

## Supplementary Figure legends

**Supplementary Figure 1. Increased abundance of CCR2+ macrophages is detected in the post-IR myocardium.** **A)** Flow gating strategy for identification of CCR2+ and CCR2- macrophages. **B, C)** Quantification of CCR2+ macrophages at 4 days (B) or 7 days (C) post-IR. N=3-6/group. Means and standard error are shown on each graph. Student's t-test, \*p<0.05, \*\*p<0.01

**Supplementary Figure 2. Hypoxia/reoxygenation impairs autophagic flux in peritoneal macrophages.** **A)** Western blots in peritoneal macrophages isolated from control mice treated with normoxia or hypoxia (1% O<sub>2</sub>) for 16 hours followed by reoxygenation for 8 hours in the presence of Bafilomycin A1 (200 nM for 2 hours) or diluent (vehicle) followed by (B) quantification of protein in (A). Means and standard error are shown on each graph. Student's t-test, \*p<0.05

**Supplementary Figure 3. TFEB upregulates autophagy and lysosomal biogenesis in peritoneal macrophages.** **A)** Western blots in peritoneal macrophages isolated from control vs M $\phi$ -TFEB mice followed by **B-F)** quantification of proteins in A. N=3/group. Student's t-test \*p<0.05

**Supplementary Figure 4. Absolute circulating monocyte number (A) and percentage (B) in control vs M $\phi$ -TFEB mice.** Control mice (n=8) versus M $\phi$ -TFEB (n=11). Means and standard error are shown in each graph, Student's t-test, p-value's shown on graph.

**Supplementary Figure 5.** Principal component analysis using all detected mRNAs in macrophages control (n=5) versus M $\phi$ -TFEB (n=4) mice, flow-sorted into CCR2+ and CCR2- populations. Ellipsoids represent 2 standard deviations.

## Supplementary Methods

**RNA Sequencing and Analysis:** Samples were prepared according to library kit manufacturer's protocol, indexed, pooled, and sequenced on an Illumina HiSeq. Basecalls and de-multiplexing were performed with Illumina's bcl2fastq software and a custom python de-multiplexing program with a maximum of one mismatch in the indexing read. RNA-seq reads were then aligned to the Ensembl release 76 top-level assembly with STAR version 2.0.4b<sup>1</sup>. Gene counts were derived from the number of uniquely aligned unambiguous reads by Subread:featureCount version 1.4.5<sup>2</sup>. Isoform expression of known Ensembl transcripts were estimated with Sailfish version 0.6.13<sup>3</sup>. Sequencing performance was assessed for the total number of aligned reads, total number of uniquely aligned reads, and features detected. The ribosomal fraction, known junction saturation, and read distribution over known gene models were quantified with RSeQC version 2.3<sup>4</sup>.

All gene counts were then imported into the R/Bioconductor package EdgeR<sup>5</sup> and TMM normalization size factors were calculated to adjust for samples for differences in library size. Ribosomal genes and genes not expressed in the smallest group size minus one samples greater than one count-per-million were excluded from further analysis. The TMM size factors and the matrix of counts were then imported into the R/Bioconductor package Limma<sup>6</sup>. Weighted likelihoods based on the observed mean-variance relationship of every gene and sample were then calculated for all samples with the voomWithQualityWeights<sup>7</sup>. The performance of all genes was assessed with plots of the residual standard deviation of every gene to their average log-count with a robustly fitted trend line of the residuals. Differential expression analysis was then performed to analyze for differences between conditions and the results were filtered for only those genes with Benjamini-Hochberg false-discovery rate adjusted p-values less than or equal to 0.02.

For each contrast extracted with Limma, global perturbations in known Gene Ontology (GO) terms and KEGG pathways were detected using the R/Bioconductor package GAGE<sup>8</sup> to test for changes

in expression of the reported log 2 fold-changes reported by Limma in each term versus the background log 2 fold-changes of all genes found outside the respective term. The R/Bioconductor package heatmap3<sup>9</sup> and Pathview<sup>10</sup> was used to display heatmaps or annotated KEGG graphs across groups of samples for each GO term or KEGG pathway (respectively) with a Benjamini-Hochberg false-discovery rate adjusted p-value less than or equal to 0.05. Heatmaps and PCA plots were prepared using Partek Genomics Suite 7.0 (Partek, St Louis, MO). Unsupervised hierarchical clustering with Euclidean distance, average linkage, was used for the heatmaps.

