle budding	1.01622e-12	5.08460e-12
acrosome matrix dispersal	1.02314e-12	5.11724e-12
negative regulation of alpha-beta T cell proliferation	1.03580e-12	5.17861e-12
formation of translation preinitiation complex	1.04428e-12	5.21900e-12
positive regulation of single-stranded telomeric DNA binding	1.09831e-12	5.48697e-12
uridine transport	1.11126e-12	5.54536e-12
regulation of chromatin assembly	1.14465e-12	5.70547e-12
susceptibility to T cell mediated cytotoxicity	1.15065e-12	5.73104e-12
negative regulation of forebrain neuron differentiation	1.18388e-12	5.89430e-12
mast cell chemotaxis	1.20611e-12	6.00272e-12
ADP transport	1.24062e-12	6.16978e-12
dATP catabolic process	1.32706e-12	6.59468e-12
cellular response to high light intensity	1.41521e-12	7.01685e-12
retinal rod cell apoptotic process	1.41521e-12	7.01685e-12
heme catabolic process	1.46889e-12	7.27203e-12
B cell negative selection	1.49357e-12	7.38865e-12
negative regulation of histone H3-K9 dimethylation	1.53265e-12	7.56490e-12
N-acetylmannosamine metabolic process	1.54433e-12	7.61968e-12
cuticle development	1.55445e-12	7.66388e-12
aflatoxin metabolic process	1.58933e-12	7.82704e-12
cellular response to redox state	1.59955e-12	7.87443e-12
negative regulation of protein ADP-ribosylation	1.63440e-12	8.04297e-12
tetrahydrofolylpolyglutamate biosynthetic process	1.75020e-12	8.60321e-12
preassembly of GPI anchor in ER membrane	1.84600e-12	9.06734e-12
inositol phosphorylation	1.86773e-12	9.17062e-12
negative regulation of epithelial cell proliferation involved in prostate gland development	1.91810e-12	9.40742e-12
double-strand break repair via break-induced replication	2.18502e-12	1.06926e-11
positive regulation of double-strand break repair via homologous recombination	2.44603e-12	1.19432e-11
canonical Wnt signaling pathway involved in cardiac muscle cell fate commitment	2.64836e-12	1.29024e-11
regulation of parathyroid hormone secretion	2.75090e-12	1.33723e-11
regulation of renal output by angiotensin	2.82975e-12	1.37302e-11
L-cysteine catabolic process	2.91329e-12	1.41251e-11
histone H3-K27 trimethylation	3.31254e-12	1.60254e-11
positive regulation of muscle atrophy	3.39762e-12	1.64310e-11
regulation of viral budding via host ESCRT complex	3.41089e-12	1.64891e-11
negative regulation of interleukin-2 secretion	3.47968e-12	1.68155e-11
negative regulation of protein K63-linked ubiquitination	3.94052e-12	1.90215e-11
determination of affect	4.45073e-12	2.14372e-11
nephrogenic mesenchyme morphogenesis	4.55312e-12	2.19143e-11
positive regulation of TORC2 signaling	4.65384e-12	2.23908e-11
glutamine secretion	4.77357e-12	2.29418e-11
L-glutamine import into cell	4.77357e-12	2.29418e-11
C-5 methylation of cytosine	4.78744e-12	2.29916e-11
trehalose catabolic process	4.89152e-12	2.34829e-11
positive regulation of retinoic acid receptor signaling pathway	4.91791e-12	2.35923e-11
positive regulation of 1-phosphatidylinositol 4-kinase activity	5.28968e-12	2.53296e-11
medium-chain fatty acid transport	5.51447e-12	2.63772e-11

slow endocytic recycling	5.70700e-12	2.72882e-11
indole metabolic process	5.75944e-12	2.75290e-11
gentamycin metabolic process	5.75944e-12	2.75290e-11
arsenate ion transmembrane transport	5.75944e-12	2.75290e-11
positive regulation of sodium-dependent phosphate transport	5.75944e-12	2.75290e-11
positive regulation of phosphate transmembrane transport	5.75944e-12	2.75290e-11
third ventricle development	5.82021e-12	2.77589e-11
defecation	6.56521e-12	3.12554e-11
positive regulation of microtubule depolymerization	6.62945e-12	3.15499e-11
response to erythropoietin	6.64560e-12	3.16039e-11
negative regulation of potassium ion export	7.27782e-12	3.45854e-11
formate transport	7.86294e-12	3.73390e-11
mannitol transport	7.86294e-12	3.73390e-11
galactitol metabolic process	7.93286e-12	3.76439e-11
glycolytic process from galactose	7.93286e-12	3.76439e-11
twitch skeletal muscle contraction	9.13594e-12	4.32126e-11
negative regulation of guanylate cyclase activity	9.18665e-12	4.34056e-11
positive regulation of heterochromatin assembly	9.36395e-12	4.42274e-11
positive regulation of cAMP catabolic process	9.65236e-12	4.55569e-11
negative regulation of membrane tubulation	9.79908e-12	4.62163e-11
protein maturation by iron-sulfur cluster transfer	1.03422e-11	4.87430e-11
negative regulation of neural crest formation	1.13022e-11	5.32103e-11
negative regulation of fibroblast growth factor receptor signaling pathway involved in neural plate anterior/posterior pattern formation	1.13022e-11	5.32103e-11
glycine biosynthetic process from serine	1.23734e-11	5.80871e-11
phosphocreatine biosynthetic process	1.25076e-11	5.86963e-11
pyridoxal phosphate catabolic process	1.32830e-11	6.22684e-11
positive regulation of nucleoside transport	1.32966e-11	6.23098e-11
negative regulation of neurotrophin production	1.32966e-11	6.23098e-11
positive regulation of mesoderm development	1.35243e-11	6.33317e-11
skeletal muscle satellite cell commitment	1.42409e-11	6.66401e-11
regulation of cell motility involved in somitogenic axis elongation	1.44410e-11	6.75521e-11
positive regulation of non-canonical Wnt signaling pathway via JNK cascade	1.44410e-11	6.75521e-11
negative regulation of convergent extension involved in axis elongation	1.44410e-11	6.75521e-11
substance P catabolic process	1.48395e-11	6.93177e-11
calcitonin catabolic process	1.48395e-11	6.93177e-11
endothelin maturation	1.48395e-11	6.93177e-11
mesenchyme migration	1.74749e-11	8.13391e-11
synaptic vesicle lumen acidification	1.81357e-11	8.43256e-11
positive regulation of chylomicron remnant clearance	1.81795e-11	8.44995e-11
Wnt-activated signaling pathway involved in forebrain neuron fate commitment	1.87259e-11	8.70082e-11
canonical Wnt signaling pathway involved in neural plate anterior/posterior pattern formation	1.87259e-11	8.70082e-11
phytoalexin metabolic process	1.93796e-11	8.99502e-11
response to insecticide	1.98830e-11	9.22545e-11
multi-organism toxin transport	2.04290e-11	9.46873e-11
negative regulation of MDA-5 signaling pathway	2.29459e-11	1.06204e-10
N-glycan processing to lysosome	2.38296e-11	1.10177e-10
positive regulation of glutamine transport	2.69340e-11	1.24312e-10
regulation of nucleoside transport	2.96417e-11	1.36522e-10
positive regulation of sequestering of triglyceride	3.03737e-11	1.39845e-10
snoRNA processing	3.05515e-11	1.40614e-10
cellular response to cisplatin	3.08666e-11	1.42015e-10
regulation of progesterone secretion	3.26121e-11	1.49836e-10
peptidyl-L-cysteine S-palmitoylation	3.38790e-11	1.55548e-10
regulation of collateral sprouting in absence of injury	3.41475e-11	1.56671e-10
growth hormone secretion	3.58587e-11	1.64236e-10
positive regulation of translational fidelity	3.60012e-11	1.64831e-10
thromboxane A2 signaling pathway	3.73078e-11	1.70695e-10
tRNA pseudouridine synthesis	3.87672e-11	1.77249e-10
negative regulation of microtubule binding	4.19079e-11	1.91276e-10
trochlear nerve development	4.25725e-11	1.94107e-10
oxidation-dependent protein catabolic process	4.87331e-11	2.21811e-10
response to injury involved in regulation of muscle adaptation	5.13892e-11	2.33577e-10
negative regulation of mature B cell apoptotic process	5.62892e-11	2.55144e-10
B cell selection	5.64331e-11	2.55708e-10
positive regulation of viral budding via host ESCRT complex	5.65954e-11	2.56356e-10
positive regulation of prostaglandin-endoperoxide synthase activity	5.78816e-11	2.62001e-10
positive regulation of protein monoubiquitination	5.84119e-11	2.64311e-10
chromosome passenger complex localization to spindle midzone	6.07908e-11	2.74791e-10
L-histidine transmembrane transport	6.23473e-11	2.81537e-10
tricuspid valve formation	6.99402e-11	3.15390e-10

