

Title: Defining neuronal responses to the neurotropic parasite *Toxoplasma gondii*

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Running Head: Neurons show microbe conserved and specific responses

Abstract

A select group of pathogens infect neurons in the brain. Prior dogma held that neurons were "defenseless" against infecting microbes, but many studies suggest that neurons can mount anti-microbial defenses. However, a knowledge gap in understanding how neurons respond *in vitro* and *in vivo* to different classes of micro-organisms remains. To address this gap, we compared a transcriptional dataset derived from primary neuron cultures (PNCs) infected with the neurotropic intracellular parasite *Toxoplasma gondii* with a dataset derived from neurons injected with *T. gondii* protein *in vivo*. These curated responses were then

compared to the transcriptional responses of PNCs infected with the single stranded RNA viruses West Nile Virus (WNV) or Zika Virus (ZKV). These analyses highlighted a conserved response to infection associated with chemokines (*Cxcl10*, *Ccl2*) and cytokines (interferon signaling). However, *T. gondii* had diminished IFN- α signaling *in vitro* compared to the viral datasets and was uniquely associated with a decrease in neuron-specific genes (*Snap25*, *Slc17a7*, *Prkcg*). These data underscore that neurons participate in infection-induced neuroinflammation and illustrate that neurons possess both pathogen-specific and pathogen-conserved responses.

Importance

Though neurons are commonly the target of pathogens that infect the CNS, few datasets assess the neuronal response to infection. This paucity of data is likely because neurons are perceived to have diminished immune capabilities. However, to understand the role of neurons in neuroinflammation and their immune capabilities, their responses must be investigated. Here we analyzed publicly accessible, neuron-specific datasets to compare neuron responses to a eukaryotic pathogen versus two Orthoflaviviruses. A better understanding of neuron responses to different infections will allow us to develop methods for inhibiting pathways that lead to neuron dysfunction, enhancing those that limit pathogen survival, and mitigating infection-induced damage to the CNS.

Introduction

A select number of microbes (e.g. measles virus, *Toxoplasma gondii*) infect the central nervous system (CNS). For many of these infections, neurons are the CNS cell that is primarily infected^{1–3}. Until relatively recently, dogma suggested this neuronal predominance arose from neurons lacking cell intrinsic immune responses. Over several decades, work

focusing on viral-neuron interactions established that neurons have cell intrinsic responses, though these responses can differ from other cell types and even between neuron subtypes⁴⁻⁷. These studies raise the question of whether the cellular immunity of neurons varies by context and/or pathogen. The eukaryotic intracellular parasite *Toxoplasma gondii* is a non-viral microbe with a tropism for neurons⁸ and broad natural host range, including rodents and humans⁹. During infection, parasites invade the CNS where they can infect multiple cells types, but, in neurons, a portion of parasites switch to a slow growing stage that forms tissue cysts^{1,10,11}. These tissue cysts cause a persistent, asymptomatic infection, potentially for the lifetime for the host¹⁰⁻¹². Recent studies suggest that the immune system can recognize infected neurons which contributes to local control of *T. gondii* *in vivo*¹³⁻¹⁶. *In vitro* studies have shown that neurons can be activated by IFN- γ to limit parasite growth¹⁷. Like most intracellular microbes, all of which depend upon the host cell for survival, *T. gondii* highly manipulates its host cell through the secretion of effectors proteins. Most of the studies that define how these effector proteins manipulate cells were done *in vitro* in fibroblasts and immune cells such as macrophages^{18,19}. While such studies have revealed fundamental aspects of *T. gondii*-host cell biology, they will have missed neuron-specific effects or effects only triggered during *in vivo* infection. The importance of understanding these nuances is highlighted by studies showing that outcomes of *T. gondii*-host cell interactions can vary by *T. gondii* strain and host cell²⁰⁻²³.

We previously tried to address this gap by using laser capture microdissection (LCM) in combination with our *T. gondii*-Cre system²⁴. In this system, we use parasites that express a *T. gondii*::Cre recombinase fusion protein (ROP::Cre) to infect Cre reporter mice that express a green fluorescent protein (GFP) only after Cre mediated recombination. Because the ROP::Cre protein is introduced into the host cell concomitantly with other early effectors

(ROPs) and before full invasion, neurons injected with the ROPs will express GFP even if they cleared the parasite or were never invaded (i.e., aborted invasion)^{25–27}. We then used LCM and RNA-seq to isolate, pool, and transcriptionally profile the somas of *T. gondii*-injected (GFP⁺) neurons (TINs). Though a small area centered on TINs' somas was captured, these transcriptional data still contained immune cells transcripts²⁴, making it difficult to distinguish which differentially expressed genes (DEGs) or pathways were derived from neurons, immune cells, or both.

In this study, we sought to identify neuron-specific responses to *T. gondii* by comparing RNA-seq datasets from our *in vivo* data with a newly generated *in vitro* dataset from *T. gondii*-infected primary neuron cultures (PNCs). This analysis revealed a set of conserved pathways driven by chemokines such as *Ccl2* and *Cxcl10*. The comparison to previously published transcriptomes of West Nile Virus (WNV)-infected and Zika Virus (ZKV)-infected PNCs⁷ revealed pathways that were conserved between these datasets and others that were pathogen dependent. For example, *T. gondii* datasets revealed a decrease in neuron-specific genes (e.g., *Snap25*, *Slc17a7*, *Prkcg*) that were unchanged in virally infected neurons. Conversely the type I IFN (IFN- α) response pathway was upregulated by WNV and ZKV and to some extent by *T. gondii in vivo*, but not by *T. gondii in vitro*. In summary, the ability to compare the *in vitro* and *in vivo* response of neurons to infection highlights that neurons have intrinsic, microbe-specific responses that are modulated *in vivo*.

Results

Conserved neuron response genes and pathways in *T. gondii* infection models

Transcriptomic data from neurons in two *T. gondii* -infection conditions— neurons in tissue sections isolated with laser capture microdissection (LCM)²⁴ and cortical primary

neuron cultures (PNCs) (**Fig. 1**)—were compared to find common neuron response pathways. Briefly, in a previous report, we combined transgenic parasites that secrete Cre recombinase with a mouse strain that expresses a Cre-sensitive GFP reporter which allowed us to isolate *T. gondii*-injected neurons (GFP⁺NeuN⁺) by LCM²⁷. The RNA from these neurons was isolated, sequenced, and compared with neurons from uninfected mice (**Fig 1A**).

In a separate study, PNCs infected with *T. gondii* for 24 hours were used to assess how infection altered the neuronal transcriptome. Reads were filtered, normalized, and represented as counts per million (CPM), shown in **Fig. S1A-C**. As expected, Principal Component Analysis of the LCM and PNCs datasets revealed marked differences between infected and uninfected controls (**Fig. S1D, E**), with over 2100 differentially expressed genes (DEGs) compared to uninfected controls (FDR ≤ 0.1, Log₂ Fold Change (FC) ≥ 1) (**Fig. 1B, Table 1, 2**).

As noted above, the transcriptomes from TINs contained transcripts classically associated with immune cells²⁴. Such transcripts were not observed in PNCs (**Fig. S2**), except for *Cd80* and *Cd44* which are receptors that are expressed during neuron development^{28,29}. Thus, the pathways identified in the PNCs data that are also identified in the LCM data likely represent neuron specific responses to *T. gondii*. Functional Enrichment Analysis of both sample types revealed 975 upregulated pathways shared between infected PNCs and neurons captured *in vivo* (**Fig. 2A**). A comparison of the top 50 enriched pathways of each condition (LCM or PNCs) identified 14 pathways in common (**Table 3**). These pathways were associated with responses to different microbial stimuli (e.g., LPS, COVID, RSV) and cytokine signaling. By analyzing the individual genes associated with these pathways, we identified a small group of genes that were consistently enriched in these 14

pathways. These genes included CXC motif chemokine ligand 10 (*Cxcl10*, 12 of the 14 pathways), chemokine (C-X-C motif) ligand 1 (*Cxcl1*, 10 of the 14), and chemokine (C-C motif) ligand 2 (*Ccl2*, 9 of the 14) (**Fig. 2B**). These pathways were functionally similar in that they primarily centered around chemokine/cytokine signaling and proinflammatory responses (**Fig. 2C**). While both PNCs and the LCM data showed an enrichment of these pathways, the LCM dataset showed a higher number of genes involved (set size) and increased Log₂FC of the DEGs (**Fig. 2C**). Only *Ifih1*, *Plaur*, and *Tnfrsf3* were highly represented genes that were equivalent or higher in PNCs versus LCM neurons.

A comparison of the downregulated pathways between LCM and PNCs found 28 pathways in common (**Fig. 2D**). Many of these pathways were neuron-specific, including neuronal markers, protein-protein interactions at synapses (e.g., SNARE proteins), long-term potentiation, activation of NMDA receptors, and GABA synthesis and receptor signaling. We had previously noticed fewer neuron markers in our LCM dataset but could not determine if this decrease was due to an increase in contaminating immune cells comprising a higher proportion of our transcripts or a true decrease in neuronal transcription. However, in the PNCs—which lack immune cells—we still saw a decrease in these neuron-specific pathways and related genes (**Table 4**). In addition to synaptic and neuron marker pathways, multiple voltage-gated potassium channels were downregulated (**Fig. 2E**). Using the genes from the GO pathway GOMF_POTASSIUM_ION_LEAK_CHANNEL_ACTIVITY, we found that many were downregulated in both of our datasets (**Fig. S3**) except for *Kcnk5/TASK-2*, which was upregulated in both paradigms. In summary, the ability to compare the *in vivo* and *in vitro* datasets appears to be a feasible way to identify neuron-specific responses from complex *in vivo* transcriptional studies and suggests that *T. gondii* may directly modulate neuronal function.

Comparison of neuronal responses to *T. gondii* or viral infection

To determine if these neuron responses were specific to *T. gondii* or occurred with other relevant infections we wanted to compare the LCM and PNCs datasets with transcriptional studies from neurons infected with non-parasitic microbes. A search of the Gene Expression Omnibus (GEO) repository, the NIH's publicly funded genomics data repository, identified several transcriptional studies on infected wildtype murine neurons^{7,30–32}. From these studies, we analyzed 4 datasets: Zika Virus (ZKV) and West Nile Virus (WNV) infected PNCs profiled by microarray⁷ and two single cell RNA seq studies of cortical neurons infected with a circuit tracing, attenuated rabies virus^{31,32}. The latter two datasets^{31,32} had very few genes that met our criteria for DEGs ($FDR \leq 0.1$, $\text{Log}_2FC \geq 1$) and were excluded from further analysis. However, the datasets for ZKV and WNV⁷ contained 193 and 690 DEGs respectively (**Fig. 3A**), making them amenable for comparison with the *T. gondii* datasets.

Between these datasets there were 532 pathways in common (**Fig. 3B**). We further narrowed our focus to pathways relating to IFN- γ , IFN- α/β , and TNF signaling to see if there were differences in these responses between infections (**Fig. 3C**). We found that all datasets had an enrichment for the IFN- γ signaling pathway and innate immunity pathways (represented by Toll-like Receptor Cascades) (**Fig. 3C**) but only the viral datasets showed enrichment for TNF signaling. As expected, the viral datasets showed an enrichment in anti-viral, type I IFN pathways, specifically in IFN-stimulated genes (ISG). Consistent with prior work³³, *T. gondii* infected PNCs showed very little type I IFN response, while the LCM dataset showed some enrichment in the “Antiviral Mechanism By IFN-related antiviral mechanisms” (**Fig. 3C, Fig. S4**). To understand these differences, we compared the individual genes involved in type I IFN pathways and found that several key IFN- α genes were differentially

expressed (**Fig 3D, E**). *T. gondii* PNCs showed upregulation in *Stat1* and *Irf7* but not in many downstream genes. These downstream genes fell into two clusters, with the first cluster (e.g., *Oas2*, *Oas1l*, and *Epsti1*) showing no baseline expression or upregulation and the second cluster (e.g., *Ifnar2*, *Stat2*) showing low baseline expression and no upregulation (**Fig. 3E**). WNV, ZKV, and, to a lesser extent, *in vivo* infection with *T. gondii* showed upregulation of many of the genes in this pathway, though differences could be seen even between these 3 experimental conditions (e.g., *Ifna2,4,5,12*) (**Fig 3D**). Collectively, these data suggest that *in vitro*, WNV and ZKV trigger neuron IFN- α responses but *T. gondii* does not, while *T. gondii* triggers a broader immune response *in vivo*.

Discussion

Here we sought to define how neurons respond to *T. gondii* and determine how this response compares to infection with other neurotropic microbes. To accomplish this goal, we compared four transcriptional datasets: *T. gondii*-injected neurons (TINs) captured by LCM from infected murine brain tissue and primary murine cortical neuron cultures (PNCs) infected with *T. gondii*, WNV, or ZKV. These comparisons revealed that cortical neurons have conserved responses to these infections but also show key differences that distinguish virus versus eukaryotic parasite.

All four datasets had a pronounced increase in inflammatory pathways, including in type I and type II interferon signaling (**Fig. 3c**). Of the many cytokines/chemokines upregulated in these datasets, *Cxcl10* is highly represented in the pathways upregulated in the LCM and *T. gondii*-infected PNCs datasets and is also upregulated in WNV and ZKV-infected PNCs. (**Fig. 4**). These data suggest *Cxcl10* upregulation is a conserved feature of the neuron response to these infections. As *Cxcl10* is a chemokine that attracts innate and adaptive immune cells, its conserved upregulation is consistent with the need to attract

immune cells to infected neurons, whether the infecting microbe is viral or parasitic (e.g., effector T cells for *T. gondii*³⁴).

The differences between the datasets are also revealing. Only the *T. gondii* infection datasets showed a consistent downregulation of neuronal function pathways (markers, LTP, synapse function, potassium channels). The downregulation in potassium channels was of particular interest to us because it could explain our recent finding that TINs have a depolarized resting membrane potential when compared to non-injected neighboring neurons or neurons in uninfected mice³⁵. Neuronal dysfunction associated with *T. gondii* infection has been identified previously^{36–41}, but the experimental setups made it a challenge to distinguish the direct effect of *T. gondii* on neurons versus effects from infiltrating immune cells or microglia and astrocytes. The findings presented here suggest that *T. gondii* can directly induce neuronal dysfunction.

Another interesting example of infection-dependent effects is IFN- α signaling. Akin to other type I IFN responses, IFN- α signaling begins with activation of a host cell pattern recognition receptor (PRR) by a pathogen. This activation leads to IRF7 phosphorylation, resulting in the upregulation of IFN- α . Once released, IFN- α binds to the Interferon alpha and beta receptor (IFNAR), which allows IFN- α to act in an autocrine and paracrine fashion. IFNAR activation leads to the phosphorylation of STAT1 and STAT2, that mediate the transcriptional upregulation of a specific set of downstream IFN- α response genes⁴² (**Fig. 5**). As expected, the virus-infected PNCs showed upregulation in genes throughout this pathway, but the two *T. gondii* datasets were less consistent. Both *T. gondii* datasets showed an upregulation in IRF-7, but no upregulation of type I IFNs (alpha or beta) (**Fig S4C**). These findings are consistent with prior work in human fibroblasts that suggest that *T. gondii*-infected cells block type I IFN responses³³ upstream of the *T. gondii* effector TgIST, which

prevents IFN signaling by binding to pSTAT1/2 heterodimers and pSTAT1 homodimers^{43,44} (**Fig 5**). That the *in vivo* *T. gondii* dataset shows upregulation of some of the downstream IFN response genes suggests that autocrine and paracrine signaling from neuronal and non-neuronal cells may overcome this inhibition *in vivo* or these downstream genes are upregulated by other pathways. Collectively, these findings are consistent with a model in which neuronal responses to infection depend on the context, with conserved responses arising from pathogen sensors that converge on the same downstream pathways. Such sensors could detect microbes directly or through neuronal stress that, in turn, triggers cellular responses associated with pathogen recognition⁴⁵.

Methods

Parasite Maintenance.

As previously described, type II *T. gondii* (Pruginaud) used in this study was maintained through serial passage in human foreskin fibroblasts (gift of John Boothroyd, Stanford University, Stanford, CA) using DMEM, supplemented with 10% fetal bovine serum, 2mM glutagro, and 100 IU/ml penicillin and 100 µg/ml streptomycin²⁷.

Mice.

All procedures and experiments were carried out in accordance with the Public Health Service Policy on Human Care and Use of Laboratory Animals and approved by the University of Arizona's Institutional Animal Care and Use Committee (#12-391). All mice were bred and housed in specific-pathogen-free University of Arizona Animal Care facilities. Cre reporter mice (ZsG mice) (mice stock no. #007906) were originally purchased from Jackson

Laboratories. Mice were inoculated with 10,000 freshly syringe-lysed parasites diluted in 200 μ l of UPS grade PBS.

Primary murine neuron culturing.

Mouse primary cortical neurons were harvested from E174 mouse embryos obtained from pregnant ZsG mice. Dissections of E174 cortical neurons were performed and primary neuronal cell cultures were generated by methods described previously with minor modifications⁴⁶. The culturing plates were prepared by coating overnight with 0.001% poly-L-lysine solution (Millipore Sigma, P4707, diluted in water 1:10) for plastic surfaces and 100 μ g/ml poly-L-lysine hydrobromide (Sigma, P6282, dissolved in borate buffer, pH 8.4) for glass surfaces. They were washed three times for ten minutes each with water and transferred to plating media (MEM, 0.6% D-glucose, 10% FBS). Neurons were seeded at 500,000 in 6-well plates for RNA-seq. Four hours after plating, full media exchange to neurobasal media (Neurobasal base media, 2% B27 supplement, 1% L-glutamine and 1% penicillin-streptomycin) was performed. On day *in vitro* (DIV) 4, neurons received a half volume media change of neurobasal media with 5 μ M cytosine arabinoside (AraC, Millipore Sigma, C6645) to stop glial proliferation. One third media exchanges with neurobasal media occurred every 3-4 days thereafter. All the experiments were performed on 10 DIV neurons.

RNA isolation, preparation of cDNA libraries and sequencing.

Primary neuronal cell cultures were infected (MOI 5) for 24 hours prior to RNA isolation. Total RNA was extracted using Direct-zol RNA Miniprep Kit and protocol (Zymo Research, R2051). Samples were sent to Novogene for quality control, library preparation and sequencing. RNA quality was measured on an Agilent 2100. Only samples with an RNA Integrity (RIN) score of >7 were used. After the QC procedures, mRNA from eukaryotic organisms is enriched using

oligo(dT) beads. For prokaryotic organisms or eukaryotic organisms' long non-coding libraries, rRNA is removed using the Ribo-Zero kit. First, the mRNA is fragmented randomly by adding fragmentation buffer, then the cDNA is synthesized by using mRNA template and random hexamers primer, after which a custom second-strand synthesis buffer (Illumina), dNTPs, RNase H and DNA polymerase I are added to initiate the second-strand synthesis. Second, after a series of terminal repair, A ligation and sequencing adaptor ligation, the double-stranded cDNA library is completed through size selection and PCR enrichment. Paired end sequencing was performed on an Illumina NovaSeq 6000 at 20 million reads per sample. Initial QC and Adaptor trimming was performed by Novogene.

RNA-seq analysis and data visualization.

Analyses and visualizations were conducted as previously described⁴⁷ using a combination of statistical computing environment R version 3, RStudio version 1.2.5042, Bioconductor version 3.1⁴⁸, and Prism 9.4.1 per a previously published training tool⁴⁹. Transcript-level count were summarized to genes using the TxImport package⁵⁰ and mouse gene annotation package from biomaRt⁵¹. Data were filtered and normalized with the EdgeR package⁵² by the Trimmed Mean of M-values (TMM) method. Genes with less than one count per million in n of the samples (3 for PN, 5 for LCM) were filtered out. The VROOM function in Limma⁵³ was used to variance stabilize the filtered, normalized data. DGE analysis was performed with Benjamini-Hochberg correction with Limma⁵³. Gene Set Enrichment Analysis (GSEA) was done with the using GSEA software (Broad Institute, version 4.0.2)⁵⁴ in R with the GSEABase package. Venn diagrams were generated with Venn Diagram tool from VIB / UGent Bioinformatics & Evolutionary Genomics at <http://bioinformatics.psb.ugent.be/webtools/Venn/>. Heat maps were generated in R with pheatmap. Microarray data from BioProject PRJNA503843⁷, GSE122121, WNV samples GSM3455732, GSM3455733, GSM3455734,

ZKV samples GSM3455735, GSM3455736, GSM3455737, and saline samples GSM3455729, GSM3455730, GSM3455731 were retrieved from the Gene Expression Omnibus (GEO) with the GEOquery package. The rabies dataset was retrieved in the same manner, GSE38975, samples GSM953148, GSM953149, GSM953150, GSM953151. Microarray data was analyzed with code from NCBI's GEO2R with the Limma⁵³ and umap⁵⁵ packages.

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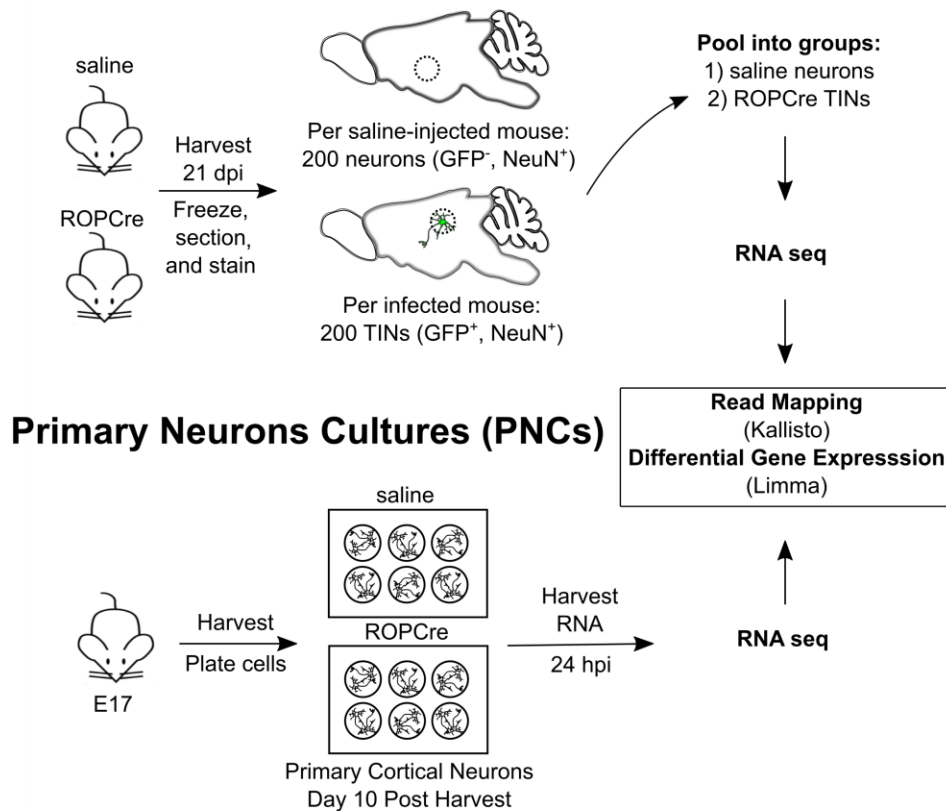
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A Laser Capture Microdissection (LCM)



B

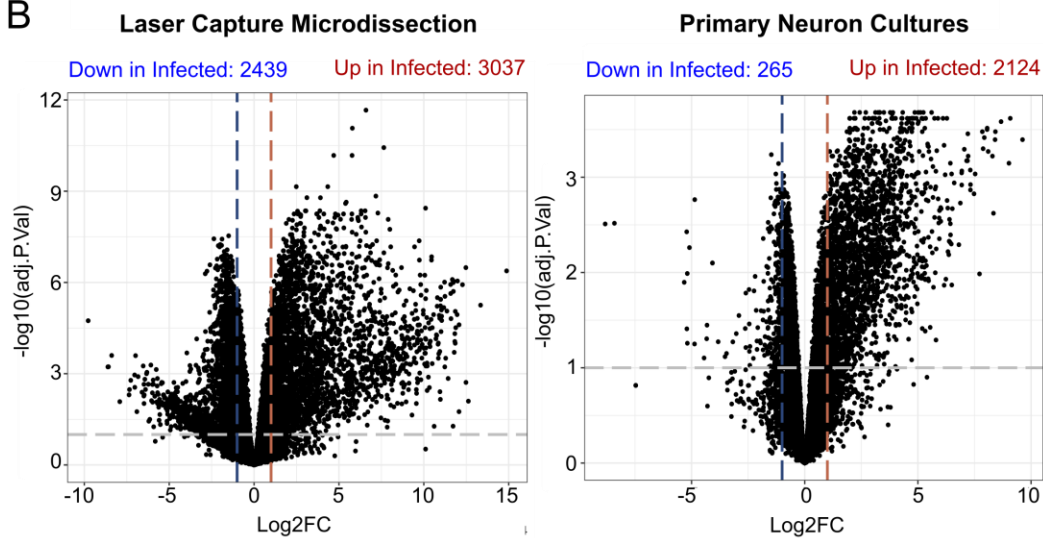
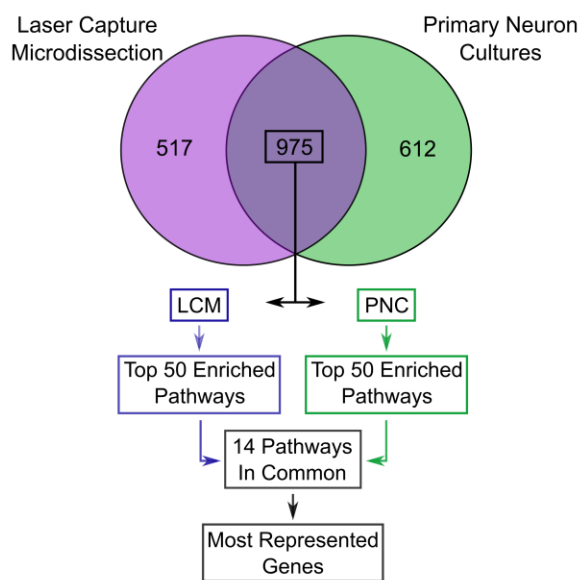
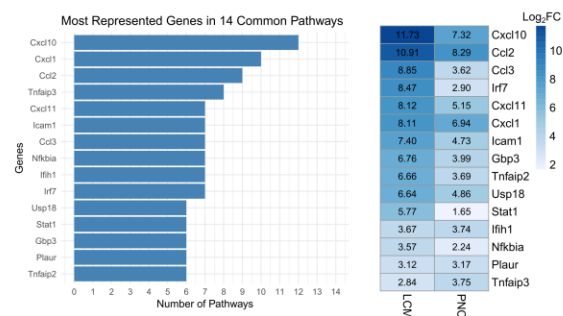


Figure 1. *T. gondii*-infected neurons from *in vitro* (PNC) and *in vivo* (LCM) systems were captured and analyzed for differentially expressed genes. (A) Experimental schematic of neurons captured by laser capture microdissection and infected primary murine neuronal cultures. (B) Volcano plots of differentially expressed genes in both datasets. Horizontal bars indicate adjusted p. values ≤ 0.1 , vertical bars indicate $\text{Log}_2\text{FC} \geq 1$ for up and downregulated genes.

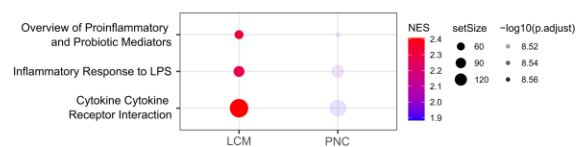
A GSEA Up-regulated Pathways



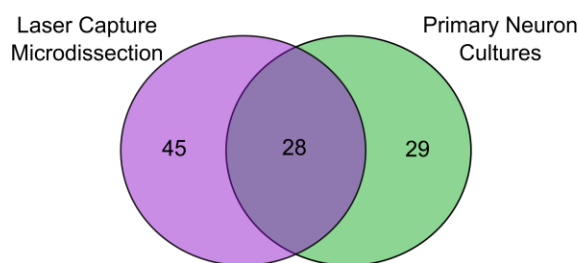
B Most Represented Genes in 14 Pathways



C Representative Pathways Upregulated by *T. gondii* in both conditions



D GSEA Down-regulated Pathways



E Representative Pathways Downregulated by *T. gondii* in both conditions

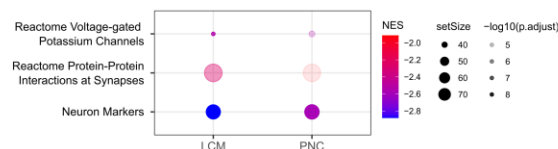


Figure 2. Pathway analysis reveals neuronal response to *T. gondii* infection involves an increase in pro-inflammatory cytokines and a decrease in neuron function. (A) The top 14 enriched pathways between LCM dataset and PNCs were selected out of 975 upregulated pathways. (B) Quantification of the most represented genes in the 14 most enriched pathways with a heatmap of their Log₂FC. (C) Representative signature pathways between PNCs and LCM with normalized enrichment scores (NES). (D) Venn diagram of 28 downregulated pathways in LCM and PNCs datasets. (E) Enrichment scores of downregulated neuron pathways in *T. gondii* datasets.

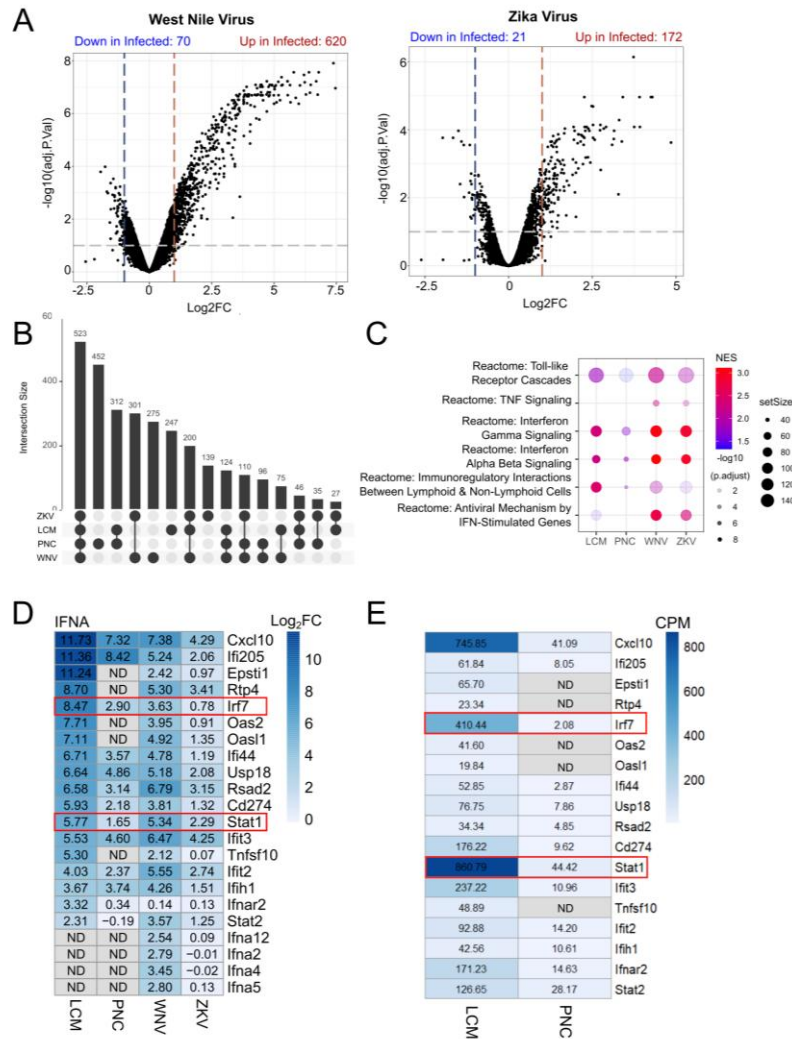


Figure 3. WNV and ZKV-infected PNCs and the LCM dataset show upregulation of IFN- α response genes, unlike *T. gondii*-infected PNCs. (A) Volcano plot of DEGs for WNV and ZKV. (B) Upset plot of upregulated GSEA pathways in *T. gondii*-infected PNCs, LCM data, WNV-infected PNCs, and Zika-infected PNCs (C) Relative expression of inflammatory pathways across datasets. (D) IFN- α response genes expressed in LCM, *T. gondii*, WNV, and ZKV-infected in Log₂FC. (E) Count per million of IFN- α response genes in LCM and *T. gondii* PNC datasets with raw values shown. ND = Not Detected. ND genes in both LCM and PNCs in D are not included in E.