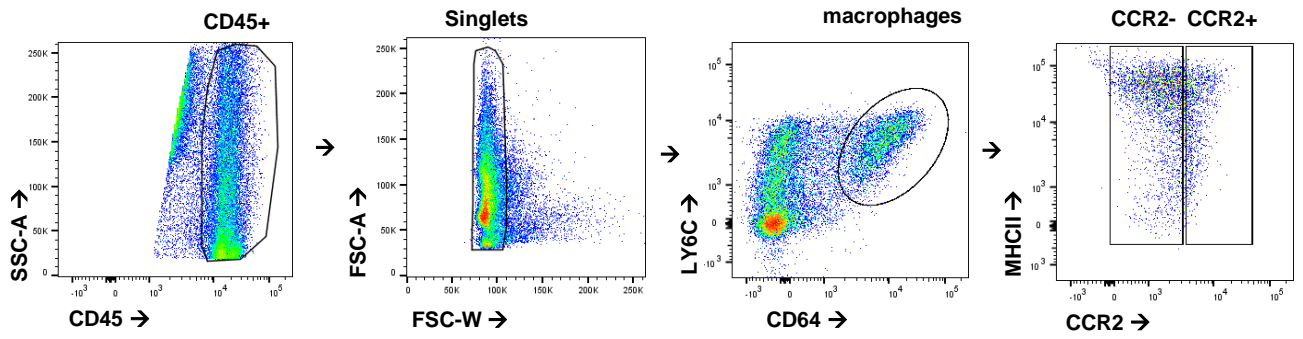
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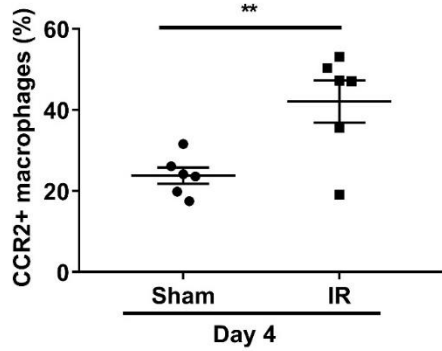
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A