snRNA 3'-end processing	7.48798e-11	3.37203e-10
cell proliferation in bone marrow	7.95450e-11	3.58089e-10
negative regulation of gap junction assembly	7.95450e-11	3.58089e-10
negative regulation of hydrogen peroxide biosynthetic process	8.07466e-11	3.63249e-10
glomerular mesangial cell proliferation	8.61820e-11	3.87039e-10
positive regulation of low-density lipoprotein particle receptor biosynthetic process	8.89893e-11	3.99374e-10
regulation of T cell activation via T cell receptor contact with antigen bound to MHC molecule on antigen presenting cell	8.99119e-11	4.03377e-10
nucleokinesis involved in cell motility in cerebral cortex radial glia guided migration	9.90677e-11	4.43697e-10
positive regulation of spontaneous neurotransmitter secretion	1.02342e-10	4.58204e-10
negative regulation of macropinocytosis	1.02342e-10	4.58204e-10
regulation of caveolin-mediated endocytosis	1.06723e-10	4.77006e-10
regulation of mRNA export from nucleus	1.09905e-10	4.90730e-10
negative regulation of microglial cell activation	1.11457e-10	4.97324e-10
positive regulation of antimicrobial humoral response	1.11733e-10	4.98385e-10
positive regulation of nephron tubule epithelial cell differentiation	1.11754e-10	4.98311e-10
positive regulation of type IIa hypersensitivity	1.29592e-10	5.75895e-10
vacuolar sequestering	1.33562e-10	5.93139e-10
negative regulation of N-terminal protein palmitoylation	1.38331e-10	6.13903e-10
regulation of definitive erythrocyte differentiation	1.38505e-10	6.14468e-10
metanephric mesenchymal cell migration	1.46899e-10	6.51046e-10
cell migration involved in coronary angiogenesis	1.46899e-10	6.51046e-10
metanephric glomerular mesangial cell proliferation involved in metanephros development	1.46899e-10	6.51046e-10
positive regulation of transcription via serum response element binding	1.53787e-10	6.80656e-10
negative regulation of chromatin silencing at rDNA	1.53946e-10	6.81132e-10
late nucleophagy	1.56681e-10	6.92534e-10
dUMP catabolic process	1.58160e-10	6.98603e-10
excitatory chemical synaptic transmission	1.60385e-10	7.08192e-10
cardiac right ventricle formation	1.76951e-10	7.78988e-10
modulation by symbiont of host signal transduction pathway	1.93091e-10	8.48338e-10
response to type III interferon	1.99525e-10	8.75728e-10
signal transduction downstream of smoothened	2.01555e-10	8.84341e-10
positive regulation of protein localization to cilium	2.15052e-10	9.41988e-10
positive regulation of t-circle formation	2.20112e-10	9.63190e-10
amino acid homeostasis	2.24671e-10	9.82486e-10
follicular dendritic cell differentiation	2.50170e-10	1.09218e-9
mitochondrial pyruvate transmembrane transport	2.59039e-10	1.12903e-9
post-embryonic camera-type eye morphogenesis	2.72253e-10	1.18544e-9
alanine catabolic process	2.73936e-10	1.19198e-9
sensory perception of touch	2.76152e-10	1.20122e-9
negative regulation of synapse maturation	2.81862e-10	1.22525e-9
replication-born double-strand break repair via sister chromatid exchange	3.19542e-10	1.38630e-9
myoblast development	3.24244e-10	1.40438e-9
positive regulation of apoptotic process involved in mammary gland involution	3.29450e-10	1.42646e-9
female meiosis I	3.31860e-10	1.43595e-9
cellular response to L-arginine	3.32482e-10	1.43817e-9
generation of catalytic spliceosome for first transesterification step	3.38602e-10	1.46416e-9
regulation of thymocyte migration	3.72563e-10	1.60784e-9
aldehyde catabolic process	3.80638e-10	1.64161e-9
rescue of stalled ribosome	3.83287e-10	1.65249e-9
purine deoxyribonucleotide catabolic process	3.89197e-10	1.67633e-9
ganglioside GM1 transport to membrane	3.90931e-10	1.68324e-9
distal tubule morphogenesis	4.05870e-10	1.74528e-9
endonucleolytic cleavage to generate mature 3'-end of SSU-rRNA from (SSU-rRNA, 5.8S rRNA, LSU-rRNA)	4.30889e-10	1.85044e-9
regulation of glutamine transport	4.32367e-10	1.85619e-9
10-formyltetrahydrofolate catabolic process	4.42777e-10	1.89840e-9
glycine biosynthetic process, by transamination of glyoxylate	4.44055e-10	1.90326e-9
positive regulation of norepinephrine secretion	4.61930e-10	1.97537e-9
UDP-glucose transport	4.68080e-10	1.99971e-9
ITP catabolic process	4.75643e-10	2.03137e-9
response to herbicide	4.77804e-10	2.03993e-9
positive regulation of progesterone secretion	4.88223e-10	2.08306e-9
positive regulation of fast-twitch skeletal muscle fiber contraction	5.13265e-10	2.18778e-9
protein sialylation	5.51251e-10	2.34513e-9
regulation of chromatin assembly or disassembly	5.64708e-10	2.40083e-9
response to muscle activity involved in regulation of muscle adaptation	6.74520e-10	2.86029e-9
type I interferon biosynthetic process	7.28554e-10	3.08445e-9

protein lipoylation	7.51308e-10	3.17772e-9
modification by virus of host mRNA processing	7.56554e-10	3.19785e-9
negative regulation of antifungal innate immune response	8.15160e-10	3.43784e-9
tRNA dihydrouridine synthesis	8.25207e-10	3.47798e-9
cellular response to vitamin E	8.59152e-10	3.61873e-9
cellular response to interleukin-3	8.67006e-10	3.65064e-9
snoRNA 3'-end processing	8.88457e-10	3.73857e-9
negative regulation of oocyte maturation	9.35848e-10	3.93421e-9
establishment or maintenance of actin cytoskeleton polarity	9.43114e-10	3.96349e-9
glyoxylate catabolic process	9.75463e-10	4.09682e-9
positive regulation of phospholipase C-activating G-protein coupled receptor signaling pathway	9.84520e-10	4.13354e-9
translational attenuation	1.00428e-9	4.21383e-9
polyamine catabolic process	1.04763e-9	4.39149e-9
sequestering of nodal from receptor via nodal binding	1.06663e-9	4.46828e-9
adenosine to inosine editing	1.07267e-9	4.49215e-9
ganglioside catabolic process	1.08430e-9	4.53799e-9
D-xylose metabolic process	1.08603e-9	4.54378e-9
definitive erythrocyte differentiation	1.08778e-9	4.54964e-9
regulation of positive thymic T cell selection	1.09052e-9	4.55966e-9
negative regulation of caveolin-mediated endocytosis	1.13741e-9	4.75118e-9
maturation of 5S rRNA	1.15579e-9	4.82490e-9
regulation of phenotypic switching	1.17857e-9	4.91688e-9
negative regulation of presynaptic membrane organization	1.18827e-9	4.95421e-9
positive regulation of lipid transport across blood brain barrier	1.18827e-9	4.95421e-9
skeletal muscle satellite cell differentiation	1.24187e-9	5.16783e-9
regulation of acetylcholine secretion, neurotransmission	1.26946e-9	5.27931e-9
negative regulation of smooth muscle cell-matrix adhesion	1.28559e-9	5.34470e-9
regulation of synaptic vesicle priming	1.34659e-9	5.59299e-9
negative regulation of UDP-glucose catabolic process	1.36378e-9	5.66264e-9
negative regulation of glycogen synthase activity, transferring glucose-1-phosphate	1.36378e-9	5.66264e-9
Okazaki fragment processing involved in mitotic DNA replication	1.37243e-9	5.69313e-9
protein linear polyubiquitination	1.41887e-9	5.88022e-9
positive regulation of clathrin coat assembly	1.44885e-9	6.00068e-9
autophagy of host cells involved in interaction with symbiont	1.44914e-9	5.99998e-9
positive regulation of DNA damage checkpoint	1.47007e-9	6.08091e-9
spontaneous exocytosis of neurotransmitter	1.48639e-9	6.14648e-9
sphinganine metabolic process	1.51039e-9	6.24181e-9
negative regulation of pre-miRNA processing	1.59451e-9	6.57291e-9
positive regulation of type B pancreatic cell proliferation	1.60892e-9	6.63025e-9
isopeptide cross-linking via N6-(L-isoglutamyl)-L-lysine	1.62046e-9	6.67362e-9
regulation of myeloid dendritic cell activation	1.62914e-9	6.70515e-9
negative regulation of cellular response to hypoxia	1.69277e-9	6.95833e-9
nephrogenic mesenchyme development	1.75931e-9	7.22962e-9
platelet alpha granule organization	1.82907e-9	7.50220e-9
positive regulation of Fc-gamma receptor signaling pathway involved in phagocytosis	1.93820e-9	7.93498e-9
P granule organization	1.98052e-9	8.09816e-9
glycolytic process through glucose-1-phosphate	2.26207e-9	9.21787e-9
cytoplasm-associated proteasomal ubiquitin-dependent protein catabolic process	2.34338e-9	9.53737e-9
glutamine transport	2.35763e-9	9.59240e-9
viral RNA genome packaging	2.44814e-9	9.95451e-9
positive regulation of adenosine receptor signaling pathway	2.53223e-9	1.02901e-8
protein K29-linked ubiquitination	2.53264e-9	1.02886e-8
NADP biosynthetic process	2.56257e-9	1.04069e-8
mammary gland fat development	2.59260e-9	1.05224e-8
positive regulation of macrophage colony-stimulating factor signaling pathway	2.59260e-9	1.05224e-8
positive regulation of microglial cell migration	2.59260e-9	1.05224e-8
positive regulation of megakaryocyte differentiation	2.71214e-9	1.09974e-8
positive regulation of leukotriene production involved in inflammatory response	2.82068e-9	1.14304e-8
negative regulation of vascular wound healing	2.82068e-9	1.14304e-8
meiotic attachment of telomere to nuclear envelope	3.02624e-9	1.22333e-8
anaerobic respiration	3.10160e-9	1.25302e-8
response to interleukin-11	3.13838e-9	1.26711e-8
positive regulation of transforming growth factor beta2 production	3.23511e-9	1.30496e-8
meiotic cell cycle checkpoint	3.30318e-9	1.33160e-8
regulation of opsonization	3.33968e-9	1.34590e-8
negative regulation of histone H2A K63-linked ubiquitination	3.36021e-9	1.35210e-8
adenosine catabolic process	3.54299e-9	1.42261e-8
inosine biosynthetic process	3.54299e-9	1.42261e-8
anterograde dendritic transport	3.54891e-9	1.42411e-8



immunoglobulin V(D)J recombination	3.58859e-9	1.43959e-8
positive regulation of DNA ligase activity	3.61815e-9	1.45101e-8
positive regulation of trophoblast cell migration	3.78049e-9	1.51473e-8
regulation of low-density lipoprotein particle receptor biosynthetic process	3.80398e-9	1.52322e-8
glucose-6-phosphate transport	3.82012e-9	1.52921e-8
leukocyte adhesive activation	3.99891e-9	1.59835e-8
negative regulation of protein refolding	4.23686e-9	1.69243e-8
regulation of protein folding	4.43762e-9	1.77047e-8
folic acid transport	4.60663e-9	1.83567e-8
visceral muscle development	5.12812e-9	2.03977e-8
regulation of actin filament binding	5.35704e-9	2.12954e-8
interleukin-4-mediated signaling pathway	5.51019e-9	2.18910e-8
negative regulation of Wnt signaling pathway involved in digestive tract morphogenesis	5.73491e-9	2.27562e-8
positive regulation of cardioblast proliferation	5.75103e-9	2.28065e-8
regulation of protein localization to cilium	5.78447e-9	2.29253e-8
neuron death in response to oxidative stress	5.89227e-9	2.33454e-8
regulation of lateral mesodermal cell fate specification	5.92768e-9	2.34787e-8
RNA polymerase III type 1 promoter transcriptional preinitiation complex assembly	5.95326e-9	2.35729e-8
transcription from RNA polymerase III type 2 promoter	5.95326e-9	2.35729e-8
cleavage in ITS2 between 5.8S rRNA and LSU-rRNA of tricistronic rRNA transcript (SSU-rRNA, 5.8S rRNA, LSU-rRNA)	6.13327e-9	2.42565e-8
regulation of granulosa cell apoptotic process	6.27612e-9	2.48065e-8
positive regulation of MHC class I biosynthetic process	6.27971e-9	2.48132e-8
mammary duct terminal end bud growth	6.41972e-9	2.53437e-8
nucleosome positioning	6.46165e-9	2.55015e-8
positive regulation of transcription involved in exit from mitosis	6.48463e-9	2.55845e-8
inosine metabolic process	6.58555e-9	2.59671e-8
menaquinone biosynthetic process	6.76805e-9	2.66707e-8
ubiquinone biosynthetic process via 3,4-dihydroxy-5-polyprenylbenzoate	6.76805e-9	2.66707e-8
vitamin K biosynthetic process	6.76805e-9	2.66707e-8
peptidyl-histidine dephosphorylation	6.81162e-9	2.68183e-8
corticosterone secretion	6.97325e-9	2.74301e-8
regulation of autophagosome size	7.13606e-9	2.80537e-8
polyamine import	7.13606e-9	2.80537e-8
peptidyl-aspartic acid autophosphorylation	7.13606e-9	2.80537e-8
cellular response to sodium arsenite	7.79167e-9	3.05762e-8
chlorinated hydrocarbon metabolic process	7.85866e-9	3.08300e-8
regulation of the force of skeletal muscle contraction	7.98502e-9	3.12977e-8
regulation of oocyte maturation	8.10849e-9	3.17721e-8
negative regulation of keratinocyte migration	8.60134e-9	3.36532e-8
positive regulation of Schwann cell proliferation	8.81300e-9	3.44403e-8
atrial septum secundum morphogenesis	9.10584e-9	3.55425e-8
positive regulation of cell fate specification	9.26713e-9	3.61506e-8
negative regulation of hyaluronan biosynthetic process	9.88707e-9	3.85347e-8
T-helper 1 cell lineage commitment	1.00346e-8	3.90866e-8
glucocorticoid secretion	1.01395e-8	3.94833e-8
negative regulation of transcription from RNA polymerase II promoter by histone modification	1.01908e-8	3.96714e-8
response to L-arginine	1.02201e-8	3.97738e-8
regulation of natural killer cell differentiation involved in immune response	1.03220e-8	4.01583e-8
negative regulation of glial cell migration	1.04478e-8	4.06357e-8
mitochondrial tRNA pseudouridine synthesis	1.06160e-8	4.12780e-8
positive regulation of histone H3-K27 acetylation	1.07037e-8	4.16066e-8
negative regulation of vascular smooth muscle cell differentiation	1.08616e-8	4.21706e-8
regulation of membrane repolarization during atrial cardiac muscle cell action potential	1.11026e-8	4.30933e-8
positive regulation of erythrocyte aggregation	1.11290e-8	4.31705e-8
establishment of protein localization to juxtaparanode region of axon	1.14381e-8	4.43564e-8
maintenance of DNA methylation	1.19914e-8	4.64473e-8
cytoplasmic pattern recognition receptor signaling pathway in response to virus	1.21737e-8	4.71394e-8
peptidyl-arginine methylation, to symmetrical-dimethyl arginine	1.23070e-8	4.76135e-8
otolith formation	1.23596e-8	4.78032e-8
neuromast hair cell development	1.23596e-8	4.78032e-8
acetylcholine secretion	1.23596e-8	4.78032e-8
regulation of peroxisome size	1.25392e-8	4.84409e-8
positive regulation of metalloendopeptidase activity	1.32056e-8	5.09851e-8
negative regulation of ATP citrate synthase activity	1.33092e-8	5.13701e-8
interleukin-6 secretion	1.33596e-8	5.15494e-8
negative regulation of macroautophagy by TORC1 signaling	1.44716e-8	5.57911e-8