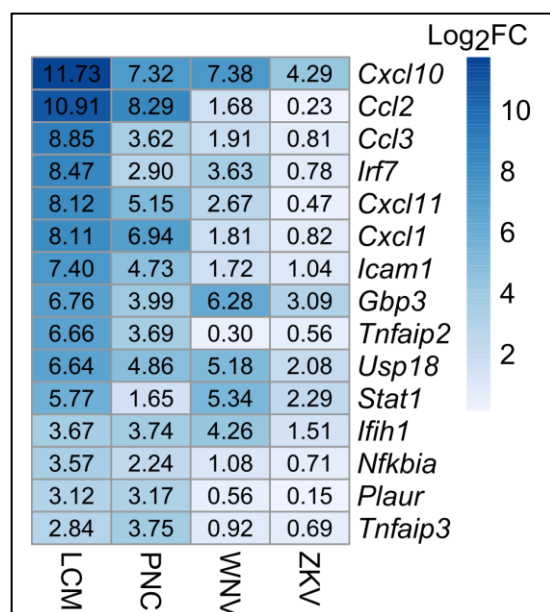


Figure 4. *Cxcl10* is upregulated across acute and subacute datasets. Other conserved genes include *Irf7*, *Icam1*, *Gbp3*, *Usp18*, *Stat1*, and *Ifih1*.

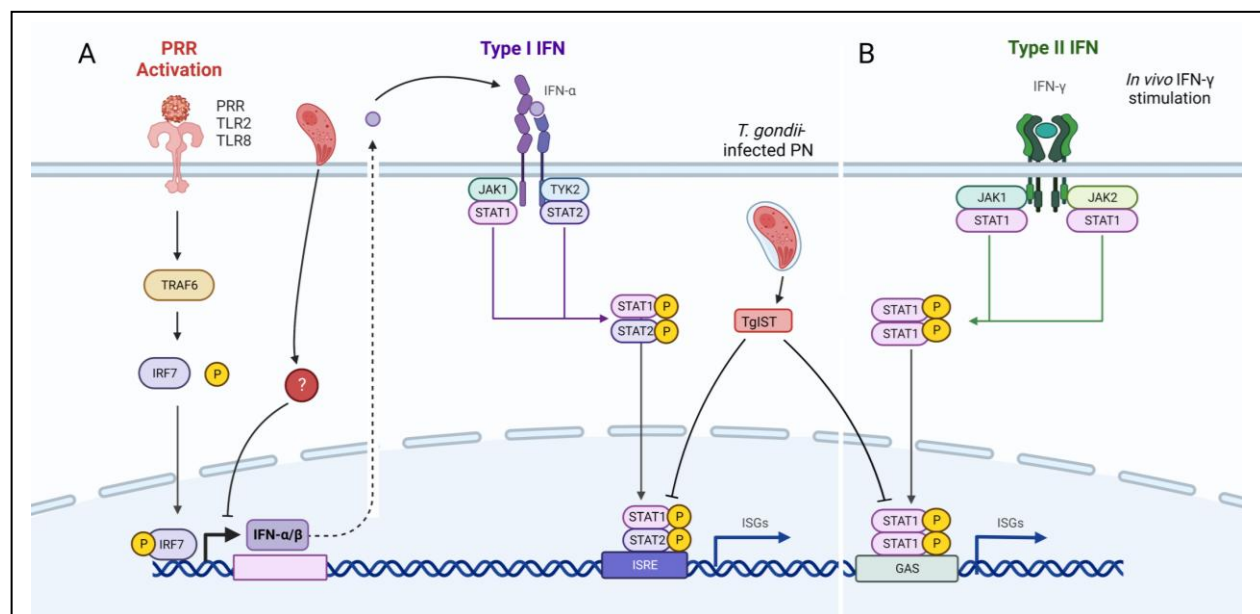


Figure 5. Despite *Irf7* upregulation in all datasets, *T. gondii*-infected neurons fail to upregulate and secrete IFN-α. (A) WNV and *T. gondii* activate PRR receptors leading to an intracellular cascade that results in IFN-α production through IRF7 phosphorylation. IFN-α binds IFNAR and upregulates *Stat1* and other subsequent IFN-α response genes in WNV-infected neurons. *T. gondii* inhibits *Stat1* in this pathway *in vitro* with *T. gondii* effector protein TgIST. The lack of *Ifn-α* upregulation in both *T. gondii* datasets indicate that the parasite may inhibit the action of phosphorylated IRF7 through an unknown mechanism; either before full invasion or after. (B) *In vivo*, *Stat1* may be upregulated through alternative stimulation pathways such as IFN-γ.

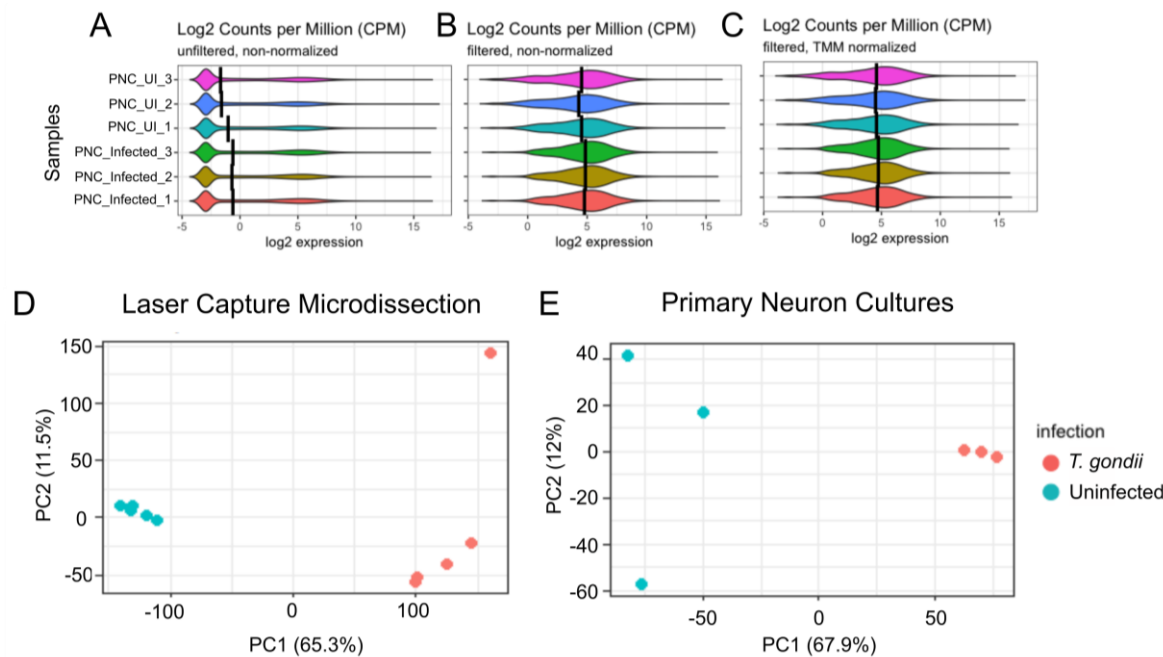


Figure S1. Normalization and data preparation in Primary Neuron Culture (PNC) analysis. (A) Unfiltered, non-normalized counts per million (CPM) in PNC samples. UI = uninfected. **(B)** Filtered, non-normalized CPM in PNC samples. **(C)** Filtered, TMM normalized CPM in PNC samples. **(D)** Principal component analysis of PNC. **(E)** Principal component analysis of LCM neurons.

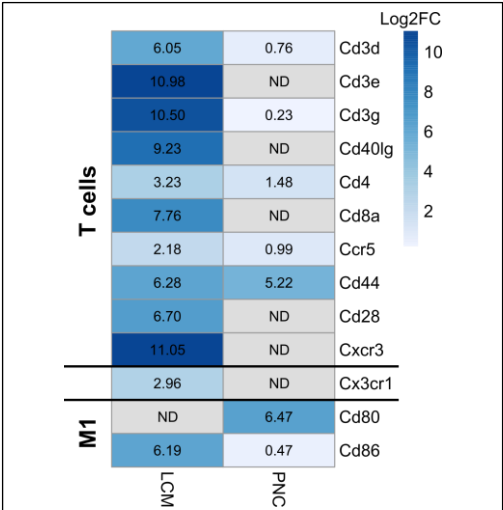


Figure S2. Heat map showing that immune cell transcripts are only observed in LCM dataset. The numbers denote the fold change between infected and uninfected samples. “ND” no differential expression between infected and uninfected datasets. *Cd44* and *Cd80* are immune cell receptors that are also expressed in neurons during development^{28,29}.

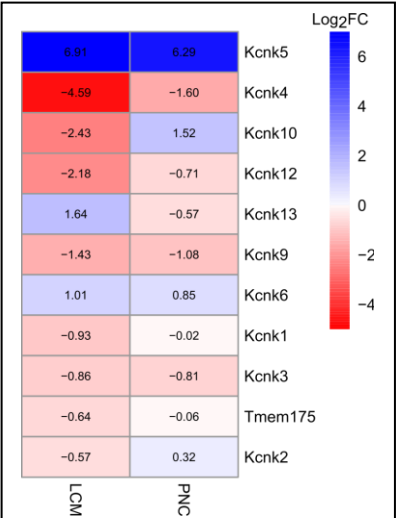


Figure S3. Potassium leak channels are downregulated in LCM and PNCs. Heatmap of genes encoding potassium leak channels shows a downregulation across *T. gondii* datasets. Previous data suggests decreased potassium leak channels result in a depolarized resting membrane potential in TINS³⁵.

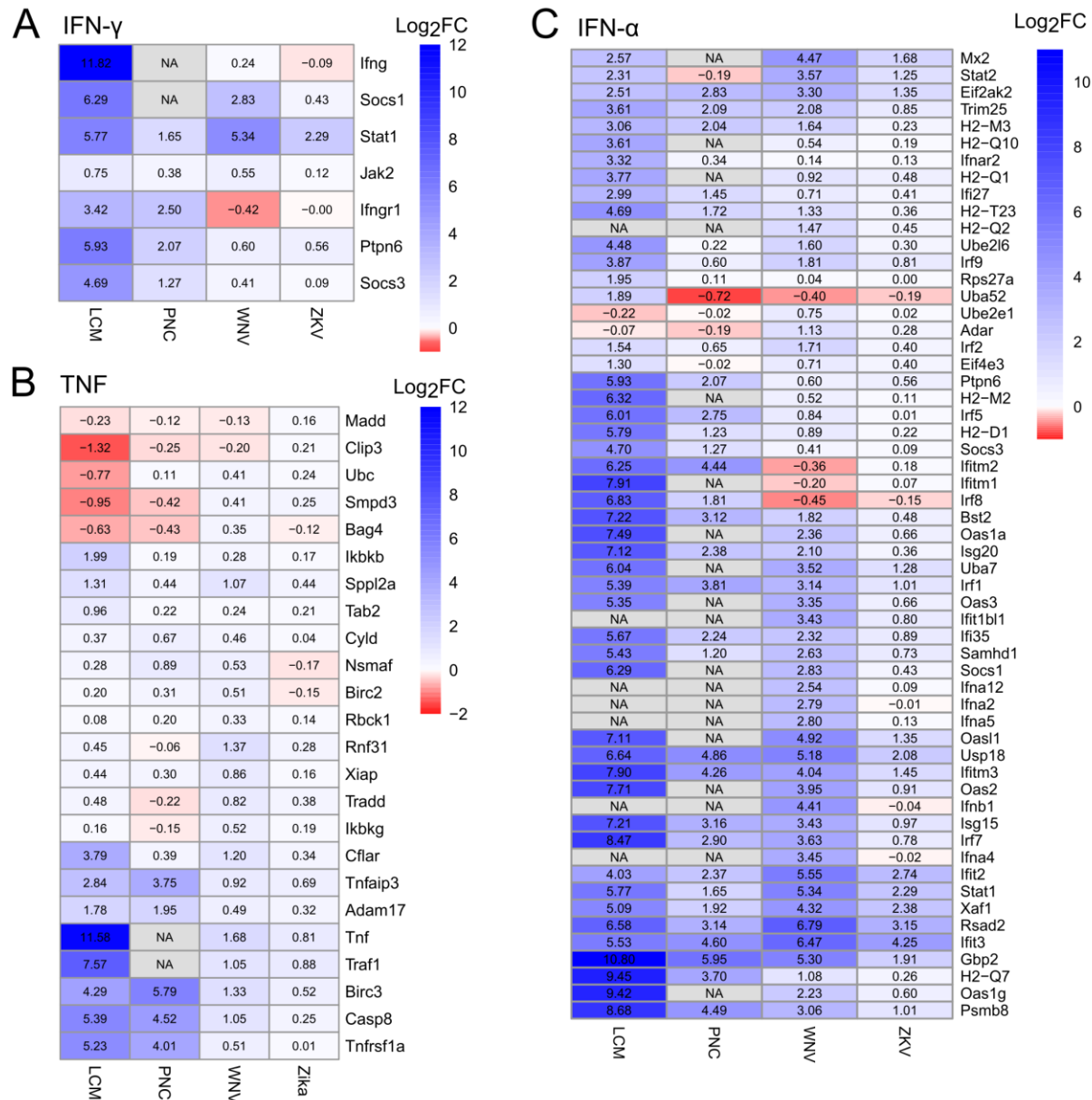


Figure S4. IFN- γ , TNF, and IFN- α pathways are differentially upregulated between datasets. (A) Heatmap of IFN- γ genes. **(B)** Heatmap of TNF genes. **(C)** Heatmap of IFN- α genes. Scale = Log₂FC. NA = Not Applicable/Not Detected.

Table 1. Differentially expressed genes from *T. gondii* infected or injected neurons from laser capture microdissection dataset. Values are Log2FC.

geneID	logFC	adj.P.Val	P.Value
Ifi47	14.876	4.17E-07	8.49E-09
Nkg7	13.3429	5.58E-06	2.82E-07
Ly6i	12.6236	0.008011	0.002948
Sirpb1c	12.4823	0.001936	5.29E-04
Gimap4	12.476	3.25E-07	6.02E-09
Gimap7	12.2764	1.19E-06	3.55E-08
Ubd	12.0766	2.47E-05	2.06E-06
Saa3	12.0728	0.017714	0.007613
Gzmb	11.983	8.96E-07	2.44E-08
Ccl19-ps1	11.9613	1.14E-05	7.40E-07
Ccl5	11.8791	3.08E-05	2.75E-06
Lilrb4	11.8534	8.94E-06	5.23E-07
Plac8	11.8487	9.96E-05	1.24E-05
Ifng	11.8253	4.84E-05	4.97E-06
Slfn1	11.8246	8.73E-05	1.06E-05
Ly6c2	11.79	1.99E-04	3.06E-05
Gbp8	11.7648	9.16E-07	2.52E-08
Gzma	11.7393	1.97E-06	7.56E-08
Cxcl10	11.731	1.01E-06	2.88E-08
Lcn2	11.7214	0.053191	0.028475
Cxcl9	11.6788	8.01E-07	2.14E-08
Sct	11.5998	1.55E-05	1.13E-06
Tnf	11.5816	2.31E-06	9.35E-08
Trbc1	11.5782	1.17E-06	3.46E-08
Clec4d	11.4311	0.001437	3.66E-04
Ifi205	11.3605	8.73E-06	5.08E-07
Ccl8	11.287	3.10E-04	5.42E-05
Epsti1	11.2442	2.87E-06	1.21E-07
Ccl7	11.2336	5.98E-04	1.25E-04
Gimap1	11.2205	9.79E-07	2.75E-08
Gbp6	11.1779	6.71E-06	3.59E-07
Ms4a4d	11.0531	1.78E-05	1.36E-06
Cxcr3	11.0491	1.29E-05	8.80E-07
Serpina3f	11.035	8.04E-06	4.51E-07
Cxcr6	11.0153	4.14E-05	4.02E-06
Lyz2	10.9962	1.43E-06	4.70E-08
Klrc1	10.9923	3.60E-06	1.63E-07
Cd3e	10.9836	5.89E-06	3.02E-07

S100a8	10.9743	0.006988	0.002492
Cxcl13	10.9503	0.003916	0.001242
Il18bp	10.9424	1.86E-04	2.81E-05
Ccl4	10.9359	1.51E-05	1.09E-06
Ccl2	10.9062	1.21E-05	8.04E-07
Serpina3g	10.8803	2.21E-04	3.53E-05
Ctsw	10.8574	9.86E-05	1.23E-05
Lat	10.8552	3.10E-04	5.42E-05
Irg1	10.8352	1.07E-04	1.37E-05
Gbp2	10.799	3.16E-06	1.36E-07
Cd2	10.7847	6.05E-06	3.14E-07
Pkp3	10.7606	5.51E-05	5.85E-06
Mnda	10.7396	5.29E-05	5.56E-06
Tspan32	10.7123	7.10E-05	8.05E-06
Apoc2	10.6079	0.05364	0.028753
Apol7c	10.5751	1.14E-05	7.43E-07
Cd3g	10.4984	3.08E-05	2.75E-06
Cd96	10.4941	4.66E-04	9.10E-05
Tgtp1	10.4573	1.43E-07	1.64E-09
H2-Aa	10.4505	1.84E-07	2.40E-09
Fas	10.4298	1.64E-05	1.23E-06
Acap1	10.3855	8.54E-05	1.03E-05
Klrd1	10.3669	1.29E-04	1.75E-05
Slc28a2	10.3578	3.29E-05	3.01E-06
Gpr65	10.3373	1.01E-04	1.28E-05
Klrk1	10.3279	0.00286	8.44E-04
Pilrb1	10.2802	2.14E-05	1.74E-06
Lgals3	10.2679	0.001297	3.23E-04
Arl11	10.2017	5.57E-04	1.14E-04
H2-Eb1	10.194	0.003569	0.001107
Fpr2	10.1884	4.48E-04	8.63E-05
Cd8b1	10.1733	1.43E-05	1.00E-06
Iigp1	10.1469	1.84E-06	6.79E-08
Gm15056	10.1228	1.42E-04	1.98E-05
Trbv16	10.1192	7.41E-05	8.54E-06
Plbd1	10.1191	5.59E-04	1.15E-04
Bcl2a1d	10.1039	3.42E-06	1.52E-07
Cd74	10.1017	3.61E-09	3.25E-12
Msr1	10.0918	6.97E-05	7.83E-06
Fgr	10.0912	2.13E-04	3.35E-05
Bcl2a1a	10.0743	3.04E-05	2.71E-06
H2-Ab1	10.0578	5.79E-07	1.36E-08
Fcgr4	10.0552	2.13E-04	3.36E-05
Csf2ra	10.0429	4.82E-04	9.47E-05

Rgs1	10.0072	1.46E-04	2.04E-05
Ifi27l2a	9.96789	8.35E-06	4.75E-07
Cd48	9.96629	1.10E-05	7.05E-07
Gm15931	9.90421	1.10E-04	1.42E-05
Il27	9.88242	3.08E-04	5.36E-05
Sit1	9.86088	3.90E-05	3.73E-06
Gpr132	9.83471	2.63E-06	1.09E-07
Cd69	9.8287	0.001583	4.13E-04
Icos	9.82084	7.86E-05	9.23E-06
Zbp1	9.81628	1.17E-06	3.50E-08
Cd52	9.78157	5.72E-07	1.33E-08
H2-DMb2	9.77151	1.42E-04	1.98E-05
Spink2	9.75737	9.54E-04	2.23E-04
Ccl19-ps3	9.7448	2.49E-05	2.09E-06
Tgtp2	9.7375	1.84E-07	2.42E-09
H2-Oa	9.73246	1.65E-04	2.42E-05
Ms4a4b	9.72653	4.27E-08	2.47E-10
Gm4955	9.68175	5.20E-05	5.46E-06
A530040E	9.65325	2.53E-05	2.14E-06
Fam26f	9.63459	7.48E-05	8.66E-06
Phf11a	9.62965	0.001978	5.44E-04
Marco	9.62561	9.75E-05	1.21E-05
Mefv	9.62049	4.00E-05	3.86E-06
Batf2	9.61785	1.52E-05	1.10E-06
Al607873	9.61429	8.80E-05	1.06E-05
Il12rb1	9.60874	0.001452	3.71E-04
Sectm1a	9.59579	4.75E-05	4.83E-06
Gpr114	9.58811	1.91E-04	2.90E-05
Xcl1	9.57303	0.004417	0.001436
Clec4e	9.55922	0.009562	0.003648
Gimap5	9.55888	0.003332	0.001019
Tlr1	9.53956	4.43E-04	8.51E-05
Phf11b	9.52492	8.38E-06	4.81E-07
Rab19	9.51465	5.22E-06	2.57E-07
H2-Q7	9.45238	6.75E-08	5.14E-10
Lyz1	9.44908	1.14E-04	1.49E-05
Slamf8	9.43869	3.06E-04	5.32E-05
C3	9.43714	1.63E-05	1.22E-06
Oas1g	9.41934	4.04E-04	7.57E-05
Il2rg	9.3869	1.87E-06	6.97E-08
Ccr8	9.38289	6.54E-05	7.24E-06
BC021614	9.30803	1.04E-05	6.54E-07
Ly9	9.30464	3.23E-05	2.94E-06
Mcemp1	9.30233	0.022915	0.010427

I830127LC	9.28947	3.33E-05	3.06E-06
Cd40lg	9.22749	1.43E-04	2.00E-05
Hk3	9.22558	4.99E-04	9.93E-05
Gm4951	9.17714	1.62E-06	5.64E-08
Slamf7	9.17321	2.75E-05	2.38E-06
Slamf9	9.16271	4.88E-04	9.63E-05
Clec7a	9.16206	7.37E-05	8.48E-06
Cytip	9.15766	1.06E-04	1.35E-05
Sh2d2a	9.14051	1.12E-04	1.45E-05
Gpr18	9.13903	1.06E-04	1.35E-05
Fpr1	9.12848	0.002054	5.68E-04
Apof	9.12464	0.001024	2.44E-04
Wfdc17	9.09757	0.003353	0.001026
Trbv3	9.06012	3.93E-05	3.77E-06
Nlrc5	9.05983	6.68E-05	7.45E-06
Tmem71	9.0242	6.33E-05	6.92E-06
Gm12250	9.01465	2.73E-04	4.60E-05
Colec12	8.96207	8.47E-04	1.92E-04
Bcl2a1b	8.95704	4.02E-06	1.90E-07
Ms4a4c	8.95647	4.60E-04	8.95E-05
Hp	8.95521	0.008428	0.003132
Rnase6	8.94469	2.30E-04	3.72E-05
Sirpb1a	8.9429	2.64E-04	4.41E-05
Gp49a	8.94075	2.72E-05	2.34E-06
Acp5	8.87893	0.002293	6.48E-04
Scimp	8.87869	7.87E-05	9.25E-06
Gm18853	8.87517	1.93E-05	1.52E-06
Nfam1	8.86439	3.13E-05	2.82E-06
Chil3	8.86243	7.56E-05	8.82E-06
Timd4	8.85974	1.04E-04	1.31E-05
Klrb1b	8.85577	1.33E-05	9.17E-07
P2ry10	8.85245	3.20E-04	5.65E-05
Ccl3	8.84664	1.25E-04	1.68E-05
Arhgap9	8.84407	1.12E-04	1.44E-05
Ptprcap	8.83395	5.58E-06	2.83E-07
Vdr	8.81141	0.0028	8.23E-04
Gstt2	8.81064	7.19E-05	8.17E-06
A530032C	8.80454	2.06E-04	3.20E-05
Wisp2	8.79243	5.72E-04	1.18E-04
Lpxn	8.78722	6.70E-04	1.44E-04
Itgb7	8.77228	3.42E-04	6.11E-05
Gm9733	8.77048	1.59E-05	1.18E-06
Ctla2b	8.76007	0.004414	0.001434
Tbc1d10c	8.75867	0.001934	5.29E-04

Tlr2	8.73805	5.23E-04	1.05E-04
Art2a-ps	8.72341	7.08E-05	8.01E-06
Gm12185	8.71525	1.47E-04	2.06E-05
Rtp4	8.70325	0.009821	0.003772
Fgl2	8.70106	5.57E-05	5.93E-06
Il4ra	8.68696	0.00209	5.81E-04
Psmb8	8.68246	3.26E-07	6.08E-09
Trbv13-2	8.67596	2.99E-05	2.64E-06
Pilra	8.6601	6.20E-04	1.31E-04
Ms4a6c	8.64109	3.20E-05	2.90E-06
Tff1	8.63156	6.88E-04	1.49E-04
Clec4a1	8.62227	2.67E-04	4.47E-05
Csf2rb2	8.59194	8.12E-04	1.83E-04
Rab20	8.55515	3.43E-04	6.14E-05
Psmb9	8.54927	1.78E-06	6.49E-08
Pirb	8.51345	1.48E-04	2.09E-05
Gm1966	8.50612	0.001012	2.41E-04
Irf7	8.47053	2.06E-06	7.97E-08
Gm10721	8.46981	3.09E-04	5.39E-05
Gm4759	8.46282	2.46E-04	4.04E-05
Ccr7	8.44566	0.009432	0.003586
Ccr1	8.44172	2.09E-04	3.28E-05
Batf	8.43246	2.67E-04	4.48E-05
Tbx21	8.39667	9.66E-04	2.26E-04
Pyhin1	8.38262	1.78E-04	2.66E-05
Ear2	8.36032	4.25E-05	4.17E-06
H2-DMb1	8.35279	1.15E-06	3.36E-08
Cst7	8.34635	5.73E-07	1.34E-08
Irgm2	8.34095	2.04E-04	3.16E-05
Cxcl16	8.32096	9.94E-06	6.08E-07
AB124611	8.27912	5.49E-04	1.12E-04
Tgm1	8.24355	0.000718	1.57E-04
Hcst	8.23953	1.24E-04	1.66E-05
Slpi	8.23729	0.012296	0.004942
BC023105	8.23091	0.001228	3.03E-04
Ms4a7	8.22629	8.10E-04	1.82E-04
Klk6	8.22479	2.06E-04	3.21E-05
Trbv19	8.21538	2.24E-05	1.84E-06
Cyba	8.20422	1.34E-06	4.33E-08
Gm4070	8.19065	0.001685	4.46E-04
Klra7	8.17495	1.43E-04	1.99E-05
Sell	8.17304	3.87E-04	7.14E-05
Ltb	8.16729	4.02E-07	7.95E-09
Clec4n	8.16449	9.92E-04	2.34E-04

Gbp9	8.1515	2.53E-04	4.19E-05
Tgfb1	8.13497	0.003458	0.001065
Il2rb	8.13445	1.18E-05	7.75E-07
Ccl1	8.12257	3.68E-04	6.67E-05
Cxcl11	8.11816	1.84E-04	2.77E-05
Gpr141	8.11729	3.96E-04	7.38E-05
Cxcl1	8.11081	1.01E-04	1.26E-05
Pla1a	8.10243	0.001649	4.34E-04
Bst1	8.0845	0.002253	6.35E-04
Dennd1c	8.08281	7.15E-04	1.56E-04
C5ar1	8.06688	5.62E-04	1.16E-04
Gm12407	8.06217	1.15E-04	1.51E-05
Ccl19	8.04905	6.75E-08	5.04E-10
A2m	8.04823	3.84E-04	7.07E-05
Ccl22	8.04464	0.010855	0.004259
Ripk3	8.03266	1.51E-04	2.13E-05
Serpina3i	8.03148	4.21E-04	7.98E-05
Slc39a4	8.0296	2.15E-05	1.75E-06
Rac2	7.99891	1.79E-08	7.68E-11
Rhbdf2	7.98911	8.10E-04	1.82E-04
Ccl12	7.98473	1.18E-04	1.57E-05
Clec4a3	7.94839	7.11E-05	8.06E-06
H2-Ob	7.94354	1.65E-04	2.41E-05
Themis2	7.93621	3.08E-04	5.35E-05
Clec5a	7.92343	0.001509	3.89E-04
Emr1	7.90607	1.38E-04	1.91E-05
Ifitm1	7.90504	2.41E-07	3.78E-09
Hcar2	7.90345	0.006791	0.002406
Smagp	7.90306	3.18E-04	5.60E-05
Ifitm3	7.8998	8.44E-09	2.40E-11
Igsf6	7.89192	9.23E-05	1.13E-05
Gm10718	7.87409	0.035945	0.017792
Tap1	7.85931	3.29E-07	6.25E-09
Cd101	7.85226	8.88E-04	2.04E-04
Cd5	7.84315	8.97E-04	2.06E-04
Arg1	7.84195	0.057202	0.031077
Ptger2	7.83904	0.006654	0.002346
Gm15922	7.83507	1.21E-04	1.61E-05
Ms4a4a	7.83438	0.00511	0.001709
Ptprc	7.82635	1.32E-05	9.10E-07
Pira2	7.82333	2.92E-04	5.01E-05
Itgb2	7.81351	3.33E-05	3.06E-06
Dnase1l3	7.8093	4.79E-05	4.88E-06
Itgal	7.79537	2.34E-05	1.94E-06

C130026I	7.76743	4.66E-05	4.71E-06
Cd8a	7.75795	5.09E-04	1.02E-04
Vav1	7.74597	6.03E-04	1.26E-04
Procr	7.74418	6.44E-04	1.37E-04
Klrc2	7.7372	1.48E-04	2.08E-05
Klrg1	7.73274	0.001347	3.39E-04
Gmfg	7.73217	1.75E-05	1.33E-06
Oas2	7.71287	0.033936	0.016636
Ikzf1	7.70418	6.18E-04	1.30E-04
Cd33	7.69615	0.002044	5.64E-04
Cybb	7.69527	3.23E-06	1.41E-07
Gsg2	7.69425	8.73E-04	1.99E-04
Dok1	7.67409	0.00174	4.64E-04
Sirpb1b	7.66622	1.99E-04	3.06E-05
Gm13212	7.66212	3.93E-04	7.29E-05
Spint1	7.65521	8.60E-04	1.96E-04
Klra2	7.65298	0.001016	2.42E-04
Fcer1g	7.64621	1.06E-07	9.83E-10
Zmynd15	7.64438	0.00104	2.49E-04
H2-K1	7.64303	3.68E-11	7.64E-15
Ncf4	7.6353	2.06E-04	3.21E-05
Evi2b	7.59042	3.82E-04	7.02E-05
Oasl2	7.57762	2.50E-05	2.11E-06
Traf1	7.57253	5.01E-05	5.20E-06
Gm10800	7.56581	1.35E-05	9.29E-07
Art2b	7.55428	4.84E-05	4.97E-06
Ikzf3	7.54997	0.00136	3.43E-04
Mkl	7.53228	2.76E-04	4.66E-05
Trbv5	7.52335	0.001176	2.89E-04
Atf3	7.51848	6.45E-04	1.37E-04
Itgax	7.50149	8.93E-04	2.05E-04
Gzmk	7.50047	2.11E-04	3.31E-05
Nos2	7.49987	0.00561	0.001913
Oas1a	7.48881	2.24E-06	9.02E-08
Gbp7	7.48326	1.67E-06	5.86E-08
Gm10722	7.47711	0.002422	6.90E-04
Il1a	7.47238	0.028467	0.013472
Ccl6	7.45428	9.06E-05	1.11E-05
Gm19684	7.45184	1.01E-04	1.27E-05
Fcgr2b	7.45141	1.98E-05	1.57E-06
Tnip3	7.45135	4.79E-05	4.89E-06
Guca1a	7.41849	3.79E-04	6.94E-05
Cmtm7	7.41569	3.92E-06	1.83E-07
H2-Q6	7.40339	2.70E-07	4.63E-09