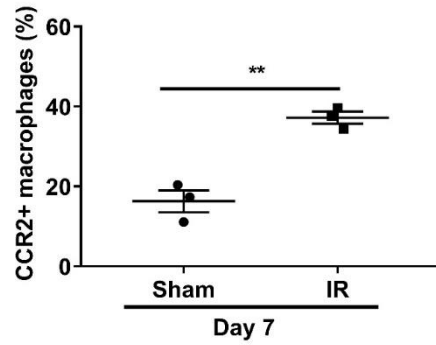
# Gating Strategy



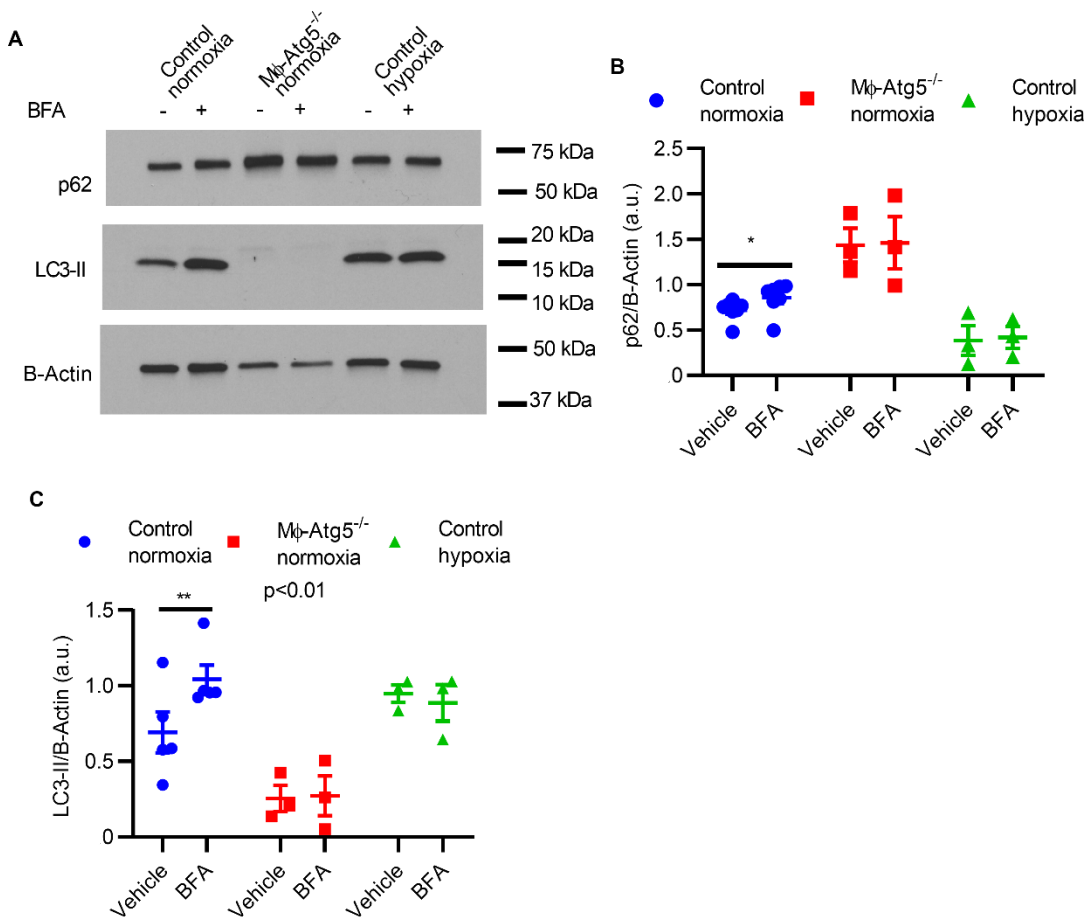
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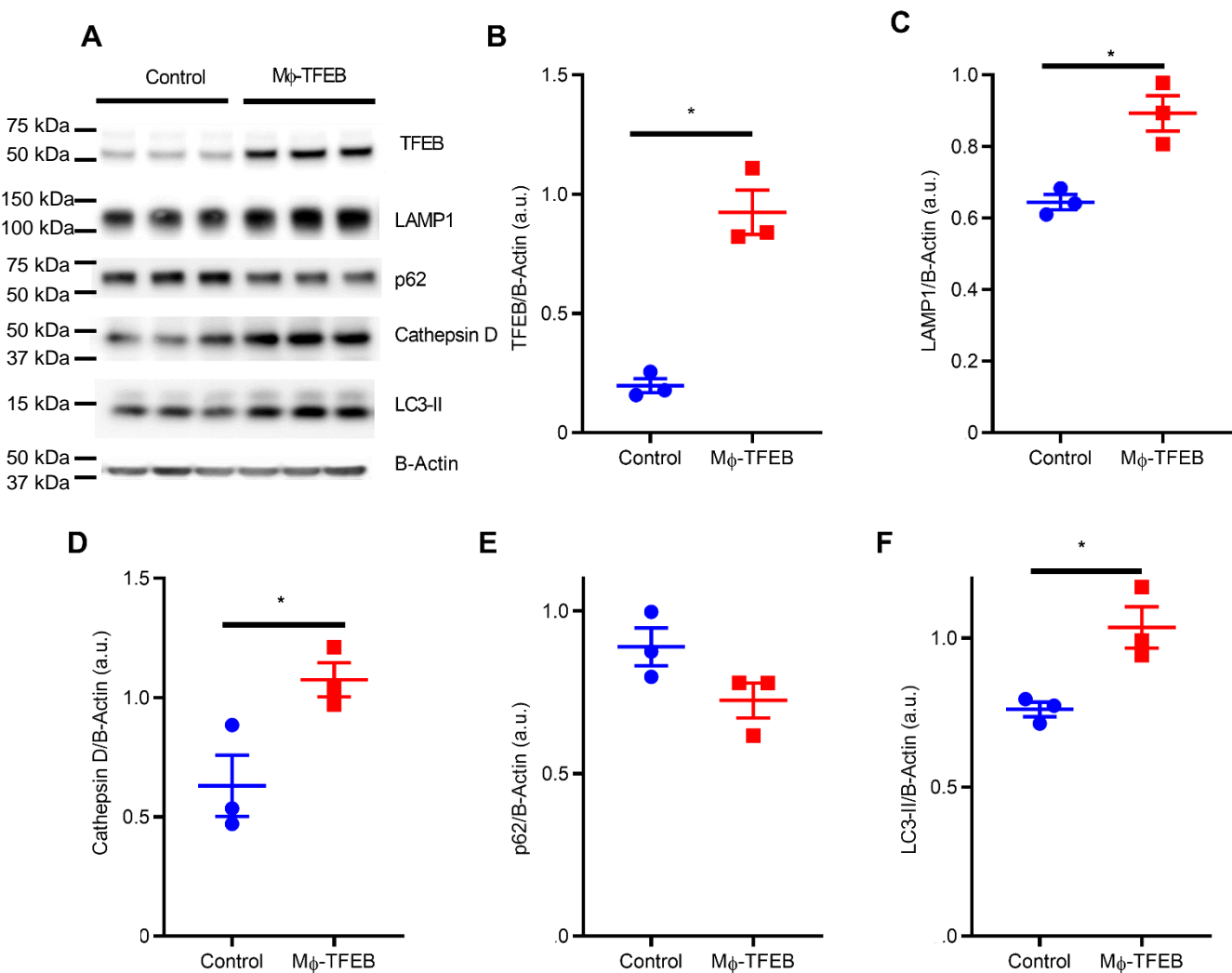


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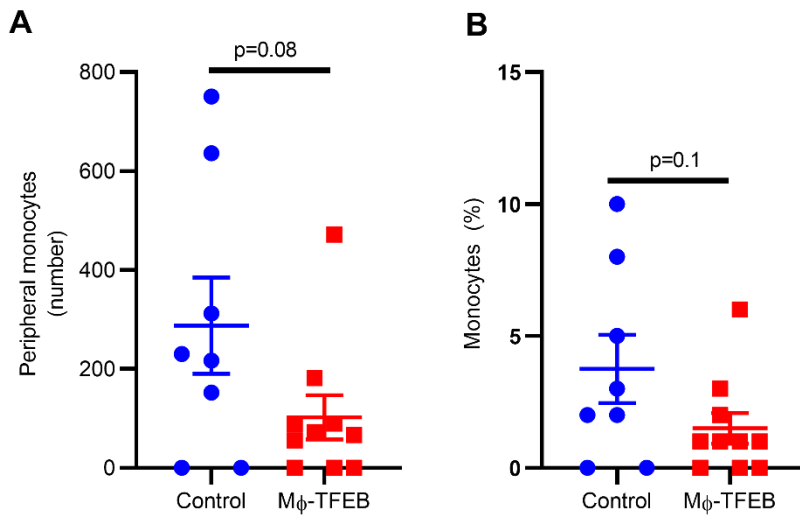