regulation of polyamine transmembrane transport	1.49884e-8	5.77158e-8
negative regulation of skeletal muscle acetylcholine-gated channel clustering	1.55030e-8	5.96800e-8
glutathione transport	1.55984e-8	6.00121e-8
DNA strand elongation involved in mitotic DNA replication	1.60661e-8	6.17575e-8
actin filament branching	1.67843e-8	6.44427e-8
positive regulation of vascular endothelial cell proliferation	1.72026e-8	6.59718e-8
positive regulation of sensory perception of pain	1.77140e-8	6.77946e-8
enucleate erythrocyte development	1.78634e-8	6.83266e-8
positive regulation of polyamine transmembrane transport	1.78757e-8	6.83539e-8
deoxyadenosine catabolic process	1.89315e-8	7.23489e-8
xanthine biosynthetic process	1.89315e-8	7.23489e-8
negative regulation of adenosine receptor signaling pathway	1.89315e-8	7.23489e-8
negative regulation of penile erection	1.89315e-8	7.23489e-8
late endosome to Golgi transport	1.89887e-8	7.24833e-8
negative regulation of natural killer cell differentiation involved in immune response	1.95966e-8	7.47821e-8
growth of symbiont in host	1.95966e-8	7.47821e-8
negative regulation of lung blood pressure	2.01826e-8	7.68622e-8
regulation of Rab protein signal transduction	2.05663e-8	7.82556e-8
seminal clot liquefaction	2.09350e-8	7.96125e-8
positive regulation of platelet-derived growth factor receptor-beta signaling pathway	2.09593e-8	7.96816e-8
glycerol biosynthetic process	2.21702e-8	8.41877e-8
negative regulation of single stranded viral RNA replication via double stranded DNA intermediate	2.24457e-8	8.52096e-8
positive regulation of humoral immune response mediated by circulating immunoglobulin	2.24607e-8	8.52418e-8
establishment or maintenance of cell polarity regulating cell shape	2.32959e-8	8.83349e-8
positive regulation of necrotic cell death	2.52635e-8	9.55206e-8
negative regulation of membrane invagination	2.56153e-8	9.68229e-8
octopamine biosynthetic process	2.59692e-8	9.80481e-8
negative regulation of cyclic-nucleotide phosphodiesterase activity	2.63258e-8	9.93658e-8
N-acetylneuraminic acid catabolic process	2.75400e-8	1.03829e-7
apoptotic process in bone marrow	2.75685e-8	1.03907e-7
positive regulation of interleukin-10 biosynthetic process	2.79867e-8	1.05453e-7
mitochondrial pyrimidine nucleotide import	2.80314e-8	1.05591e-7
zymogen granule exocytosis	2.95229e-8	1.11083e-7
interleukin-10 production	3.03116e-8	1.13952e-7
response to silicon dioxide	3.15635e-8	1.18523e-7
DNA replication, Okazaki fragment processing	3.31367e-8	1.24253e-7
response to mycotoxin	3.32566e-8	1.24667e-7
regulation of inositol 1,4,5-trisphosphate-sensitive calcium-release channel activity	3.46306e-8	1.29670e-7
response to sodium arsenite	3.59233e-8	1.34358e-7
regulation of membrane hyperpolarization	3.60774e-8	1.34896e-7
SH2 domain-mediated complex assembly	3.69818e-8	1.38199e-7
cellular response to endothelin	3.69818e-8	1.38199e-7
nuclear-transcribed mRNA catabolic process, exonucleolytic, 3'-5' rRNA 3'-end processing	3.76219e-8	1.40471e-7
regulation of homocysteine metabolic process	3.81791e-8	1.42470e-7
regulation of homocysteine metabolic process	3.86629e-8	1.44194e-7
positive regulation of hypersensitivity	3.90800e-8	1.45667e-7
negative regulation of transforming growth factor beta activation	4.11368e-8	1.53160e-7
positive regulation of mitotic cell cycle, embryonic	4.20350e-8	1.56415e-7
negative regulation of stomach neuroendocrine cell differentiation	4.20350e-8	1.56415e-7
negative regulation of pancreatic A cell differentiation	4.20350e-8	1.56415e-7
glycine secretion, neurotransmission	4.23121e-8	1.57313e-7
norepinephrine secretion	4.28206e-8	1.59113e-7
menaquinone metabolic process	4.28219e-8	1.59074e-7
negative regulation of circadian sleep/wake cycle, sleep	4.31510e-8	1.60251e-7
negative regulation of NK T cell activation	4.46222e-8	1.65621e-7
negative regulation of phagocytosis, engulfment	4.46222e-8	1.65621e-7
negative regulation of activation of JAK2 kinase activity	4.46222e-8	1.65621e-7
positive regulation of antigen processing and presentation	4.53472e-8	1.68169e-7
response to hydroxyisoflavone	4.73985e-8	1.75579e-7
positive regulation of inclusion body assembly	4.97448e-8	1.83959e-7
antibiotic metabolic process	4.99079e-8	1.84511e-7
negative regulation by symbiont of host apoptotic process	5.40721e-8	1.99569e-7
telomere tethering at nuclear periphery	5.65559e-8	2.08444e-7
regulation of protein monoubiquitination	5.67772e-8	2.09201e-7
positive regulation of G1 to G0 transition	5.71977e-8	2.10632e-7
positive regulation of uterine smooth muscle relaxation	5.99395e-8	2.20482e-7
negative regulation of maintenance of permeability of blood-brain barrier	5.99395e-8	2.20482e-7
positive regulation of thymocyte migration	5.99731e-8	2.20483e-7

spermine catabolic process	6.14999e-8	2.25906e-7
tRNA acetylation	6.17187e-8	2.26647e-7
rRNA acetylation involved in maturation of SSU-rRNA	6.17187e-8	2.26647e-7
detection of hypoxic conditions in blood by carotid body chemoreceptor signaling	6.23647e-8	2.28827e-7
dermatan sulfate catabolic process	6.25384e-8	2.29401e-7
protein localization to cell cortex	6.52369e-8	2.39033e-7
resolution of mitotic recombination intermediates	6.55540e-8	2.40061e-7
positive regulation of glucose catabolic process to lactate via pyruvate	6.62168e-8	2.42285e-7
macrophage migration inhibitory factor signaling pathway	6.63227e-8	2.42605e-7
release of cytoplasmic sequestered NF-kappaB	6.80231e-8	2.48687e-7
regulation of translational termination	7.28657e-8	2.66169e-7
follicular dendritic cell activation	7.38315e-8	2.69622e-7
tRNA transcription	7.49787e-8	2.73584e-7
negative regulation of dendritic cell cytokine production	7.59202e-8	2.76865e-7
zygote asymmetric cell division	7.61839e-8	2.77673e-7
plasma membrane long-chain fatty acid transport	7.64733e-8	2.78497e-7
medium-chain fatty-acyl-CoA metabolic process	8.07324e-8	2.93601e-7
maintenance of transcriptional fidelity during DNA-templated transcription elongation from RNA polymerase II promoter	8.35244e-8	3.03503e-7
dGDP metabolic process	8.79669e-8	3.19293e-7
positive regulation of aggregophagy	9.02610e-8	3.26988e-7
fourth ventricle development	9.09462e-8	3.29380e-7
initiation of neural tube closure	9.09462e-8	3.29380e-7
DNA unwinding involved in DNA replication	9.21723e-8	3.33636e-7
viral translational termination-reinitiation	9.90310e-8	3.57774e-7
defense response to fungus, incompatible interaction	9.98988e-8	3.60810e-7
transforming growth factor beta receptor signaling pathway involved in heart development	9.98988e-8	3.60810e-7
embryonic liver development	9.98988e-8	3.60810e-7
mesenchymal cell apoptotic process	1.02263e-7	3.68945e-7
release from viral latency	1.02473e-7	3.69599e-7
regulation of sperm capacitation	1.05975e-7	3.81918e-7
glucose import in response to insulin stimulus	1.06870e-7	3.85037e-7
extracellular matrix constituent secretion	1.08298e-7	3.89967e-7
positive regulation of endoplasmic reticulum stress-induced eIF2 alpha dephosphorylation	1.08461e-7	3.90447e-7
depurination	1.09366e-7	3.93492e-7
cornified envelope assembly	1.10545e-7	3.97513e-7
rRNA transport	1.11690e-7	4.01521e-7
positive regulation of microtubule binding	1.12355e-7	4.03802e-7
negative regulation of Rac protein signal transduction	1.12791e-7	4.05258e-7
G0 to G1 transition	1.13871e-7	4.08916e-7
post-embryonic body morphogenesis	1.18497e-7	4.25294e-7
positive regulation of acetylcholine secretion, neurotransmission	1.22518e-7	4.39248e-7
negative regulation of nuclear-transcribed mRNA poly(A) tail shortening	1.26410e-7	4.52953e-7
negative regulation of megakaryocyte differentiation	1.31211e-7	4.69518e-7
triglyceride acyl-chain remodeling	1.35350e-7	4.83935e-7
regulation of multivesicular body size	1.39084e-7	4.96879e-7
L-threonine catabolic process to glycine	1.42049e-7	5.07334e-7
thiamine pyrophosphate transport	1.43548e-7	5.12412e-7
positive regulation of telomeric DNA binding	1.57359e-7	5.60643e-7
actin filament fragmentation	1.61066e-7	5.73695e-7
negative regulation of formation of translation preinitiation complex	1.66883e-7	5.93452e-7
positive regulation of histone H3-K9 dimethylation	1.71086e-7	6.07249e-7
eukaryotic translation initiation factor 4F complex assembly	1.72603e-7	6.12468e-7
base-excision repair, DNA ligation	1.74433e-7	6.18627e-7
negative regulation of pinocytosis	1.77235e-7	6.28058e-7
regulation of cAMP catabolic process	1.77533e-7	6.28945e-7
MDA-5 signaling pathway	1.77977e-7	6.30346e-7
negative regulation of cysteine-type endopeptidase activity involved in apoptotic signaling pathway	1.79498e-7	6.35391e-7
sperm flagellum movement involved in flagellated sperm motility	1.79880e-7	6.36574e-7
polyadenylation-dependent snoRNA 3'-end processing	1.81756e-7	6.43039e-7
histone H3-R26 citrullination	1.82376e-7	6.45060e-7
wound healing involved in inflammatory response	1.82705e-7	6.46047e-7
cellular response to cobalt ion	1.90971e-7	6.74550e-7
cellular response to leptomycin B	1.94492e-7	6.86434e-7
negative regulation of glomerular filtration by angiotensin	2.03694e-7	7.18335e-7
smooth muscle hypertrophy	2.03694e-7	7.18335e-7
interleukin-8 secretion	2.04129e-7	7.19484e-7
fat-soluble vitamin biosynthetic process	2.04235e-7	7.19663e-7
D-xylose catabolic process	2.05659e-7	7.24294e-7