Srgn	7.40161	1.81E-07	2.32E-09
Icam1	7.39956	3.87E-05	3.69E-06
Tspo	7.39148	9.60E-06	5.80E-07
Csf2rb	7.38181	2.34E-04	3.80E-05
Lst1	7.3633	7.57E-07	1.98E-08
Runx3	7.35928	2.20E-05	1.80E-06
Tlr12	7.35293	3.79E-04	6.94E-05
C1s1	7.34383	4.55E-04	8.82E-05
Sp110	7.33809	2.64E-07	4.31E-09
Lat2	7.32327	0.004742	0.001563
Aqp4	7.31682	6.64E-04	1.42E-04
Bik	7.30294	9.66E-04	2.27E-04
Ly6a	7.29264	5.22E-09	7.23E-12
Gvin1	7.28184	0.003636	0.001135
Xlr4b	7.27379	2.60E-04	4.33E-05
Apol9a	7.26805	8.48E-04	1.92E-04
Gm10801	7.26774	2.85E-04	4.86E-05
Aoah	7.2672	4.14E-04	7.79E-05
Ctsc	7.24904	2.20E-07	3.17E-09
Anpep	7.24531	0.002348	6.66E-04
Nlrp3	7.23547	0.001551	4.03E-04
Haa0	7.23001	3.99E-04	7.45E-05
Bst2	7.21868	4.27E-08	2.51E-10
Lax1	7.20976	0.008546	0.003187
Isg15	7.20969	2.59E-07	4.17E-09
Cdk1	7.19334	7.57E-04	1.68E-04
Casp12	7.19002	3.70E-04	6.72E-05
Apol9b	7.18747	0.002254	6.35E-04
Gm9574	7.1824	3.26E-04	5.77E-05
Igtp	7.17366	1.45E-09	8.02E-13
Klhl6	7.17349	0.002687	7.80E-04
Nlrp1b	7.17321	5.69E-04	1.17E-04
Spi1	7.15442	1.93E-05	1.53E-06
Dpep2	7.14125	0.005748	0.001973
Serping1	7.13018	2.21E-07	3.25E-09
Tmem106	7.12711	9.60E-06	5.80E-07
S100a4	7.1219	1.47E-05	1.04E-06
Isg20	7.12143	4.21E-04	7.98E-05
Ptpn18	7.10939	1.77E-05	1.35E-06
Oasl1	7.10828	2.57E-04	4.27E-05
Akr1c13	7.10197	0.001718	4.57E-04
Runx1	7.09399	3.48E-04	6.25E-05
Fxyd1	7.0915	6.25E-05	6.79E-06
Mpeg1	7.07735	1.51E-05	1.09E-06

Ifit1	7.04844	9.94E-07	2.81E-08
Trbv12-2	7.04119	0.001983	5.46E-04
Samsn1	7.0119	4.16E-04	7.83E-05
Capg	7.00615	1.27E-05	8.61E-07
Il1rn	6.98935	7.91E-04	1.77E-04
Osgin1	6.97955	0.007055	0.00252
Ctss	6.97948	5.67E-08	3.77E-10
Il12b	6.97568	7.61E-04	1.69E-04
Tmem140	6.97346	1.82E-05	1.39E-06
Steap4	6.96736	9.73E-04	2.29E-04
Cfb	6.96297	0.001571	4.09E-04
H2-Q5	6.93121	9.25E-06	5.51E-07
Clec9a	6.92538	8.10E-04	1.82E-04
C4b	6.92367	1.90E-07	2.57E-09
Myo1f	6.92309	2.79E-05	2.43E-06
Zc3hav1	6.91533	9.85E-05	1.23E-05
Tyrobp	6.90865	1.95E-06	7.42E-08
Kcnk5	6.90505	0.001294	3.22E-04
Cd14	6.89875	2.19E-04	3.50E-05
F13a1	6.89801	0.01187	0.004733
Smpd13b	6.89394	4.30E-04	8.19E-05
Hck	6.89084	2.73E-05	2.35E-06
Stra6	6.87486	5.43E-04	1.11E-04
Phf11d	6.87189	1.78E-05	1.36E-06
AA467197	6.86426	0.002538	7.29E-04
Lsp1	6.86005	1.06E-07	9.81E-10
Gpsm3	6.85095	7.50E-06	4.15E-07
Irf8	6.83222	6.75E-08	5.11E-10
Slc15a3	6.82374	3.57E-05	3.33E-06
Traf3ip3	6.81461	1.16E-04	1.53E-05
Apol7e	6.80962	6.47E-04	1.38E-04
Gimap9	6.80632	1.27E-04	1.72E-05
Ifi203	6.80478	5.22E-06	2.57E-07
Glpr2	6.79179	5.26E-05	5.53E-06
Calca	6.78538	3.94E-05	3.78E-06
Mndal	6.78425	6.37E-06	3.37E-07
Sp140	6.77896	2.09E-04	3.27E-05
Myo1g	6.77119	2.12E-04	3.33E-05
Crtam	6.76722	0.005632	0.001922
Mgst1	6.75795	1.67E-04	2.44E-05
Gbp3	6.75665	2.21E-06	8.72E-08
Car13	6.73572	0.004553	0.001488
1700123IC	6.73137	7.06E-04	1.54E-04
S100a11	6.73056	1.52E-07	1.83E-09

Timp1	6.71278	0.001556	4.04E-04
B3gnt5	6.71251	0.002789	8.19E-04
Ifi44	6.70888	3.30E-05	3.03E-06
Cd28	6.70388	0.018091	0.007824
Cd53	6.70197	2.68E-06	1.11E-07
Sh3glb1	6.6827	3.45E-04	6.19E-05
Kdelr3	6.67948	0.001444	3.69E-04
Tnfaip8l2	6.66971	3.46E-04	6.21E-05
Insl6	6.66811	5.99E-04	1.25E-04
Fgfbp1	6.66719	0.049288	0.025969
Tnfaip2	6.66405	1.87E-05	1.45E-06
Chek2	6.65909	0.004198	0.001348
Il1b	6.65736	7.91E-04	1.77E-04
Al467606	6.65538	0.001473	3.78E-04
Slamf6	6.65366	5.91E-04	1.23E-04
Usp18	6.63749	3.12E-04	5.45E-05
Fyb	6.63604	5.74E-07	1.34E-08
Aif1	6.62235	6.15E-08	4.29E-10
Slfn2	6.59529	1.81E-07	2.36E-09
B2m	6.59123	2.17E-12	1.50E-16
Trem3	6.58709	5.90E-04	1.23E-04
Gpr84	6.58701	6.98E-05	7.85E-06
Emp3	6.58369	3.35E-06	1.47E-07
C1qb	6.58362	2.23E-08	1.00E-10
Rsad2	6.57907	0.007095	0.002542
C1qa	6.56343	7.31E-09	1.91E-11
5430435G	6.55761	0.003312	0.001011
Spc25	6.54405	9.48E-04	2.21E-04
C1qc	6.54266	4.42E-09	4.59E-12
Fcgr1	6.5197	7.26E-06	3.98E-07
Ptafr	6.51657	0.003248	9.87E-04
Tspan8	6.51602	0.022239	0.010063
Trim30a	6.50161	2.63E-06	1.09E-07
Fasl	6.50155	6.78E-04	1.47E-04
Fcgr3	6.4991	3.25E-07	6.03E-09
Bcl3	6.49367	1.78E-04	2.65E-05
Gngt2	6.49112	5.67E-05	6.05E-06
Rab32	6.48331	8.22E-06	4.65E-07
Sash3	6.47599	3.67E-04	6.64E-05
AF251705	6.4682	3.73E-05	3.53E-06
Lck	6.46758	6.37E-07	1.58E-08
Trim30d	6.4664	1.14E-04	1.49E-05
Il1r2	6.45436	0.00247	7.06E-04
Podnl1	6.45259	0.003393	0.001041

Gbp5	6.44916	2.77E-05	2.40E-06
Myof	6.42877	0.002401	6.83E-04
Milr1	6.42548	2.94E-04	5.07E-05
Gm8369	6.41668	0.001336	3.35E-04
Dock2	6.41287	9.89E-05	1.23E-05
Apobec1	6.40802	0.001315	3.29E-04
Psme2b	6.40068	6.93E-04	1.51E-04
Gstm2	6.39565	0.002809	8.27E-04
Cd247	6.39465	0.001499	3.85E-04
Irak3	6.38985	0.001096	2.65E-04
Atp8b4	6.38638	6.42E-04	1.36E-04
Rinl	6.38196	0.001201	2.96E-04
Cryba4	6.37928	0.001188	2.92E-04
Ms4a6b	6.37549	3.39E-07	6.51E-09
Ggta1	6.35664	0.00148	3.80E-04
Plscr1	6.35141	6.40E-05	7.03E-06
Ptpn22	6.34842	3.34E-04	5.95E-05
Ly86	6.32771	1.51E-08	5.53E-11
Hist1h4h	6.32192	6.54E-05	7.23E-06
H2-M2	6.31927	0.001132	2.75E-04
Arhgdib	6.30773	4.42E-09	5.09E-12
Irgm1	6.30752	5.59E-09	9.34E-12
Serpib6b	6.30214	1.55E-04	2.22E-05
Tgif1	6.29455	1.38E-04	1.91E-05
Pydc4	6.29374	1.33E-06	4.23E-08
Socs1	6.2903	1.42E-06	4.63E-08
Gbp11	6.28968	0.002234	6.28E-04
Cd44	6.28351	3.86E-05	3.68E-06
Ccr2	6.2825	1.93E-04	2.95E-05
Trim34a	6.27042	9.10E-04	2.10E-04
Spn	6.26609	2.23E-05	1.83E-06
Ifitm2	6.25003	4.27E-08	2.42E-10
Cd70	6.24728	2.46E-04	4.06E-05
Clec2d	6.23165	0.005095	0.001704
Cd40	6.21906	5.49E-05	5.83E-06
Emr4	6.21763	0.002666	7.73E-04
Upp1	6.20438	9.25E-06	5.50E-07
Pld4	6.19728	6.53E-08	4.75E-10
Clic1	6.19064	1.38E-07	1.50E-09
Cd86	6.18818	1.21E-05	8.08E-07
Gm21975	6.18679	4.39E-04	8.41E-05
Cxcr4	6.17727	0.004441	0.001445
Il27ra	6.16639	0.02843	0.013449
Tor4a	6.16148	3.54E-04	6.37E-05

Gsdmd	6.15956	5.33E-05	5.61E-06
Ikbke	6.15505	1.19E-04	1.58E-05
Rnf213	6.15045	9.29E-09	2.89E-11
Trim21	6.14251	2.19E-04	3.50E-05
Ptpn7	6.13466	4.84E-05	4.97E-06
Ucp2	6.11947	8.37E-09	2.28E-11
Cd300lf	6.11821	3.03E-04	5.25E-05
Lgals3bp	6.10768	7.31E-09	1.83E-11
Casp4	6.10078	6.95E-05	7.81E-06
Sh3bp2	6.09831	2.51E-05	2.12E-06
Cdk2	6.08762	0.008022	0.002953
Aqp1	6.06794	0.003051	9.13E-04
Ctsh	6.05595	1.24E-06	3.77E-08
Alox5ap	6.05204	3.99E-05	3.84E-06
Gm15710	6.05041	0.002003	5.52E-04
Cd3d	6.04916	3.09E-07	5.53E-09
Il13ra1	6.04652	2.88E-04	4.94E-05
Gypc	6.03942	0.001712	4.56E-04
Uba7	6.03601	6.40E-07	1.60E-08
Parp14	6.03404	4.22E-07	8.65E-09
Vamp8	6.02842	1.49E-07	1.77E-09
Syng2	6.01801	2.61E-08	1.23E-10
Irf5	6.01483	3.76E-07	7.36E-09
Clspn	6.01213	0.01341	0.005495
Adgb	6.00028	0.00345	0.001062
Pik3cg	5.99591	0.009669	0.003699
Ncf1	5.99074	2.60E-05	2.22E-06
Frrs1	5.96892	0.010337	0.004011
Pik3ap1	5.94509	9.55E-04	2.23E-04
Ptpn6	5.93378	4.83E-07	1.04E-08
Susd3	5.93282	1.84E-04	2.76E-05
Cd274	5.93162	8.17E-07	2.18E-08
Clec12a	5.92499	4.88E-05	5.02E-06
Hist1h4n	5.92483	0.001478	3.79E-04
Mmp25	5.91949	0.003323	0.001015
Bbox1	5.90267	0.009806	0.003762
Mmp2	5.8945	0.007773	0.002835
Hcls1	5.8881	7.27E-05	8.33E-06
Tlr6	5.88417	0.001389	3.51E-04
Mapk13	5.88365	0.004259	0.001372
Serpinh1	5.86958	0.003124	9.40E-04
Foxl2	5.86942	0.00116	2.84E-04
Gm10719	5.86852	0.020773	0.009283
Gm8995	5.83832	0.007692	0.002797

Slc11a1	5.82969	2.12E-06	8.29E-08
1700112E	5.82379	2.85E-04	4.85E-05
Xlr4a	5.82095	0.005077	0.001696
Ifi204	5.8085	3.09E-06	1.33E-07
Il3ra	5.80656	0.006692	0.002364
Cd200r4	5.80146	0.021612	0.009718
Apoc1	5.80074	9.11E-04	2.10E-04
Rad51b	5.79402	0.004295	0.001386
Fam180a	5.79039	0.002495	7.15E-04
H2-D1	5.78826	8.49E-12	1.18E-15
Trim14	5.78378	5.49E-04	1.12E-04
Samd9l	5.77636	1.89E-05	1.47E-06
Hmgb2	5.77606	2.23E-08	9.95E-11
Ddx60	5.77564	1.87E-04	2.82E-05
Vim	5.77561	2.22E-07	3.35E-09
Lrrc25	5.77321	2.47E-04	4.08E-05
Naip2	5.77245	0.001942	5.31E-04
Stat1	5.77188	6.67E-11	2.01E-14
Lgals9	5.7694	1.16E-07	1.14E-09
Dok3	5.7688	0.013218	0.005399
Fxyd5	5.76183	5.59E-09	1.13E-11
Thbs1	5.7569	7.40E-04	1.63E-04
Tagln2	5.74497	8.47E-09	2.51E-11
Arhgap30	5.74277	1.29E-05	8.85E-07
Ciita	5.71927	4.80E-06	2.34E-07
Snai3	5.6994	0.007658	0.002783
Ube2c	5.69368	2.51E-04	4.16E-05
Sytl3	5.6921	5.05E-04	1.01E-04
Slc12a7	5.69111	0.001326	3.32E-04
Nfe2	5.69037	0.00179	4.81E-04
Kcnj13	5.68659	0.014515	0.006021
Hbb-bs	5.68045	2.79E-04	4.74E-05
Rasa13	5.6754	0.001978	5.43E-04
Hbb-bt	5.6719	0.002724	7.95E-04
Ifi35	5.66972	3.43E-07	6.61E-09
Ctla4	5.6686	0.00112	2.72E-04
Tnfrsf4	5.66446	1.14E-04	1.49E-05
Nuak2	5.65931	0.018437	0.008012
Cytl1	5.65735	0.007974	0.002931
Cebpd	5.65482	7.24E-06	3.97E-07
Fam167b	5.64962	0.004428	0.00144
Psd4	5.64263	0.010088	0.003897
Dcn	5.6343	7.84E-07	2.08E-08
Gm13597	5.63138	0.003157	9.51E-04

Tnfsf13	5.63046	3.74E-05	3.53E-06
H2-Q4	5.62665	1.95E-06	7.46E-08
Cd68	5.61552	1.53E-06	5.08E-08
Anxa1	5.61514	0.023723	0.010862
Tmem252	5.61503	1.27E-05	8.63E-07
Gfap	5.61246	7.17E-07	1.85E-08
Smpd5	5.61073	9.18E-04	2.13E-04
Aurkb	5.60832	0.004964	0.001649
Hvcn1	5.60764	1.45E-05	1.02E-06
M1ap	5.59508	0.001419	3.61E-04
Mdfic	5.59385	7.21E-05	8.24E-06
Dapl1	5.58958	0.021757	0.009802
Tnfrsf1b	5.58817	1.41E-06	4.59E-08
Tuba1c	5.58366	1.05E-05	6.65E-07
Ubash3a	5.56967	0.002152	6.01E-04
Ch25h	5.5626	8.61E-05	1.03E-05
Hba-a2	5.55642	4.08E-04	7.65E-05
Havcr2	5.55528	0.00493	0.001635
Hba-a1	5.55043	4.68E-04	9.13E-05
2200002D	5.55019	0.001351	3.40E-04
F10	5.5501	0.002061	5.70E-04
Ptx3	5.54815	0.03542	0.017503
Cd37	5.5358	3.38E-06	1.50E-07
Cd300ld	5.53327	0.017746	0.007634
Fes	5.53031	0.001649	4.34E-04
Ifit3	5.52937	2.22E-07	3.33E-09
Ly75	5.51665	9.76E-04	2.30E-04
Sh3tc1	5.50754	0.002349	6.67E-04
Itk	5.50027	0.001666	4.40E-04
Insl3	5.49667	0.003166	9.56E-04
Mki67	5.48958	0.004491	0.001464
Espl1	5.48242	0.007754	0.002827
Fermt3	5.47311	3.18E-05	2.87E-06
Cd1d1	5.46955	0.003206	9.71E-04
Hic1	5.46897	0.017917	0.007724
Nckap1l	5.46559	0.003124	9.40E-04
Slc37a2	5.45555	5.38E-04	1.09E-04
Spidr	5.45479	0.002131	5.93E-04
Kcne1l	5.45165	0.015329	0.006425
Samhd1	5.43043	2.30E-09	1.75E-12
Tgm2	5.42784	1.56E-06	5.23E-08
Crip1	5.42544	7.15E-06	3.89E-07
Sgol1	5.41826	0.002328	6.60E-04
Abcc3	5.41332	0.013503	0.005546

Cnn2	5.41123	6.53E-08	4.71E-10
Unc93b1	5.40866	6.83E-08	5.39E-10
Casp8	5.39705	4.25E-05	4.16E-06
Irf1	5.38543	2.52E-09	2.10E-12
Apobr	5.37986	0.01312	0.005353
Gstp2	5.372	0.009032	0.003404
Lrrk1	5.35212	3.38E-06	1.50E-07
Plcg2	5.34689	1.50E-04	2.12E-05
Grap2	5.34662	0.025241	0.011668
Oas3	5.34558	0.001146	2.79E-04
Adap2	5.34345	0.001542	4.00E-04
Cd160	5.34025	3.49E-04	6.27E-05
Trim12a	5.32269	1.59E-05	1.18E-06
Flnc	5.31492	0.027735	0.013064
Gimap6	5.3097	1.12E-07	1.07E-09
Hmha1	5.30594	6.19E-06	3.26E-07
Ahnak	5.30411	1.19E-06	3.57E-08
Tnfsf10	5.29831	2.85E-06	1.20E-07
Abi3	5.29564	8.38E-06	4.81E-07
Apobec3	5.28865	1.61E-08	6.24E-11
Cacna1s	5.28627	0.003737	0.001173
S1pr4	5.28175	6.88E-04	1.49E-04
Gm694	5.28155	0.003475	0.001071
Dynlt1f	5.27967	6.68E-07	1.68E-08
Cdh23	5.26939	0.006617	0.002329
Laptn5	5.26799	5.59E-09	1.20E-11
Clic5	5.26027	5.73E-04	1.18E-04
Gpr174	5.24202	0.020747	0.00927
Fcgrt	5.23815	0.004106	0.001313
Tnfrsf1a	5.23545	4.97E-07	1.07E-08
Hist1h2ap	5.2284	6.83E-08	5.31E-10
1-Sep	5.2157	1.60E-05	1.20E-06
Rarres2	5.19963	1.08E-04	1.38E-05
Dennd2d	5.18294	1.31E-04	1.79E-05
Lcp2	5.18046	4.75E-04	9.30E-05
Napsa	5.17954	1.20E-05	7.94E-07
Pdpr	5.16533	1.24E-05	8.34E-07
Rps27rt	5.16365	2.79E-07	4.85E-09
Eva1b	5.14089	1.91E-05	1.50E-06
Nmi	5.14023	1.56E-06	5.26E-08
Sla	5.13605	6.36E-06	3.36E-07
Ppp1r18	5.13563	9.02E-07	2.47E-08
Pycard	5.13549	5.20E-07	1.17E-08
Gna15	5.13261	4.13E-04	7.77E-05

Gm12216	5.13093	4.35E-06	2.07E-07
Cd38	5.12182	1.39E-04	1.93E-05
Tlr13	5.12101	2.28E-04	3.68E-05
Vamp5	5.11697	2.37E-05	1.97E-06
Xlr4c	5.11542	0.001032	2.47E-04
Tes	5.10502	3.81E-04	7.00E-05
Anxa2	5.09407	1.04E-06	2.96E-08
Xaf1	5.09151	8.37E-09	2.32E-11
Cmtm3	5.08733	2.81E-07	4.92E-09
Emilin1	5.08508	3.27E-04	5.80E-05
C3ar1	5.08106	1.51E-04	2.14E-05
Agtrap	5.07692	5.33E-06	2.66E-07
Akna	5.06954	5.86E-06	2.99E-07
Tlr7	5.06058	0.003916	0.001242
Cklf	5.05149	3.78E-05	3.58E-06
Bcl2l12	5.04802	0.008431	0.003134
Csf3r	5.04025	5.15E-05	5.38E-06
Itpr12	5.03597	7.67E-05	8.98E-06
Btk	5.03054	8.33E-04	1.88E-04
Vcam1	5.02923	2.67E-07	4.49E-09
Cp	5.02879	5.53E-07	1.28E-08
Dapp1	5.0272	2.46E-04	4.06E-05
C1rb	5.02633	0.009185	0.003475
Prdm6	5.02323	0.024681	0.011375
Il16	5.01745	1.61E-04	2.33E-05
Osmr	5.00451	5.14E-04	1.03E-04
Lypd2	5.00283	0.012667	0.005121
Zap70	5.00258	4.85E-05	4.99E-06
Ltc4s	4.99506	0.004268	0.001375
Fzd7	4.99191	8.87E-04	2.04E-04
Casp1	4.98789	6.53E-06	3.47E-07
Apod	4.98146	1.16E-07	1.15E-09
Foxd2	4.98013	0.003651	0.001139
Crabp2	4.94963	0.048566	0.025461
Ly6c1	4.9466	6.12E-09	1.40E-11
Slc43a3	4.94017	0.005222	0.001755
Dok2	4.93277	3.43E-05	3.18E-06
Nfe2l2	4.92708	6.23E-07	1.53E-08
Tmem37	4.92414	9.71E-05	1.20E-05
Tgfb1	4.92262	1.60E-05	1.19E-06
Gdf15	4.92066	0.023642	0.010812
Tnni3	4.91578	0.011766	0.004678
Hmcn2	4.91123	0.010638	0.004151
Gpr160	4.90045	0.010922	0.004289

Nupr1	4.90041	1.59E-07	1.95E-09
Misp	4.89729	0.016667	0.007094
Pla2g4a	4.89559	7.28E-04	1.60E-04
Hist1h2bj	4.89215	0.002867	8.47E-04
Lyn	4.88333	1.26E-06	3.89E-08
Pglyrp1	4.87756	1.44E-05	1.01E-06
Sp100	4.8721	4.29E-06	2.03E-07
Tap2	4.86618	1.78E-08	7.52E-11
Gm13394	4.85061	0.022832	0.01038
Ido1	4.84516	9.09E-05	1.11E-05
Nr1h3	4.83711	1.03E-04	1.30E-05
Pla2g16	4.83152	1.70E-08	6.82E-11
Ccl9	4.82753	4.41E-05	4.37E-06
Cd180	4.82343	0.002298	6.50E-04
Gpnmb	4.81502	8.97E-05	1.09E-05
Snx20	4.80917	1.13E-05	7.31E-07
Prrx2	4.8059	0.008134	0.003003
BC064078	4.79556	7.53E-04	1.67E-04
Cdh1	4.79171	0.024316	0.01118
Rps12l1	4.79024	2.57E-04	4.28E-05
Gng5	4.78734	5.59E-09	1.09E-11
Aim1	4.7856	0.01803	0.007784
Pdzk1ip1	4.78519	0.016199	0.006858
Tnfrsf13b	4.76136	0.001601	4.18E-04
Fam64a	4.75778	0.017139	0.007327
Glpr1	4.75732	2.66E-05	2.27E-06
BC028528	4.75539	9.70E-06	5.91E-07
Rnaset2a	4.75443	6.56E-08	4.81E-10
Txnip	4.75286	1.32E-07	1.35E-09
Lcp1	4.75105	7.31E-09	1.85E-11
Lyl1	4.74766	0.023706	0.010851
Cyp4f18	4.7424	2.85E-05	2.50E-06
Bgn	4.74096	6.76E-05	7.56E-06
Gch1	4.73974	8.18E-04	1.84E-04
Slamf1	4.73131	0.006758	0.002394
Gm6548	4.72262	0.0078	0.002846
P2ry6	4.70932	2.30E-05	1.89E-06
Hk2	4.70802	1.92E-05	1.51E-06
Ang	4.70534	0.005086	0.0017
Socs3	4.69766	7.40E-05	8.52E-06
H2-T23	4.69052	6.67E-11	2.31E-14
2810417H	4.67659	8.27E-07	2.21E-08
Sla2	4.67315	0.004412	0.001433
Cdca3	4.67025	4.46E-04	8.58E-05

Ltb4r1	4.669	0.010945	0.0043
Parvg	4.65874	3.13E-04	5.48E-05
Aldh1a2	4.65142	1.57E-04	2.26E-05
Adcy4	4.64983	0.002952	8.78E-04
Ptges	4.64781	7.53E-05	8.78E-06
Mmp19	4.64556	0.016924	0.007221
Lair1	4.64551	7.00E-08	5.62E-10
Ftl1	4.64531	1.10E-08	3.59E-11
Pim1	4.63963	5.68E-04	1.17E-04
Il2ra	4.62413	0.008823	0.00331
Plscr2	4.62374	2.19E-04	3.50E-05
Msx1	4.61546	0.007961	0.002926
BC094916	4.61539	3.41E-05	3.15E-06
C1ra	4.61265	4.49E-07	9.41E-09
Pon3	4.61094	0.002889	8.55E-04
Il21r	4.60757	2.74E-05	2.36E-06
F11r	4.59689	3.42E-04	6.12E-05
Vwf	4.59546	2.76E-05	2.39E-06
Prkcd	4.58829	2.68E-07	4.57E-09
Cyth4	4.58374	3.63E-06	1.65E-07
I8300120	4.5791	1.82E-05	1.40E-06
Hpse	4.57383	1.05E-04	1.33E-05
Naip5	4.57262	0.001346	3.38E-04
Fli1	4.57075	3.34E-05	3.07E-06
Rbp1	4.56898	3.75E-06	1.72E-07
Nid1	4.56384	2.09E-05	1.69E-06
4930523C	4.56324	1.03E-04	1.30E-05
Vasp	4.56119	1.07E-07	1.00E-09
Acta2	4.55541	0.003666	0.001145
Mcm3	4.55234	0.001168	2.86E-04
F830016B	4.55039	1.25E-06	3.82E-08
Tm4sf5	4.55028	0.006375	0.002226
Ecscr	4.54466	3.40E-05	3.14E-06
Tmem45a	4.54103	0.004536	0.001481
Ms4a6d	4.53916	7.15E-06	3.90E-07
Col3a1	4.53258	1.91E-04	2.91E-05
Itgam	4.52639	8.89E-05	1.08E-05
Xlr	4.51713	7.32E-05	8.41E-06
Stab1	4.51602	1.22E-05	8.18E-07
Lrmp	4.51513	5.08E-04	1.01E-04
Arpc1b	4.51007	4.84E-08	3.05E-10
Emp1	4.49521	4.32E-05	4.27E-06
Il1rl2	4.49013	0.018509	0.008056
Msn	4.48655	9.50E-07	2.64E-08

1110007C	4.48585	1.31E-06	4.14E-08
Mmp14	4.4838	2.07E-06	8.07E-08
Cfh	4.48112	1.91E-06	7.23E-08
Ube2l6	4.48005	3.09E-08	1.62E-10
Crispld2	4.47656	2.06E-04	3.20E-05
Cd109	4.47596	0.009434	0.003588
Ifitm6	4.46342	0.004967	0.001651
Foxd1	4.45352	0.001312	3.28E-04
Cdh5	4.44843	1.88E-05	1.47E-06
Pnp	4.44821	1.84E-06	6.83E-08
Mgp	4.43961	1.22E-05	8.13E-07
Il10ra	4.42981	1.76E-06	6.26E-08
Nod1	4.42731	9.63E-06	5.84E-07
Trim56	4.42277	3.79E-04	6.94E-05
Dcxr	4.41968	1.38E-05	9.57E-07
Foxc2	4.41848	0.025021	0.011555
Apol7b	4.41734	0.029299	0.013937
Trem2	4.40304	3.85E-05	3.66E-06
Cd72	4.39992	2.81E-04	4.78E-05
Gsap	4.39586	7.42E-05	8.57E-06
Ptplad2	4.39271	7.17E-07	1.86E-08
Slc47a1	4.38394	0.054218	0.029114
Cox6b2	4.36848	7.48E-05	8.65E-06
Wdr62	4.36213	0.011283	0.004448
Pyroxd2	4.35335	0.009073	0.003423
Smim24	4.35245	1.87E-04	2.82E-05
C920025E	4.35221	0.003841	0.001211
Tmem123	4.35055	9.23E-08	7.98E-10
I830077JC	4.34994	9.30E-04	2.16E-04
Helz2	4.34745	1.60E-04	2.31E-05
Pgm5	4.34398	0.002471	7.07E-04
Prkch	4.34183	1.91E-04	2.91E-05
Psme2	4.34036	7.10E-10	3.24E-13
Ltbr	4.3392	5.86E-05	6.27E-06
Trex1	4.33215	1.01E-08	3.21E-11
Amica1	4.32285	0.024599	0.01133
Tifab	4.32219	0.006692	0.002364
Aox3	4.32216	0.01248	0.005032
Hspg2	4.31832	0.031135	0.014992
Apol6	4.315	2.74E-04	4.62E-05
Gpx8	4.31462	0.001345	3.38E-04
Parp3	4.30861	1.76E-06	6.33E-08
Loxl1	4.30829	0.00644	0.00226
Id3	4.30701	2.95E-08	1.53E-10

Hmox1	4.30516	2.60E-04	4.35E-05
Tagln	4.30235	0.001037	2.48E-04
Renbp	4.30205	5.39E-05	5.69E-06
Birc3	4.29449	6.16E-05	6.66E-06
Cysltr1	4.29414	0.051955	0.027705
Agpat2	4.29336	4.69E-05	4.74E-06
Mustn1	4.2892	1.25E-06	3.84E-08
Bin2	4.28861	2.81E-04	4.77E-05
Rapsn	4.28573	0.002041	5.64E-04
Asf1b	4.28355	6.04E-05	6.51E-06
Ninj1	4.27854	2.59E-07	4.18E-09
Selpg	4.27747	1.43E-07	1.65E-09
Cd79a	4.27268	0.002948	8.77E-04
Clcf1	4.27102	0.051763	0.027578
Slc14a1	4.26277	2.46E-04	4.05E-05
Tnfaip8	4.25704	1.78E-06	6.50E-08
1500015C	4.23377	0.074238	0.042594
Apol10b	4.2276	4.51E-04	8.73E-05
Tnfrsf18	4.22738	3.26E-04	5.76E-05
Pf4	4.21938	0.007818	0.002859
Rnf125	4.21885	0.001376	3.47E-04
Fabp7	4.21484	1.40E-07	1.55E-09
Tnfsf9	4.20784	2.08E-04	3.26E-05
Vwa5a	4.20724	1.31E-04	1.78E-05
Rbpms2	4.20375	0.008714	0.00326
Pstpip1	4.19723	1.73E-05	1.31E-06
Tm4sf1	4.19534	2.24E-06	9.00E-08
Anxa3	4.19223	4.68E-05	4.73E-06
B3gnt8	4.18931	0.011502	0.004557
Top2a	4.18922	4.86E-04	9.58E-05
Arhgap28	4.18842	0.016951	0.007238
Lrg1	4.18046	2.06E-06	7.94E-08
Col4a5	4.18003	0.004629	0.001518
Hhex	4.17962	4.48E-04	8.65E-05
Dusp2	4.17587	4.83E-05	4.94E-06
Slfn5	4.15725	2.93E-06	1.25E-07
Ebi3	4.15341	2.06E-05	1.66E-06
Slc6a13	4.15038	4.69E-06	2.28E-07
Cfap43	4.14048	0.004227	0.001359
Cyp4v3	4.13742	2.35E-05	1.95E-06
Rhog	4.13571	2.20E-07	3.18E-09
A230065H	4.13516	0.032542	0.015815
Rps27l	4.13258	1.75E-08	7.25E-11
Prg4	4.12072	4.44E-04	8.54E-05