**Supplementary Figure 2. Hypoxia/reoxygenation impairs autophagic flux in peritoneal macrophages.**

A) Western blots in peritoneal macrophages isolated from either M $\phi$ -Atg5<sup>-/-</sup> mice treated with normoxia, or peritoneal macrophages isolated from control mice treated with normoxia or hypoxia (1% O<sub>2</sub>) for 16 hours followed by reoxygenation for 8 hours in the presence of Bafilomycin A1 (200 nM for 2 hours) or diluent (vehicle) followed by (B) quantification of protein in (A). Means and standard error are shown on each graph, with each datapoint representing cells from one mouse. Paired student's t-test, \*p<0.05

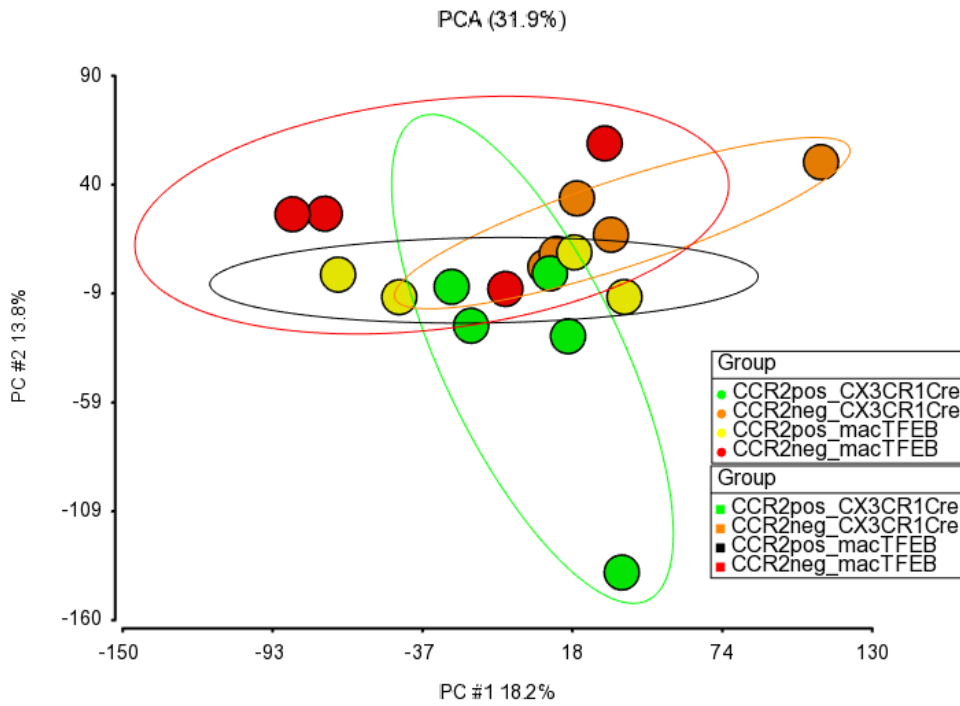


**Supplementary Figure 3. TFEB upregulates autophagy and lysosomal biogenesis in peritoneal macrophages.** A) Western blots in peritoneal macrophages isolated from control vs M $\phi$ -TFEB mice followed by B-F) quantification of proteins in A. N=3/group, each datapoint represents cells from different mice, with means and standard error shown on each graph. Student's t-test \*p<0.05



**Supplementary Figure 4. Absolute circulating monocyte number (A) and percentage (B) in control vs M $\phi$ -TFEB mice.** Control mice (n=8) versus M $\phi$ -TFEB (n=11). Means and standard error are shown in each graph, with each datapoint representing an individual mouse. Student's t-test, p-values shown on graph.





**Supplementary Figure 5. Principal component analysis using all detected mRNAs in macrophages control (n=5) versus M $\phi$ -TFEB (n=4) mice, flow-sorted into CCR2+ and CCR2- populations. Each circle is one mouse, and ellipsoids represent 2 standard deviations.**