regulation of endocannabinoid signaling pathway	2.06405e-7	7.26726e-7
regulation of oxygen metabolic process	2.06812e-7	7.27964e-7
regulation of polynucleotide adenylyltransferase activity	2.10806e-7	7.41031e-7
SNARE complex disassembly	2.16224e-7	7.59470e-7
toxin biosynthetic process	2.17669e-7	7.64137e-7
oxidative deethylation	2.17669e-7	7.64137e-7
CD40 signaling pathway	2.22446e-7	7.80282e-7
positive regulation of platelet aggregation	2.24643e-7	7.87568e-7
symmetric cell division	2.33950e-7	8.19322e-7
negative regulation of protein localization to cell cortex	2.33950e-7	8.19322e-7
B cell costimulation	2.45615e-7	8.57663e-7
skeletal muscle fiber adaptation	2.46291e-7	8.59797e-7
sebaceous gland cell differentiation	2.66581e-7	9.29642e-7
negative regulation of podosome assembly	2.67812e-7	9.33439e-7
clearance of foreign intracellular DNA by conversion of DNA cytidine to uridine	2.82914e-7	9.83991e-7
positive regulation of RNA polymerase II regulatory region sequence-specific DNA binding	3.16954e-7	1.09861e-6
positive regulation of transcription from RNA polymerase II promoter in response to heat stress	3.18471e-7	1.10358e-6
cellular response to nitroglycerin	3.18471e-7	1.10358e-6
GDP-L-fucose salvage	3.27540e-7	1.13410e-6
negative regulation of receptor localization to synapse	3.31916e-7	1.14835e-6
negative regulation of anterograde synaptic vesicle transport	3.31916e-7	1.14835e-6
transepithelial L-ascorbic acid transport	3.43139e-7	1.18593e-6
nitrate catabolic process	3.47714e-7	1.20143e-6
nitric oxide catabolic process	3.47714e-7	1.20143e-6
cellular organofluorine metabolic process	3.47714e-7	1.20143e-6
suppression by virus of host type I interferon-mediated signaling pathway	3.48930e-7	1.20468e-6
suppression by virus of host STAT1 activity	3.48930e-7	1.20468e-6
suppression by virus of host STAT2 activity	3.48930e-7	1.20468e-6
neurotransmitter receptor transport postsynaptic membrane to endosome	3.48930e-7	1.20468e-6
enzyme active site formation via cysteine modification to L-cysteine persulfide	3.51387e-7	1.21189e-6
protein urmylation	3.51387e-7	1.21189e-6
asparagine catabolic process	3.72950e-7	1.28357e-6
detection of temperature stimulus involved in thermoception	3.74297e-7	1.28753e-6
response to capsazepine	3.74297e-7	1.28753e-6
thyroid hormone catabolic process	3.90517e-7	1.34087e-6
gamma-aminobutyric acid import	4.00748e-7	1.37492e-6
negative regulation of RNA polymerase II regulatory region sequence-specific DNA binding	4.02167e-7	1.37907e-6
actin rod assembly	4.06675e-7	1.39380e-6
putrescine transport	4.30526e-7	1.47439e-6
cerebellum formation	4.35782e-7	1.49200e-6
midbrain-hindbrain boundary maturation during brain development	4.35782e-7	1.49200e-6
astrocyte-dopaminergic neuron signaling	4.35782e-7	1.49200e-6
regulation of adiponectin secretion	4.44570e-7	1.51893e-6
anterior compartment pattern formation	4.70831e-7	1.60282e-6
posterior compartment specification	4.70831e-7	1.60282e-6
type I interferon production	4.76659e-7	1.62182e-6
lysosomal membrane organization	4.84887e-7	1.64939e-6
sperm mitochondrion organization	4.91916e-7	1.67244e-6
sulfur oxidation	5.16416e-7	1.75438e-6
vitamin E biosynthetic process	5.84222e-7	1.98012e-6
xenophagy	6.35649e-7	2.15110e-6
protein localization to nucleoplasm	6.42454e-7	2.17301e-6
tricarboxylic acid transmembrane transport	6.62731e-7	2.23929e-6
mitotic DNA replication preinitiation complex assembly	6.65163e-7	2.24693e-6
negative regulation of actin filament binding	6.65782e-7	2.24787e-6
ATF6-mediated unfolded protein response	7.02593e-7	2.36851e-6
enzyme active site formation	7.09974e-7	2.39278e-6
rhomomere 2 development	7.17755e-7	2.41714e-6
pons maturation	7.50651e-7	2.52533e-6
synaptic vesicle recycling via endosome	7.63447e-7	2.56707e-6
positive regulation of proteasomal ubiquitin-dependent protein catabolic process involved in cellular response to hypoxia	7.94939e-7	2.67023e-6
U4 snRNA 3'-end processing	8.01642e-7	2.69137e-6
protein secretion by platelet	8.02783e-7	2.69452e-6
lactate oxidation	8.03668e-7	2.69680e-6
phosphatidylserine biosynthetic process	8.24013e-7	2.76295e-6
viral release from host cell	8.38800e-7	2.81039e-6
regulation of lipoprotein oxidation	8.56063e-7	2.86749e-6

mRNA cleavage involved in gene silencing by miRNA	9.07888e-7	3.03645e-6
negative regulation of glycogen catabolic process	9.44643e-7	3.15617e-6
peptidyl-glutamine methylation	9.59232e-7	3.20410e-6
positive regulation of mediator complex assembly	9.60288e-7	3.20681e-6
skeletal muscle fiber differentiation	9.91743e-7	3.30682e-6
protein depalmitoylation	1.07353e-6	3.57319e-6
cellular response to interleukin-17	1.09740e-6	3.64985e-6
negative regulation of hydrogen peroxide metabolic process	1.10204e-6	3.66436e-6
histone H3-T3 phosphorylation involved in chromosome passenger complex localization to kinetochore	1.15229e-6	3.82758e-6
negative regulation of vitamin D receptor signaling pathway	1.17249e-6	3.89076e-6
response to host immune response	1.18753e-6	3.93769e-6
negative regulation of muscle atrophy	1.25298e-6	4.15154e-6
positive regulation of plasminogen activation	1.29704e-6	4.29430e-6
negative regulation of FasL biosynthetic process	1.32333e-6	4.37803e-6
acetaldehyde metabolic process	1.37915e-6	4.55584e-6
trans-Golgi network membrane organization	1.39740e-6	4.61149e-6
dolichyl diphosphate biosynthetic process	1.40539e-6	4.63552e-6
mineralocorticoid receptor signaling pathway	1.42639e-6	4.70363e-6
positive regulation of vitamin D 24-hydroxylase activity	1.45566e-6	4.79533e-6
tRNA N2-guanine methylation	1.46709e-6	4.83057e-6
activation of protein kinase C activity	1.47476e-6	4.85461e-6
positive regulation of dendritic cell antigen processing and presentation	1.47516e-6	4.85470e-6
coenzyme A transmembrane transport	1.48899e-6	4.89653e-6
AMP transport	1.48899e-6	4.89653e-6
regulation of CD8-positive, alpha-beta T cell differentiation	1.50723e-6	4.95280e-6
glycerol biosynthetic process from pyruvate	1.59005e-6	5.21715e-6
guanosine-containing compound catabolic process	1.61893e-6	5.30661e-6
regulation of lipoprotein lipid oxidation	1.62232e-6	5.31640e-6
L-serine catabolic process	1.62484e-6	5.32331e-6
maintenance of unfolded protein involved in ERAD pathway	1.67516e-6	5.48410e-6
regulation of mRNA endonucleolytic cleavage involved in unfolded protein response	1.69307e-6	5.53858e-6
peptidyl-cysteine S-trans-nitrosylation	1.70139e-6	5.56441e-6
positive regulation of circadian sleep/wake cycle, REM sleep	1.71047e-6	5.59271e-6
mitochondrial L-ornithine transmembrane transport	1.71906e-6	5.61943e-6
antifungal humoral response	1.76256e-6	5.75732e-6
cell migration involved in kidney development	1.80166e-6	5.88213e-6
L-lysine transmembrane transport	1.80368e-6	5.88726e-6
peptidyl-glutamine modification	1.89498e-6	6.17604e-6
thermosensory behavior	1.90040e-6	6.19220e-6
positive regulation of interleukin-1 beta biosynthetic process	1.90287e-6	6.19870e-6
regulation of type Ila hypersensitivity	1.93023e-6	6.28471e-6
Schwann cell proliferation	1.98012e-6	6.44076e-6
tRNA wobble cytosine modification	2.00373e-6	6.51595e-6
regulation of cilium beat frequency involved in ciliary motility	2.00864e-6	6.53032e-6
modification of dendritic spine	2.05536e-6	6.67725e-6
cellular response to pheromone	2.12900e-6	6.91137e-6
regulation of vesicle targeting, to, from or within Golgi	2.22858e-6	7.23106e-6
negative regulation of myeloid dendritic cell activation	2.29552e-6	7.44460e-6
vacuolar phosphate transport	2.40404e-6	7.78695e-6
positive regulation of mitotic cell cycle DNA replication	2.40404e-6	7.78695e-6
positive regulation of parathyroid hormone secretion	2.40404e-6	7.78695e-6
cellular response to interleukin-13	2.42368e-6	7.84284e-6
negative regulation of MyD88-dependent toll-like receptor signaling pathway	2.51810e-6	8.13434e-6
negative regulation of defense response to virus by host	2.56684e-6	8.28569e-6
vacuolar protein processing	2.70026e-6	8.70568e-6
regulation of eosinophil activation	2.78794e-6	8.97958e-6
pentose-phosphate shunt, oxidative branch	2.78966e-6	8.98290e-6
negative regulation of lipoprotein metabolic process	2.82977e-6	9.10537e-6
cell gliding	2.86034e-6	9.20150e-6
response to vitamin B1	2.89658e-6	9.31352e-6
myotube differentiation involved in skeletal muscle regeneration	2.91568e-6	9.37263e-6
positive regulation of complement activation	2.99922e-6	9.63178e-6
ER-dependent peroxisome organization	3.03243e-6	9.73128e-6
establishment of planar polarity involved in nephron morphogenesis	3.04339e-6	9.76407e-6
carnosine biosynthetic process	3.37488e-6	1.07986e-5
cellular heat acclimation	3.44607e-6	1.10184e-5
regulation of cardiac cell fate specification	3.47441e-6	1.11036e-5
mitochondrial electron transport, succinate to ubiquinone	3.57681e-6	1.14170e-5
fructose 1,6-bisphosphate metabolic process	3.88169e-6	1.23571e-5
nitrate transport	3.89804e-6	1.24062e-5
positive regulation of collecting lymphatic vessel constriction	3.90682e-6	1.24311e-5