Cd84	4.12055	4.28E-05	4.21E-06
Asgr1	4.12017	0.041889	0.021346
Elf1	4.11113	3.95E-06	1.85E-07
Lgals1	4.10881	5.59E-09	1.19E-11
Serpina3n	4.10831	6.35E-05	6.95E-06
Erap1	4.10005	2.01E-06	7.73E-08
Tcea3	4.08966	6.87E-04	1.49E-04
H2-T10	4.08904	4.21E-04	7.97E-05
Trim12c	4.08781	1.70E-05	1.28E-06
Tmem176	4.08614	1.89E-06	7.12E-08
Serpinb9	4.08605	3.18E-05	2.88E-06
Ncf2	4.08406	1.14E-05	7.45E-07
Ly6g5b	4.08147	0.006315	0.002201
Aim2	4.08084	4.68E-05	4.74E-06
Zfp36l1	4.08022	5.17E-08	3.36E-10
Rab11fip1	4.077	5.42E-05	5.73E-06
S100a6	4.07385	1.08E-05	6.92E-07
Calcr1	4.07306	2.67E-04	4.49E-05
A4galt	4.07286	2.13E-04	3.37E-05
Ets1	4.05853	7.02E-07	1.79E-08
Cd82	4.05355	1.70E-07	2.14E-09
Pdlim4	4.04994	7.24E-07	1.88E-08
Tbxa2r	4.04901	0.021083	0.009435
Mxd3	4.04899	0.005028	0.001676
Ptgdr	4.04735	0.012682	0.005129
Cd200r1	4.04541	0.006655	0.002347
Wnt6	4.04489	0.001954	5.35E-04
Lum	4.04341	2.24E-04	3.59E-05
Rbpms	4.04229	8.98E-06	5.26E-07
Cmk1r1	4.03968	7.09E-04	1.55E-04
Dhx58	4.03459	1.04E-05	6.59E-07
Ifit2	4.03385	5.93E-07	1.42E-08
Slc6a20a	4.02946	5.60E-04	1.15E-04
Vmn1r65	4.01647	1.80E-04	2.70E-05
Fam111a	4.01598	1.01E-05	6.28E-07
Ldlrap1	4.01562	0.003051	9.13E-04
Dtx3l	4.01221	3.29E-07	6.25E-09
Dnaaf3	4.01192	0.001324	3.32E-04
C1qtnf6	4.00892	0.001202	2.96E-04
Cpq	4.00473	9.00E-05	1.10E-05
Ly96	4.00349	1.13E-04	1.48E-05
Knstrn	3.99549	8.97E-04	2.06E-04
Rin3	3.9946	9.48E-05	1.17E-05
Cd27	3.98677	2.84E-04	4.83E-05

Ppm1j	3.9841	0.016025	0.006771
Chaf1b	3.98145	0.00207	5.73E-04
Dram1	3.98007	1.01E-04	1.26E-05
Itpr1l1	3.9765	0.001808	4.88E-04
S100a13	3.96598	2.40E-06	9.83E-08
Atp6v0e	3.95961	1.61E-08	6.02E-11
Ormdl2	3.95585	0.017318	0.007423
Zfp36	3.95317	1.35E-05	9.33E-07
Mgst2	3.95243	3.94E-04	7.31E-05
Birc5	3.95063	2.09E-04	3.27E-05
Wipf1	3.9495	6.66E-06	3.55E-07
Baz1a	3.94697	6.98E-04	1.52E-04
Neurl3	3.94557	1.71E-05	1.29E-06
Apbb1ip	3.94038	1.69E-04	2.49E-05
Rai14	3.93969	0.018242	0.007917
C1rl	3.93609	0.001924	5.25E-04
4632428N	3.93553	8.04E-05	9.51E-06
Atp2a3	3.93338	1.86E-04	2.81E-05
Pla2g2d	3.9308	0.009087	0.003429
Lfng	3.92818	1.40E-05	9.74E-07
Mx1	3.9267	9.17E-06	5.42E-07
Uhrf1	3.92637	4.30E-04	8.21E-05
Syk	3.92237	8.71E-04	1.98E-04
Col1a2	3.91531	4.89E-05	5.05E-06
Tax1bp3	3.91478	4.20E-06	1.99E-07
Csf1r	3.91438	1.40E-07	1.56E-09
Cd63	3.91397	1.39E-08	5.02E-11
Gm4841	3.91311	1.48E-05	1.05E-06
Cks1b	3.91021	3.09E-06	1.32E-07
Psme1	3.90893	1.64E-09	1.14E-12
Spsb2	3.89576	2.99E-04	5.17E-05
Parp9	3.89536	1.25E-06	3.82E-08
Icam2	3.89149	1.79E-04	2.68E-05
Hlx	3.89128	0.02408	0.011053
Spata13	3.88277	3.65E-04	6.62E-05
Nts	3.87772	0.085902	0.0506
Klf4	3.87668	1.55E-04	2.21E-05
Rps27	3.87565	4.42E-09	4.32E-12
Irf9	3.87448	1.72E-08	7.02E-11
Zfp217	3.87296	0.004165	0.001335
Themis	3.87111	4.93E-04	9.75E-05
Fam117a	3.86807	1.82E-04	2.73E-05
Pcolce	3.866	3.06E-04	5.31E-05
Cdkn2c	3.86293	9.40E-04	2.19E-04

Foxs1	3.85956	0.001786	4.80E-04
Stat4	3.85692	1.46E-05	1.03E-06
Btla	3.85296	0.037113	0.018514
Maff	3.85251	0.003658	0.001142
Dnajb13	3.85016	0.004365	0.001414
Parp4	3.84368	1.10E-04	1.41E-05
Kif11	3.83679	0.002131	5.93E-04
Abca1	3.83665	6.42E-05	7.06E-06
Fbln1	3.83411	8.71E-04	1.99E-04
Gm9581	3.83385	0.031997	0.015501
Serpina10	3.83091	0.006345	0.002214
Phf11c	3.82416	2.06E-04	3.20E-05
H2-T22	3.81952	7.31E-09	1.92E-11
Sqrdl	3.81804	1.00E-04	1.26E-05
Hrct1	3.8165	1.29E-04	1.75E-05
Cdc14a	3.81572	0.001374	3.47E-04
Map4k1	3.81365	0.020137	0.00895
Id1	3.8135	2.21E-07	3.25E-09
Slc1a5	3.81001	1.22E-05	8.12E-07
Arl5c	3.80652	1.01E-05	6.27E-07
Tlr3	3.80597	0.004757	0.001569
Mapkapk3	3.80286	1.23E-05	8.23E-07
Map3k8	3.80213	0.001013	2.41E-04
Mt2	3.80099	1.61E-06	5.58E-08
Itga5	3.79951	1.50E-05	1.07E-06
Hpgds	3.79723	2.35E-04	3.82E-05
Tnfrsf9	3.79606	1.29E-04	1.75E-05
Cflar	3.79573	2.71E-08	1.33E-10
Nxn	3.79515	4.75E-04	9.30E-05
Ttc12	3.78878	0.029299	0.013936
Prdm1	3.78823	0.009952	0.003834
Triobp	3.78641	4.88E-05	5.03E-06
Cks2	3.78502	1.55E-06	5.16E-08
Tmem176	3.7811	1.14E-07	1.09E-09
Mfng	3.77911	2.00E-04	3.09E-05
Axl	3.77091	5.39E-07	1.22E-08
Rras	3.77015	6.03E-07	1.46E-08
H2-Q1	3.76563	0.00511	0.001709
Cd300a	3.7508	9.05E-06	5.31E-07
Rbm38	3.74952	0.002693	7.82E-04
Mmp23	3.74819	0.004125	0.001321
Sema3g	3.74655	0.025464	0.01179
Rdh5	3.74355	0.00665	0.002344
Cd7	3.73691	4.89E-06	2.39E-07

Mgmt	3.73577	4.14E-04	7.79E-05
Olfml3	3.73403	1.78E-06	6.45E-08
G430095F	3.72811	0.014396	0.005965
Gpr182	3.72804	7.48E-04	1.65E-04
Fam46c	3.72317	0.001631	4.28E-04
Ctsz	3.71723	5.59E-09	9.76E-12
Lbp	3.71485	0.001154	2.82E-04
Cd97	3.71453	2.25E-04	3.61E-05
Bdh2	3.71104	0.003435	0.001056
Rcsd1	3.70372	3.08E-04	5.37E-05
Angptl4	3.7018	7.86E-04	1.75E-04
Gm13285	3.69766	0.015276	0.006392
Rrm2	3.69722	3.97E-04	7.40E-05
Tk1	3.6941	0.002341	6.64E-04
Elf4	3.6889	0.001254	3.11E-04
Plekhf1	3.68876	0.008188	0.003026
Rab29	3.68858	2.22E-07	3.33E-09
Slc22a6	3.68812	0.001861	5.05E-04
Btg1	3.68694	5.59E-09	9.18E-12
Sncg	3.68604	0.003636	0.001134
Rhoj	3.67788	3.56E-04	6.41E-05
Dock8	3.6728	0.011368	0.004493
Ifih1	3.66858	3.58E-06	1.60E-07
Zic4	3.66826	0.007309	0.002633
Gpr171	3.6663	8.63E-06	4.99E-07
Slc13a4	3.66469	0.002591	7.47E-04
Igf2	3.66437	4.98E-04	9.90E-05
Ctdsp1	3.66078	1.21E-05	8.06E-07
Kl	3.65291	0.081355	0.047431
Dab2	3.64245	1.20E-05	7.92E-07
Plekhg2	3.63602	4.85E-04	9.55E-05
Prph	3.63473	0.010055	0.003878
Parp12	3.63353	6.62E-05	7.36E-06
Rrad	3.63148	0.003899	0.001235
C1ql2	3.629	0.044879	0.023168
Gm13248	3.62574	4.75E-05	4.82E-06
Was	3.62329	8.42E-05	1.01E-05
Plek	3.62118	1.16E-06	3.41E-08
Rhoc	3.6195	1.95E-06	7.43E-08
C2	3.61897	2.29E-04	3.71E-05
Spp1	3.61854	0.002244	6.31E-04
Myd88	3.6177	3.26E-07	6.13E-09
Oas1b	3.61514	1.02E-04	1.28E-05
Tnfsf12Tn	3.61349	1.73E-04	2.56E-05

Bmx	3.61049	0.016951	0.007238
Tlr4	3.60822	0.005067	0.001691
Tifa	3.60739	8.63E-05	1.04E-05
Trim25	3.60729	9.25E-06	5.50E-07
H2-Q10	3.6068	3.26E-04	5.77E-05
Tcn2	3.60527	1.78E-06	6.53E-08
5430427C	3.60418	0.017595	0.007557
Rest	3.60417	4.89E-06	2.39E-07
Zbtb42	3.60343	0.005697	0.00195
Fn1	3.58975	2.24E-06	8.93E-08
Cyyr1	3.5853	0.007978	0.002933
Alas2	3.58417	0.017929	0.007732
Cd93	3.57994	1.86E-06	6.90E-08
Grap	3.56976	8.98E-05	1.09E-05
Nfkbia	3.56901	6.87E-08	5.47E-10
Ccdc69	3.56686	0.058235	0.031772
Skap1	3.56529	1.60E-06	5.47E-08
10-Sep	3.56503	0.078031	0.045153
Npc2	3.56412	2.34E-08	1.09E-10
Nfatc1	3.56313	0.007546	0.002734
Ly6g6e	3.55988	0.008581	0.003203
Gm20257	3.55591	3.98E-04	7.43E-05
Pik3r5	3.5529	0.001637	4.29E-04
E2f2	3.54756	0.001755	4.69E-04
Emcn	3.54694	9.62E-04	2.25E-04
Sdc1	3.5335	0.007513	0.002717
Ppic	3.5315	6.33E-05	6.92E-06
Tubb6	3.52655	1.09E-04	1.40E-05
Uaca	3.51811	0.040623	0.020616
Mdk	3.51524	6.68E-06	3.56E-07
Itih2	3.51475	0.013183	0.005383
Gjb2	3.51452	1.35E-04	1.86E-05
Slc7a2	3.51415	6.25E-05	6.80E-06
AU021092	3.51283	0.001671	4.42E-04
P2ry13	3.50929	0.004967	0.001652
Prorsd1	3.50754	1.99E-05	1.58E-06
Prelp	3.50687	7.17E-05	8.14E-06
Cebpb	3.50677	3.09E-07	5.58E-09
Zfp677	3.50462	0.01169	0.00464
Alx4	3.50225	6.38E-04	1.35E-04
Myo1h	3.50128	0.084106	0.049297
Mocos	3.49867	0.001617	4.23E-04
Ogn	3.49697	0.008275	0.003066
Hist1h4i	3.49694	0.00165	4.34E-04

Pydc3	3.4954	0.01398	0.005766
Igfbp2	3.494	5.06E-07	1.10E-08
Gng11	3.49225	3.59E-06	1.62E-07
Chst14	3.48734	0.001627	4.27E-04
Tagap	3.48467	0.001025	2.45E-04
Sema3d	3.48368	0.001038	2.49E-04
Tcf7l2	3.48102	0.001009	2.40E-04
Orai1	3.47803	5.28E-06	2.61E-07
Tram2	3.47775	0.015423	0.006473
Sod3	3.47666	4.98E-07	1.08E-08
Nxph4	3.4739	0.016131	0.006825
B4galt1	3.47317	9.35E-06	5.61E-07
Twist1	3.46656	0.017874	0.007703
Klk8	3.46497	0.069309	0.039223
Cstb	3.4621	6.68E-07	1.68E-08
Plin3	3.46111	2.06E-05	1.66E-06
Col23a1	3.45745	0.001432	3.65E-04
Prrx1	3.45307	5.86E-04	1.22E-04
Slc13a3	3.44981	8.73E-05	1.05E-05
Nusap1	3.44812	0.001763	4.72E-04
Gem	3.44537	0.001004	2.38E-04
Ccnb1	3.44386	0.003322	0.001015
Wasf2	3.44207	1.42E-06	4.65E-08
Zfp36l2	3.43737	2.39E-06	9.72E-08
Stx11	3.43662	1.81E-04	2.72E-05
Hoxb4	3.4363	0.006331	0.002208
Rnase4	3.43489	2.78E-05	2.41E-06
Smim3	3.43462	1.89E-06	7.08E-08
Bmp6	3.42975	0.01369	0.005634
Plin2	3.42828	1.26E-06	3.88E-08
Hsh2d	3.42518	7.71E-04	1.71E-04
Ptgds	3.42203	3.94E-04	7.32E-05
Ifngr1	3.41951	2.01E-07	2.78E-09
Tcirg1	3.41791	7.34E-06	4.04E-07
Klre1	3.41234	0.002558	7.35E-04
Ccnb2	3.40998	0.064414	0.03582
S100a1	3.40933	4.24E-07	8.72E-09
Adora2a	3.4078	0.020494	0.009133
Acsf2	3.40544	0.00111	2.69E-04
Rbm47	3.40421	1.19E-04	1.57E-05
Copz2	3.40155	3.59E-06	1.61E-07
Svil	3.40009	2.79E-05	2.43E-06
Ecm1	3.39501	5.96E-06	3.07E-07
Bmp4	3.39001	0.001787	4.80E-04

Plekho2	3.3899	5.63E-06	2.86E-07
Fxyd3	3.38944	0.015943	0.006732
Cox4i2	3.3846	0.002453	7.00E-04
Hdc	3.3759	0.00675	0.00239
Blvrb	3.37445	3.17E-06	1.37E-07
Arap1	3.37367	3.33E-05	3.07E-06
Dynlt1b	3.36669	4.83E-07	1.04E-08
Aebp1	3.36655	8.30E-04	1.87E-04
Sned1	3.35946	0.009815	0.003768
Aldh3b1	3.35702	1.33E-04	1.82E-05
Lama1	3.35281	0.032388	0.015733
Litaf	3.34363	7.72E-07	2.04E-08
Dbi	3.34255	4.35E-08	2.62E-10
Entpd1	3.34132	6.23E-07	1.52E-08
Zic1	3.33886	0.004152	0.00133
Nfkbie	3.33762	1.57E-04	2.25E-05
Tgfb2	3.33427	4.60E-05	4.64E-06
Rftn1	3.32593	3.34E-04	5.93E-05
Tfap2b	3.32591	0.022163	0.010018
Sdcbp2	3.32577	0.009285	0.00352
Notch2	3.32099	4.86E-04	9.57E-05
Wdfy4	3.31889	4.44E-04	8.55E-05
Tapbp1	3.31687	2.34E-07	3.63E-09
Ifnar2	3.31649	2.30E-07	3.51E-09
Snx33	3.31622	0.003508	0.001085
S1pr2	3.31155	0.006225	0.002164
Gm8624	3.31064	0.001345	3.38E-04
Tmem51	3.30841	1.02E-04	1.29E-05
Plac9a	3.30708	3.23E-05	2.94E-06
Slc16a3	3.30522	4.84E-04	9.52E-05
Slc31a2	3.29931	1.27E-06	3.92E-08
Gng12	3.29501	1.46E-07	1.72E-09
Def6	3.29255	3.61E-04	6.51E-05
Epb4.1l5	3.29128	3.65E-04	6.62E-05
Ptgs2	3.28722	1.44E-04	2.02E-05
Klf2	3.28357	8.36E-07	2.25E-08
Wfdc1	3.2787	1.35E-04	1.87E-05
Dap	3.27272	1.68E-06	5.93E-08
Apoe	3.27039	7.17E-07	1.84E-08
Fam107b	3.2681	7.18E-05	8.15E-06
Nostrin	3.26795	3.50E-04	6.29E-05
Cnn1	3.26725	0.012214	0.0049
Rarres1	3.26712	0.00259	7.46E-04
Hfe	3.26342	3.81E-05	3.61E-06

2610318N	3.26019	0.01719	0.007354
Smco4	3.25909	0.01562	0.006572
Urah	3.2581	0.02713	0.012721
Fth1	3.25795	1.70E-07	2.13E-09
Foxc1	3.25722	3.43E-04	6.14E-05
Anxa9	3.2567	0.044828	0.023135
Ms4a8a	3.25201	0.017999	0.007766
Bmp7	3.25042	1.06E-04	1.36E-05
Trim47	3.24739	0.001576	4.11E-04
Ramp2	3.24612	1.58E-06	5.35E-08
Hpgd	3.2453	0.002057	5.69E-04
Trim5	3.24491	0.002832	8.35E-04
Nradd	3.24405	0.023367	0.010675
Sh2d1a	3.24333	1.58E-06	5.39E-08
Sulf1	3.24135	6.36E-04	1.35E-04
Elk3	3.24122	1.13E-04	1.47E-05
Efemp1	3.23816	1.55E-05	1.13E-06
Nnmt	3.23748	0.002375	6.74E-04
Cdt1	3.23533	0.031369	0.015136
Ccnd3	3.23477	1.33E-07	1.37E-09
Gja4	3.23202	8.96E-05	1.09E-05
Cd4	3.22952	3.80E-04	6.95E-05
Osr1	3.2263	0.005254	0.001767
Trim30b	3.22274	0.007541	0.002731
Smc4	3.21363	7.49E-05	8.67E-06
Siglec1	3.21357	1.57E-04	2.25E-05
2610034M	3.21259	0.042452	0.021697
Dera	3.21165	2.24E-04	3.60E-05
Npm3	3.21103	0.005399	0.001827
Adora3	3.20829	0.00781	0.002855
Soat2	3.20585	0.00943	0.003584
T2	3.20378	0.03371	0.016502
Col1a1	3.20293	0.013056	0.005325
Krcc1	3.19049	7.12E-04	1.55E-04
Creg1	3.18968	2.38E-07	3.71E-09
Fam129a	3.18788	0.003779	0.001187
Lepr	3.1828	6.84E-04	1.48E-04
Pros1	3.17986	7.49E-05	8.68E-06
Tfpi	3.17381	1.05E-04	1.33E-05
Il12rb2	3.16714	0.001852	5.03E-04
MyI9	3.16352	5.48E-04	1.12E-04
Arid5a	3.16239	1.04E-05	6.55E-07
Slc8b1	3.16164	7.59E-05	8.86E-06
Itga1	3.1607	2.31E-05	1.90E-06

Hspb8	3.15602	1.91E-05	1.50E-06
Pqlc3	3.15408	2.12E-04	3.33E-05
Abhd11os	3.15364	0.004523	0.001476
Sipa1	3.15255	2.80E-04	4.75E-05
Scarf1	3.15238	0.001049	2.52E-04
Sult1a1	3.15152	6.14E-04	1.29E-04
Jag1	3.1486	2.25E-04	3.61E-05
Lpar4	3.14756	0.004863	0.00161
Ccna2	3.145	0.009584	0.003663
Slc38a5	3.14372	0.001738	4.64E-04
Naprt	3.1413	0.003553	0.001101
Mvp	3.1405	2.75E-05	2.37E-06
Atp10d	3.13935	1.04E-04	1.31E-05
Rpl10-ps3	3.1385	2.56E-07	4.08E-09
Fmod	3.13678	0.018689	0.008155
Olfml2a	3.13668	0.042367	0.021643
8430408G	3.13551	0.030644	0.014731
GltP	3.13358	3.09E-07	5.55E-09
Rnaset2b	3.1329	8.31E-06	4.72E-07
Igfbp7	3.13068	1.31E-07	1.32E-09
Il1r1	3.1301	4.34E-04	8.28E-05
Eya2	3.12716	0.017445	0.00748
Rassf4	3.12274	1.08E-04	1.38E-05
Ncapg	3.11692	0.010986	0.004319
Plaur	3.11578	3.95E-04	7.35E-05
Dnase1l1	3.11336	0.004227	0.001359
A630001C	3.11059	8.18E-04	1.84E-04
Rpl32	3.11047	1.63E-09	1.02E-12
Eltd1	3.10853	3.67E-04	6.65E-05
Tapbp	3.10433	2.70E-07	4.65E-09
Lef1	3.10407	1.50E-05	1.08E-06
Foxf2	3.10354	0.001454	3.72E-04
Gm15590	3.10298	0.003184	9.63E-04
Adam8	3.10297	0.00127	3.15E-04
Islr	3.10027	5.86E-04	1.22E-04
Cib1	3.09802	2.17E-07	3.05E-09
Tigit	3.09698	0.003014	9.00E-04
Liph	3.09662	0.033825	0.016569
Atp13a5	3.09543	0.0391	0.0197
Slfn10-ps	3.0943	0.001003	2.38E-04
Kmo	3.09117	0.009471	0.003606
Pmp22	3.08893	9.00E-05	1.10E-05
Hist1h1c	3.08808	1.43E-07	1.63E-09
Aox1	3.08558	0.003553	0.001101

Tirap	3.08321	0.001072	2.58E-04
Fam46a	3.08302	1.02E-05	6.37E-07
Inpp5d	3.0763	2.72E-06	1.13E-07
Hspb1	3.0738	1.21E-05	8.08E-07
Xcr1	3.07323	0.027649	0.013014
Irak4	3.07238	0.088897	0.052767
Stk17b	3.0707	3.27E-06	1.43E-07
Fkbp10	3.07022	0.01662	0.007068
Pdlim3	3.06745	0.040457	0.020498
Sdc4	3.06736	4.75E-07	1.01E-08
Bmf	3.06679	0.016538	0.007026
Mxra8	3.06179	6.67E-04	1.43E-04
H2-M3	3.05943	3.84E-06	1.79E-07
Cdc20	3.05726	0.010046	0.003874
Baiap3	3.05711	0.017135	0.007324
Rps15a	3.05544	4.43E-09	5.52E-12
Mmrn2	3.05192	0.001497	3.85E-04
Csf1	3.04995	1.57E-06	5.30E-08
Mt1	3.04644	2.70E-07	4.63E-09
Pear1	3.04425	0.015352	0.006435
Lpar6	3.04339	5.94E-05	6.38E-06
Gata2	3.0403	7.72E-04	1.72E-04
Anxa4	3.03931	1.07E-05	6.82E-07
Fam212a	3.03411	0.00781	0.002854
Rasgrp4	3.02526	1.55E-04	2.20E-05
Il18r1	3.02292	4.19E-04	7.93E-05
Zfp366	3.02246	0.032742	0.015934
Pfn1	3.02001	4.42E-09	5.20E-12
Myoc	3.0181	0.024935	0.011506
P2ry14	3.01316	0.005067	0.001691
Hint3	3.00717	1.04E-05	6.55E-07
Pla2g7	3.00505	1.27E-06	3.94E-08
Piezo1	3.00419	8.65E-04	1.97E-04
Clec4a2	3.00281	9.45E-05	1.17E-05
Serp1b1a	3.002	7.72E-04	1.72E-04
Actg2	2.99509	0.004881	0.001617
Zfp521	2.99371	0.048419	0.025364
Cenpk	2.98894	0.048735	0.025573
Ifi27	2.98853	6.75E-08	5.18E-10
Gstt3	2.98718	0.003882	0.001228
Mecom	2.98575	0.020009	0.008879
Hsd3b7	2.98506	5.17E-04	1.04E-04
Gatsl3	2.97916	0.002249	6.33E-04
She	2.97247	0.006111	0.002116

Toporsos	2.97092	1.65E-06	5.75E-08
Pbxip1	2.96729	4.75E-07	1.01E-08
Sat1	2.96643	1.61E-08	6.23E-11
Il10rb	2.96236	4.18E-07	8.53E-09
Myzap	2.96107	0.006376	0.002226
Sorbs3	2.96015	2.86E-04	4.89E-05
Cx3cr1	2.95521	6.09E-06	3.18E-07
4930522L	2.9552	0.004482	0.001461
Paqr5	2.95324	0.024065	0.011041
Ppap2c	2.95182	0.001922	5.25E-04
Lpcat2	2.95179	1.53E-05	1.11E-06
Slc22a8	2.9507	0.01441	0.005972
P2rx7	2.94971	1.07E-05	6.80E-07
Fgd2	2.94761	0.023793	0.010896
Zfp429	2.94177	0.0025	0.000716
Arhgap4	2.93941	5.92E-05	6.36E-06
C1qtnf2	2.93743	0.0152	0.006351
Gm7536	2.93258	2.95E-08	1.52E-10
Arhgap11a	2.932	0.003486	0.001076
Cep85	2.93173	2.24E-08	1.02E-10
Rps20	2.92796	2.95E-08	1.50E-10
Hist1h2bc	2.92607	9.52E-08	8.37E-10
Gna13	2.91998	2.40E-06	9.83E-08
Fam89a	2.91985	0.004589	0.001501
Slc25a24	2.91884	3.42E-04	6.10E-05
Taf6l	2.91744	1.75E-07	2.23E-09
Il18	2.917	0.040495	0.020524
B3gnt3	2.91551	0.019763	0.008736
Shroom4	2.91543	0.047542	0.024789
Cd9	2.91081	6.04E-07	1.47E-08
Fhod1	2.91059	0.007095	0.002543
Tcf7	2.90922	0.002642	7.65E-04
Stat5a	2.90741	9.71E-04	2.28E-04
Galm	2.90679	0.068973	0.039009
Gimap8	2.90637	5.05E-05	5.26E-06
Cav1	2.90273	1.13E-04	1.47E-05
Cmb1	2.90243	0.007621	0.002765
Tmem243	2.90195	1.57E-06	5.30E-08
Msrb1	2.90099	1.14E-04	1.49E-05
Robo4	2.89771	0.090778	0.054062
Cgnl1	2.89672	8.45E-05	1.01E-05
Hist1h2ae	2.89486	0.069746	0.039543
Adcy7	2.89408	3.84E-07	7.56E-09
Nde1	2.89205	2.22E-05	1.82E-06

Gm9844	2.88911	0.017081	0.007299
Clic4	2.88749	9.47E-07	2.62E-08
Tbx2	2.8867	0.060255	0.033074
Nr2f2	2.88506	0.001501	3.86E-04
Mrc2	2.88349	0.006001	0.002069
Ptpn14	2.8825	0.005111	0.001711
Prkd2	2.88021	0.001409	3.58E-04
Slc9a3r1	2.87951	5.46E-07	1.26E-08
Cdc45	2.87803	0.001755	4.69E-04
Stom	2.8778	1.79E-05	1.37E-06
Swap70	2.87654	0.003161	9.53E-04
Crlf2	2.87351	3.34E-04	5.93E-05
Eng	2.87266	5.07E-05	5.29E-06
Vtn	2.87104	3.03E-05	2.70E-06
Asap3	2.8705	6.34E-05	6.93E-06
Rpl22	2.86384	5.05E-08	3.25E-10
Unc13d	2.86257	1.11E-05	7.13E-07
2310039H	2.8592	3.14E-05	2.83E-06
Bcl2l11	2.85904	1.62E-04	2.36E-05
Cyp27a1	2.84897	1.58E-04	2.27E-05
Hmmr	2.84637	0.001798	4.84E-04
Steap3	2.84328	6.78E-04	1.47E-04
Tnfaip3	2.84179	3.04E-05	2.70E-06
Col18a1	2.84008	3.97E-05	3.81E-06
Rpl17-ps8	2.83695	0.007207	0.00259
Parp10	2.83469	1.60E-06	5.55E-08
Fzd1	2.83198	2.21E-04	3.54E-05
Noxo1	2.83023	0.001506	3.87E-04
Slc2a12	2.82711	0.006861	0.002437
Prdx1	2.82707	5.27E-08	3.47E-10
Nlrc3	2.82675	0.00565	0.00193
Smo	2.82371	0.015326	0.006421
Tspan4	2.82165	1.17E-06	3.48E-08
Tst	2.81929	7.34E-05	8.43E-06
Tyms	2.81674	1.14E-05	7.40E-07
Cfp	2.81439	1.75E-05	1.33E-06
Ezr	2.81316	1.60E-06	5.54E-08
Hist2h2aa	2.81106	2.99E-04	5.18E-05
D16Ertd47	2.81002	0.002541	7.30E-04
Hist2h3c2	2.80815	0.002927	8.68E-04
Tmem134	2.80738	2.22E-07	3.32E-09
Postn	2.80563	0.005546	0.001886
Itpr3	2.80523	0.004314	0.001394
Phactr4	2.80384	9.82E-05	1.22E-05