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ENSMUSGC	18034	Nfkb2	protein_coding	MGI Symbc	2
ENSMUSGC	13421	Dnase1l3	protein_coding	MGI Symbc	2
ENSMUSGC	17937	Nab2	protein_coding	MGI Symbc	4
ENSMUSGC	11501	Adam8	protein_coding	MGI Symbc	8
ENSMUSGC	21877	Tk1	protein_coding	MGI Symbc	7
ENSMUSGC	15239	Hgs	protein_coding	MGI Symbc	6
ENSMUSGC	80752	Fam20c	protein_coding	MGI Symbc	6
ENSMUSGC	74257	Tspan17	protein_coding	MGI Symbc	9
ENSMUSGC	14048	Eya1	protein_coding	MGI Symbc	9
ENSMUSGC	75712	Tmem14a	protein_coding	MGI Symbc	2
ENSMUSGC	12487	Cd28	protein_coding	MGI Symbc	3
ENSMUSGC	271697	Cdk15	protein_coding	MGI Symbc	4
ENSMUSGC	12825	Col3a1	protein_coding	MGI Symbc	7
ENSMUSGC	110895	Slc9a4	protein_coding	MGI Symbc	4
ENSMUSGC	20353	Sema4c	protein_coding	MGI Symbc	8
ENSMUSGC	104086	Cyp27a1	protein_coding	MGI Symbc	3
ENSMUSGC	64294	Ihm2c	protein_coding	MGI Symbc	3
ENSMUSGC	18582	Pde6d	protein_coding	MGI Symbc	5
ENSMUSGC	50778	Rgs1	protein_coding	MGI Symbc	9
ENSMUSGC	12628	Cfh	protein_coding	MGI Symbc	8
ENSMUSGC	18557	Cdk18	protein_coding	MGI Symbc	5
ENSMUSGC	69051	Pycr2	protein_coding	MGI Symbc	4
ENSMUSGC	78255	Ralgps2	protein_coding	MGI Symbc	15
ENSMUSGC	20652	Soat1	protein_coding	MGI Symbc	8
ENSMUSGC	108000	Cenpf	protein_coding	MGI Symbc	6

ENSMUSGC	381319	Batf3	protein_coding	MGI Symbc	5
ENSMUSGC	18845	Plxna2	protein_coding	MGI Symbc	5
ENSMUSGC	70024	Mcm10	protein_coding	MGI Symbc	10
ENSMUSGC	66977	Nuf2	protein_coding	MGI Symbc	5
ENSMUSGC	67448	Plxdc2	protein_coding	MGI Symbc	4
ENSMUSGC	67121	Mastl	protein_coding	MGI Symbc	2
ENSMUSGC	14582	Gfi1b	protein_coding	MGI Symbc	4
ENSMUSGC	70239	Gtf3c5	protein_coding	MGI Symbc	7
ENSMUSGC	227671	Gbgt1	protein_coding	MGI Symbc	3
ENSMUSGC	56177	Olfm1	protein_coding	MGI Symbc	5
ENSMUSGC	67839	Gpsm1	protein_coding	MGI Symbc	13
ENSMUSGC	241452	Dhrs9	protein_coding	MGI Symbc	1
ENSMUSGC	110074	Dut	protein_coding	MGI Symbc	3
ENSMUSGC	108907	Nusap1	protein_coding	MGI Symbc	4
ENSMUSGC	19361	Rad51	protein_coding	MGI Symbc	8
ENSMUSGC	76464	Kn1	protein_coding	MGI Symbc	5
ENSMUSGC	12235	Bub1	protein_coding	MGI Symbc	5
ENSMUSGC	20638	Snrpb	protein_coding	MGI Symbc	4
ENSMUSGC	17064	Cd93	protein_coding	MGI Symbc	1
ENSMUSGC	69270	Gins1	protein_coding	MGI Symbc	4
ENSMUSGC	24105	Rbck1	protein_coding	MGI Symbc	8
ENSMUSGC	72119	Tpx2	protein_coding	MGI Symbc	7
ENSMUSGC	20878	Aurka	protein_coding	MGI Symbc	5
ENSMUSGC	56190	Rbm38	protein_coding	MGI Symbc	8
ENSMUSGC	16592	Fabp5	protein_coding	MGI Symbc	2
ENSMUSGC	66934	Dsn1	protein_coding	MGI Symbc	6
ENSMUSGC	320024	Nceh1	protein_coding	MGI Symbc	5
ENSMUSGC	13605	Ect2	protein_coding	MGI Symbc	13
ENSMUSGC	28146	Serp1	protein_coding	MGI Symbc	1
ENSMUSGC	76123	Gpsm2	protein_coding	MGI Symbc	4
ENSMUSGC	229709	Ahcyl1	protein_coding	MGI Symbc	8
ENSMUSGC	74343	Crtc2	protein_coding	MGI Symbc	8
ENSMUSGC	68659	Fam198b	protein_coding	MGI Symbc	5
ENSMUSGC	11490	Adam15	protein_coding	MGI Symbc	13
ENSMUSGC	22724	Zbtb7b	protein_coding	MGI Symbc	9
ENSMUSGC	20351	Sema4a	protein_coding	MGI Symbc	19
ENSMUSGC	404710	Iqgap3	protein_coding	MGI Symbc	6
ENSMUSGC	29815	Bcar3	protein_coding	MGI Symbc	10
ENSMUSGC	14579	Gem	protein_coding	MGI Symbc	2
ENSMUSGC	242341	Atp6v0d2	protein_coding	MGI Symbc	2
ENSMUSGC	77032	Tstd3	protein_coding	MGI Symbc	1
ENSMUSGC	14211	Smc2	protein_coding	MGI Symbc	5
ENSMUSGC	74152	Stra6l	protein_coding	MGI Symbc	5
ENSMUSGC	622404	Ccdc107	protein_coding	MGI Symbc	6
ENSMUSGC	11520	Plin2	protein_coding	MGI Symbc	8
ENSMUSGC	30924	Angptl3	protein_coding	MGI Symbc	3
ENSMUSGC	56309	Mycbp	protein_coding	MGI Symbc	4