cellular response to light intensity	3.92998e-6	1.24988e-5
oocyte growth	4.18421e-6	1.32816e-5
histone H3-K14 acetylation	4.30785e-6	1.36510e-5
positive regulation of cytolysis in other organism	4.32794e-6	1.37114e-5
cellular response to selenite ion	4.39033e-6	1.39057e-5
negative regulation of selenocysteine incorporation	4.39033e-6	1.39057e-5
negative regulation of selenocysteine insertion sequence binding	4.39033e-6	1.39057e-5
cell migration involved in heart formation	4.47659e-6	1.41653e-5
protein localization to mitotic spindle	4.49484e-6	1.42162e-5
asparagine transport	4.50747e-6	1.42493e-5
convergent extension involved in neural plate elongation	4.55291e-6	1.43860e-5
atrioventricular node cell development	4.58159e-6	1.44732e-5
histone peptidyl-prolyl isomerization	4.65700e-6	1.47043e-5
postsynaptic neurotransmitter receptor diffusion trapping	4.70433e-6	1.48502e-5
Mullerian duct regression	4.96653e-6	1.56478e-5
endomitotic cell cycle	5.03833e-6	1.58626e-5
trichloroethylene metabolic process	5.09664e-6	1.60424e-5
negative regulation of IRE1-mediated unfolded protein response	5.11295e-6	1.60899e-5
suppression by virus of host apoptotic process	5.12755e-6	1.61320e-5
photoreceptor cell morphogenesis	5.24651e-6	1.64904e-5
barrier septum assembly	5.35849e-6	1.68263e-5
quinolinate catabolic process	5.39784e-6	1.69459e-5
microtubule-dependent intracellular transport of viral material towards nucleus	5.67053e-6	1.77850e-5
lipoxin A4 biosynthetic process	5.69876e-6	1.78650e-5
positive regulation of nucleobase-containing compound transport	5.84994e-6	1.83258e-5
cardiac atrium formation	5.93498e-6	1.85701e-5
sinus venosus morphogenesis	5.93498e-6	1.85701e-5
cardioblast anterior-lateral migration	5.93498e-6	1.85701e-5
positive regulation of Notch signaling pathway involved in heart induction	5.93498e-6	1.85701e-5
negative regulation of endodermal cell fate specification	5.93498e-6	1.85701e-5
cardioblast migration to the midline involved in heart field formation	5.93498e-6	1.85701e-5
positive regulation of hepatocyte differentiation	5.93498e-6	1.85701e-5
regulation of exocyst assembly	5.94219e-6	1.85618e-5
regulation of exocyst localization	5.94219e-6	1.85618e-5
receptor localization to non-motile cilium	6.08582e-6	1.89879e-5
Purkinje myocyte differentiation	6.11624e-6	1.90738e-5
atrioventricular node cell fate commitment	6.11624e-6	1.90738e-5
positive regulation of chronic inflammatory response to non-antigenic stimulus	6.37859e-6	1.98683e-5
negative regulation of ERK5 cascade	6.46199e-6	2.01234e-5
regulation of molecular function, epigenetic	6.57817e-6	2.04706e-5
sperm individualization	6.83204e-6	2.12405e-5
regulation of collecting lymphatic vessel constriction	7.58325e-6	2.35204e-5
urokinase plasminogen activator signaling pathway	7.65162e-6	2.37213e-5
purine deoxyribonucleoside metabolic process	7.86448e-6	2.43640e-5
negative regulation of intracellular calcium activated chloride channel activity	8.53028e-6	2.63707e-5
regulation of antibacterial peptide production	8.54440e-6	2.64082e-5
biosynthetic process of antibacterial peptides active against Gram-negative bacteria	8.66839e-6	2.67788e-5
neutrophil mediated killing of fungus	8.66839e-6	2.67788e-5
rRNA import into mitochondrion	8.92130e-6	2.75407e-5
regulation of sodium-dependent phosphate transport	9.31199e-6	2.87265e-5
negative regulation of toll-like receptor 7 signaling pathway	9.37138e-6	2.89030e-5
interferon-alpha production	9.57827e-6	2.95203e-5
positive regulation of chaperone-mediated autophagy	9.73636e-6	3.00005e-5
histone H3-K9 deacetylation	9.89092e-6	3.04625e-5
protein localization to perinuclear region of cytoplasm	9.89708e-6	3.04743e-5
establishment of glial blood-brain barrier	1.00842e-5	3.10360e-5
positive regulation of fractalkine biosynthetic process	1.04017e-5	3.19758e-5
negative regulation of cellular amino acid metabolic process	1.06265e-5	3.26592e-5
cellular cadmium ion homeostasis	1.09356e-5	3.35776e-5
nitrite transport	1.09356e-5	3.35776e-5
interleukin-3 production	1.09356e-5	3.35776e-5
MHC class II biosynthetic process	1.09356e-5	3.35776e-5
polarity specification of proximal/distal axis	1.10795e-5	3.39880e-5
axial mesodermal cell fate specification	1.10795e-5	3.39880e-5
epiblast cell-extraembryonic ectoderm cell signaling involved in anterior/posterior axis specification	1.10795e-5	3.39880e-5
transforming growth factor beta receptor signaling pathway involved in primitive streak formation	1.10795e-5	3.39880e-5
negative regulation of ovarian follicle development	1.12331e-5	3.44190e-5
fever generation	1.14333e-5	3.50079e-5

negative regulation of syncytium formation by plasma membrane fusion	1.18067e-5	3.61342e-5
regulation of DNA ligase activity	1.18272e-5	3.61886e-5
hypoxanthine salvage	1.22317e-5	3.74177e-5
cell-cell adhesion involved in gastrulation	1.22583e-5	3.74815e-5
positive regulation of protein K63-linked deubiquitination	1.23093e-5	3.76201e-5
regulation of cytolysis in other organism	1.27085e-5	3.88041e-5
regulation of arginine metabolic process	1.27832e-5	3.90230e-5
regulation of cysteine-type endopeptidase activity involved in execution phase of apoptosis	1.30910e-5	3.99442e-5
peptidyl-lysine modification to peptidyl-hypusine	1.30997e-5	3.99615e-5
regulation of CD8-positive, alpha-beta T cell activation	1.31657e-5	4.01347e-5
peroxisomal membrane transport	1.32436e-5	4.03442e-5
vitamin A biosynthetic process	1.33521e-5	4.06558e-5
beta-carotene metabolic process	1.33521e-5	4.06558e-5
positive regulation of miRNA mediated inhibition of translation	1.35661e-5	4.12692e-5
coumarin metabolic process	1.39674e-5	4.24214e-5
response to sulfur dioxide	1.40755e-5	4.27300e-5
cell wall mannoprotein biosynthetic process	1.41389e-5	4.29127e-5
mannose to fructose-6-phosphate metabolic process	1.41389e-5	4.29127e-5
regulation of actin cytoskeleton organization by cell-cell adhesion	1.44923e-5	4.39343e-5
regulation of thyroid-stimulating hormone secretion	1.45481e-5	4.40934e-5
positive regulation of chronic inflammatory response	1.48999e-5	4.50973e-5
mitochondrial ribosome assembly	1.49132e-5	4.51273e-5
regulation of transcription from RNA polymerase II promoter in response to iron	1.50179e-5	4.54336e-5
response to intra-S DNA damage checkpoint signaling	1.52255e-5	4.60405e-5
cytosine metabolic process	1.58570e-5	4.78731e-5
telomeric heterochromatin assembly	1.59381e-5	4.81068e-5
negative regulation of chromosome condensation	1.59381e-5	4.81068e-5
diadenosine tetraphosphate biosynthetic process	1.59568e-5	4.81412e-5
commitment of multipotent stem cells to neuronal lineage in forebrain	1.72030e-5	5.18416e-5
protein targeting to vacuole involved in ubiquitin-dependent protein catabolic process via the multivesicular body sorting pathway	1.82524e-5	5.48658e-5
meiotic DNA integrity checkpoint	1.84601e-5	5.54772e-5
uncoating of virus	1.86899e-5	5.61167e-5
negative regulation of mRNA polyadenylation	1.88500e-5	5.65585e-5
chaperone cofactor-dependent protein refolding	1.90514e-5	5.71109e-5
alanyl-tRNA aminoacylation	1.92786e-5	5.77655e-5
spermidine catabolic process	2.04783e-5	6.12347e-5
metanephric proximal convoluted tubule development	2.05397e-5	6.14045e-5
adenine salvage	2.05586e-5	6.14469e-5
peptide antigen stabilization	2.10028e-5	6.27460e-5
positive regulation of transcription from RNA polymerase II promoter in response to arsenic-containing substance	2.12743e-5	6.35140e-5
histone H3-K4 acetylation	2.16495e-5	6.46193e-5
regulation of myeloid progenitor cell differentiation	2.18396e-5	6.51719e-5
nicotinate nucleotide salvage	2.37408e-5	7.06050e-5
positive regulation of DNA damage response, signal transduction by p53 class mediator resulting in transcription of p21 class mediator	2.42470e-5	7.20781e-5
positive regulation of IP-10 production	2.46564e-5	7.32785e-5
prostaglandin catabolic process	2.64667e-5	7.85522e-5
positive regulation of DNA catabolic process	2.75397e-5	8.15710e-5
cerebrospinal fluid secretion	3.00782e-5	8.89098e-5
enterobactin transport	3.14640e-5	9.29019e-5
establishment of natural killer cell polarity	3.29842e-5	9.73030e-5
negative regulation of Fas signaling pathway	3.30846e-5	9.75774e-5
positive regulation of osteoclast proliferation	3.35613e-5	9.89612e-5
peptidyl-lysine oxidation	3.38975e-5	9.98630e-5
fibronectin fibril organization	3.38975e-5	9.98630e-5
response to interleukin-13	3.60069e-5	1.05887e-4
cap-dependent translational initiation	3.62949e-5	1.06687e-4
regulation of cellular amino acid biosynthetic process	3.65708e-5	1.07474e-4
skeletal muscle satellite cell migration	3.70200e-5	1.08745e-4
viral protein processing	3.77825e-5	1.10861e-4
dibasic protein processing	3.77825e-5	1.10861e-4
cellular response to diamide	3.81169e-5	1.11768e-4
rhombomere 4 development	3.87155e-5	1.13396e-4
response to iron ion starvation	4.01985e-5	1.17583e-4
positive regulation of mRNA 3'-UTR binding	4.12493e-5	1.20549e-4
cell communication by chemical coupling	4.39756e-5	1.28232e-4
quorum sensing involved in interaction with host	4.49342e-5	1.30998e-4
positive regulation of intestinal epithelial structure maintenance	4.49342e-5	1.30998e-4
sodium-dependent organic cation transport	4.49342e-5	1.30998e-4
negative regulation of complement-dependent cytotoxicity	4.52310e-5	1.31747e-4