Cnih4	2.80377	1.16E-07	1.14E-09
Tmem119	2.79865	0.005653	0.001932
Cpt1a	2.79767	1.02E-04	1.28E-05
Hist2h2aa	2.79702	5.63E-07	1.30E-08
Slc35d2	2.79688	3.84E-04	7.08E-05
Kif16b	2.79618	0.097896	0.059033
Zc3h12d	2.79335	0.037043	0.018471
Slc39a1	2.78775	4.28E-05	4.21E-06
Rnf130	2.78716	4.27E-08	2.51E-10
Kdr	2.78666	0.004012	0.001278
Cd302	2.78648	7.07E-08	5.72E-10
Elm	2.78365	0.003817	0.001202
Cnn3	2.78302	1.34E-07	1.43E-09
Apaf1	2.78224	9.19E-04	2.13E-04
Tmc8	2.78193	0.03113	0.014984
Gramd3	2.78138	1.15E-05	7.48E-07
Gm13251	2.77978	2.26E-04	3.63E-05
Crybb1	2.77838	6.42E-04	1.36E-04
S1pr3	2.77752	0.00347	0.001069
Ncapg2	2.77665	0.011318	0.004467
Tor3a	2.77663	2.06E-04	3.21E-05
Acvrl1	2.77648	3.16E-04	5.55E-05
Als2cl	2.77471	0.001665	4.40E-04
Il18rap	2.77416	1.56E-04	2.23E-05
Casp6	2.76781	0.001393	3.52E-04
Nnat	2.76245	0.002642	7.65E-04
Piezo2	2.75736	0.052318	0.027931
Zic3	2.75598	0.017505	0.007514
Gpx1	2.75449	6.04E-09	1.34E-11
Rps6ka1	2.75377	2.01E-05	1.61E-06
Slc7a11	2.75128	2.12E-07	2.97E-09
Acads	2.74943	4.00E-04	7.47E-05
Higd1b	2.74799	0.005728	0.001965
Pramel4	2.74741	0.015011	0.006256
Rps19	2.74555	6.79E-09	1.60E-11
Ephb4	2.74544	0.016951	0.007239
Gm5617	2.7442	1.93E-05	1.52E-06
Rpl37a	2.74355	1.14E-08	3.83E-11
Agt	2.73471	0.096453	0.058066
Snrpg	2.73321	7.21E-05	8.22E-06
Ptrf	2.73116	3.47E-04	6.24E-05
Gpr4	2.73086	0.013299	0.005441
Chrna1	2.73008	1.08E-04	1.39E-05
Ptger4	2.72976	0.003619	0.001127

Skap2	2.72801	0.034061	0.016706
Clec14a	2.72696	0.002033	5.61E-04
Cped1	2.72592	7.01E-04	1.53E-04
Akip1	2.7248	2.07E-05	1.67E-06
Nod2	2.72087	0.010719	0.004188
Hopx	2.72061	7.62E-07	2.00E-08
Tns3	2.71775	3.34E-04	5.93E-05
Tinagl1	2.71723	8.50E-05	1.02E-05
Tmco4	2.71633	7.78E-04	1.73E-04
Dach2	2.71491	0.054243	0.029132
Cdk2ap2	2.71389	7.64E-07	2.02E-08
Rab27a	2.71325	4.77E-04	9.33E-05
Rps29	2.70866	1.14E-08	3.95E-11
Ccdc23	2.70426	6.12E-07	1.49E-08
Mthfs	2.70361	1.17E-04	1.55E-05
Plcb2	2.70171	8.82E-05	1.07E-05
Gins2	2.69438	4.41E-05	4.38E-06
Casp7	2.69347	0.008101	0.002988
1700017B	2.69267	3.20E-05	2.90E-06
Szrd1	2.69163	8.94E-07	2.42E-08
Ace	2.69125	0.006434	0.002257
Rpl39	2.69001	2.24E-07	3.40E-09
Antxr2	2.68708	0.010471	0.00407
Dock5	2.68668	0.060434	0.033207
Tnfsf12	2.68642	4.40E-05	4.36E-06
Pold4	2.684	2.91E-05	2.57E-06
Lsr	2.68196	0.001007	2.39E-04
Cpne2	2.6768	1.88E-06	7.02E-08
Cd6	2.67539	1.00E-04	1.26E-05
Vrk2	2.67487	2.66E-04	4.45E-05
Srebf1	2.67322	3.31E-06	1.45E-07
Zbtb7b	2.67215	1.32E-04	1.81E-05
Fblim1	2.67168	1.84E-04	2.76E-05
Rps23-ps	2.66926	5.59E-09	8.93E-12
Hbq1a	2.66357	0.022441	0.01017
Naaa	2.65753	3.03E-04	5.25E-05
Cdc42ep5	2.65728	0.037609	0.018817
Rpl15-ps3	2.65453	3.25E-07	6.00E-09
Perp	2.65416	0.003866	0.001221
Pygl	2.65321	0.001852	5.02E-04
Stra6l	2.65147	0.057438	0.031232
Rab3il1	2.64802	1.29E-05	8.81E-07
Tgfb3	2.64334	5.00E-04	9.94E-05
Dse	2.64278	0.003162	9.54E-04

Pmf1	2.64273	1.49E-05	1.06E-06
Iqgap1	2.63776	4.24E-07	8.78E-09
Rplp0	2.63421	5.59E-09	1.04E-11
Limd2	2.63163	9.23E-08	7.97E-10
BC051015	2.62649	0.007961	0.002926
Pde3a	2.62077	0.006016	0.002076
Nt5dc1	2.61884	0.00218	6.10E-04
Col20a1	2.61606	0.026404	0.012307
Cenpa	2.61605	0.003598	0.001119
Stra13	2.61547	1.89E-06	7.11E-08
Gm15280	2.6128	2.96E-04	5.11E-05
Jak3	2.61031	2.79E-05	2.44E-06
Grb7	2.60995	0.06415	0.035664
Mical1	2.60467	1.87E-04	2.82E-05
Serpinf1	2.60415	8.40E-04	1.90E-04
Syce2	2.60333	9.00E-04	2.07E-04
Sepp1	2.60109	4.15E-07	8.35E-09
Rps16	2.60065	8.21E-08	6.76E-10
Foxm1	2.59767	0.011159	0.004394
Sft2d2	2.59595	1.05E-05	6.62E-07
Il15ra	2.59091	5.96E-06	3.07E-07
Nedd9	2.59009	1.57E-04	2.25E-05
Lhfpl2	2.59005	4.56E-05	4.58E-06
Tenc1	2.58968	0.011893	0.004744
Rpl18	2.58719	4.35E-08	2.65E-10
Relb	2.58391	1.51E-05	1.08E-06
Prkd3	2.58191	1.78E-04	2.66E-05
Pdlim5	2.57798	1.25E-04	1.67E-05
S100a16	2.57725	7.02E-07	1.79E-08
Trip6	2.57611	0.005252	0.001766
Nampt	2.57524	1.32E-06	4.19E-08
Cdkn1a	2.5745	1.44E-06	4.73E-08
Ctso	2.57388	9.80E-06	5.98E-07
Tmsb4x	2.57246	5.59E-09	9.08E-12
Tmsb10	2.57089	1.57E-06	5.32E-08
Rpl34	2.56903	1.16E-07	1.13E-09
Cotl1	2.56733	0.001646	4.33E-04
Ccdc109b	2.56607	1.01E-04	1.27E-05
Ier3	2.56578	5.07E-07	1.11E-08
Rps23	2.5651	1.19E-06	3.56E-08
Rps18	2.56061	4.53E-09	5.96E-12
Mr1	2.55994	9.14E-04	2.12E-04
Thbs2	2.55836	0.020899	0.009344
Bicc1	2.55804	1.42E-05	9.95E-07

Cd151	2.55461	3.20E-04	5.64E-05
Limd1	2.55417	1.86E-04	2.81E-05
Lsm5	2.55376	3.79E-06	1.75E-07
Tmem220	2.5515	0.008131	0.003002
Sap25	2.55143	0.001139	2.78E-04
Slco2b1	2.54981	4.43E-04	8.51E-05
Heatr5a	2.54893	3.16E-04	5.56E-05
BC026585	2.54786	6.40E-05	7.02E-06
Angpt2	2.54617	0.009755	0.003738
Mertk	2.54491	2.89E-05	2.55E-06
Sgms2	2.54368	0.001765	4.73E-04
Cdc42ep4	2.54347	2.01E-05	1.60E-06
Pald1	2.54281	0.024227	0.011132
Tnfrsf11b	2.53945	0.00993	0.003824
Elovl1	2.53921	6.74E-06	3.61E-07
Edem1	2.53588	3.20E-05	2.90E-06
Lime1	2.53331	4.73E-07	1.00E-08
Arrdc4	2.53254	8.54E-04	1.94E-04
Hist1h4d	2.53111	1.78E-06	6.46E-08
Nanog	2.52934	0.01051	0.004089
Lmod1	2.52683	0.048944	0.025741
Rasa4	2.52625	1.92E-06	7.25E-08
Kynu	2.52109	0.031288	0.015084
Psmb10	2.51813	1.27E-08	4.47E-11
D830044I	2.51794	0.015233	0.006369
Soat1	2.51375	8.89E-05	1.08E-05
Serpinb1b	2.51277	0.031135	0.014989
Filip1l	2.50963	7.19E-05	8.17E-06
Psmg4	2.50846	3.26E-07	6.08E-09
Eif2ak2	2.50828	1.79E-04	2.67E-05
Rrbp1	2.50497	4.69E-07	9.91E-09
Lamc1	2.50486	1.60E-04	2.31E-05
Gm10288	2.50384	5.78E-08	3.92E-10
Spib	2.50189	0.034102	0.016731
Podxl	2.4982	6.73E-07	1.71E-08
Zfp503	2.49392	0.047066	0.024496
Rpl23a	2.4938	1.85E-08	8.08E-11
Tmed10	2.49343	2.19E-07	3.12E-09
Creb3l1	2.4907	0.011208	0.004418
Ly6e	2.48636	7.10E-10	3.44E-13
Zfp568	2.48512	0.01477	0.006139
Art3	2.48405	0.001275	3.17E-04
Des	2.48305	0.013707	0.005642
Adhfe1	2.48143	4.10E-04	7.71E-05

Fkbp7	2.47857	1.13E-04	1.47E-05
Aldh1a1	2.47725	3.30E-05	3.02E-06
Rpl35	2.47621	4.54E-08	2.79E-10
Rps14	2.47618	1.86E-07	2.46E-09
Tceanc	2.47585	0.018063	0.007805
Dennd1b	2.46899	0.007878	0.002886
Gm2000	2.46803	1.32E-07	1.34E-09
Carhsp1	2.46203	2.90E-05	2.55E-06
1810058l2	2.46162	9.86E-07	2.79E-08
Ggh	2.46117	6.72E-07	1.70E-08
Itih5	2.46072	2.71E-04	4.57E-05
Rasd1	2.45944	0.002739	8.00E-04
Trpm6	2.45793	0.013297	0.005436
Mob3a	2.45694	7.51E-05	8.72E-06
Ctgf	2.45672	1.87E-05	1.45E-06
Nmb	2.45624	0.001852	5.02E-04
Batf3	2.4557	8.73E-05	1.06E-05
Slc1a3	2.45472	2.32E-07	3.57E-09
Nfkb1	2.45314	8.62E-06	4.98E-07
Ccdc163	2.45062	0.004621	0.001514
Scamp2	2.44824	5.20E-07	1.16E-08
Rbl1	2.44799	1.60E-04	2.32E-05
Prdx6	2.44717	2.40E-06	9.81E-08
Plekhf2	2.44237	5.02E-04	9.99E-05
Gm9894	2.43929	4.16E-04	7.86E-05
Mob1a	2.43866	1.36E-05	9.42E-07
Il4i1	2.43843	0.005259	0.00177
Mettl7a3	2.4357	0.013153	0.005368
Sparc	2.4348	2.30E-04	3.72E-05
Stap2	2.43351	0.012621	0.005098
Txn1	2.43096	2.22E-07	3.27E-09
Maml2	2.43082	1.07E-04	1.37E-05
Dlgap5	2.42658	0.009814	0.003766
Lcat	2.42579	9.46E-06	5.70E-07
Rpl37	2.42523	1.56E-06	5.23E-08
Lbh	2.42504	1.16E-05	7.58E-07
Hn1l	2.41964	0.0217	0.009771
Tpm4	2.41788	5.51E-06	2.77E-07
Tnfrsf26	2.41648	0.001451	3.71E-04
Acadl	2.41402	1.76E-06	6.29E-08
Fam86	2.41264	4.73E-05	4.79E-06
Ppp1r14b	2.40792	2.70E-05	2.32E-06
Tmc6	2.40773	2.10E-04	3.29E-05
Idnk	2.40682	2.04E-07	2.83E-09

Ddr2	2.40425	0.00116	2.84E-04
Edn1	2.40399	0.00252	7.23E-04
Inpp4b	2.40195	0.001265	3.14E-04
Abcb1a	2.39959	1.30E-04	1.77E-05
Lrp10	2.39846	5.31E-07	1.20E-08
Npepl1	2.39722	3.97E-06	1.86E-07
Glra3	2.39615	0.008202	0.003034
Plcb3	2.39595	0.022655	0.010279
Pltp	2.39576	1.65E-06	5.79E-08
Pm20d1	2.39398	0.014265	0.0059
Kank2	2.3914	0.003286	0.001002
Loxl2	2.38979	1.71E-04	2.52E-05
Sash1	2.38467	2.39E-05	1.98E-06
Cracr2b	2.38399	0.005978	0.00206
Tmem86a	2.38211	5.82E-07	1.37E-08
Rdm1	2.38198	8.80E-05	1.07E-05
Rpl13	2.38176	6.15E-08	4.30E-10
Ost4	2.37798	1.02E-07	9.23E-10
Eif2s3y	2.37686	0.073326	0.041994
Cdc42bpg	2.37684	0.04547	0.023542
Atox1	2.36904	1.90E-07	2.54E-09
Ndufa4l2	2.36873	0.001869	5.08E-04
Lrrc17	2.36848	3.83E-04	7.06E-05
Chd7	2.36721	1.51E-05	1.09E-06
Aspn	2.36621	0.012721	0.00515
Shc1	2.36595	1.25E-06	3.82E-08
Gm13225	2.36367	0.021251	0.009516
Stk10	2.35951	0.001312	3.28E-04
Stap1	2.35899	0.045308	0.02343
Mavs	2.35868	0.002624	7.58E-04
5730508B	2.3586	3.89E-04	7.19E-05
9930111J	2.35822	1.07E-06	3.08E-08
Itgb4	2.35695	0.059761	0.032761
Rps11	2.35507	5.59E-09	1.10E-11
Nme2	2.35401	1.69E-06	5.98E-08
Eif4ebp1	2.34858	7.97E-06	4.44E-07
Myh11	2.3475	0.014214	0.005877
Ccr9	2.34657	0.01936	0.008528
Evi2a	2.3461	1.72E-05	1.30E-06
Rps28	2.34328	1.10E-07	1.04E-09
Phyhd1	2.34304	6.27E-05	6.82E-06
Rpl30	2.34169	1.07E-07	9.98E-10
Ap1g2	2.34066	0.003439	0.001058
Pnpla2	2.33938	7.63E-06	4.23E-07

Gcnt1	2.33633	0.003098	9.31E-04
Fmnl3	2.33585	0.001051	2.53E-04
Smim1	2.33352	4.55E-04	8.84E-05
Gm6472	2.33178	5.88E-07	1.40E-08
Lacc1	2.32993	0.002226	6.25E-04
Plxnb2	2.32977	8.00E-06	4.47E-07
Rbms2	2.32768	2.06E-04	3.20E-05
Lrch4	2.32691	5.80E-05	6.20E-06
Adamts9	2.3265	0.051568	0.027442
Erbp2	2.32646	0.032222	0.015639
Ebf1	2.32499	0.001319	3.30E-04
Atp10a	2.32472	0.002809	8.27E-04
Gm10177	2.32401	1.34E-07	1.42E-09
Lama4	2.32029	0.002247	6.32E-04
Tshz2	2.31937	0.003125	9.41E-04
Rps16-ps2	2.31717	1.38E-07	1.48E-09
Gpr146	2.31331	9.34E-05	1.15E-05
Tmem150	2.31253	0.02489	0.01148
Plekhg1	2.31205	0.003949	0.001255
Stat2	2.30804	1.70E-07	2.12E-09
Gstt1	2.30731	2.23E-05	1.83E-06
Apool	2.30633	1.26E-05	8.57E-07
Rpl36	2.30608	1.02E-07	9.21E-10
Ehd2	2.30607	0.003008	8.98E-04
Cald1	2.30414	8.13E-05	9.65E-06
Cobll1	2.30233	0.004245	0.001367
Gnb2l1	2.30184	1.31E-07	1.33E-09
Tfcp2l1	2.30169	0.043193	0.022154
Tbx18	2.29689	0.016504	0.007006
Nrp2	2.29583	1.13E-04	1.48E-05
Stat3	2.29538	2.67E-07	4.52E-09
Smpd13a	2.29215	1.26E-05	8.55E-07
Map3k1	2.29167	1.23E-04	1.64E-05
Gm10443	2.28971	2.07E-05	1.67E-06
Tmcc3	2.28884	2.70E-04	4.55E-05
Tmem98	2.28743	0.002175	6.09E-04
Tpm2	2.28468	0.001005	2.38E-04
Pml	2.28309	2.24E-06	9.01E-08
Gm12918	2.28028	3.91E-08	2.19E-10
Frmd4b	2.27741	1.39E-04	1.92E-05
Cldn5	2.27712	6.06E-06	3.15E-07
Tmod3	2.27697	1.01E-05	6.27E-07
Ppp1r14a	2.27624	1.30E-04	1.77E-05
Rpl37rt	2.27359	5.45E-07	1.24E-08

Rpl35a	2.27356	7.31E-08	5.97E-10
Reep4	2.27165	3.12E-04	5.45E-05
Med11	2.26932	2.23E-06	8.89E-08
F2r	2.26839	2.74E-04	4.62E-05
Sox18	2.26515	0.001154	2.82E-04
Rps5	2.26471	9.07E-09	2.76E-11
Sec61b	2.26446	2.64E-07	4.29E-09
Igf1	2.26318	0.046363	0.024065
Mif4gd	2.26152	1.33E-04	1.82E-05
Gm13157	2.26099	0.007908	0.002901
Vstm4	2.26062	0.056717	0.030739
Maf	2.25749	2.52E-06	1.04E-07
Hexb	2.2562	8.28E-06	4.70E-07
Fadd	2.2561	0.016263	0.00689
Asb2	2.25488	0.001641	4.31E-04
Gm2a	2.25438	1.63E-08	6.41E-11
Rps9	2.25399	3.37E-08	1.80E-10
Gm9797	2.2538	0.026874	0.012571
Herc6	2.2532	9.08E-06	5.34E-07
Lamp2	2.25268	4.65E-08	2.90E-10
Shisa5	2.2504	9.12E-08	7.73E-10
Derl2	2.24878	1.76E-06	6.26E-08
Metrn	2.24845	3.76E-04	6.85E-05
Fgd6	2.24815	0.005806	0.001995
Itgb1	2.24766	1.16E-06	3.41E-08
Lmf2	2.24721	0.010746	0.0042
Rpl41	2.24107	1.05E-07	9.60E-10
Tmem219	2.24018	4.20E-06	1.99E-07
Rps10	2.23815	9.76E-08	8.71E-10
Stat6	2.23552	2.84E-05	2.49E-06
Scpep1	2.2348	6.37E-07	1.58E-08
Smad6	2.23066	0.084682	0.049729
Tmem154	2.23002	0.008188	0.003026
Pabpc1	2.22748	2.67E-08	1.27E-10
Alpk2	2.2262	4.70E-04	9.18E-05
Rpsa	2.22576	4.21E-05	4.11E-06
Lrrc71	2.22572	0.085519	0.05032
Prr13	2.22343	3.15E-07	5.72E-09
Gm8430	2.22012	9.00E-05	1.10E-05
Gm4540	2.21968	0.035548	0.017576
Sfrp1	2.21654	1.06E-04	1.35E-05
Accs	2.21523	0.008502	0.003165
Csk	2.2151	0.001428	3.63E-04
Trib3	2.21284	0.037938	0.019015

Itpkb	2.21185	1.75E-04	2.59E-05
Mc5r	2.2089	0.084337	0.049496
Lamb2	2.20666	0.001008	2.40E-04
Ocln	2.20632	0.058892	0.032167
Adamts1	2.20514	8.21E-04	1.85E-04
Gm8186	2.20405	5.44E-06	2.72E-07
Dhrs3	2.19847	2.79E-06	1.17E-07
Spic	2.19769	0.069636	0.039452
Ass1	2.19662	2.48E-05	2.08E-06
Cdk6	2.1962	0.001104	2.67E-04
Mrpl52	2.19559	7.95E-07	2.11E-08
Bag3	2.19438	5.38E-04	1.09E-04
Fbxl22	2.19392	7.49E-05	8.68E-06
Zhx2	2.19181	0.031188	0.015023
Cbfb	2.19015	6.84E-06	3.67E-07
Stard5	2.18827	1.03E-04	1.29E-05
Cpne3	2.1871	6.29E-04	1.33E-04
Cd200	2.18615	4.35E-07	9.07E-09
Slc31a1	2.18543	3.25E-07	6.04E-09
Nqo1	2.18497	0.001978	5.43E-04
Rb1	2.18465	9.67E-06	5.87E-07
2810474C	2.18072	6.04E-06	3.13E-07
Ccr5	2.18024	1.48E-05	1.05E-06
Ikzf2	2.17868	0.011953	0.004773
Mmp11	2.17521	0.006204	0.002154
Glis3	2.17478	0.018905	0.008265
Gpr183	2.17383	0.064479	0.035874
Gm7332	2.173	0.008314	0.003084
Ptpn13	2.17267	0.005069	0.001692
Malt1	2.17045	0.001531	3.96E-04
Tec	2.16888	0.019814	0.008767
Spdl1	2.16839	0.080563	0.046908
Sri	2.1675	6.83E-08	5.35E-10
Vmn2r11	2.16525	0.002916	8.65E-04
Itga4	2.16187	1.77E-04	2.63E-05
Lima1	2.16173	1.53E-04	2.17E-05
Plce1	2.16076	0.002785	8.17E-04
Ctsd	2.15945	6.37E-07	1.57E-08
Iqgap3	2.15898	0.009456	0.003599
Gm10260	2.15716	0.011318	0.004467
Bloc1s1	2.15092	5.20E-07	1.16E-08
Itgb5	2.14815	0.003785	0.00119
Tsc22d4	2.14556	7.02E-07	1.79E-08
Cish	2.14501	3.82E-06	1.77E-07

S100a10	2.14434	1.40E-07	1.56E-09
Parvb	2.14412	0.013267	0.005422
Olfr1	2.14267	0.002844	8.39E-04
Sox13	2.14265	0.027135	0.012727
Pola1	2.14182	1.77E-04	2.62E-05
Sptssa	2.14113	5.20E-07	1.15E-08
Ccdc73	2.13985	9.91E-04	2.34E-04
Nbeal2	2.1379	0.008351	0.0031
Stxbp3a	2.13782	8.80E-05	1.07E-05
Lap3	2.13733	6.62E-05	7.35E-06
Rps2	2.13578	2.67E-08	1.29E-10
Entpd2	2.13532	3.06E-04	5.31E-05
Bak1	2.13329	0.031459	0.015191
Dpm3	2.13321	1.01E-06	2.88E-08
Sowahc	2.13266	7.20E-04	1.58E-04
Cyp4f16	2.13165	2.11E-04	3.32E-05
Selenbp1	2.13157	0.022381	0.010138
Rp2h	2.12949	1.44E-04	2.02E-05
Gabarap	2.12874	2.19E-07	3.12E-09
Uxt	2.1274	6.56E-05	7.27E-06
Kif22	2.12599	0.009893	0.003805
Epas1	2.1247	5.31E-06	2.64E-07
Gm13139	2.12433	7.49E-04	1.65E-04
Cmtm6	2.11963	7.27E-05	8.32E-06
Spc24	2.11697	3.26E-04	5.76E-05
Dnase2a	2.11646	2.17E-04	3.43E-05
Lama5	2.11621	8.21E-04	1.85E-04
Rcbtb2	2.11308	1.58E-06	5.36E-08
Mylk	2.11264	6.43E-04	1.37E-04
Dock1	2.10654	0.002102	5.85E-04
Trabd2b	2.10353	0.002514	7.21E-04
Lix1l	2.10331	6.78E-04	1.47E-04
Slc25a43	2.10261	0.0261	0.012124
UBC	2.09787	0.001969	5.40E-04
Gm15950	2.09617	0.01768	0.007597
Abrac1	2.09601	1.60E-06	5.51E-08
Myc	2.0957	1.20E-04	1.59E-05
Rmi2	2.09531	4.90E-04	9.68E-05
Chil1	2.09344	5.33E-04	1.08E-04
Tie1	2.09234	0.002781	8.16E-04
Hmga1	2.0912	1.42E-04	1.98E-05
Cenpf	2.08949	0.003487	0.001077
Cmtm8	2.08904	0.002309	6.54E-04
Rpl9-ps6	2.088	0.002414	6.88E-04

Igfbp5	2.08745	1.42E-05	9.91E-07
Gm12481	2.08209	2.59E-07	4.20E-09
Rps3	2.08176	1.41E-07	1.59E-09
Trp53i13	2.07934	8.96E-05	1.09E-05
Krtcap2	2.07817	6.00E-07	1.45E-08
Lats2	2.0758	1.11E-04	1.43E-05
Zic5	2.07475	0.023864	0.010938
Esr1	2.07364	0.009329	0.00354
Ptbp1	2.07163	1.80E-06	6.59E-08
Ptgr1	2.06928	0.07813	0.045232
Rpl15	2.06884	4.36E-07	9.11E-09
Col4a1	2.06878	4.96E-04	9.84E-05
Trappc6a	2.06566	5.90E-06	3.04E-07
Fbxo36	2.06518	0.004029	0.001284
Bach1	2.06436	0.00447	0.001456
Prim1	2.06424	0.001015	2.42E-04
Lpp	2.06168	2.28E-06	9.22E-08
Atf5	2.06008	0.001541	4.00E-04
Lama2	2.05972	0.077352	0.044642
Mpp4	2.05785	0.0326	0.01585
Ccdc36	2.05749	0.080559	0.0469
Crtap	2.05719	3.55E-05	3.32E-06
Notch1	2.05702	2.10E-05	1.70E-06
Ddx58	2.05695	3.69E-05	3.48E-06
Gnat1	2.05197	0.006895	0.002453
Tor1aip1	2.05179	9.14E-06	5.39E-07
Gnai2	2.05123	8.47E-09	2.52E-11
Igf2bp3	2.04988	0.054728	0.029438
Trf	2.0476	2.87E-04	4.91E-05
Egfr	2.04709	0.016223	0.006871
Rgs5	2.04509	5.33E-06	2.66E-07
Sgsh	2.0402	4.77E-04	9.34E-05
Efemp2	2.03878	1.12E-04	1.45E-05
Zfhx3	2.03869	0.009275	0.003515
Pon2	2.03747	2.72E-05	2.33E-06
Ccdc122	2.03613	0.001311	3.27E-04
Rpl10	2.03554	3.38E-06	1.49E-07
Itm2a	2.03426	8.95E-05	1.09E-05
Reep3	2.03401	2.06E-06	8.00E-08
Rplp1	2.02951	9.51E-08	8.30E-10
Decr1	2.02572	2.18E-04	3.47E-05
Ppfia4	2.02323	8.33E-05	9.91E-06
1810037I1	2.01929	8.96E-07	2.44E-08
Rpl31	2.01916	2.91E-06	1.23E-07

Plp2	2.01885	1.78E-05	1.36E-06
Wwtr1	2.01809	8.99E-05	1.10E-05
Homer3	2.01718	0.015377	0.006449
Tep1	2.01656	6.92E-05	7.76E-06
Rpl31-ps8	2.01655	1.27E-06	3.95E-08
Gm11518	2.0133	2.56E-07	4.09E-09
Rpl27-ps3	2.0133	2.56E-07	4.09E-09
Gm11627	2.01313	0.02736	0.012857
Tmem258	2.0124	9.79E-07	2.74E-08
Rps13	2.00964	4.04E-07	8.03E-09
Hsd17b11	2.00596	1.56E-04	2.23E-05
Npr1	2.00569	0.041265	0.020982
Cd59a	2.00514	3.13E-04	5.47E-05
Ttc32	2.00463	0.001654	4.36E-04
Phldb2	2.00385	0.007521	0.002722
Ikbkb	1.99894	5.72E-06	2.91E-07
Efna1	1.99825	0.005354	0.001809
Slc10a3	1.9963	4.57E-05	4.60E-06
Furin	1.99595	1.57E-05	1.15E-06
Itga10	1.99111	0.050502	0.026745
Syde1	1.99018	0.004302	0.001389
Magt1	1.98764	0.016176	0.006847
Gm4604	1.98758	0.006676	0.002356
Mov10	1.98335	2.30E-04	3.72E-05
Foxo4	1.98089	0.027296	0.012822
Notch3	1.98088	6.17E-05	6.68E-06
Cln5	1.97907	1.16E-05	7.55E-07
Gm10499	1.97763	0.004343	0.001405
Slc30a7	1.97588	6.94E-05	7.79E-06
Fgfr1	1.97582	7.55E-04	1.67E-04
Cpxm1	1.97531	0.006273	0.002183
Gmip	1.97321	6.30E-04	1.33E-04
Nfatc3	1.96759	4.97E-04	9.86E-05
Mcm6	1.96527	0.064617	0.035969
Rreb1	1.96516	0.001741	4.65E-04
Trbc2	1.96321	2.74E-07	4.74E-09
Cdh19	1.96198	0.070743	0.040241
Csrp1	1.96164	1.33E-06	4.28E-08
Vwa1	1.95905	9.35E-06	5.60E-07
Ddah2	1.9579	4.26E-04	8.09E-05
Rps2-ps10	1.95787	6.56E-04	1.40E-04
Dynlt1c	1.9578	5.49E-04	1.12E-04
Cdc42se1	1.95755	1.54E-06	5.12E-08
E130114P	1.95511	0.002835	8.36E-04

Ankrd44	1.95298	1.29E-05	8.86E-07
Ptprb	1.95233	6.53E-05	7.21E-06
Rpl36a	1.95177	6.40E-07	1.60E-08
Rps27a	1.95043	1.76E-06	6.29E-08
4930579G	1.9488	0.009153	0.003461
Mob3c	1.94858	7.45E-04	1.64E-04
Cela1	1.94802	0.006419	0.002249
Mcm10	1.94713	0.006333	0.002209
Slc39a8	1.94614	0.018157	0.00786
Ssfa2	1.94001	1.08E-05	6.86E-07
Ptbp3	1.93776	1.00E-05	6.18E-07
Pdlim2	1.93619	1.80E-04	2.69E-05
Pnpla7	1.93425	1.48E-04	2.08E-05
Esyt1	1.93066	0.001451	3.71E-04
Afap1l2	1.93001	0.001744	4.66E-04
Paox	1.92975	6.77E-04	1.46E-04
Rps17	1.92969	1.58E-07	1.93E-09
Oaf	1.92927	6.35E-04	1.35E-04
Trim6	1.92856	0.016172	0.006844
Ninj2	1.92842	0.014934	0.006218
Gpr124	1.9266	0.001525	3.95E-04
Nes	1.9248	0.00675	0.00239
Prrg2	1.9242	0.006073	0.002099
Rpl9-ps7	1.92384	0.035771	0.017696
Rpl7	1.9232	6.23E-08	4.44E-10
Cldn11	1.92303	4.18E-05	4.07E-06
Tmem100	1.923	1.40E-04	1.94E-05
Mrpl33	1.92132	2.06E-06	7.99E-08
Rps21	1.91923	1.51E-06	4.99E-08
Map3k14	1.91904	0.013167	0.005375
Gm11808	1.91855	2.81E-07	4.92E-09
Tsacc	1.91813	0.005652	0.001931
Foxq1	1.91803	0.003732	0.001171
Pdgfrb	1.91648	6.70E-04	1.44E-04
Znrf2	1.91548	0.002706	7.87E-04
Pcbd2	1.91412	7.25E-05	8.30E-06
Pbld1	1.91337	0.010658	0.004161
Prr5l	1.91238	9.00E-04	2.07E-04
Fam96a	1.91034	1.17E-06	3.46E-08
Ybx3	1.90976	4.04E-07	8.06E-09
Lgals4	1.90917	0.03183	0.015416
Nudt14	1.90872	0.019987	0.008865
Gja1	1.90794	9.25E-06	5.48E-07
Cd24a	1.90752	4.33E-04	8.27E-05