ENSMUSGC	26394	Lypla2	protein_coding	MGI Symbc	5
ENSMUSGC	19366	Rad54l	protein_coding	MGI Symbc	6
ENSMUSGC	20460	Stil	protein_coding	MGI Symbc	6
ENSMUSGC	15234	Hgf	protein_coding	MGI Symbc	6
ENSMUSGC	52276	Cdca8	protein_coding	MGI Symbc	6
ENSMUSGC	100340	Smpdl3b	protein_coding	MGI Symbc	1
ENSMUSGC	71787	Trnau1ap	protein_coding	MGI Symbc	12
ENSMUSGC	74155	Errfi1	protein_coding	MGI Symbc	3
ENSMUSGC	56273	Pex14	protein_coding	MGI Symbc	5
ENSMUSGC	108888	Atad3a	protein_coding	MGI Symbc	9
ENSMUSGC	27405	Abcg3	protein_coding	MGI Symbc	2
ENSMUSGC	20750	Spp1	protein_coding	MGI Symbc	7
ENSMUSGC	22022	Tpst2	protein_coding	MGI Symbc	7
ENSMUSGC	59043	Wsb2	protein_coding	MGI Symbc	6
ENSMUSGC	72542	Pgam5	protein_coding	MGI Symbc	4
ENSMUSGC	12704	Cit	protein_coding	MGI Symbc	19
ENSMUSGC	21426	Tfec	protein_coding	MGI Symbc	5
ENSMUSGC	14086	Fscn1	protein_coding	MGI Symbc	7
ENSMUSGC NA		Auts2	protein_coding	MGI Symbc	20
ENSMUSGC	78829	Tsc22d4	protein_coding	MGI Symbc	9
ENSMUSGC	17220	Mcm7	protein_coding	MGI Symbc	10
ENSMUSGC	65963	Tmem176b	protein_coding	MGI Symbc	12
ENSMUSGC	93695	GpnmB	protein_coding	MGI Symbc	5
ENSMUSGC	109648	Npy	protein_coding	MGI Symbc	1
ENSMUSGC	56150	Mad2l1	protein_coding	MGI Symbc	4
ENSMUSGC	18844	Plxna1	protein_coding	MGI Symbc	6
ENSMUSGC	20893	Bhlhe40	protein_coding	MGI Symbc	4
ENSMUSGC	17474	Clec4d	protein_coding	MGI Symbc	3
ENSMUSGC	69810	Clec4b1	protein_coding	MGI Symbc	2
ENSMUSGC	13730	Emp1	protein_coding	MGI Symbc	6
ENSMUSGC	66857	Plbd1	protein_coding	MGI Symbc	4
ENSMUSGC	58186	Rad18	protein_coding	MGI Symbc	8
ENSMUSGC	79362	Bhlhe41	protein_coding	MGI Symbc	3
ENSMUSGC	52163	Camk1	protein_coding	MGI Symbc	6
ENSMUSGC	19362	Rad51ap1	protein_coding	MGI Symbc	10
ENSMUSGC	83382	Siglece	protein_coding	MGI Symbc	2
ENSMUSGC	18036	Nfkbib	protein_coding	MGI Symbc	3
ENSMUSGC	110033	Kif22	protein_coding	MGI Symbc	6
ENSMUSGC	20887	Sult1a1	protein_coding	MGI Symbc	4
ENSMUSGC	67800	Dgat2	protein_coding	MGI Symbc	6
ENSMUSGC	114332	Lyve1	protein_coding	MGI Symbc	2
ENSMUSGC	11535	Adm	protein_coding	MGI Symbc	2
ENSMUSGC	29810	Bag3	protein_coding	MGI Symbc	1
ENSMUSGC	18817	Plk1	protein_coding	MGI Symbc	3
ENSMUSGC	12971	Crym	protein_coding	MGI Symbc	2
ENSMUSGC	17345	Mki67	protein_coding	MGI Symbc	2
ENSMUSGC	21953	Tnni2	protein_coding	MGI Symbc	8