neurofibrillary tangle assembly	4.54011e-5	1.32184e-4
positive regulation of diacylglycerol kinase activity	4.54011e-5	1.32184e-4
commissural neuron differentiation in spinal cord	4.57040e-5	1.33007e-4
antibacterial peptide production	4.57274e-5	1.33045e-4
positive regulation of histone H2B ubiquitination	4.66665e-5	1.35718e-4
carotene metabolic process	4.78191e-5	1.38947e-4
negative regulation of memory T cell differentiation	4.88906e-5	1.42029e-4
cellular response to zinc ion starvation	4.99824e-5	1.45104e-4
negative regulation of sodium:proton antiporter activity	4.99920e-5	1.45100e-4
DNA dephosphorylation	5.03208e-5	1.46023e-4
modulation by symbiont of host I-kappaB kinase/NF-kappaB cascade	5.20205e-5	1.50722e-4
positive regulation of hydrogen peroxide biosynthetic process	5.20888e-5	1.50887e-4
mitochondrial citrate transport	5.25134e-5	1.52083e-4
mitotic cytokinesis checkpoint	5.34153e-5	1.54627e-4
corneocyte development	5.64921e-5	1.63175e-4
amylopectin biosynthetic process	5.69906e-5	1.64542e-4
complement component C5a signaling pathway	5.76798e-5	1.66386e-4
intrinsic apoptotic signaling pathway in response to hypoxia	5.77458e-5	1.66540e-4
positive regulation of cellular amino acid metabolic process	6.06264e-5	1.74656e-4
negative regulation of lipoprotein lipase activity	6.43720e-5	1.85203e-4
acetylcholine transport	6.51643e-5	1.87442e-4
dGTP catabolic process	6.52942e-5	1.87774e-4
interleukin-1 alpha secretion	6.53997e-5	1.88037e-4
allantoin catabolic process	6.58126e-5	1.89141e-4
lysosomal lumen pH elevation	6.62444e-5	1.90340e-4
negative regulation of mitotic centrosome separation	6.62777e-5	1.90395e-4
negative regulation of cysteine-type endopeptidase activity involved in execution phase of apoptosis	6.68837e-5	1.92094e-4
negative regulation of protein folding	6.75590e-5	1.93948e-4
histone biotinylation	6.76738e-5	1.94193e-4
prenylated protein catabolic process	6.96585e-5	1.99583e-4
negative regulation of endocytic recycling	7.26040e-5	2.07706e-4
L-arginine transport	7.35947e-5	2.10495e-4
positive regulation of deadenylation-independent decapping of nuclear-transcribed mRNA	7.58583e-5	2.16875e-4
negative regulation of polynucleotide adenylyltransferase activity	7.58583e-5	2.16875e-4
mRNA cleavage involved in gene silencing by siRNA	7.75934e-5	2.21594e-4
DNA replication preinitiation complex assembly	7.87037e-5	2.24619e-4
G1 to G0 transition involved in cell differentiation	8.09051e-5	2.30852e-4
positive regulation of cell proliferation in midbrain	8.34390e-5	2.37618e-4
cellular response to glial cell derived neurotrophic factor	8.34390e-5	2.37618e-4
basement membrane disassembly	8.56714e-5	2.43764e-4
deoxycytidine metabolic process	8.96533e-5	2.54598e-4
cellular response to L-glutamine	9.27434e-5	2.63203e-4
cellular response to dithiothreitol	9.28766e-5	2.63524e-4
nitric oxide homeostasis	9.37575e-5	2.65966e-4
intracellular transport of viral protein in host cell	9.62316e-5	2.72749e-4
regulation of t-circle formation	9.63698e-5	2.73082e-4
mature conventional dendritic cell differentiation	1.03443e-4	2.92685e-4
protein palmitoylation	1.09582e-4	3.09323e-4
regulation of translation by machinery localization	1.09746e-4	3.09718e-4
negative regulation of mRNA endonucleolytic cleavage involved in unfolded protein response	1.10341e-4	3.11332e-4
interleukin-23-mediated signaling pathway	1.11043e-4	3.13110e-4
regulation of glucosylceramidase activity	1.15361e-4	3.24867e-4
regulation of glucose catabolic process to lactate via pyruvate	1.15608e-4	3.25494e-4
positive regulation of calcium-independent cell-cell adhesion	1.29985e-4	3.64800e-4
transcription initiation from mitochondrial promoter	1.30207e-4	3.65347e-4
tolerance induction to self antigen	1.32299e-4	3.70899e-4
regulation of chronic inflammatory response to non-antigenic stimulus	1.34860e-4	3.77758e-4
farnesyl diphosphate metabolic process	1.35725e-4	3.80019e-4
regulation of vascular permeability involved in acute inflammatory response	1.36089e-4	3.80876e-4
negative regulation of neutrophil apoptotic process	1.39238e-4	3.89522e-4
protein K33-linked deubiquitination	1.40477e-4	3.92904e-4
positive regulation of attachment of spindle microtubules to kinetochore	1.41644e-4	3.95833e-4
negative regulation of cellular organofluorine metabolic process	1.49317e-4	4.16568e-4
negative regulation of collagen catabolic process	1.54854e-4	4.31557e-4
negative regulation of elastin catabolic process	1.54854e-4	4.31557e-4
bile acid signaling pathway	1.56861e-4	4.36780e-4
negative regulation of the force of heart contraction	1.57122e-4	4.37416e-4
negative regulation of arginine catabolic process	1.57122e-4	4.37416e-4
negative regulation of citrulline biosynthetic process	1.57122e-4	4.37416e-4



negative regulation of connective tissue replacement involved in inflammatory response wound healing	1.57228e-4	4.37338e-4
negative regulation of advanced glycation end-product receptor activity	1.57228e-4	4.37338e-4
negative regulation of erythrocyte apoptotic process	1.58535e-4	4.40510e-4
cellular response to tetrahydrofolate	1.62275e-4	4.50711e-4
positive regulation of low-density lipoprotein particle receptor catabolic process	1.62475e-4	4.51170e-4
protein localization to microvillus	1.66100e-4	4.60847e-4
nitrobenzene metabolic process	1.75429e-4	4.86322e-4
acetate biosynthetic process	1.76667e-4	4.89650e-4
acetyl-CoA biosynthetic process from acetate	1.76667e-4	4.89650e-4
propionate biosynthetic process	1.76667e-4	4.89650e-4
leukocyte migration involved in immune response	1.81648e-4	5.03031e-4
positive regulation of AMPA glutamate receptor clustering	1.82099e-4	5.04175e-4
negative regulation of centriole elongation	1.89871e-4	5.25028e-4
positive regulation of cardiolipin metabolic process	1.91542e-4	5.29428e-4
positive regulation of T cell anergy	1.93422e-4	5.34511e-4
carbon dioxide transmembrane transport	2.05687e-4	5.67451e-4
positive regulation of respiratory burst involved in inflammatory response	2.07207e-4	5.71285e-4
CD4-positive, CD25-positive, alpha-beta regulatory T cell differentiation	2.07837e-4	5.72903e-4
cellular response to L-ascorbic acid	2.15458e-4	5.93288e-4
positive regulation of fat cell apoptotic process	2.15458e-4	5.93288e-4
negative regulation of glutamine transport	2.15458e-4	5.93288e-4
mitochondrial alanyl-tRNA aminoacylation	2.18386e-4	6.00846e-4
positive regulation of immunoglobulin biosynthetic process	2.29927e-4	6.31411e-4
regulation of DNA replication origin binding	2.30107e-4	6.31774e-4
Spemann organizer formation at the anterior end of the primitive streak	2.31776e-4	6.36223e-4
canonical Wnt signaling pathway involved in stem cell proliferation	2.31776e-4	6.36223e-4
negative regulation of protein K48-linked deubiquitination	2.33121e-4	6.39381e-4
negative regulation of ubiquitin-specific protease activity	2.33121e-4	6.39381e-4
positive regulation of homophilic cell adhesion	2.37097e-4	6.49609e-4
positive regulation of sequestering of zinc ion	2.40561e-4	6.58688e-4
positive regulation of polynucleotide adenylyltransferase activity	2.43922e-4	6.67753e-4
carbon tetrachloride metabolic process	2.44577e-4	6.69267e-4
benzene metabolic process	2.44577e-4	6.69267e-4
ITP metabolic process	2.51336e-4	6.86906e-4
Golgi vesicle pre-fusion complex stabilization	2.70538e-4	7.37086e-4
chronic inflammatory response to antigenic stimulus	2.82097e-4	7.67151e-4
regulation of presynaptic membrane organization	3.01565e-4	8.17725e-4
positive regulation of natural killer cell degranulation	3.12932e-4	8.47674e-4
evasion or tolerance by virus of host immune response	3.21335e-4	8.70256e-4
positive regulation of eosinophil degranulation	3.38448e-4	9.15096e-4
negative regulation of DNA methylation	3.40574e-4	9.20655e-4
positive regulation of DNA methylation	3.40574e-4	9.20655e-4
suppression by virus of host molecular function	3.43291e-4	9.27237e-4
protein localization to cell leading edge	3.48119e-4	9.39507e-4
pore formation in membrane of other organism	3.58056e-4	9.65335e-4
alpha-tubulin acetylation	3.59562e-4	9.68601e-4
positive regulation of base-excision repair	3.65886e-4	9.85234e-4
negative regulation of intracellular transport of viral material	3.79288e-4	1.02007e-3
proteasome regulatory particle assembly	3.82773e-4	1.02881e-3
immunoglobulin transcytosis in epithelial cells mediated by polymeric immunoglobulin receptor	3.91777e-4	1.05280e-3
interleukin-21-mediated signaling pathway	3.99667e-4	1.07356e-3
neural plate mediolateral regionalization	4.10603e-4	1.10203e-3
paraxial mesoderm structural organization	4.10603e-4	1.10203e-3
positive regulation of cardiac ventricle development	4.10603e-4	1.10203e-3
fibrous ring of heart morphogenesis	4.10603e-4	1.10203e-3
basophil activation	4.18466e-4	1.12177e-3
N-terminal peptidyl-glycine N-myristoylation	4.21133e-4	1.12868e-3
positive regulation of mitochondrial electron transport, NADH to ubiquinone	4.33038e-4	1.15965e-3
negative regulation of hydrogen peroxide-induced neuron intrinsic apoptotic signaling pathway	4.33038e-4	1.15965e-3
positive regulation of acrosomal vesicle exocytosis	4.35388e-4	1.16547e-3
gastric inhibitory peptide signaling pathway	4.58463e-4	1.22598e-3
cadmium ion homeostasis	4.59672e-4	1.22897e-3
lysosomal lumen acidification	4.61925e-4	1.23449e-3
formation of cytoplasmic translation initiation complex	4.78812e-4	1.27884e-3
hemangioblast cell differentiation	4.87154e-4	1.30007e-3
nucleus accumbens development	5.03359e-4	1.34277e-3