Cst3	1.90752	4.35E-08	2.63E-10
Igflr1	1.90264	0.003444	0.00106
Rgs16	1.90073	0.006634	0.002337
Sardh	1.89795	0.028421	0.013441
Rab5c	1.89723	7.83E-05	9.19E-06
Ptma	1.89632	1.14E-08	3.93E-11
Gpr35	1.8951	0.00387	0.001222
Rab13	1.89427	0.005696	0.001949
C920009E	1.88882	0.025739	0.011934
Uba52	1.88838	1.64E-07	2.04E-09
Lipa	1.88471	1.87E-04	2.82E-05
Ppp4c	1.88368	9.50E-07	2.65E-08
Rassf2	1.88243	3.84E-06	1.79E-07
Magohb	1.87989	2.17E-04	3.44E-05
Tmbim4	1.87775	6.23E-07	1.53E-08
F3	1.87731	0.001451	3.71E-04
Synpo2	1.87651	0.066655	0.037449
Trpc2	1.87614	0.097221	0.058592
Necap2	1.87122	7.11E-06	3.85E-07
Zfp456	1.87037	0.078532	0.045481
Fam89b	1.86797	9.45E-06	5.69E-07
Tead3	1.86667	0.047156	0.024546
Slc41a1	1.86561	6.85E-06	3.68E-07
Aldh1a3	1.86487	0.005605	0.00191
Plod1	1.86409	4.37E-04	8.37E-05
Rpl13a	1.86326	1.20E-05	7.92E-07
Ube2d3	1.86203	9.59E-07	2.68E-08
Chrac1	1.85868	1.36E-05	9.47E-07
Rbms1	1.85802	5.07E-07	1.11E-08
Rps4x	1.85773	4.97E-08	3.16E-10
Fam26e	1.85556	3.13E-04	5.47E-05
Mitd1	1.85193	1.23E-05	8.26E-07
Slc2a1	1.85117	1.33E-06	4.28E-08
Aurka	1.8511	0.01723	0.007374
Plagl2	1.8498	0.007655	0.002781
Nkd1	1.846	0.016535	0.007023
Rasgrp3	1.8423	0.007737	0.00282
Lig1	1.84066	3.46E-04	6.20E-05
Rpl28-ps1	1.83979	1.22E-06	3.70E-08
Sh3bgrl3	1.83621	1.43E-07	1.65E-09
Sertad3	1.83458	0.003732	0.001171
Nr2c2ap	1.83384	3.30E-04	5.85E-05
Rpl9	1.83194	5.92E-07	1.42E-08
Nbl1	1.83063	1.87E-04	2.83E-05

Rps24	1.82906	1.52E-07	1.83E-09
Tgfb1	1.82773	3.21E-05	2.91E-06
Yes1	1.82757	0.001576	4.11E-04
Prkcq	1.82692	0.004184	0.001343
Mcl1	1.82656	1.31E-06	4.11E-08
Naglu	1.82637	9.41E-04	2.19E-04
Ctla2a	1.82568	0.011845	0.00472
Col5a2	1.82386	0.051699	0.027537
Nsmce1	1.82083	2.00E-05	1.59E-06
Nrros	1.81905	6.31E-04	1.34E-04
Etv6	1.81867	4.20E-05	4.10E-06
Rps8	1.81822	3.28E-07	6.20E-09
Rpl27	1.81808	1.78E-06	6.49E-08
Suclg2	1.81806	0.005978	0.002059
Neil3	1.81755	0.046535	0.024177
3110009E	1.81754	0.022437	0.010166
Nupr1l	1.81664	0.018242	0.007917
Col9a3	1.81504	0.01291	0.005243
Zfyve21	1.81459	0.002781	8.16E-04
Rab43	1.81456	1.72E-04	2.54E-05
Frmd8	1.81451	1.97E-05	1.56E-06
Ttf2	1.80871	0.059535	0.03262
Smim4	1.80756	2.55E-05	2.16E-06
Pigv	1.80635	5.78E-04	1.20E-04
Pde6g	1.80629	0.039512	0.019938
H2afv	1.80563	7.17E-07	1.86E-08
Sphk1	1.80349	0.009094	0.003433
Nxph3	1.80213	0.029039	0.013787
Kdelr2	1.80022	9.25E-06	5.51E-07
Galnt4	1.79759	0.057524	0.031308
Gm14303	1.79724	2.44E-04	3.99E-05
Gjb6	1.79718	0.012351	0.004966
Dna2	1.79583	0.017465	0.007494
Glul	1.79561	7.17E-07	1.86E-08
Ackr1	1.79542	5.00E-06	2.45E-07
Mrpl54	1.79454	1.56E-05	1.15E-06
Six5	1.79391	0.06972	0.039524
Rhox8	1.79212	0.033784	0.01654
Tmbim1	1.79131	1.75E-05	1.33E-06
Glrx	1.78964	1.96E-05	1.56E-06
Fbxo4	1.78927	5.92E-04	1.23E-04
Adam17	1.78608	2.47E-04	4.07E-05
4931406C	1.7833	0.001192	2.93E-04
Tmem63a	1.78326	5.62E-04	1.16E-04

Vamp3	1.78162	4.10E-05	3.97E-06
Gpx3	1.77792	0.012082	0.004836
Serf2	1.77671	5.88E-07	1.40E-08
Itgb3bp	1.77655	0.001363	3.43E-04
Lbr	1.77654	7.19E-05	8.19E-06
Grrp1	1.77425	0.004555	0.001489
Setdb2	1.7708	0.034159	0.016762
0610040Jl	1.7675	0.00943	0.003584
Rpl24	1.76661	1.34E-07	1.41E-09
Psenen	1.7659	5.59E-06	2.83E-07
Slc22a4	1.7645	8.73E-04	1.99E-04
Tubb2b	1.76331	9.59E-04	2.24E-04
Pcca	1.76108	3.01E-05	2.68E-06
Tfap4	1.76012	0.097887	0.059014
Rpl27a	1.75479	6.92E-06	3.74E-07
Tcf7l1	1.75317	0.021947	0.009906
Slirp	1.75315	2.85E-06	1.20E-07
Sytl1	1.75306	0.057998	0.031614
Tnni1	1.75263	0.009505	0.003623
Golim4	1.75245	2.52E-04	4.16E-05
Gm12942	1.75232	1.56E-04	2.22E-05
Abtb2	1.75211	0.005186	0.001741
Tfeb	1.75211	0.004997	0.001664
Cers2	1.75203	5.29E-06	2.62E-07
Plgrkt	1.75194	5.63E-06	2.86E-07
Aff1	1.75164	3.95E-04	7.34E-05
Hscb	1.75038	6.31E-05	6.87E-06
Iah1	1.74937	1.45E-05	1.02E-06
Shfm1	1.74864	1.01E-06	2.87E-08
Ppib	1.74696	2.67E-07	4.49E-09
Rplp2	1.7465	5.13E-07	1.13E-08
Cd99	1.74567	1.35E-05	9.37E-07
Tmem167	1.74494	2.56E-07	4.04E-09
Rpl7a	1.74447	3.09E-07	5.53E-09
Ece2	1.74367	0.002592	7.47E-04
Tmem205	1.74267	8.63E-05	1.04E-05
Cwf19l2	1.74239	0.008278	0.003068
Slc29a3	1.74212	0.006148	0.002131
1600014C	1.7402	3.42E-06	1.52E-07
Tmem256	1.74016	1.18E-04	1.57E-05
Sdf2l1	1.73999	1.72E-05	1.30E-06
Tppp3	1.7392	1.27E-04	1.72E-05
Snrpe	1.7391	2.64E-06	1.09E-07
Wnt5a	1.73905	0.015103	0.006297

Eef1a1	1.73869	3.77E-08	2.09E-10
Ss18	1.73857	7.04E-04	1.53E-04
Txndc17	1.73847	9.12E-08	7.77E-10
Sec61g	1.73758	7.64E-05	8.94E-06
Lsm10	1.73711	1.51E-05	1.09E-06
Amdhd2	1.73676	9.75E-04	2.29E-04
Polh	1.73648	0.068763	0.038872
Gper1	1.73539	0.008271	0.003063
2610020H	1.73225	0.013003	0.005297
Vangl1	1.73176	0.027699	0.013042
Rbm7	1.72779	3.20E-05	2.89E-06
Arsk	1.72561	0.015665	0.006593
Slc12a4	1.72403	0.004324	0.001397
C1qtnf5	1.72162	0.008345	0.003097
Hmg20b	1.71976	4.17E-05	4.06E-06
Trps1	1.71973	9.69E-04	2.28E-04
Rpl17	1.71965	9.11E-08	7.63E-10
Galnt6	1.71604	0.00143	3.64E-04
Sgk1	1.71348	9.49E-07	2.63E-08
Tnfrsf13c	1.71146	0.056176	0.030349
Tead1	1.71135	0.022115	0.009993
Aspg	1.71086	0.073491	0.042094
Rpl29	1.7084	2.82E-06	1.18E-07
Mknk2	1.7066	0.019624	0.008666
Coa4	1.70621	6.11E-04	1.28E-04
Rps7	1.70516	3.34E-05	3.08E-06
Cox7a1	1.70493	0.019844	0.008783
Slco1a4	1.70466	3.83E-04	7.06E-05
Fhl3	1.70431	0.052379	0.027971
Ehd4	1.70354	1.74E-04	2.57E-05
Zbtb7c	1.70185	0.007035	0.002512
Ube2t	1.70019	0.015695	0.006608
Trbj2-7	1.69965	0.084999	0.049962
Tmsb15b1	1.6986	0.001579	4.12E-04
Zcchc24	1.69829	9.36E-04	2.18E-04
Rps15	1.69811	3.63E-06	1.65E-07
Timp3	1.69549	8.71E-05	1.05E-05
Clca1	1.69347	0.072098	0.041171
Nras	1.69249	2.58E-05	2.19E-06
Acaa2	1.691	3.64E-04	6.59E-05
Trafd1	1.68893	7.65E-06	4.25E-07
Gm9843	1.68863	2.23E-06	8.90E-08
Kat2b	1.68757	0.00354	0.001096
Ginm1	1.68497	1.48E-05	1.06E-06

Aup1	1.68215	0.017656	0.007586
Bax	1.67929	2.47E-05	2.06E-06
Pxmp2	1.67749	0.011775	0.004683
Rarg	1.67643	0.007001	0.002497
Abcd1	1.67634	7.87E-06	4.38E-07
9930012K	1.67598	0.013887	0.005724
Arhgap19	1.67497	0.017453	0.007486
Slc15a2	1.67416	0.001427	3.63E-04
Chsy1	1.67416	9.69E-04	2.27E-04
Mocs1	1.6731	0.00289	8.56E-04
Tmbim6	1.67137	4.15E-07	8.35E-09
Padi2	1.67123	0.014434	0.005983
Max	1.67111	2.13E-04	3.36E-05
Adamts4	1.67008	0.021287	0.009542
Mitf	1.66992	0.001659	4.38E-04
Grn	1.66852	0.001787	4.80E-04
St3gal4	1.6673	1.68E-04	2.47E-05
Pik3cd	1.66556	2.01E-04	3.11E-05
Smtm	1.66531	0.019624	0.008665
H3f3a	1.66446	1.96E-07	2.70E-09
Nme6	1.66022	0.007284	0.002622
Anapc13	1.65937	3.61E-06	1.64E-07
Taf10	1.65796	1.47E-05	1.04E-06
Atp11c	1.65727	0.038637	0.01943
Gm7488	1.65663	5.36E-04	1.09E-04
Kcnj10	1.6562	4.09E-05	3.95E-06
Akr1b10	1.65545	2.11E-05	1.71E-06
Bambi	1.65524	0.001797	4.84E-04
Flt1	1.6538	1.62E-05	1.21E-06
Cox20	1.65198	1.90E-06	7.15E-08
Pcsk6	1.65155	0.020013	0.008887
Cyb5a	1.65073	2.83E-05	2.48E-06
Lmo2	1.6502	1.50E-05	1.07E-06
Brip1	1.64951	0.031768	0.015382
Nkiras2	1.64924	2.28E-04	3.67E-05
Ubtd1	1.64843	4.57E-04	8.88E-05
Car5b	1.64802	0.00644	0.00226
Scrg1	1.64624	9.09E-04	2.10E-04
Fam221b	1.64594	3.79E-04	6.92E-05
Cdca8	1.64523	0.022172	0.010025
Kcnk13	1.64329	0.044641	0.023014
Cercam	1.6429	0.032643	0.015877
Mvb12a	1.64156	3.77E-04	6.87E-05
Phactr2	1.64006	0.011079	0.004361

Fam96b	1.63996	8.35E-06	4.77E-07
Pnrc2	1.63957	3.18E-06	1.37E-07
Rpl28	1.63949	2.81E-06	1.18E-07
Pxn	1.63937	5.38E-04	1.09E-04
H6pd	1.63848	4.82E-04	9.49E-05
Pfkfb3	1.63708	1.51E-05	1.09E-06
Gusb	1.63576	3.94E-05	3.78E-06
Tmem198	1.63539	0.00644	0.002261
Thsd1	1.63312	0.041999	0.021417
Rgcc	1.63185	4.98E-04	9.89E-05
Anln	1.63098	0.02675	0.012511
Polr2k	1.62874	6.14E-05	6.64E-06
Sntb1	1.62679	0.029427	0.014024
Bola3	1.62543	8.71E-06	5.05E-07
Nkx6-2	1.62522	0.005926	0.00204
Tmem69	1.62422	1.56E-04	2.24E-05
Nos3	1.62416	6.00E-04	1.26E-04
Stk24	1.62393	2.86E-04	4.89E-05
Rpl26	1.62301	2.64E-07	4.38E-09
Fibin	1.62241	0.091185	0.054349
Prdx5	1.62239	2.64E-04	4.42E-05
Fau	1.62171	2.21E-06	8.77E-08
Btg2	1.61834	5.63E-04	1.16E-04
Nkx2-2	1.61767	0.029882	0.014286
Gjb1	1.61629	0.007663	0.002785
Hist1h1d	1.61542	0.052005	0.027735
Gm6169	1.61406	0.089949	0.053488
Gstm1	1.61356	7.14E-06	3.88E-07
Kcnmb1	1.61294	0.022247	0.010068
Dbx2	1.6128	0.004339	0.001403
Nubp2	1.6126	1.55E-04	2.20E-05
Pcif1	1.61257	2.17E-04	3.43E-05
Rps6	1.61237	2.32E-07	3.55E-09
Myh9	1.61186	4.41E-05	4.38E-06
Arg2	1.61181	0.028208	0.013314
Tmem238	1.61125	0.003376	0.001034
Leprot	1.61069	3.26E-04	5.76E-05
Exosc5	1.61008	3.71E-05	3.50E-06
Rpa3	1.60983	1.14E-05	7.41E-07
Ernm	1.60787	0.001515	3.91E-04
Vkorc1	1.60464	2.57E-05	2.18E-06
Gm29013	1.60417	0.027198	0.012762
RP23-47K	1.60259	0.024599	0.01133
Mapkapk2	1.60026	1.76E-06	6.35E-08

Ceacam1	1.59957	0.047982	0.025088
Arhgef26	1.59946	0.028766	0.013634
Npc1	1.59895	1.56E-05	1.14E-06
1810022K	1.59824	1.06E-05	6.69E-07
Rpl21	1.59654	1.31E-06	4.15E-08
Fbxw17	1.5964	1.60E-04	2.31E-05
Gm10163	1.59589	5.45E-04	1.11E-04
Timm17b	1.59586	6.25E-05	6.79E-06
Btd	1.59523	6.49E-04	1.38E-04
C1qtnf1	1.59327	0.053623	0.028739
Pmepa1	1.59261	4.59E-04	8.93E-05
Capza1	1.5923	3.00E-06	1.28E-07
Slc38a3	1.59197	1.57E-04	2.26E-05
Actb	1.59135	1.55E-07	1.87E-09
Ctbs	1.59082	0.001795	4.83E-04
Polr2f	1.59014	0.001571	4.09E-04
Gpx4	1.58961	6.56E-05	7.28E-06
Mrpl23-ps	1.5874	4.49E-05	4.48E-06
Hyal1	1.58729	2.29E-04	3.70E-05
Tmem194	1.58591	0.057438	0.031233
Tmsb15b2	1.58538	0.019124	0.008394
Usb1	1.58372	1.16E-04	1.53E-05
Fanca	1.58212	0.039363	0.019849
Rpl19	1.58037	3.76E-07	7.36E-09
Gm14446	1.57998	0.001718	4.57E-04
Bcl7c	1.57911	1.39E-06	4.53E-08
Kcne4	1.57892	0.089201	0.052981
Ppfbp2	1.5789	0.00943	0.003584
Dazap2	1.57804	1.39E-06	4.53E-08
Rgs10	1.57615	7.47E-04	1.65E-04
3110062M	1.57527	0.001508	3.88E-04
Slc26a2	1.57475	0.002755	8.06E-04
Heg1	1.57433	4.32E-05	4.26E-06
Ampd3	1.57418	0.001158	2.83E-04
Churc1	1.57375	5.46E-07	1.25E-08
Emc8	1.57352	3.99E-06	1.88E-07
Rpl11	1.5729	2.88E-06	1.22E-07
Lrrc8c	1.57217	1.13E-04	1.46E-05
Zfp524	1.57213	0.012284	0.004935
Ybx1	1.57205	1.81E-06	6.66E-08
Fbxo30	1.57103	0.01553	0.006527
Rap1b	1.57043	1.01E-05	6.30E-07
Ednrb	1.57039	0.001258	3.12E-04
Ccdc13	1.56926	0.012312	0.00495

Mthfs1	1.56917	6.32E-05	6.90E-06
Mcc	1.56862	0.004713	0.001551
4931406P	1.56862	1.31E-04	1.79E-05
Gm21748	1.56726	0.001146	2.79E-04
Nlrc4	1.56458	0.04937	0.026019
Mbd2	1.56248	7.53E-05	8.78E-06
Tma7	1.56164	1.58E-05	1.17E-06
Sema4d	1.56094	2.55E-05	2.17E-06
Nrm	1.5592	0.008177	0.003021
Rps13-ps2	1.55872	2.92E-06	1.24E-07
Laptn4a	1.55837	3.62E-07	7.02E-09
Gimp	1.55557	1.52E-06	5.03E-08
Ndr1	1.55384	0.001685	4.47E-04
Rpl8	1.55316	5.48E-07	1.26E-08
Alox12	1.55263	0.099916	0.060493
Tbkb1	1.55126	0.003921	0.001244
Spg21	1.55071	1.62E-06	5.63E-08
Tram1	1.5494	1.11E-05	7.14E-07
Slc52a2	1.5492	0.002992	8.93E-04
Fam114a1	1.54735	0.002016	5.56E-04
Chchd1	1.54702	8.06E-05	9.54E-06
Rbks	1.54665	0.077812	0.044978
Ccnk	1.54633	0.008507	0.003168
Phf1	1.54615	0.009115	0.003443
Fibp	1.54555	0.00673	0.002381
Itga6	1.54534	2.46E-04	4.06E-05
Ehd1	1.54467	1.02E-05	6.35E-07
4933426N	1.54402	9.74E-05	1.21E-05
Irf2	1.54278	0.003537	0.001094
Spint2	1.54062	5.98E-04	1.25E-04
Ccdc63	1.53845	0.065336	0.036473
Zfp691	1.53748	0.012444	0.005013
Hebp1	1.53745	0.03492	0.017208
Cr1l	1.5373	6.16E-06	3.23E-07
Rpl10-ps1	1.53723	3.02E-04	5.22E-05
Rapgef3	1.53615	9.94E-04	2.35E-04
Hdac1	1.53603	6.71E-06	3.59E-07
Lbhd1	1.53574	7.51E-04	1.66E-04
Cdon	1.53512	0.071187	0.040562
Arhgef5	1.53455	0.012115	0.004853
Tma16	1.5343	8.85E-04	2.03E-04
Slc39a12	1.53411	0.025152	0.011623
Rps3a1	1.53258	1.90E-07	2.56E-09
Rpl38-ps2	1.53238	3.77E-05	3.56E-06

Rps25	1.53223	6.12E-04	1.29E-04
Mtus1	1.53106	2.95E-04	5.08E-05
Nek6	1.53092	5.40E-04	1.10E-04
Aprt	1.52949	3.98E-04	7.43E-05
Abcg2	1.52878	0.001437	3.66E-04
Rel	1.52832	0.010656	0.00416
Cenpw	1.5277	0.001671	4.42E-04
Rab37	1.52707	0.013694	0.005636
Fuca1	1.52533	5.76E-06	2.94E-07
Bmp2k	1.5232	0.055105	0.029683
Tmem164	1.52313	1.61E-04	2.34E-05
Fzd6	1.52284	0.008196	0.003031
Siva1	1.51838	7.58E-05	8.85E-06
Gsn	1.51808	0.002849	8.41E-04
Sun2	1.51806	0.007284	0.002623
Hif1a	1.51662	4.87E-05	5.01E-06
Gatm	1.51577	7.69E-05	9.00E-06
Atp1a2	1.51461	6.65E-05	7.41E-06
Tmem150	1.51314	0.001176	2.89E-04
Gadd45g	1.51257	2.98E-05	2.64E-06
Eya1	1.51135	0.025476	0.011798
Pgls	1.51127	5.31E-06	2.64E-07
Mrps18c	1.51056	2.77E-05	2.40E-06
Anapc10	1.51003	0.001262	3.13E-04
Smim11	1.50986	3.13E-05	2.81E-06
Zdhhc12	1.50937	4.01E-04	7.51E-05
Ankrd13a	1.50901	9.43E-06	5.67E-07
Fcf1	1.50824	7.71E-06	4.29E-07
Srsf9	1.50779	5.45E-06	2.73E-07
Gm10307	1.50775	0.041708	0.021248
Prkcdbp	1.50457	3.00E-05	2.66E-06
Baiap2l1	1.50255	0.02413	0.011079
Tomm7	1.50228	2.02E-05	1.62E-06
Tnnt1	1.50159	0.075614	0.043477
Zyx	1.49854	1.26E-04	1.69E-05
2-Sep	1.49825	7.34E-06	4.03E-07
Gm10282	1.49379	0.00342	0.001051
Btf3	1.49324	2.20E-07	3.16E-09
Prr11	1.49239	0.060633	0.033327
A530054K	1.49234	4.88E-04	9.63E-05
Rela	1.49052	4.61E-06	2.24E-07
Ppap2b	1.49032	2.69E-05	2.30E-06
Wbp1	1.48976	5.97E-06	3.09E-07
St6galnac	1.48901	0.035153	0.017351

Cln3	1.48886	5.92E-05	6.35E-06
Bri3	1.48658	1.95E-04	2.99E-05
Rpl23	1.48627	4.15E-07	8.38E-09
Cplx3	1.48519	0.048407	0.025354
Lgals8	1.4848	3.68E-05	3.46E-06
Sp1	1.48298	4.80E-04	9.43E-05
Trp53i11	1.48252	4.01E-04	7.50E-05
Sema3f	1.4813	0.015889	0.006704
Elovl5	1.48114	0.001003	2.38E-04
Chrnbl	1.48076	0.049844	0.026345
Cbs	1.4787	0.015227	0.006365
Fhdc1	1.4786	0.030894	0.014862
Tlcl1	1.47841	0.004997	0.001664
Ndufb4	1.47767	2.76E-04	4.68E-05
Tmem241	1.4774	0.023158	0.010559
2210016F	1.47581	8.26E-05	9.83E-06
Tbc1d4	1.47183	0.002591	7.47E-04
Rsu1	1.47107	4.80E-05	4.90E-06
H3f3b	1.47044	1.34E-07	1.40E-09
Rpl38	1.46983	2.33E-05	1.92E-06
Igfbp3	1.46951	2.46E-04	4.05E-05
Ttc39c	1.46904	0.001232	3.05E-04
Nipal1	1.46897	0.047562	0.024806
Id2	1.46868	1.88E-07	2.50E-09
5031420N	1.4675	2.65E-04	4.44E-05
Emd	1.46705	0.001655	4.36E-04
Pttg1ip	1.46699	1.48E-05	1.06E-06
1810009A	1.46405	1.52E-05	1.10E-06
Timm10b	1.46352	6.35E-05	6.95E-06
Sgpl1	1.46252	2.79E-05	2.43E-06
Atp5l	1.46108	3.87E-05	3.68E-06
Scara3	1.46088	8.74E-04	2.00E-04
Ubalcl2	1.46069	1.11E-04	1.43E-05
Tpt1	1.46064	1.09E-06	3.16E-08
Trp53inp1	1.45838	0.006967	0.002481
Mapk3	1.4581	1.21E-05	8.06E-07
Fgd5	1.45629	0.027003	0.012645
Rab8b	1.45608	7.52E-05	8.75E-06
Snrpf	1.4548	1.33E-05	9.18E-07
Ggact	1.45468	3.01E-04	5.21E-05
Rhbdl2	1.4522	0.086384	0.050946
Mettl20	1.45181	0.016755	0.007134
Stag1	1.45172	4.19E-04	7.93E-05
Pold1	1.45116	0.043738	0.02247

Anxa5	1.45057	7.14E-06	3.88E-07
mt-Nd3	1.44691	1.79E-05	1.37E-06
Hist1h2be	1.44628	0.010759	0.004209
Tgfa	1.44589	0.003953	0.001256
Man2b1	1.44128	3.19E-06	1.38E-07
Pi4k2b	1.44102	0.067054	0.03771
Thap3	1.43849	1.32E-04	1.81E-05
Gm12396	1.43719	1.01E-04	1.27E-05
5031414D	1.43706	0.081644	0.047617
Cdca4	1.43305	0.051594	0.027472
Ak2	1.43268	5.33E-06	2.66E-07
Dctpp1	1.43261	9.18E-04	2.13E-04
Galnt10	1.43144	0.005656	0.001934
Commd1	1.42673	1.52E-05	1.10E-06
Kctd12	1.42575	4.77E-04	9.35E-05
Coro1b	1.42492	9.73E-06	5.93E-07
Trmt112	1.42453	5.55E-06	2.79E-07
Pag1	1.42412	0.010082	0.003893
Fbxo6	1.42336	4.53E-05	4.54E-06
Cd248	1.4225	0.090255	0.053695
Sap30	1.42244	6.30E-04	1.33E-04
Ech1	1.42241	4.38E-06	2.10E-07
Hexa	1.4224	1.51E-06	5.00E-08
Mis18a	1.42229	0.017339	0.007433
Dram2	1.42142	4.49E-05	4.48E-06
Apeh	1.4214	6.59E-05	7.31E-06
Gng10	1.42101	9.00E-05	1.10E-05
Ndufa3	1.42076	1.08E-05	6.90E-07
3110007F	1.4193	0.015911	0.006715
Nab1	1.41862	1.68E-04	2.47E-05
Cxcl12	1.41811	6.89E-04	1.50E-04
Plekha2	1.41767	4.22E-04	8.00E-05
Psmb3	1.41757	2.16E-05	1.76E-06
Mthfd2	1.41686	1.71E-04	2.51E-05
Tacc3	1.41673	0.002695	7.83E-04
Rasl12	1.41583	0.08091	0.047134
Ccdc53	1.41567	3.95E-04	7.36E-05
Fmo1	1.41557	1.90E-05	1.49E-06
Gm10012	1.41514	0.002141	5.98E-04
Slc25a30	1.41388	0.040039	0.020242
Zfp467	1.4118	0.004353	0.001409
Mrps21	1.4116	1.10E-05	7.04E-07
Rnf149	1.40969	2.42E-04	3.95E-05
St5	1.40772	0.003582	0.001112

Dnajc24	1.40711	5.05E-04	1.01E-04
Erbp2ip	1.40489	2.25E-04	3.62E-05
Ppt2	1.4035	4.77E-04	9.35E-05
Epc1	1.40328	0.012623	0.0051
Acss1	1.40296	0.021824	0.009834
Gas1	1.40247	0.001797	4.84E-04
Thbd	1.40224	0.077997	0.045123
Arrdc1	1.40188	2.63E-04	4.40E-05
Gm10774	1.4017	0.026292	0.012244
Rhobtb1	1.40131	0.012947	0.005265
Twsg1	1.40081	6.31E-05	6.88E-06
Fabp5	1.40037	5.56E-04	1.14E-04
Slc25a35	1.40033	0.007839	0.002868
Col5a1	1.39955	0.029416	0.014017
Sema4a	1.39924	1.16E-04	1.54E-05
Cyp2j9	1.39889	0.036441	0.018101
Kif1c	1.39868	0.003084	9.25E-04
Tmem184	1.39857	0.001138	2.77E-04
Rpl36a1	1.39727	1.60E-06	5.48E-08
Zfp455	1.39708	0.050452	0.026712
Gm3244	1.39558	1.61E-04	2.33E-05
Ighm	1.39446	0.017453	0.007486
Pax6	1.39416	0.00979	0.003756
Slc25a37	1.39363	4.29E-04	8.17E-05
Prdm5	1.39136	0.064059	0.03561
Cmtm5	1.39103	0.002704	7.86E-04
Myom2	1.39077	0.076497	0.044048
Scand1	1.39047	8.13E-05	9.65E-06
Zfp97	1.39	0.021314	0.00956
Rep15	1.38973	0.006866	0.002441
Adipor2	1.38669	3.17E-05	2.86E-06
Serp1	1.38659	1.89E-05	1.48E-06
Nipsnap3t	1.3863	7.30E-04	1.61E-04
Psmb2	1.38423	3.77E-06	1.74E-07
1600002K	1.38404	0.002327	6.59E-04
G6pdx	1.38399	1.23E-05	8.26E-07
Ephx1	1.38194	0.023016	0.010486
2700094K	1.38093	3.97E-04	7.42E-05
Rnh1	1.38047	1.35E-05	9.32E-07
Dph3	1.3769	1.08E-05	6.88E-07
0610010K	1.37544	3.05E-05	2.73E-06
Lamtor4	1.37484	6.51E-05	7.18E-06
Krt7	1.37481	0.049506	0.026118
Stt3a	1.37474	4.24E-04	8.05E-05

Plekhj1	1.37285	1.09E-04	1.40E-05
Gulp1	1.37183	0.030714	0.014769
Gemin7	1.37031	1.93E-05	1.52E-06
Eif3f	1.36892	8.89E-06	5.19E-07
Arhgap31	1.36865	5.40E-04	1.10E-04
Thsd4	1.36861	0.064504	0.035897
Ilvbl	1.3681	0.002258	6.36E-04
9-Sep	1.36804	4.51E-06	2.18E-07
Car8	1.36773	0.05666	0.030696
Gm11434	1.36719	0.056825	0.030806
Atg4a	1.36684	0.053033	0.028364
Atp5e	1.3631	4.91E-05	5.07E-06
Plekha3	1.36278	5.78E-04	1.20E-04
Gm13092	1.36226	1.09E-04	1.40E-05
B3gnt9	1.36186	0.061431	0.033864
Zfp229	1.36164	0.036041	0.017855
Lamp1	1.36125	1.17E-06	3.47E-08
Fam189a2	1.36073	0.003569	0.001108
Pecam1	1.36045	3.88E-04	7.16E-05
P4hb	1.36038	1.57E-05	1.16E-06
Klf3	1.35884	3.93E-04	7.27E-05
Ccdc86	1.35736	1.30E-05	8.93E-07
Polk	1.3567	0.003555	0.001102
Hist1h1e	1.35524	0.04096	0.020808
Fcor	1.35373	0.032085	0.015559
Kxd1	1.35362	3.07E-05	2.75E-06
Pola2	1.35355	4.49E-04	8.67E-05
Fdx1	1.35186	1.40E-04	1.95E-05
Sike1	1.35151	8.73E-04	1.99E-04
Rsb1l1	1.35094	4.11E-04	7.73E-05
Gng2	1.34914	1.11E-04	1.43E-05
1700066B	1.34797	0.067747	0.038194
Adams2	1.34771	0.003632	0.001132
Mpv17l2	1.34728	2.95E-04	5.09E-05
Trp53	1.34692	1.24E-05	8.42E-07
Gpr37l1	1.34597	3.36E-05	3.10E-06
Snrpc	1.34596	2.19E-04	3.49E-05
Gm4617	1.34503	0.069994	0.039737
Gm10175	1.34411	1.60E-06	5.45E-08
Malsu1	1.34372	9.65E-04	2.26E-04
Plat	1.34328	0.000494	9.77E-05
Dusp5	1.34265	0.008196	0.003031
Nudt1	1.34035	0.005731	0.001966
Chic2	1.33951	6.71E-04	1.45E-04