ENSMUSGC	18824	Plp2	protein_coding	MGI Symbc	3
ENSMUSGC	13641	Efnb1	protein_coding	MGI Symbc	2
ENSMUSGC	102920	Cenpi	protein_coding	MGI Symbc	5
ENSMUSGC	108012	Ap1s2	protein_coding	MGI Symbc	4
ENSMUSGC	66889	Rnf128	protein_coding	MGI Symbc	3
ENSMUSGC	24099	Tnfsf13b	protein_coding	MGI Symbc	6
ENSMUSGC	15446	Hpgd	protein_coding	MGI Symbc	1
ENSMUSGC	71310	Tbc1d9	protein_coding	MGI Symbc	3
ENSMUSGC	64209	Herpud1	protein_coding	MGI Symbc	6
ENSMUSGC	16582	Kifc3	protein_coding	MGI Symbc	12
ENSMUSGC	272551	Gins2	protein_coding	MGI Symbc	4
ENSMUSGC	234796	Klhl36	protein_coding	MGI Symbc	3
ENSMUSGC	19339	Rab3a	protein_coding	MGI Symbc	6
ENSMUSGC	56437	Rrad	protein_coding	MGI Symbc	2
ENSMUSGC	56857	Slc37a2	protein_coding	MGI Symbc	3
ENSMUSGC	12442	Ccnb2	protein_coding	MGI Symbc	1
ENSMUSGC	17427	Mns1	protein_coding	MGI Symbc	3
ENSMUSGC	12306	Anxa2	protein_coding	MGI Symbc	6
ENSMUSGC	69106	Stoml1	protein_coding	MGI Symbc	8
ENSMUSGC	27965	Spg21	protein_coding	MGI Symbc	4
ENSMUSGC	94062	Mrpl3	protein_coding	MGI Symbc	9
ENSMUSGC	75686	Nudt16	protein_coding	MGI Symbc	5
ENSMUSGC	12217	Bsn	protein_coding	MGI Symbc	2
ENSMUSGC	233871	Atxn2l	protein_coding	MGI Symbc	6
ENSMUSGC	12509	Cd59a	protein_coding	MGI Symbc	3
ENSMUSGC	216134	Pdxk	protein_coding	MGI Symbc	2
ENSMUSGC	224814	Abcc10	protein_coding	MGI Symbc	7
ENSMUSGC	14225	Fkbp1a	protein_coding	MGI Symbc	10
ENSMUSGC	12583	Cdo1	protein_coding	MGI Symbc	1
ENSMUSGC	106039	Gga1	protein_coding	MGI Symbc	1
ENSMUSGC	72662	Dis3	protein_coding	MGI Symbc	6
ENSMUSGC	210126	Lpp	protein_coding	MGI Symbc	3
ENSMUSGC	13430	Dnm2	protein_coding	MGI Symbc	14
ENSMUSGC	17095	Lyl1	protein_coding	MGI Symbc	1
ENSMUSGC	217732	Cipc	protein_coding	MGI Symbc	11
ENSMUSGC	12445	Ccnd3	protein_coding	MGI Symbc	21
ENSMUSGC	237911	Brip1	protein_coding	MGI Symbc	3
ENSMUSGC	13612	Edil3	protein_coding	MGI Symbc	8
ENSMUSGC	76448	Ppp1r18	protein_coding	MGI Symbc	6
ENSMUSGC	58250	Chst11	protein_coding	MGI Symbc	1
ENSMUSGC	56320	Dbn1	protein_coding	MGI Symbc	9
ENSMUSGC	75612	Gns	protein_coding	MGI Symbc	10
ENSMUSGC	217216	BC030867	protein_coding	MGI Symbc	5
ENSMUSGC	14676	Gna15	protein_coding	MGI Symbc	3
ENSMUSGC	215387	Ncaph	protein_coding	MGI Symbc	6
ENSMUSGC	80981	Arl4d	protein_coding	MGI Symbc	1
ENSMUSGC	15442	Hpse	protein_coding	MGI Symbc	2

ENSMUSGC	432486	Gnptab	protein_coding	MGI Symbc	7
ENSMUSGC	20293	Ccl12	protein_coding	MGI Symbc	2
ENSMUSGC	75317	Parpbp	protein_coding	MGI Symbc	4
ENSMUSGC	76478	Haus8	protein_coding	MGI Symbc	8
ENSMUSGC	60530	Figl1	protein_coding	MGI Symbc	7
ENSMUSGC	232798	Leng8	protein_coding	MGI Symbc	10
ENSMUSGC	234384	Mpv17l2	protein_coding	MGI Symbc	4
ENSMUSGC	66078	Tsen34	protein_coding	MGI Symbc	12
ENSMUSGC	216161	Sbno2	protein_coding	MGI Symbc	9
ENSMUSGC	17279	Melk	protein_coding	MGI Symbc	4
ENSMUSGC	27261	Dok3	protein_coding	MGI Symbc	3
ENSMUSGC	118451	Mrps2	protein_coding	MGI Symbc	3
ENSMUSGC	223752	Gramd4	protein_coding	MGI Symbc	5
ENSMUSGC	226409	Zranb3	protein_coding	MGI Symbc	7
ENSMUSGC	107895	Mgat5	protein_coding	MGI Symbc	4
ENSMUSGC	66725	Lrrk2	protein_coding	MGI Symbc	6
ENSMUSGC	140795	P2ry14	protein_coding	MGI Symbc	9
ENSMUSGC	72726	Tbcc	protein_coding	MGI Symbc	1
ENSMUSGC	108723	Card11	protein_coding	MGI Symbc	3
ENSMUSGC	14960	H2-Aa	protein_coding	MGI Symbc	4
ENSMUSGC	209737	Kif15	protein_coding	MGI Symbc	17
ENSMUSGC	67455	Klhl13	protein_coding	MGI Symbc	7
ENSMUSGC	171166	Mcoln3	protein_coding	MGI Symbc	3
ENSMUSGC	66421	2410004B1	protein_coding	MGI Symbc	7
ENSMUSGC	327762	Dna2	protein_coding	MGI Symbc	6
ENSMUSGC	12259	C1qa	protein_coding	MGI Symbc	1
ENSMUSGC	12262	C1qc	protein_coding	MGI Symbc	2
ENSMUSGC	54445	Unc93b1	protein_coding	MGI Symbc	4
ENSMUSGC	243910	Nfkbid	protein_coding	MGI Symbc	4
ENSMUSGC	11785	Apbb1	protein_coding	MGI Symbc	21
ENSMUSGC	78514	Arhgap10	protein_coding	MGI Symbc	3
ENSMUSGC	207839	Galnt6	protein_coding	MGI Symbc	3
ENSMUSGC	21335	Tacc3	protein_coding	MGI Symbc	8
ENSMUSGC	15894	Icam1	protein_coding	MGI Symbc	2
ENSMUSGC	56506	Cib2	protein_coding	MGI Symbc	1
ENSMUSGC	218977	Dlgap5	protein_coding	MGI Symbc	9
ENSMUSGC	22057	Tob1	protein_coding	MGI Symbc	1
ENSMUSGC	72391	Cdkn3	protein_coding	MGI Symbc	4
ENSMUSGC	14998	H2-DMa	protein_coding	MGI Symbc	2
ENSMUSGC	114874	Ddhd1	protein_coding	MGI Symbc	13
ENSMUSGC	12520	Cd81	protein_coding	MGI Symbc	6
ENSMUSGC	21817	Tgm2	protein_coding	MGI Symbc	4
ENSMUSGC	217864	Rcor1	protein_coding	MGI Symbc	2
ENSMUSGC	19401	Rara	protein_coding	MGI Symbc	7
ENSMUSGC	329877	Dennd4c	protein_coding	MGI Symbc	4
ENSMUSGC	218215	Rnf144b	protein_coding	MGI Symbc	2
ENSMUSGC	70925	Cdkn2aip	protein_coding	MGI Symbc	3