ergosterol biosynthetic process	5.08093e-4	1.35485e-3
box C/D snoRNA 3'-end processing	5.43268e-4	1.44454e-3
histone glutamine methylation	5.43268e-4	1.44454e-3
DNA protection	5.45685e-4	1.45038e-3
negative regulation of inorganic anion transmembrane transport	5.67605e-4	1.50621e-3
coumarin catabolic process	5.93680e-4	1.57445e-3
positive regulation of photoreceptor cell differentiation	6.00830e-4	1.59213e-3
peripheral T cell tolerance induction	6.04692e-4	1.60172e-3
central tolerance induction to self antigen	6.04692e-4	1.60172e-3
positive regulation of NAD+ ADP-ribosyltransferase activity	6.44963e-4	1.70495e-3
agmatine biosynthetic process	6.48844e-4	1.71487e-3
positive regulation of large conductance calcium-activated potassium channel activity	6.67118e-4	1.76140e-3
positive regulation of atrial cardiac muscle cell action potential	6.79246e-4	1.79198e-3
negative regulation of establishment of blood-brain barrier	6.84576e-4	1.80532e-3
intestinal folate absorption	6.91738e-4	1.82165e-3
negative regulation of branching involved in lung morphogenesis	7.16901e-4	1.88602e-3
positive regulation of leukocyte adhesion to arterial endothelial cell	7.16901e-4	1.88602e-3
absorption of visible light	7.36984e-4	1.93537e-3
glucoside transport	7.38822e-4	1.93981e-3
methylglyoxal catabolic process to D-lactate via S-lactoyl-glutathione	7.57982e-4	1.98774e-3
negative regulation of lipoprotein oxidation	7.74599e-4	2.02889e-3
fructoselysine metabolic process	7.98245e-4	2.08833e-3
axon extension involved in regeneration	8.24959e-4	2.15650e-3
metanephric glomerular basement membrane development	8.24959e-4	2.15650e-3
positive regulation of chronic inflammatory response to antigenic stimulus	8.26391e-4	2.15938e-3
maltose metabolic process	8.32707e-4	2.17546e-3
regulation of DNA-dependent DNA replication initiation	8.97651e-4	2.33816e-3
negative regulation of RNA polymerase II transcriptional preinitiation complex assembly	1.04062e-3	2.69773e-3
sequestering of neurotransmitter	1.04065e-3	2.69728e-3
nucleotide-excision repair, DNA damage removal	1.04758e-3	2.71418e-3
DNA 3' dephosphorylation involved in DNA repair	1.04758e-3	2.71418e-3
polynucleotide 3' dephosphorylation	1.04758e-3	2.71418e-3
borate transmembrane transport	1.07242e-3	2.77415e-3
ethylene metabolic process	1.08755e-3	2.81219e-3
dibenzo-p-dioxin catabolic process	1.08755e-3	2.81219e-3
regulation of centriole elongation	1.09970e-3	2.84249e-3
renal protein absorption	1.10155e-3	2.84672e-3
regulation of plasma membrane raft polarization	1.10155e-3	2.84672e-3
negative regulation of protein glutathionylation	1.10352e-3	2.85069e-3
positive regulation of endoribonuclease activity	1.12302e-3	2.89880e-3
positive regulation of mRNA endonucleolytic cleavage involved in unfolded protein response	1.12302e-3	2.89880e-3
CD4-positive, CD25-positive, alpha-beta regulatory T cell lineage commitment	1.12886e-3	2.91271e-3
positive regulation of peripheral T cell tolerance induction	1.12886e-3	2.91271e-3
Golgi to secretory granule transport	1.16560e-3	3.00222e-3
intrinsic apoptotic signaling pathway in response to nitrosative stress	1.17449e-3	3.02452e-3
negative regulation of maintenance of mitotic sister chromatid cohesion, centromeric	1.17739e-3	3.03140e-3
negative regulation of the force of heart contraction by chemical signal	1.18750e-3	3.05683e-3
Golgi to plasma membrane CFTR protein transport	1.21336e-3	3.11974e-3
N-acetylglucosamine catabolic process	1.21554e-3	3.12472e-3
protein localization to kinetochore involved in kinetochore assembly	1.24552e-3	3.19930e-3
positive regulation of cristae formation	1.28705e-3	3.30338e-3
positive regulation of free ubiquitin chain polymerization	1.28705e-3	3.30338e-3
negative regulation of iron ion transmembrane transport	1.29896e-3	3.33134e-3
basophil differentiation	1.35154e-3	3.45879e-3
histamine-induced gastric acid secretion	1.37605e-3	3.51877e-3
gastrin-induced gastric acid secretion	1.37605e-3	3.51877e-3
transitional one stage B cell differentiation	1.38197e-3	3.53254e-3
positive regulation of actin filament binding	1.38197e-3	3.53254e-3
sphinganine-1-phosphate biosynthetic process	1.43532e-3	3.66322e-3
cellular response to chromate	1.43532e-3	3.66322e-3
positive regulation of intrinsic apoptotic signaling pathway in response to osmotic stress	1.43532e-3	3.66322e-3
BMP signaling pathway involved in mesodermal cell fate specification	1.45415e-3	3.70840e-3
prolyl-tRNA aminoacylation	1.48433e-3	3.77804e-3
negative regulation of lipoprotein lipid oxidation	1.48723e-3	3.78467e-3
pre-replicative complex assembly involved in nuclear cell cycle DNA replication	1.51275e-3	3.84591e-3
negative regulation of eosinophil activation	1.52699e-3	3.87760e-3

positive regulation of glomerular metanephric mesangial cell proliferation	1.53088e-3	3.88674e-3
prevention of polyspermy	1.57793e-3	4.00155e-3
positive regulation of oocyte maturation	1.58006e-3	4.00619e-3
positive regulation of voltage-gated potassium channel activity involved in atrial cardiac muscle cell action potential repolarization	1.61071e-3	4.07997e-3
positive regulation of interleukin-1 biosynthetic process	1.61283e-3	4.08454e-3
regulation of signal transduction by receptor internalization	1.61408e-3	4.08693e-3
regulation of nerve growth factor receptor activity	1.61408e-3	4.08693e-3
negative regulation of sarcomere organization	1.61408e-3	4.08693e-3
negative regulation of membrane depolarization during cardiac muscle cell action potential	1.61408e-3	4.08693e-3
trimming of terminal mannose on B branch	1.79440e-3	4.52263e-3
trimming of first mannose on A branch	1.79440e-3	4.52263e-3
trimming of second mannose on A branch	1.79440e-3	4.52263e-3
negative regulation of skeletal muscle hypertrophy	1.81675e-3	4.57543e-3
regulation of chronic inflammatory response to antigenic stimulus	1.86475e-3	4.69003e-3
glycolipid translocation	1.87913e-3	4.72351e-3
nucleotide-sugar catabolic process	1.89385e-3	4.75958e-3
regulation of skeletal muscle hypertrophy	2.03391e-3	5.10087e-3
negative regulation of high voltage-gated calcium channel activity	2.12647e-3	5.32285e-3
positive regulation of pancreatic juice secretion	2.12799e-3	5.32564e-3
D-serine biosynthetic process	2.19932e-3	5.49788e-3
termination of RNA polymerase III transcription	2.22221e-3	5.55088e-3
negative regulation of double-strand break repair via single-strand annealing	2.28323e-3	5.69791e-3
rRNA export from nucleus	2.31252e-3	5.76880e-3
connective tissue growth factor biosynthetic process	2.34687e-3	5.85339e-3
negative regulation of white fat cell proliferation	2.34687e-3	5.85339e-3
central tolerance induction	2.36405e-3	5.89399e-3
regulation of phenotypic switching by transcription from RNA polymerase II promoter	2.39213e-3	5.96175e-3
positive regulation of hydrogen sulfide biosynthetic process	2.39213e-3	5.96175e-3
negative regulation of zinc ion transmembrane import	2.45550e-3	6.10695e-3
detoxification of cadmium ion	2.45550e-3	6.10695e-3
positive regulation of hindgut contraction	2.45723e-3	6.10895e-3
IgG immunoglobulin transcytosis in epithelial cells mediated by FcRn immunoglobulin receptor	2.45765e-3	6.10884e-3
dCTP catabolic process	2.49174e-3	6.19240e-3
negative regulation of root hair elongation	2.53017e-3	6.28314e-3
positive regulation of renal water transport	2.63873e-3	6.54655e-3
asparagine catabolic process via L-aspartate	2.65599e-3	6.58815e-3
regulation of transcription from RNA polymerase II promoter in response to arsenic-containing substance	2.89730e-3	7.15702e-3
BMP signaling pathway involved in spinal cord dorsal/ventral patterning	3.17124e-3	7.80147e-3
positive regulation of very-low-density lipoprotein particle remodeling	3.23864e-3	7.95834e-3
positive regulation of methylation-dependent chromatin silencing	3.26137e-3	8.00674e-3
interleukin-12 secretion	3.27259e-3	8.03128e-3
regulation of glutamate uptake involved in transmission of nerve impulse	3.29308e-3	8.07703e-3
positive regulation of prostaglandin secretion involved in immune response	3.29368e-3	8.07700e-3
L-lysine catabolic process to acetyl-CoA via L-pipecolate	3.33381e-3	8.17390e-3
base-excision repair, base-free sugar-phosphate removal	3.51502e-3	8.60374e-3
negative regulation of CD4 biosynthetic process	3.55894e-3	8.70640e-3
mitochondrial depolarization	3.69001e-3	9.00693e-3
maintenance of mitochondrion location	3.70362e-3	9.03847e-3
immune response in mucosal-associated lymphoid tissue	3.75958e-3	9.16655e-3
negative regulation of chondrocyte development	3.87984e-3	9.44575e-3
trans-Golgi network to recycling endosome transport	4.02525e-3	9.78166e-3
positive regulation of antigen processing and presentation of peptide antigen via MHC class II	4.04408e-3	9.82379e-3
actomyosin contractile ring contraction	4.35108e-3	1.05326e-2
positive regulation of mitochondrial DNA replication	4.50757e-3	1.08974e-2
stress-induced mitochondrial fusion	4.50757e-3	1.08974e-2
thiocyanate metabolic process	4.59959e-3	1.11096e-2
positive regulation of type IV hypersensitivity	4.66080e-3	1.12430e-2
positive regulation of antral ovarian follicle growth	4.66080e-3	1.12430e-2
GDP-fucose import into Golgi lumen	4.74880e-3	1.14469e-2
histone H3-T11 phosphorylation	4.78276e-3	1.15182e-2
small-subunit processome assembly	4.84447e-3	1.16604e-2
regulation of mRNA stability involved in response to stress	4.89180e-3	1.17700e-2
pallium cell proliferation in forebrain	4.89180e-3	1.17700e-2
CAAX-box protein processing	5.06881e-3	1.21826e-2