Eci2	1.33928	6.36E-05	6.97E-06
Sap18	1.33834	2.05E-04	3.19E-05
Arhgef6	1.33816	0.002623	7.57E-04
Abca4	1.3371	0.092914	0.055598
Pts	1.33633	5.57E-05	5.92E-06
Irak2	1.33608	0.00721	0.002591
Foxr1	1.33288	0.063633	0.035316
Lims1	1.3325	1.66E-04	2.43E-05
Tmem128	1.33235	1.72E-05	1.29E-06
Snx9	1.32924	0.001869	5.08E-04
Nup37	1.3289	0.002694	7.82E-04
Mfsd1	1.32798	8.40E-05	1.00E-05
Shb	1.32455	0.024194	0.011111
Cd164	1.32362	3.05E-05	2.72E-06
Rpf1	1.32351	5.73E-04	1.19E-04
Mrps24	1.32242	2.96E-05	2.61E-06
Ptprz1	1.3222	0.001647	4.33E-04
Mettl23	1.32101	6.33E-06	3.34E-07
Tmed1	1.31951	9.06E-05	1.11E-05
Hadh	1.31872	0.007137	0.002561
Hist2h2be	1.3172	0.027846	0.01312
Chrdl1	1.31655	0.03262	0.015862
Bnip2	1.31642	3.09E-04	5.39E-05
Asah1	1.31406	7.08E-05	8.00E-06
Tbxas1	1.31252	0.073795	0.042293
Lpar1	1.31192	0.008874	0.003336
Rfc4	1.31108	0.006669	0.002353
Acnat1	1.31095	0.071541	0.040794
Isoc1	1.31056	2.85E-04	4.87E-05
Dbf4	1.31012	0.038046	0.019079
Sppl2a	1.30976	3.00E-04	5.19E-05
Rpl14	1.30881	7.08E-06	3.83E-07
Slc4a2	1.30617	4.28E-04	8.14E-05
Mterf1a	1.30535	0.04379	0.022506
Fbn1	1.30458	0.005299	0.001786
Vill	1.3043	0.009039	0.003408
Abcc4	1.30427	0.004271	0.001377
Ghr	1.30422	0.020101	0.008933
Gpx7	1.30328	0.004457	0.001451
Elf2	1.30299	3.20E-04	5.64E-05
Pkmyt1	1.30001	0.011537	0.004573
Nxt1	1.29991	2.82E-04	4.80E-05
Foxn2	1.2997	0.007841	0.002869
Lipe	1.29938	0.001095	2.64E-04

Magoh	1.29935	2.78E-05	2.42E-06
Mospd2	1.29893	0.004722	0.001555
Mafb	1.29873	1.99E-04	3.07E-05
Eif4e3	1.29854	5.01E-05	5.21E-06
Hmgn2	1.2976	5.93E-07	1.43E-08
Sox9	1.2967	4.21E-05	4.12E-06
Dnajc19	1.29595	1.08E-04	1.38E-05
Irf2bp2	1.29565	7.31E-05	8.39E-06
Uqcrb	1.29514	2.46E-05	2.05E-06
Gm29666	1.29492	9.11E-04	2.10E-04
Gldc	1.29458	0.057018	0.030946
Nudt22	1.29442	0.005539	0.001883
Sdpr	1.29323	0.013099	0.005343
Ndufa7	1.29294	2.42E-05	2.01E-06
Gm8113	1.29235	0.004347	0.001407
Pxmp4	1.29147	1.36E-04	1.88E-05
Tead2	1.29119	0.019314	0.008504
Ppard	1.29097	0.023057	0.010511
Arpc5	1.29069	1.22E-05	8.18E-07
Ccnd2	1.28934	3.30E-05	3.03E-06
Smpd2	1.28859	0.008989	0.003385
Mxd4	1.28857	8.73E-04	1.99E-04
Daxx	1.28808	0.001637	4.30E-04
S1pr1	1.28743	0.001609	4.21E-04
Acer2	1.28683	0.002659	7.71E-04
Slc46a3	1.28649	0.007644	0.002776
Cox7c	1.28551	1.86E-05	1.44E-06
Zfp710	1.28415	0.002526	7.25E-04
Dennd3	1.2827	0.06119	0.033686
Arf6	1.28215	1.06E-05	6.69E-07
Polr2i	1.28207	4.30E-04	8.21E-05
Esam	1.28205	2.46E-04	4.05E-05
Arhgap24	1.28097	0.070605	0.040148
Tpst2	1.28013	4.46E-04	8.58E-05
Myo10	1.27791	0.007801	0.002849
Gm10221	1.27655	9.39E-05	1.16E-05
Tnfrsf12a	1.27354	0.001178	2.89E-04
Manf	1.27347	3.50E-06	1.56E-07
Ctnnb2nl	1.27027	0.011625	0.004612
Lsm2	1.27023	4.21E-05	4.12E-06
Banf1	1.26905	1.51E-05	1.09E-06
Mcm2	1.26882	0.049467	0.026094
Cenpp	1.26879	0.091428	0.054547
Nos1	1.26844	0.042683	0.021842

Nfkbid	1.26821	0.018028	0.007781
Rspo3	1.26802	0.005539	0.001883
St3gal6	1.26741	9.66E-04	2.27E-04
Sf3b6	1.2674	3.29E-05	3.00E-06
Ptplb	1.26637	5.09E-04	1.02E-04
Mbnl1	1.26603	8.33E-06	4.74E-07
Mrpl17	1.26592	9.16E-05	1.13E-05
Emb	1.26474	6.46E-05	7.11E-06
Gal3st4	1.26234	0.022669	0.01029
Chpt1	1.25939	1.88E-04	2.84E-05
Lage3	1.25921	4.40E-04	8.44E-05
Slc26a6	1.25872	0.022832	0.010382
Ethe1	1.25789	0.00179	4.82E-04
Znrd1	1.25765	1.79E-04	2.68E-05
Akap5	1.25765	0.012596	0.005086
Ccl17	1.25711	0.012089	0.004839
Ddt	1.25706	1.16E-04	1.53E-05
Helb	1.25678	0.038687	0.019463
Bcl10	1.25668	0.036666	0.018241
Bcam	1.25568	0.005962	0.002054
Fmn12	1.25488	2.03E-04	3.14E-05
Pgap2	1.25437	5.14E-05	5.37E-06
1110059G	1.25431	0.001014	2.41E-04
Snrpb2	1.25112	4.47E-05	4.46E-06
Naa38	1.25006	1.36E-04	1.88E-05
Aspa	1.24711	0.016813	0.007161
Rnf114	1.2468	1.12E-05	7.24E-07
Lmnb1	1.24547	0.010309	0.003998
Crlf3	1.24527	0.001726	4.60E-04
Vat1	1.24457	0.016033	0.006778
Aph1c	1.2432	0.001761	4.71E-04
Trim26	1.24158	1.58E-04	2.28E-05
Ddx21	1.24108	3.88E-04	7.16E-05
Eif3k	1.24019	4.27E-05	4.19E-06
Nubp1	1.23941	3.02E-04	5.23E-05
Gadd45b	1.23937	6.04E-05	6.51E-06
Mplkip	1.23857	0.003959	0.001258
Ntn4	1.23835	0.013056	0.005325
Mcur1	1.23767	0.008775	0.003286
Prex1	1.2375	1.35E-04	1.86E-05
Crybg3	1.23687	0.018091	0.007824
Cebpz	1.23682	2.06E-04	3.21E-05
Mrpl14	1.23616	4.41E-05	4.38E-06
Orai3	1.2323	1.78E-04	2.65E-05

Arrb2	1.23222	8.38E-05	9.98E-06
Smad5	1.23181	0.00436	0.001413
Rap1a	1.23136	6.19E-04	1.30E-04
Vma21	1.23085	4.28E-05	4.20E-06
Arl10	1.23041	0.007418	0.00268
Med10	1.22954	3.25E-04	5.74E-05
D8Ert73f	1.22927	6.78E-05	7.59E-06
Rab8a	1.22919	2.28E-06	9.18E-08
Rgma	1.2285	0.017181	0.007349
Pde6a	1.22767	0.048735	0.025573
Meig1	1.22767	0.069168	0.039134
1810043H	1.22761	4.24E-04	8.06E-05
Isoc2a	1.22688	0.08665	0.051136
Neu3	1.22679	0.012296	0.004943
Itgav	1.22653	5.14E-04	1.03E-04
BC017643	1.22558	2.89E-04	4.96E-05
Ddx18	1.22536	1.60E-04	2.30E-05
Dgka	1.22458	0.061979	0.034256
Tipin	1.2243	3.70E-04	6.71E-05
Chchd5	1.22407	0.001827	4.95E-04
Gstm7	1.22392	0.001355	3.41E-04
Pigp	1.22237	2.64E-05	2.25E-06
Tnfrsf25	1.22149	0.022975	0.010463
Mcm4	1.22101	0.011822	0.00471
Pgpep1	1.2192	0.002631	7.60E-04
Samd1	1.21616	0.001305	3.25E-04
Zcchc9	1.21297	3.76E-04	6.86E-05
Smdt1	1.21286	8.66E-05	1.04E-05
Fbln7	1.21269	0.050407	0.026677
Adipor1	1.21178	3.73E-06	1.71E-07
Spsb1	1.21018	0.023394	0.010689
Nol7	1.20909	0.005252	0.001766
Ctdnep1	1.20781	1.37E-04	1.89E-05
Zfp865	1.20714	0.047562	0.024808
Rgs3	1.20566	2.30E-04	3.73E-05
Bola2	1.20524	3.37E-04	6.01E-05
Tle3	1.20417	9.09E-04	2.10E-04
Ptpn2	1.20299	1.08E-04	1.39E-05
Cd47	1.20274	1.84E-06	6.80E-08
Ubl5	1.20193	2.76E-05	2.39E-06
2610001J	1.20049	3.90E-05	3.72E-06
3-Mar	1.19805	0.040304	0.020402
Gm10275	1.19562	7.18E-06	3.93E-07
Nans	1.19551	0.001381	3.49E-04

Zbtb20	1.1954	0.003684	0.001152
Prickle3	1.19539	0.062581	0.03464
Abcb1b	1.19433	0.055193	0.029745
Arhgef40	1.19246	9.25E-04	2.15E-04
Med12	1.19038	5.61E-04	1.15E-04
Usp1	1.18738	0.003412	0.001048
Ttc7	1.18736	0.002754	8.06E-04
Ccdc141	1.18734	0.014195	0.005867
Nlr1x1	1.18675	0.024069	0.011044
Alg5	1.18649	3.99E-05	3.86E-06
Usp25	1.1862	2.77E-04	4.70E-05
Ovca2	1.18597	0.003373	0.001033
Rffl	1.18529	0.007056	0.002522
Enpp2	1.18524	0.048451	0.025384
Arhgap18	1.18475	0.099119	0.059921
Chmp4b	1.18448	2.89E-04	4.95E-05
Lxn	1.18413	4.53E-05	4.54E-06
Mad2l2	1.18109	0.001699	4.51E-04
Ier3ip1	1.18064	3.00E-04	5.19E-05
Romo1	1.18054	4.18E-05	4.07E-06
Rab11a	1.17954	2.96E-05	2.62E-06
4930453N	1.17923	1.67E-04	2.45E-05
Ctdsp2	1.17905	2.61E-04	4.35E-05
Sin3b	1.17832	2.82E-06	1.18E-07
Ube2i	1.17779	8.03E-06	4.49E-07
Gkap1	1.17684	6.78E-04	1.47E-04
Itm2b	1.17683	9.20E-07	2.54E-08
St6gal1	1.17669	0.004072	0.001301
Gmnn	1.1763	0.004183	0.001342
Parp11	1.17583	9.41E-04	2.19E-04
Tmem2	1.17507	0.001818	4.91E-04
Gm12338	1.17454	1.91E-05	1.49E-06
Ndufv3	1.17372	1.11E-04	1.43E-05
Rap2c	1.17293	0.00245	6.99E-04
Myo1c	1.17281	2.89E-04	4.95E-05
Ppp1r3c	1.17263	0.002209	6.20E-04
1810024B	1.1726	0.057483	0.03128
Galnt7	1.17118	0.003521	0.001089
Pigx	1.16943	0.001147	2.80E-04
Sox17	1.16859	0.047611	0.024852
Selm	1.1684	8.80E-04	2.02E-04
Snap23	1.16838	0.004047	0.001291
Oser1	1.16758	2.34E-04	3.80E-05
Lym2	1.16708	3.83E-05	3.64E-06

Mgat4a	1.16695	7.64E-04	1.70E-04
Asnsd1	1.16677	7.12E-04	1.55E-04
Sh2b3	1.16676	6.19E-04	1.30E-04
Pak2	1.16516	0.0013	3.24E-04
Tbca	1.16447	2.81E-04	4.77E-05
Micu2	1.16425	1.13E-04	1.47E-05
Ccdc167	1.16201	0.006152	0.002133
Polr2l	1.16142	2.84E-05	2.49E-06
Rbpj	1.1614	0.002276	6.43E-04
Rnf19b	1.16136	7.09E-05	8.03E-06
Phgdh	1.16119	0.002838	8.37E-04
Spata24	1.16071	0.065899	0.036872
Sypl	1.16056	4.78E-05	4.87E-06
Cers6	1.1593	0.007078	0.002534
M6pr	1.15854	6.10E-05	6.57E-06
Commd6	1.1581	3.38E-05	3.12E-06
Nsa2	1.15804	4.86E-04	9.59E-05
2610002Jl	1.15798	3.01E-05	2.67E-06
Raly	1.15773	0.030436	0.014608
9430038Ic	1.15751	0.004881	0.001617
Ripk2	1.15721	0.016876	0.007195
Polr1d	1.15692	1.35E-05	9.37E-07
Lrig1	1.15539	0.018789	0.008204
Pold2	1.15524	0.002083	5.78E-04
Arsg	1.15499	0.01483	0.006168
Gsta4	1.15427	5.73E-04	1.18E-04
Fxn	1.15378	0.004413	0.001433
Tceanc2	1.15316	0.045126	0.023314
Foxo1	1.15182	0.001138	2.77E-04
Ccdc71l	1.15095	0.003955	0.001257
Etfb	1.15027	4.51E-05	4.52E-06
Tmem192	1.14947	2.06E-05	1.66E-06
Rhoa	1.14817	2.24E-06	8.99E-08
Fam63a	1.14796	0.00156	4.05E-04
2310022B	1.14755	0.00588	0.002023
Cnpy2	1.14617	3.52E-05	3.28E-06
Tcp1l1l	1.14445	0.004807	0.001588
Samd14	1.14412	0.010158	0.003928
Exosc8	1.14245	7.08E-05	7.99E-06
Dock10	1.14235	0.007597	0.002754
Myo7a	1.14214	0.005712	0.001956
Rsph9	1.14046	0.002385	6.78E-04
Acsbg1	1.14003	0.003247	9.87E-04
Dhrs4	1.14002	0.007022	0.002507

Akap8	1.13999	0.02644	0.01233
Stag2	1.13948	0.009915	0.003817
Rnasel	1.13946	0.007227	0.002598
1110034G	1.13904	0.002838	8.37E-04
Pxdc1	1.13899	0.075568	0.043446
Rpl22l1	1.13894	3.75E-04	6.83E-05
Ptpn1	1.13884	5.01E-05	5.19E-06
Zfp598	1.13883	0.011401	0.004513
Papd4	1.13813	0.002797	8.22E-04
Wdr89	1.13795	0.001711	4.55E-04
Gm13340	1.13685	0.087186	0.051573
Ssr4	1.13563	2.00E-05	1.59E-06
Lrrc51	1.1354	0.013467	0.005525
Pgd	1.13523	5.37E-05	5.66E-06
Alkbh1	1.13513	0.002133	5.94E-04
Eif1b	1.13496	6.88E-04	1.49E-04
Myl12a	1.13494	0.039039	0.019664
Fam78a	1.13319	0.043032	0.022053
Psma7	1.13258	1.04E-05	6.53E-07
Mettl5	1.13235	0.008507	0.003168
Pid1	1.13051	6.34E-04	1.34E-04
Med28	1.13031	1.79E-05	1.37E-06
Pik3r6	1.13028	0.003947	0.001253
Nudt7	1.13026	0.023289	0.010633
Frg1	1.12981	7.06E-05	7.96E-06
Lamtor1	1.12959	2.51E-04	4.15E-05
1110012L	1.12741	0.007021	0.002506
Aida	1.1266	2.01E-04	3.10E-05
Rexo2	1.12613	2.81E-05	2.45E-06
Crtc3	1.12481	0.001096	2.65E-04
Bcl2	1.12381	0.001604	4.20E-04
Mrps36	1.1235	1.16E-04	1.52E-05
Swt1	1.12296	0.001639	4.30E-04
Ndufa1	1.12268	7.49E-05	8.69E-06
Gm9806	1.12254	0.057156	0.031044
Cited1	1.12208	0.071	0.040421
Gm20594	1.12203	8.16E-04	1.84E-04
Rrm1	1.12021	0.061271	0.033738
Smarcd2	1.12	2.33E-04	3.79E-05
Arpc2	1.11936	3.35E-06	1.47E-07
Fam129c	1.11886	0.088739	0.052651
Myeov2	1.11855	3.47E-05	3.22E-06
Slc50a1	1.11747	0.001647	4.33E-04
Atp6v1f	1.11486	2.04E-04	3.16E-05

Zbtb1	1.11469	0.001525	3.94E-04
Mad2l1	1.11354	0.005153	0.001728
Snrpd2	1.11266	4.80E-04	9.43E-05
Gtf2a2	1.11143	1.18E-04	1.55E-05
Atf7	1.11128	2.20E-04	3.51E-05
Gm28048	1.11083	0.004498	0.001467
Lsm6	1.11061	1.67E-04	2.45E-05
Phpt1	1.10867	1.52E-04	2.15E-05
Mylip	1.10779	0.004715	0.001552
Zmat5	1.10747	6.54E-04	1.39E-04
Rrp36	1.10739	0.001172	2.87E-04
2210013C	1.10677	4.81E-04	9.45E-05
Tmem138	1.10631	0.030058	0.014383
Tmed3	1.10627	7.11E-05	8.07E-06
Hnrnpl	1.10508	8.85E-04	2.03E-04
Tmem126	1.1047	2.18E-04	3.45E-05
P2rx4	1.10403	0.002268	6.40E-04
Cblb	1.10278	0.003166	9.56E-04
Dguok	1.10272	2.85E-04	4.86E-05
Galnt2	1.10208	6.31E-04	1.33E-04
Naga	1.10207	4.78E-04	9.38E-05
Kdelr1	1.10184	1.25E-04	1.68E-05
Bin3	1.10181	1.57E-04	2.25E-05
Dnajc15	1.09925	2.13E-04	3.35E-05
Bad	1.09918	7.94E-04	1.78E-04
Ttc9c	1.09793	2.65E-04	4.44E-05
Cox16	1.09745	5.15E-05	5.38E-06
Hepacam	1.09711	0.003684	0.001152
Bace2	1.09635	0.039192	0.019755
Ddit4l	1.09518	0.064733	0.036061
2310009B	1.09485	0.001164	2.85E-04
Mt3	1.09483	0.00104	2.49E-04
Vrk3	1.09445	0.002462	7.04E-04
Pld2	1.09268	0.042179	0.021526
Tmsb15l	1.09234	0.016514	0.007012
Fam110a	1.09102	0.018815	0.008218
Atp5g2	1.09055	3.94E-04	7.32E-05
Wtip	1.08992	0.011415	0.004519
Atl3	1.08974	0.005623	0.001919
Tmem255	1.08839	0.003084	9.25E-04
Gdf11	1.08778	0.05807	0.031657
Hyi	1.08764	0.00391	0.00124
Nfkbiz	1.08687	0.034821	0.017149
Ralb	1.08583	1.66E-04	2.43E-05

Hsd11b1	1.08523	0.01406	0.005804
Tmem261	1.08512	6.33E-04	1.34E-04
Tspan15	1.08506	0.013682	0.005628
Nxf1	1.08505	1.33E-04	1.83E-05
Mif	1.08423	3.05E-04	5.29E-05
Tbc1d8	1.08289	0.019078	0.008365
Pnrc1	1.08235	1.18E-05	7.74E-07
Ctsa	1.08231	4.41E-06	2.12E-07
Mog	1.08165	0.009572	0.003654
Stat5b	1.08084	0.00251	7.20E-04
Isoc2b	1.07928	0.014003	0.005778
Dbnidd2	1.07926	5.48E-05	5.81E-06
Wdfy2	1.07897	0.008263	0.003059
Traf2	1.07756	0.01236	0.004972
Mbd6	1.07704	0.004931	0.001636
Emp2	1.07691	0.056921	0.030873
15-Sep	1.07551	2.55E-06	1.05E-07
Cln6	1.0742	0.00295	8.77E-04
Iqcg	1.0735	0.073268	0.041935
Cnp	1.07327	0.009316	0.003535
Minos1	1.07258	7.55E-06	4.18E-07
Ctnna1	1.07243	4.23E-04	8.03E-05
Armc7	1.07199	0.018817	0.008222
Sik1	1.07198	0.075478	0.043389
Jam2	1.07195	0.012996	0.005293
Txnrd1	1.07047	0.001755	4.69E-04
D930015E	1.0699	0.001532	3.97E-04
Sys1	1.06952	5.56E-06	2.80E-07
Sptlc2	1.0695	0.001405	3.57E-04
Patl1	1.06949	0.009344	0.003547
Camk2d	1.06904	0.006419	0.002249
Eif3h	1.06819	1.17E-05	7.65E-07
Rcan3	1.06715	0.054715	0.029419
Fndc3b	1.06688	6.26E-04	1.32E-04
Oaz1	1.06551	9.27E-06	5.54E-07
AI413582	1.06456	0.001598	4.17E-04
Map4k4	1.06425	7.50E-04	1.66E-04
Ilk	1.06415	8.71E-05	1.05E-05
Qk	1.06398	1.89E-04	2.87E-05
Hnrnpf	1.06381	2.40E-05	2.00E-06
Vimp	1.06344	2.79E-05	2.43E-06
Gm8741	1.06205	0.017799	0.007662
Echs1	1.06105	1.27E-04	1.72E-05
Phka1	1.06002	0.036901	0.018378

Traf4	1.05966	0.036853	0.018351
Dcps	1.05832	0.013033	0.00531
Lman2	1.05788	4.89E-06	2.39E-07
Rbm43	1.05678	0.001421	3.61E-04
Pfdn5	1.05596	1.11E-05	7.15E-07
Sos2	1.05569	2.95E-04	5.08E-05
Eif1	1.0547	4.20E-06	1.99E-07
Lgmn	1.05459	2.88E-05	2.53E-06
Tank	1.05259	0.001924	5.25E-04
Elk4	1.05241	5.90E-04	1.23E-04
Mrps28	1.05232	6.94E-04	1.51E-04
Dhrs11	1.05192	0.007525	0.002724
Ccdc125	1.05175	0.059417	0.032527
Suv420h2	1.05023	0.010719	0.004188
Gm15500	1.04938	1.48E-05	1.06E-06
Arhgap17	1.04925	0.012952	0.00527
Lrch1	1.04839	0.024237	0.011138
Saysd1	1.04736	0.00262	7.56E-04
Lsm12	1.0446	8.30E-04	1.87E-04
Rgs19	1.04446	7.12E-04	1.55E-04
Sec11a	1.04428	7.51E-05	8.71E-06
Elof1	1.04386	8.88E-05	1.08E-05
Ccdc58	1.04317	0.004689	0.00154
Pafah1b3	1.04313	5.28E-04	1.07E-04
Tcf19	1.04311	0.085215	0.050107
Rer1	1.0421	1.31E-05	8.98E-07
Tmpo	1.04162	2.17E-04	3.42E-05
Pcna	1.03934	3.13E-04	5.48E-05
Adamtsl4	1.03928	0.026105	0.012129
Hus1	1.03645	0.010588	0.004126
Lym9	1.03613	0.003068	9.19E-04
Trip4	1.03537	0.004115	0.001316
Galns	1.03428	0.090625	0.053952
Ssh1	1.03426	0.008456	0.003145
Stard3nl	1.03295	2.37E-05	1.97E-06
Psen2	1.0329	0.001812	4.89E-04
Itpr2	1.03262	0.067705	0.038161
Psph	1.03207	0.004901	0.001625
Rps6-ps4	1.03147	6.75E-05	7.55E-06
Eif4ebp2	1.03023	0.002937	8.73E-04
Trpm2	1.03022	0.003226	9.79E-04
Hmgn1	1.02998	5.65E-06	2.87E-07
Npl	1.02979	0.088245	0.052321
Psma3	1.02953	4.11E-05	3.99E-06

Pdpf	1.02951	3.94E-05	3.79E-06
BC033916	1.02943	0.073715	0.042234
Mrps16	1.02868	0.012036	0.004813
Tiparp	1.0275	0.016891	0.007204
Atp7a	1.02747	0.060736	0.033409
Peli1	1.02738	7.43E-05	8.59E-06
Gm10094	1.02697	1.47E-04	2.06E-05
Efh1	1.02628	0.028789	0.013649
Eif4e2	1.02623	3.20E-04	5.65E-05
Haus7	1.02591	0.045248	0.023396
Mycbp	1.0254	6.62E-04	1.42E-04
Cox6a1	1.02424	1.38E-04	1.92E-05
Pan3	1.02332	0.013327	0.005455
mt-Atp6	1.02274	1.63E-04	2.38E-05
Slc16a6	1.02039	0.003252	9.90E-04
Zfp560	1.01967	0.015406	0.006463
Rlbp1	1.01811	0.040505	0.020537
Rpl4	1.01764	2.08E-06	8.14E-08
Atraid	1.0166	4.78E-05	4.88E-06
Exosc1	1.01647	8.10E-04	1.82E-04
Trna1ap	1.01642	0.002135	5.95E-04
Ndufa13	1.01588	7.00E-05	7.88E-06
Cox6b1	1.01586	2.21E-04	3.53E-05
Akr1b3	1.01569	4.95E-05	5.12E-06
Oaz1-ps	1.01429	2.15E-05	1.75E-06
Ski	1.01328	3.87E-04	7.14E-05
Atp5j2	1.01298	1.15E-04	1.51E-05
Sh3bp4	1.01294	0.05452	0.029296
Setd1b	1.01251	0.001755	4.69E-04
Immp1l	1.01249	2.31E-04	3.75E-05
Pstpip2	1.01239	0.019997	0.008872
mt-Co3	1.01014	2.86E-04	4.90E-05
Hsd17b10	1.00989	0.001515	3.91E-04
Klf6	1.00948	1.65E-04	2.41E-05
Cd81	1.00945	4.57E-05	4.59E-06
Itgb8	1.00934	0.004343	0.001405
Zfp87	1.00804	0.033128	0.01618
Adamts10	1.0078	0.010076	0.003889
Sf3b5	1.00758	2.81E-04	4.76E-05
Gbe1	1.00753	0.036943	0.018407
Marcksl1	1.00703	0.003821	0.001203
Tmem208	1.0065	2.87E-04	4.91E-05
Rp9	1.00641	2.13E-04	3.36E-05
Cdk4	1.00615	3.80E-04	6.98E-05

Ghdc	1.00385	0.07663	0.044141
Ccdc12	1.0032	1.98E-04	3.05E-05
Gltscr2	1.00243	0.00337	0.001032
Arhgap27	1.00226	0.015322	0.006419
Nadk	1.00188	2.52E-04	4.18E-05
Phf10	1.00177	0.001958	5.37E-04
Ramp1	1.0004	2.17E-04	3.44E-05

Table 2. Differentially expressed genes from *T. gondii* infected or injected neurons from primary neuron cultures. Values are Log2FC.

geneID	logFC	adj.P.Val	P.Value
Cplx2	-1.0031	0.043906	0.010574
Fabp3	-1.00475	0.00294	1.59E-04
Plcxd1	-1.00523	0.075002	0.022739
Prkce	-1.00539	0.02419	0.00446
Yjefn3	-1.00574	0.034287	0.007389
Fsd1	-1.00592	0.003016	1.65E-04
Sh3gl2	-1.00767	0.002053	8.45E-05
Synpr	-1.00794	0.08284	0.026577
Grasp	-1.00813	0.013529	0.001868
Serpini1	-1.00909	0.002182	9.44E-05
Hapln1	-1.01097	0.02109	0.003626
Lrrc16b	-1.01123	0.099409	0.034409
Jakmip1	-1.01152	0.033432	0.007085
Hmgcs1	-1.01249	0.00826	8.57E-04
Pcdha9	-1.01754	0.009949	0.001147
Slc12a5	-1.01757	0.025807	0.00488
Ache	-1.02047	0.091876	0.030665
Zfp653	-1.0213	0.022303	0.00393
Gabra5	-1.02397	0.006491	5.82E-04
mt-Co2	-1.02509	0.030158	0.006103
Dgkb	-1.02574	0.009044	9.93E-04
3/1/2023	-1.02818	0.042185	0.010021
Mien1	-1.0286	0.005871	4.93E-04
Pgbd5	-1.02923	0.049144	0.012284
Crmp1	-1.03096	0.002623	1.31E-04
Syt3	-1.03175	0.048468	0.012021
Pla2g4e	-1.03268	0.015956	0.002405
Zfp112	-1.0337	0.073656	0.022057
Strn	-1.03417	0.008036	8.19E-04
Id2	-1.03417	0.005238	4.07E-04
Prr7	-1.03798	0.006978	6.59E-04
Siah3	-1.04092	0.033658	0.007171
Rnf182	-1.04584	0.017338	0.002731
Haghl	-1.04941	0.021383	0.003694
Frmpd4	-1.04947	0.028306	0.005575
Sepw1	-1.05287	0.018596	0.003038
Eid2	-1.05483	0.001616	5.53E-05
Hypk	-1.05524	0.03038	0.006182
Zcchc18	-1.05551	0.022339	0.003946

Fam19a2	-1.0569	0.063238	0.017682
Tceal1	-1.06032	0.031316	0.006445
Inhbb	-1.06059	0.038934	0.008906
Foxo6	-1.06455	0.094999	0.032158
Zfp1	-1.06519	0.03025	0.006134
Cap2	-1.06561	0.08597	0.027939
Slc6a1	-1.06693	0.004192	2.85E-04
Trnp1	-1.06749	0.001444	4.38E-05
Sprn	-1.0675	0.059358	0.01612
Slc1a2	-1.06842	0.068138	0.019693
Gm996	-1.06942	0.021992	0.003841
Flot1	-1.07083	0.002428	1.15E-04
Sema4f	-1.07167	0.011856	0.001529
Pnma3	-1.0718	0.015087	0.002222
Matr3	-1.07221	0.027921	0.005467
Necab2	-1.07513	0.005337	4.21E-04
Kcnk9	-1.07519	0.033634	0.007156
Unc5a	-1.07621	0.031371	0.006461
Gria1	-1.07753	0.003308	1.92E-04
Kcna1	-1.07927	0.003983	2.65E-04
Vsnl1	-1.0834	0.032121	0.00671
Rasgef1a	-1.08437	0.029102	0.005806
Cox14	-1.08953	0.011728	0.001501
Jph4	-1.09196	0.018058	0.002898
Rwdd2a	-1.09482	0.048505	0.012037
Pnpla3	-1.0985	0.067334	0.019369
Kcns1	-1.10564	0.04206	0.009963
Tceal6	-1.10648	0.00655	5.96E-04
Dixdc1	-1.10795	0.018785	0.003081
C1qtnf4	-1.109	0.031742	0.006574
Tagln3	-1.1127	0.010061	0.001166
Grb14	-1.11324	0.090539	0.030023
Lmo2	-1.11922	0.086962	0.028368
Fam69b	-1.11996	0.00134	3.80E-05
Syndig1l	-1.1213	0.061301	0.016933
Gas7	-1.12307	0.01689	0.002623
Drc1	-1.12402	0.027687	0.005397
2010300Cc	-1.1322	0.061768	0.017124
Nsf	-1.13323	0.001676	5.97E-05
Gabrd	-1.13496	0.033546	0.007121
Hspa12a	-1.1366	0.030727	0.006293
Gpr61	-1.1394	0.018219	0.002941
Lingo1	-1.14157	0.052412	0.013472
Nme3	-1.14213	0.023251	0.004196