dGDP biosynthetic process	5.45408e-3	1.30775e-2
dGMP metabolic process	5.45408e-3	1.30775e-2
GDP biosynthetic process	5.45408e-3	1.30775e-2
tubulin deacetylation	5.65966e-3	1.35457e-2
sphingoid catabolic process	5.89012e-3	1.40768e-2
Rab protein signal transduction	6.10881e-3	1.45835e-2
chemokine (C-C motif) ligand 19 signaling pathway	6.14245e-3	1.46532e-2
chemokine (C-C motif) ligand 21 signaling pathway	6.14245e-3	1.46532e-2
lymphocyte migration into lymph node	6.14245e-3	1.46532e-2
positive regulation of immunological synapse formation	6.14245e-3	1.46532e-2
positive regulation of glycoprotein biosynthetic process involved in immunological synapse formation	6.14245e-3	1.46532e-2
biphenyl catabolic process	6.16919e-3	1.47037e-2
dolichyl monophosphate biosynthetic process	6.20806e-3	1.47883e-2
negative regulation of androgen receptor activity	6.32901e-3	1.50573e-2
response to methamphetamine hydrochloride	6.36312e-3	1.51357e-2
negative regulation of plasmacytoid dendritic cell cytokine production	6.37846e-3	1.51667e-2
negative regulation of apolipoprotein binding	6.58285e-3	1.56245e-2
positive regulation of cilium movement	7.05868e-3	1.67056e-2
facial nucleus development	7.15115e-3	1.69123e-2
epidermal growth factor catabolic process	7.25324e-3	1.71353e-2
lipophagy	7.25324e-3	1.71353e-2
detection of peptidoglycan	7.25588e-3	1.71353e-2
actin filament debranching	7.34557e-3	1.73409e-2
protein N-linked glycosylation via arginine	7.41197e-3	1.74851e-2
S-adenosylhomocysteine catabolic process	7.42364e-3	1.75095e-2
homocysteine biosynthetic process	7.42364e-3	1.75095e-2
translocation of peptides or proteins into host cell cytoplasm	7.87288e-3	1.85094e-2
regulation of dendritic cell dendrite assembly	7.91373e-3	1.85988e-2
negative regulation of elastin biosynthetic process	7.94959e-3	1.86797e-2
deoxynucleotide transport	8.08976e-3	1.89853e-2
cell surface bile acid receptor signaling pathway	8.09168e-3	1.89864e-2
cellular response to caloric restriction	8.21338e-3	1.92445e-2
negative regulation of oligodendrocyte progenitor proliferation	8.21338e-3	1.92445e-2
regulation of systemic arterial blood pressure by ischemic conditions	8.31915e-3	1.94820e-2
homeostasis of number of retina cells	8.44858e-3	1.97745e-2
negative regulation of hypoxia-inducible factor-1alpha signaling pathway	8.44858e-3	1.97745e-2
regulation of excitatory postsynaptic membrane potential involved in skeletal muscle contraction	8.48120e-3	1.98367e-2
positive regulation of male germ cell proliferation	8.69401e-3	2.03200e-2
positive regulation of intrinsic apoptotic signaling pathway in response to DNA damage by p53 class mediator	8.99300e-3	2.10039e-2
regulation of translation involved in cellular response to UV	8.99300e-3	2.10039e-2
regulation of ATP:ADP antiporter activity	8.99333e-3	2.09972e-2
negative regulation of tolerance induction	9.02334e-3	2.10635e-2
negative regulation of thymidylate synthase biosynthetic process	9.21085e-3	2.14746e-2
detection of oxidative stress	9.57065e-3	2.22700e-2
positive regulation of metanephric glomerular visceral epithelial cell development	9.57065e-3	2.22700e-2
positive regulation of renal albumin absorption	9.57065e-3	2.22700e-2
negative regulation of metanephric mesenchymal cell migration	9.57065e-3	2.22700e-2
negative regulation of high-density lipoprotein particle clearance	9.91916e-3	2.30402e-2
methionyl-tRNA aminoacylation	1.00231e-2	2.32571e-2
regulation of endoplasmic reticulum stress-induced eIF2 alpha phosphorylation	1.02167e-2	2.36685e-2
nerve maturation	1.03347e-2	2.39293e-2
UDP-N-acetylglucosamine catabolic process	1.03438e-2	2.39421e-2
UDP-galactose transmembrane transport	1.04284e-2	2.41250e-2
bilirubin conjugation	1.07599e-2	2.48483e-2
response to nematode	1.13430e-2	2.61489e-2
protein-FAD linkage	1.14802e-2	2.64467e-2
arginine deiminase pathway	1.14897e-2	2.64638e-2
DNA replication, removal of RNA primer	1.17397e-2	2.70018e-2
negative regulation of calcium-dependent cell-cell adhesion	1.21093e-2	2.78131e-2
nuclear-transcribed mRNA catabolic process, 3'-5' exonucleolytic nonsense-mediated decay	1.30615e-2	2.99323e-2
regulation of cholesterol import	1.30694e-2	2.99451e-2
positive regulation of histone H4-K20 methylation	1.32839e-2	3.03996e-2
positive regulation of growth rate	1.45562e-2	3.31438e-2
cortisol secretion	1.45562e-2	3.31438e-2
positive regulation of gastric mucosal blood circulation	1.45562e-2	3.31438e-2
T cell homeostatic proliferation	1.46549e-2	3.33339e-2
release of matrix enzymes from mitochondria	1.46549e-2	3.33339e-2
B cell receptor apoptotic signaling pathway	1.46549e-2	3.33339e-2

immunoglobulin heavy chain V-D-J recombination	1.47354e-2	3.34940e-2
peroxisome membrane biogenesis	1.47931e-2	3.36192e-2
negative regulation of glutamate metabolic process	1.48045e-2	3.36393e-2
regulation of eIF2 alpha phosphorylation by dsRNA	1.51000e-2	3.42930e-2
molybdate ion transport	1.54714e-2	3.50880e-2
synapse assembly involved in innervation	1.59120e-2	3.60501e-2
xylulose catabolic process	1.59226e-2	3.60678e-2
negative regulation of collagen binding	1.62242e-2	3.67131e-2
anti-Mullerian hormone signaling pathway	1.64755e-2	3.72176e-2
renal glucose absorption	1.66202e-2	3.75316e-2
detection of lipoteichoic acid	1.73367e-2	3.90758e-2
positive regulation of C-C chemokine receptor CCR7 signaling pathway	1.73367e-2	3.90758e-2
positive regulation of CD40 signaling pathway	1.73367e-2	3.90758e-2
peptide antigen transport	1.81818e-2	4.08897e-2
protein localization to cytosolic proteasome complex involved in ERAD pathway	1.82138e-2	4.09476e-2
regulation of iron ion transmembrane transport	1.86790e-2	4.19290e-2
regulation of secretion of lysosomal enzymes	1.89877e-2	4.25783e-2
long-day photoperiodism	1.90964e-2	4.28001e-2
mitotic spindle microtubule depolymerization	1.91938e-2	4.30038e-2
ventral midline determination	1.95881e-2	4.38276e-2
detection of cell density by contact stimulus involved in contact inhibition	1.95881e-2	4.38276e-2
mesenchymal to epithelial transition involved in metanephric renal vesicle formation	1.95881e-2	4.38276e-2
positive regulation of glucagon secretion	1.97621e-2	4.41718e-2
lipid transport across blood brain barrier	2.01012e-2	4.48839e-2
ovarian follicle atresia	2.02783e-2	4.52716e-2
UDP-glucose catabolic process	2.02783e-2	4.52716e-2
interleukin-5 production	2.02783e-2	4.52716e-2
positive regulation of telomeric loop disassembly	2.02783e-2	4.52716e-2
negative regulation of growth of symbiont on or near host surface	2.05660e-2	4.58596e-2
intracellular defense response	2.09043e-2	4.65586e-2
negative regulation of gastrin-induced gastric acid secretion	2.12232e-2	4.72369e-2
RNA polymerase II complex import to nucleus	2.20986e-2	4.90691e-2
RNA polymerase III complex localization to nucleus	2.20986e-2	4.90691e-2

**Supplementary table 19. Expression changes of *RAP1A* and *RAP1B* in Ad-KLF4 versus Ad-EGFP transduced TC28a2 cells in DRUG-seq analysis.**

Gene	Log2(FC)	<i>P</i> value	FDR
<i>RAP1A</i>	-1.42E-01	2.93E-01	4.09E-01
<i>RAP1B</i>	1.24E-01	3.50E-01	4.69E-01

*FC* fold change, *FDR* false discovery rate

**Supplementary table 20. List of TaqMan probes.**

Species	Gene	Probe
Human	<i>ACAN</i>	Hs00153936_m1
Human	<i>ADAMTS5</i>	Hs01095518_m1
Human	<i>COL1A1</i>	Hs00164004_m1
Human	<i>COL2A1</i>	Hs00264051_m1
Human	<i>COL10A1</i>	Hs00166657_m1
Human	<i>COL11A2</i>	Hs00365416_m1
Human	<i>COMP</i>	Hs01561079_m1
Human	<i>GAPDH</i>	Hs02786624_g1
Human	<i>KLF2</i>	Hs00360439_g1
Human	<i>KLF4</i>	Hs00358836_m1
Human	<i>KLF4</i> (in mouse samples)	Hs00358837_g1
Human	<i>KLF9</i>	Hs00230918_m1
Human	<i>KLF10</i>	Hs00921811_m1
Human	<i>KLF15</i>	Hs00362736_m1
Human	<i>IL6</i>	Hs00174131_m1
Human	<i>MMP3</i>	Hs00968305_m1
Human	<i>MMP13</i>	Hs00233992_m1
Human	<i>NOS2</i>	Hs01075529_m1
Human	<i>PRG4</i>	Hs00981633_m1
Human	<i>PTGS2</i>	Hs00153133_m1
Human	<i>SCX</i>	Hs03054634_g1
Human	<i>SOX5</i>	Hs00374709_m1
Human	<i>SOX6</i>	Hs00264525_m1
Human	<i>SOX9</i>	Hs00165814_m1
Human	<i>TNXB</i>	Hs00372889_g1
Mouse	<i>Gapdh</i>	Mm99999915_g1
Mouse	<i>Klf2</i> (Exon 1–2)	Mm00500486_g1
Mouse	<i>Klf2</i> (Exon 2–3)	Mm01244979_g1
-	<i>Cre</i>	Mr00635245_cn

**Supplementary table 21. Antibodies used for IHC.**

Antibody	Clone	Manufacturer (Cat. No.)	Dilution
Rabbit anti-KLF4	EPR3550(2)(ABC)	Abcam (#ab151733)	1:200
Rabbit anti-KLF2	Polyclonal	Bioss (#bs-2772R)	1:100
Rabbit anti-HA tag	C29F4	Cell Signaling Technology (#3724)	1:50
Rabbit anti-GFP	Polyclonal	Thermo Fisher Scientific (#A-31852)	1:100