Dzank1	-1.14246	0.003839	2.48E-04
Has3	-1.14772	0.091219	0.030334
Elfn2	-1.14792	0.070947	0.020898
Cntfr	-1.14883	0.003161	1.78E-04
Pde9a	-1.14918	0.03833	0.008704
Fam213b	-1.14998	0.004799	3.55E-04
Gpr135	-1.15168	0.015169	0.002246
Gpr83	-1.15319	0.043891	0.010564
Ppapdc3	-1.15352	0.016433	0.002514
Rtn4rl1	-1.15448	0.01491	0.002181
Foxp4	-1.15508	0.004364	3.02E-04
Rit2	-1.15509	0.003881	2.56E-04
Klhl5	-1.15517	0.020157	0.003407
Golga7b	-1.15822	7.19E-04	1.19E-05
Ankrd34a	-1.16013	0.030429	0.006199
Adarb2	-1.16088	0.007759	7.73E-04
Cacybp	-1.16104	0.00455	3.29E-04
Sparcl1	-1.16396	0.010294	0.001222
Isyna1	-1.16504	0.013342	0.001831
Rcor2	-1.16588	0.033317	0.007055
Daam1	-1.16743	0.009897	0.001136
Coro1a	-1.16776	0.003638	2.26E-04
Al413582	-1.16819	0.004989	3.77E-04
Capn5	-1.16826	0.00373	2.37E-04
Thsd7b	-1.17009	0.093155	0.031266
Thrsp	-1.17395	0.091392	0.030429
Ndufaf3	-1.17693	0.003628	2.23E-04
Pnmal1	-1.17753	0.001877	7.32E-05
Calm2	-1.17843	0.003204	1.83E-04
Exog	-1.18213	0.087639	0.028671
Tubb4a	-1.18459	0.014992	0.002201
Cyhr1	-1.18481	0.001612	5.40E-05
Tmem240	-1.18936	0.006329	5.53E-04
Mycn	-1.19379	0.008791	9.45E-04
Pcdh12	-1.19431	0.047888	0.011832
Spock1	-1.19681	0.07422	0.02233
1110001J0	-1.19879	0.014319	0.002045
Syt13	-1.20093	0.060205	0.016486
Pnmal2	-1.20267	0.009587	0.001082
Cnih2	-1.20588	0.025886	0.004903
Mark3	-1.20619	0.001828	6.89E-05
Spns2	-1.21144	0.01616	0.002454
Lrtm2	-1.21178	0.079406	0.024789
Slc35f3	-1.212	0.072709	0.021687

Hist1h4h	-1.2171	0.055725	0.014779
Prmt8	-1.2262	0.0033	1.91E-04
Gjd2	-1.23664	0.003592	2.20E-04
Slc6a11	-1.23947	0.048635	0.012085
Adam11	-1.25091	0.001162	2.88E-05
Ttc9b	-1.2524	0.008373	8.76E-04
Grm4	-1.25443	0.04026	0.009351
1500009Cf	-1.25616	0.007966	8.05E-04
Ccdc184	-1.25689	0.006215	5.39E-04
Dynll1	-1.25738	0.001345	3.84E-05
Brdt	-1.2616	0.016186	0.002462
Sh3gl3	-1.27009	0.037921	0.008568
Alyref2	-1.27058	0.050302	0.012726
Rbfox3	-1.27109	0.086131	0.027998
D630023F1	-1.27327	0.096437	0.032805
Slc7a4	-1.27651	0.011585	0.001468
Dync1i1	-1.27702	9.24E-04	1.87E-05
Snca	-1.27712	0.00177	6.58E-05
Pcdha7	-1.27955	0.006597	6.01E-04
Actr3b	-1.28053	0.015592	0.002331
Neurog2	-1.28076	0.062246	0.017305
Cacna1h	-1.28529	0.005127	3.94E-04
Decr2	-1.28569	0.008029	8.17E-04
St6galnac5	-1.28621	0.011121	0.001375
Camkv	-1.28689	0.008279	8.60E-04
Rbm11	-1.28825	0.050561	0.01282
Krt10	-1.29238	0.033034	0.006972
Neurod2	-1.29463	0.057729	0.015477
Adcyap1r1	-1.29906	0.016786	0.002595
Pcdha4	-1.30216	0.002028	8.26E-05
Syndig1	-1.30648	0.065402	0.018569
Gm29216	-1.31259	0.001827	6.87E-05
Ggct	-1.31262	0.078495	0.02433
B3galt5	-1.32939	0.088178	0.028885
Ydjc	-1.33251	0.014244	0.002025
Dgkg	-1.33693	0.091219	0.030313
Lmo1	-1.33936	0.056145	0.014932
Sphkap	-1.34061	0.081865	0.026037
Fam131a	-1.34209	0.001947	7.74E-05
Amph	-1.35577	0.004788	3.53E-04
Sstr1	-1.36044	0.002423	1.14E-04
D130043K2	-1.36508	0.043867	0.010549
Clec11a	-1.36804	0.06725	0.019329
Gm20390	-1.38242	0.050747	0.012882

Ccdc85a	-1.38385	0.075582	0.023037
Vstm2l	-1.39239	0.012629	0.001682
Tmem196	-1.41738	0.098564	0.033982
Phyhip	-1.4312	0.033658	0.00717
Calb2	-1.44588	0.003471	2.09E-04
Gtf3c6	-1.45349	0.071474	0.021109
Kcnj9	-1.4567	0.078858	0.024527
Lrfr2	-1.46152	0.019588	0.003272
Tmsb15b2	-1.47379	0.070922	0.020881
Pnck	-1.47716	5.79E-04	6.96E-06
Mical2	-1.4793	0.011856	0.001527
Ajap1	-1.49378	0.01832	0.002977
Chst1	-1.49642	0.061449	0.016991
Cntn2	-1.4992	0.001645	5.72E-05
Rhbd1	-1.50089	0.0033	1.91E-04
Matk	-1.50239	0.018311	0.002969
Zbtb16	-1.50709	0.056095	0.014913
Prph	-1.51288	0.095633	0.032462
Sema7a	-1.51551	0.017898	0.002871
Cpne7	-1.52437	0.029718	0.005986
6330403A0	-1.53985	0.03339	0.007073
Sh2d5	-1.5417	0.014574	0.0021
Pde2a	-1.54348	0.049397	0.012404
Tmem191c	-1.54818	0.030513	0.006223
Neurod6	-1.55602	0.003742	2.39E-04
Spata2l	-1.55823	0.058077	0.015638
Slc22a17	-1.56019	0.019402	0.003224
Mbp	-1.56606	0.096902	0.033088
Tssc1	-1.5672	0.007121	6.84E-04
Adamts12	-1.58711	0.067904	0.019601
Gm12481	-1.60017	0.059944	0.016405
Cpne4	-1.60789	0.068705	0.019895
Rab40b	-1.61182	0.024751	0.004593
Nr4a1	-1.61632	0.002976	1.61E-04
Nos1	-1.61817	0.00348	2.11E-04
Arg2	-1.62078	0.048225	0.01194
Tpd52l1	-1.62083	0.037703	0.008497
Asic2	-1.62097	0.019953	0.003361
Idh3a	-1.62474	0.008866	9.63E-04
Kcnab1	-1.6279	0.010208	0.001195
Abca8a	-1.62918	0.038516	0.008766
Cidea	-1.63919	0.071474	0.02112
Hist4h4	-1.64594	0.068505	0.019829
Pnpla6	-1.66378	0.0612	0.016896

C2cd4b	-1.68406	0.008626	9.11E-04
1810041L1	-1.68751	0.061857	0.017157
Cacna1g	-1.69229	0.032884	0.006933
Lor	-1.75449	0.04712	0.011568
Chst8	-1.76514	0.057685	0.015461
Ntsr1	-1.77901	0.074108	0.022276
Bhlhe22	-1.8134	0.012395	0.001639
Lrrc10b	-1.81613	0.025536	0.004814
Tspan18	-1.83391	0.004402	3.07E-04
Lin7b	-1.84365	0.064926	0.018345
Cib2	-1.84502	0.031466	0.006487
Gm14685	-1.9278	0.025194	0.004731
Fam181a	-1.94992	0.05487	0.01443
1700001L1	-1.97693	0.052136	0.01337
Dak	-2.07533	0.037916	0.008564
Slc17a7	-2.10745	0.064161	0.018032
Slc8a2	-2.1117	0.052406	0.013461
Ehbp1l1	-2.14598	0.024973	0.004662
Crym	-2.19167	0.010992	0.001347
Sntg2	-2.24074	0.0156	0.002334
Hsd11b1	-2.26911	0.079707	0.025021
Gck	-2.41807	0.05966	0.016278
Kcnb1	-2.42563	0.094237	0.031819
Zfp958	-2.4443	0.06725	0.019324
Hbq1b	-2.45168	0.03468	0.007511
Grp	-2.4606	0.015093	0.002224
Nat14	-2.60218	0.016445	0.00252
Rprml	-2.60321	0.061322	0.016943
Myh1	-2.62886	0.038724	0.008844
Sstr3	-2.90764	0.028306	0.005574
Klk8	-3.02484	0.043822	0.010532
Hist1h2bg	-3.17647	0.053474	0.013871
Trim68	-3.45529	0.070798	0.020788
Npy2r	-3.52216	0.076475	0.023462
Slc4a1ap	-3.82455	0.05332	0.013815
Gm15801	-4.07748	0.007949	8.03E-04
Gm8783	-4.07748	0.007949	8.03E-04
Gm21541	-4.31711	0.035718	0.007869
Arhgap29	-4.33225	0.049599	0.012478
Rps12-ps3	-4.44711	0.078974	0.024606
Ccdc14	-4.86	0.001718	6.19E-05
Scyl1	-4.86879	0.056263	0.014982
Gnb5	-5.09333	0.005479	4.41E-04
Lrrc73	-5.18623	0.05526	0.01462

Ryr1	-5.18908	0.010248	0.001208
Gm14288	-5.2084	0.039025	0.008935
Htr3a	-5.21544	0.003741	2.38E-04
Gm3883	-5.32407	0.012675	0.001696
Gm28437	-8.40842	0.003042	1.67E-04
Gm12918	-8.8162	0.003094	1.71E-04

Table 3. Fourteen pathways shared in the top 50 enriched pathways of each condition (LCM or PNC).

ID	Descriptive	setSize	enrichment	NES	pvalue	p.adjust	qvalue	rank	leading_enrichment	core_enrichment	phenotype
ALTEMEIER_RE	ALTEMEIER	85	0.78907	1.93178	1.00E-10	3.14E-09	1.90E-09	1910	tags=68%	Ccl20/Ccl2	PN
BLANCO_MELO_BLANCO		85	0.76658	1.87674	1.00E-10	3.14E-09	1.90E-09	1801	tags=59%	Ccl20/Cxc	PN
BLANCO_MELO_BLANCO		197	0.73651	1.84691	1.00E-10	3.14E-09	1.90E-09	1919	tags=49%	Ccl20/Ifi2	PN
BLANCO_MELO_BLANCO		128	0.73122	1.8186	1.00E-10	3.14E-09	1.90E-09	1852	tags=52%	Ifi205/Cxc	PN
BLANCO_MELO_BLANCO		190	0.72766	1.82172	1.00E-10	3.14E-09	1.90E-09	2361	tags=57%	Ifi205/Ccl2	PN
ICHIBA_GRAFT_ICHIBA_C		92	0.75304	1.84849	1.00E-10	3.14E-09	1.90E-09	1994	tags=53%	Ifi205/Ccl2	PN
KEGG_CYTOKIN	KEGG_C	118	0.76012	1.88342	1.00E-10	3.14E-09	1.90E-09	2110	tags=58%	Ccl20/Tslp	PN
KIM_GLIS2_TAR	KIM_GLIS	67	0.817	1.9804	1.00E-10	3.14E-09	1.90E-09	1277	tags=67%	Ccl2/Cxcl1	PN
SANA_TNF_SIG	SANA_TN	64	0.80358	1.94508	1.00E-10	3.14E-09	1.90E-09	1129	tags=53%	Ccl20/Ccl2	PN
SEKI_INFLAMMA	SEKI_INF	73	0.81223	1.97639	1.00E-10	3.14E-09	1.90E-09	2029	tags=75%	Tslp/Ccl2/	PN
VERHAAK_AML_VERHAAI		117	0.72132	1.78761	1.00E-10	3.14E-09	1.90E-09	1900	tags=45%	Ccl20/Cxc	PN
VERHAAK_GLIO	VERHAAI	168	0.75708	1.89252	1.00E-10	3.14E-09	1.90E-09	2417	tags=69%	Cpq/S100	PN
WP_OVERVIEW_WP_OVE		38	0.84602	1.97127	1.00E-10	3.14E-09	1.90E-09	768	tags=55%	Ccl20/Tslp	PN
XIE_ST_HSC_S1	XIE_ST_I	125	0.73122	1.81727	1.00E-10	3.14E-09	1.90E-09	1885	tags=52%	Tnfsf18/C	PN
ALTEMEIER_RE	ALTEMEIER	111	0.85211	2.50343	1.00E-10	2.67E-09	1.65E-09	1333	tags=76%	Cxcl10/Ccl	LCM
BLANCO_MELO_BLANCO		95	0.78634	2.29179	1.00E-10	2.67E-09	1.65E-09	1574	tags=60%	Tnf/Epsti1	LCM
BLANCO_MELO_BLANCO		237	0.75356	2.29826	1.00E-10	2.67E-09	1.65E-09	1609	tags=54%	Ccl5/Cxcl1	LCM
BLANCO_MELO_BLANCO		158	0.80617	2.42776	1.00E-10	2.67E-09	1.65E-09	1614	tags=65%	Cxcl10/Ifi2	LCM
BLANCO_MELO_BLANCO		217	0.74854	2.28009	1.00E-10	2.67E-09	1.65E-09	1801	tags=55%	Cxcl10/Tn	LCM
ICHIBA_GRAFT_ICHIBA_C		108	0.85921	2.52457	1.00E-10	2.67E-09	1.65E-09	1603	tags=75%	Gimap4/P	LCM
KEGG_CYTOKIN	KEGG_C	149	0.80257	2.40724	1.00E-10	2.67E-09	1.65E-09	1593	tags=58%	Ccl5/Ifng/	LCM
KIM_GLIS2_TAR	KIM_GLIS	76	0.83859	2.41988	1.00E-10	2.67E-09	1.65E-09	1436	tags=71%	Ccl5/Cxcl1	LCM
SANA_TNF_SIG	SANA_TN	69	0.80939	2.29281	1.00E-10	2.67E-09	1.65E-09	1416	tags=59%	Ubd/Cxcl1	LCM
SEKI_INFLAMMA	SEKI_INF	61	0.82514	2.29763	1.00E-10	2.67E-09	1.65E-09	1677	tags=62%	Gbp8/Cxc	LCM
VERHAAK_AML_VERHAAI		129	0.78763	2.341	1.00E-10	2.67E-09	1.65E-09	1574	tags=57%	Cxcl10/Tn	LCM
VERHAAK_GLIO	VERHAAI	192	0.80115	2.43585	1.00E-10	2.67E-09	1.65E-09	1975	tags=72%	Lgals3/Plk	LCM
WP_OVERVIEW_WP_OVE		49	0.85292	2.32186	1.00E-10	2.67E-09	1.65E-09	1374	tags=65%	Ccl5/Ifng/	LCM
XIE_ST_HSC_S1	XIE_ST_I	140	0.76226	2.26615	1.00E-10	2.67E-09	1.65E-09	1800	tags=59%	Ccl5/Cxcl1	LCM

Table 4. Neuron-associated genes from pathway analysis across four datasets. Values are Log2FC.

gene	LCM	PN	WNV	Zika
Adcy8	-6.53885	-0.28112	-0.1	0.245
Ppfia3	-5.08691	-0.53323	0.145	0.261
ErbB4	-4.52953	-0.39083	-0.502	0.245
Ptprs	-4.19083	-0.1458	-0.294	0.0528
Rps6ka6	-3.69667	0.01125	0.0902	-0.0653
Trank1	-3.41728	-0.62875	-0.831	0.0718
Camk4	-2.80836	-1.01532	0.391	0.336
Syt9	-2.79457	0.26851	0.547	0.0792
Gabrg1	-2.75764	0.60955	0.575	0.32
Pacsin1	-2.47146	-0.95722	-0.533	0.164
Ppfia2	-2.45622	-0.34735	0.744	0.507
Gabra1	-2.41929	-0.30372	-0.331	-0.43
Clstn3	-2.4085	-0.69925	-0.42	0.00268
Gabrd	-2.39566	-1.13496	0.0858	-0.0542
Lin7a	-2.34678	-0.50681	-0.272	-0.433
Gabrb2	-2.30852	-0.7137	0.465	0.189
Flywch1	-2.25591	-0.07349	-0.288	-0.0842
Gad1	-2.23665	-0.61488	0.425	0.161
Dlgap2	-2.22818	-0.89186	-0.555	-0.539
Prkcg	-2.20828	-1.6511	-0.649	-0.266
Gabrg3	-2.16668	-0.02458	-0.106	-0.175
Slc18a1	-2.13103	0.823	0.0829	0.0833
Stx1a	-2.06323	-0.58613	-0.221	-0.0736
Lrfr1	-2.06189	-0.69	-0.38	-0.183
Syt10	-2.06012	-1.07246	0.891	0.889
Chgb	-2.03588	-0.45712	0.115	-0.134
Chn1	-2.03244	-1.23331	0.348	0.127
Homer1	-2.03092	-0.37852	0.588	0.33
Prkcb	-2.0285	-0.69528	-0.376	0.262
Ppfia4	2.01744	-0.56037	0.192	0.124
Snap25	-2.01343	-0.68681	-0.356	-0.25
Unc13a	-2.00003	-0.65431	-0.392	-0.651
Syp	-1.99897	-0.83516	-0.195	-0.169
Jakmip1	-1.98346	-1.01152	-0.381	-0.301
Prkar1b	-1.96156	-0.74847	-0.13	-0.18
Stxbp1	-1.93933	-0.68215	0.557	0.205
Gria4	-1.91786	-0.02869	0.332	0.386
Nbea	-1.90026	-0.48227	0.632	0.478
Il1rap	-1.88678	0.86344	1.07	-0.0442
Apba2	-1.8673	-0.6331	-0.284	0.153
Syn1	-1.85547	-0.52356	-0.47	-0.106
Rims1	-1.84206	-0.46468	-0.812	-0.372
Dlgap1	-1.8111	-0.61918	1.18	0.688
Ndr4	-1.80394	-0.71036	0.327	0.298
Camk1	-1.80165	-0.76629	0.118	0.118

Gabrg2	-1.79824	-0.41192	0.113	-0.256
Ptprn	-1.78964	-0.16348	-0.53	-0.307
Gabbr2	-1.77381	-0.88012	-0.632	-0.364
Slc32a1	-1.77354	-0.44441	-0.0307	-0.186
Slitrk3	-1.77264	-0.73496	-0.691	-0.155
Kif17	-1.76655	-0.68246	-0.535	-0.175
Slc17a7	-1.76183	-2.10745	-0.713	-0.648
Tubb2b	1.76154	-0.6043	0.0256	0.0643
Cplx1	-1.7589	-0.24495	0.177	0.0388
Cacng3	-1.75404	-0.25763	-0.122	0.0757
Grin2a	-1.75252		0.0404	0.00793
Nsf	-1.75025	-1.13323	-0.284	-0.102
Gabra3	-1.74779	-0.20405	0.379	-0.3
Actn2	-1.71457	0.10301	0.0832	-0.223
Il1rapl1	-1.70672	1.0747	-0.0956	-0.183
Rps6ka2	-1.70455	-0.60734		
Cacng8	-1.69189	-0.93249	-0.0369	-0.128
Grin2c	-1.65236		-0.439	-0.0959
Sh3gl2	-1.65013	-1.00767	0.473	0.368
Il1rapl2	-1.64427	0.28834	-0.429	-0.519
Egr1	-1.64256	0.86923	0.085	-0.211
Cx3cl1	-1.63423	0.20481	0.0314	-0.53
Atp6v1g2	-1.6225	-0.58802	-0.65	-0.405
Syt12	-1.62034	1.06405	-0.245	0.0514
Syn3	-1.61963	-0.30387	0.925	0.933
Syt1	-1.59782	-0.63778	-0.308	0.357
Camk2b	-1.5871	-0.9822	-0.345	0.234
Mapt	-1.57845	-0.48637	-0.456	0.338
Gria2	-1.5766	-0.62714	-0.368	0.123
Tuba8	-1.57385	0.31583	-0.0665	0.0215
Tuba4a	-1.56032	-0.83216	-0.523	-0.289
Tspan7	-1.54021	-0.45751	-0.0424	-0.115
Prkab2	-1.51449	-0.38656	-0.193	-0.0472
Napb	-1.48837	-0.6978	0.265	0.211
Prkaa1	-1.48543		0.17	-0.138
Lrrtm4	-1.48362	-0.83219	0.149	0.29
Cplx3	1.48327	-1.35659	-0.465	-0.0776
Kifc2	-1.48238	-0.74322	-0.498	-0.209
Homer2	-1.47741	-0.9637	-0.323	-0.0924
Ndfip1	-1.47149	0.12606	0.272	-0.215
Chst1	-1.45679	-1.49642	-0.0627	-0.0269
Mapk3	1.45518	-0.34158	-0.455	0.0387
Camkk2	-1.45022	-0.47716	0.208	0.437
Gabra4	-1.44551	-0.35773	-0.0321	-0.0103
Ryr2	-1.43378	-0.95645	0.288	0.356
Slitrk5	-1.43221	-0.33221	-0.462	-0.278
Dnm1	-1.4246	-0.87093	-0.324	-0.241
Tubb4a	-1.41646	-1.18459	-0.38	0.062
Rab3a	-1.41121	-0.82976	0.127	0.054

Pick1	-1.41086	-0.30272	-0.419	0.0535
Lrrtm3	-1.40055	-0.2278	0.438	0.413
Gria3	-1.39025	0.63754	0.248	0.294
Slc6a1	-1.36382	-1.06693	0.454	0.322
Ywhag	-1.3522	-0.43525	0.383	0.309
Cplx2	-1.3497	-1.0031	-0.488	-0.303
Snrpn	-1.33637	-0.65109	0.0636	-0.0385
Grin1	-1.32786	-0.79947	-0.177	-0.153
Vamp2	-1.32525	-0.21201	-0.0767	0.16
Gabrb1	-1.32248	-0.62374	-0.0638	0.192
Lrp11	-1.29949	-0.56252	0.205	0.0581
Dpp6	-1.29927	-0.87715	0.425	0.667
Slitrk4	-1.29863	0.22888	0.228	-0.108
Prkar2b	-1.29635	-0.62409	0.374	0.338
Ntrk3	-1.28374	-0.42905	-0.225	-0.0907
Rtn1	-1.27209	-0.69982	-0.257	-0.166
Gls2	-1.27158	0.12136	-0.0719	0.15
Myo5a	-1.26901	0.15112	-0.0821	-0.0652
Slc1a1	-1.26175	-0.86392	0.231	0.11
Dlgap3	-1.25722	-0.49896	-0.104	-0.243
Nlgn1	-1.24728	-0.88111	1.16	0.632
Slitrk1	-1.22704	-0.27533	0.446	0.306
Rtn3	-1.22612	-0.52936	-0.417	-0.118
Ap2m1	-1.22584	-0.66793	-0.829	-0.347
Gria1	-1.21972	-1.07753	0.39	0.281
Rasgrf1	-1.21785	-0.36294	0.541	-0.439
Map2k4	-1.21494	-0.39249	0.304	0.105
Ptprd	-1.21134	-0.21291	0.464	0.612
Grm1	-1.20685	-0.60057	-0.0224	-0.128
Ap2a1	-1.20481	-0.44484	-0.285	-0.151
Grin2d	-1.19378	-0.65078	0.267	-0.0411
Abat	-1.18653	-0.24535	0.52	0.331
Nrxn3	-1.18005	-0.37173	-0.373	-0.0823
Hspa8	-1.17501	-0.49546	0.134	0.247
Rab6a	-1.17001	-0.5682	0.253	-0.0869
Gabra5	-1.16862	-1.02397	-0.544	-0.514
Gabarapl1	-1.15272	-0.36869	0.131	0.0509
Dnajc5	-1.14222	-0.37192	-0.369	-0.266
Reps2	-1.1353	-0.92893	-0.0392	0.15
Begain	-1.13298	-0.48094		
Gabrb3	-1.12921	-0.7472	-0.442	-0.237
Faim2	-1.11219	-1.02026	-0.461	-0.701
Shank2	-1.10782	-0.7629	0.144	0.202
Nsg2	-1.10345	-0.91687	0.199	0.0808
Tubb2a	-1.09026	-0.93838	-0.491	0.0568
Prkacb	-1.08279	-0.3245	0.295	0.213
Nefl	-1.07813	-0.36779	-0.706	-0.807
Syt7	-1.07411	-0.96347	-0.641	-0.57
Syngr3	-1.06166	-0.74902	-0.287	-0.33

Prkaa2	-1.0445	-0.18035	0.481	-0.0242
Kras	-1.04171	-0.03985	-0.19	-0.152
Nrxn1	-1.03871	-0.56724	-0.432	0.378
Unc80	-1.03186	-0.24111	-0.565	-0.56
Disp2	-1.02696	-0.67822	0.278	0.345
Syt2	-1.02478	0.30137	-0.102	0.406
NIgn3	-1.0194	-0.52002	0.278	0.0328
Uchl1	-1.00642	-0.56007	-0.178	-0.166
Stx1b	-1.0021	-0.61518	-0.245	-0.12
Dlg3	-0.99861	-0.89584	0.296	0.148
Cltc	-0.99233	-0.3874	-0.138	-0.049
Camk2a	-0.98934	-1.58919	0.398	0.608
Cyfp2	-0.98842	-0.4696	-0.602	0.205
Lrtn4	-0.98732	-0.27954	-0.486	-0.283
Fbxw5	-0.98072	-0.48196	-0.751	-0.271
Slc38a1	-0.97907	0.29776	-0.191	-0.158
Gpr162	-0.97574	-0.84842	-0.121	-0.196
Dlg4	-0.96553	-0.53307	0.152	-0.104
Calm2	-0.9466	-1.17843	-0.0465	-0.137
Sipa1l1	-0.93544	-0.8155	0.668	0.405
Prkaca	-0.93297	-0.18802	-0.249	-0.128
Prkar1a	-0.92934	-0.3381	-0.0678	-0.122
Napa	-0.92685	-0.26507	-0.283	-0.303
Pdpk1	-0.91446	-0.30294	-0.333	-0.279
Bex2	-0.90997	-0.84492	-0.0561	-0.212
Gap43	-0.89498	-0.74523	-0.102	-0.0848
Syn2	-0.89447	0.11423	0.658	0.291
Gabbr1	-0.89274	-0.69354	-0.522	-0.296
Grip1	-0.86651	-0.15758	0.288	0.273
Cask	-0.85875	0.12507	0.51	0.273
Cacna1a	-0.85147	-0.19281	-0.802	-0.517
Prkag2	-0.83507	-0.31665	0.127	0.12
Camk2g	-0.83506	-0.47944	0.275	0.191
Adcy1	-0.83085	-0.75003	0.411	-0.19
Tubb4b	-0.82538	0.2101	-0.17	0.0369
Slc22a17	-0.80413	-1.56019	-0.639	-0.328
Unc13b	-0.79992	0.24274	-0.536	-0.16
Ppm1e	-0.78801	-0.78436	0.651	0.345
Tubb3	-0.78498	-0.5394	0.043	0.0964
Git1	-0.76875	-0.2169	-0.046	-0.0009
Flot1	-0.7686	-1.07083	-0.434	-0.145
Map2k1	-0.7607	-0.73081	0.852	0.252
Dnm1l	-0.75894	-0.37634	0.23	0.276
Cacng2	-0.75735	-0.7325	0.523	0.188
Slc6a11	0.75069	-1.23947	-0.632	-0.219
Ap2b1	-0.75069	-0.52961	-0.136	0.0991
Ap2a2	-0.74855	-0.31569	-0.26	0.145
Grin2b	-0.73932	-0.52198	-0.461	-0.331
Lin7b	-0.72433	-1.84365	0.0371	-0.08

Dnm3	-0.7127	-0.08321	0.404	0.135
Nrxn2	-0.69387	-0.89814	-0.572	0.0184
Nrgn	-0.67149	-1.23676	-0.0102	0.411
Grm5	-0.64183	-0.56546	0.587	0.561
Stx2	0.6385	-0.43331	0.278	0.0311
Slc25a4	-0.59891	-0.64105	-0.109	-0.0572
Gphn	-0.59675	-0.34766	-0.524	-0.162
Hras	-0.59411	-0.31942	-0.147	-0.0335
Gad2	-0.59287	-0.39818	-0.0169	-0.163
Flot2	-0.56312	-0.75897	-0.11	-0.0167
Mapk1	-0.54284	-0.52192	0.629	0.114
Lrrtm1	-0.53804	-0.97369	-0.489	0.214
Lrfr3	-0.50324	-0.54613	-0.0662	-0.0333
Unc13c	-0.50121	-0.52316	-0.0313	-0.175
Slc1a2	-0.49465	-1.06842	0.503	0.277
Gls	-0.49095	-0.38568	0.701	0.435
Dlg2	-0.48058	-0.75134	0.425	0.462
Cacna1b	-0.47101	-0.38116	-0.386	-0.136
Apba1	-0.4253	-0.42575	0.131	-0.0872
Lrfr2	-0.37114	-1.46152	0.297	0.299
Calm1	-0.36073	-0.7775	0.44	0.366
Lrrc4b	-0.3433	-0.9065	0.0534	-0.0968
Lin7c	0.34285	-0.485	0.277	0.0708
Rasgrf2	0.33889	-0.95055	0.159	0.129
Shank1	-0.33546	-0.49945	-0.337	-0.229
Prkca	-0.33442	-0.65631	-0.227	-0.211
Arhgef7	-0.32199	-0.42945	0.556	0.447
Ap2s1	0.24594	-0.53043	-0.223	0.0405
Camk1	-0.23297	-0.44374	-0.348	-0.0908
Tuba1a	-0.18592	-0.64041	0.262	0.0328
Arl6ip5	0.17626	-0.49905	0.0943	0.0949
Park7	0.14319	-0.60186	-0.0996	-0.0461
Clta	-0.05793	-0.50291	-0.214	-0.143
Slc22a3		-1.15673		
Gabra2		-0.70506	-0.358	0.391
Gabrq		-0.52311		
Gabre		-0.34939	-0.268	-0.149
Kcnk5	6.85312	6.28904	-0.526	-0.22
Kcnk4	-4.58757	-1.59691	-0.593	-0.144
Kcnk7	4.25346		-0.396	0.205
Kcnk10	-2.41963	1.51581	0.329	0.142
Kcnk12	-2.18237	-0.70662	-0.191	-0.085
Kcnk13	1.63901	-0.56888	-0.487	-0.128
Kcnk9	-1.43639	-1.07519		
Kcnk6	1.00018	0.85483	-0.447	-0.147
Kcnk1	-0.92823	-0.01632	0.175	-0.114
Kcnk3	-0.86445	-0.81069	-0.286	-0.101
Tmem175	-0.64291	-0.05578	-0.245	-0.102
Kcnk2	-0.57027	0.3158	-0.116	0.119