ENSMUSGC	210530	P3h2	protein_coding	MGI Symbc	4
ENSMUSGC	75345	Slamf7	protein_coding	MGI Symbc	5
ENSMUSGC	140742	Sesn1	protein_coding	MGI Symbc	3
ENSMUSGC	22137	Ttk	protein_coding	MGI Symbc	6
ENSMUSGC	69957	Cdc16	protein_coding	MGI Symbc	5
ENSMUSGC	66694	Uqcrfs1	protein_coding	MGI Symbc	1
ENSMUSGC	66124	Josd2	protein_coding	MGI Symbc	19
ENSMUSGC	13590	Lefty1	protein_coding	MGI Symbc	2
ENSMUSGC	233406	Prc1	protein_coding	MGI Symbc	14
ENSMUSGC	16790	Anpep	protein_coding	MGI Symbc	6
ENSMUSGC	12393	Runx2	protein_coding	MGI Symbc	13
ENSMUSGC	100182	Akna	protein_coding	MGI Symbc	2
ENSMUSGC	68867	Rnf122	protein_coding	MGI Symbc	5
ENSMUSGC	69876	Thap3	protein_coding	MGI Symbc	3
ENSMUSGC	103284	Zc3h10	protein_coding	MGI Symbc	4
ENSMUSGC	329559	Zfp335	protein_coding	MGI Symbc	3
ENSMUSGC	268512	Slc26a11	protein_coding	MGI Symbc	4
ENSMUSGC	19219	Ptger4	protein_coding	MGI Symbc	3
ENSMUSGC	235283	Gramd1b	protein_coding	MGI Symbc	14
ENSMUSGC	68026	Pclaf	protein_coding	MGI Symbc	3
ENSMUSGC	23890	Gpr34	protein_coding	MGI Symbc	2
ENSMUSGC	407790	Ndufa4l2	protein_coding	MGI Symbc	3
ENSMUSGC	17872	Ppp1r15a	protein_coding	MGI Symbc	3
ENSMUSGC	574428	Zmynd15	protein_coding	MGI Symbc	6
ENSMUSGC	232975	Atp1a3	protein_coding	MGI Symbc	5
ENSMUSGC	16801	Arhgef1	protein_coding	MGI Symbc	19
ENSMUSGC	216864	Mgl2	protein_coding	MGI Symbc	5
ENSMUSGC	72754	Arhgef10l	protein_coding	MGI Symbc	12
ENSMUSGC	17965	Nbl1	protein_coding	MGI Symbc	3
ENSMUSGC	18782	Pla2g2d	protein_coding	MGI Symbc	2
ENSMUSGC	235380	Dmxl2	protein_coding	MGI Symbc	8
ENSMUSGC	16543	Mdfic	protein_coding	MGI Symbc	7
ENSMUSGC	268697	Ccnb1	protein_coding	MGI Symbc	7
ENSMUSGC	381293	Kif14	protein_coding	MGI Symbc	8
ENSMUSGC	15900	Irf8	protein_coding	MGI Symbc	7
ENSMUSGC	68077	Nop53	protein_coding	MGI Symbc	4
ENSMUSGC	68889	Ubac2	protein_coding	MGI Symbc	4
ENSMUSGC	68875	Tmcc2	protein_coding	MGI Symbc	6
ENSMUSGC	11881	Arsb	protein_coding	MGI Symbc	2
ENSMUSGC	269582	Clsn	protein_coding	MGI Symbc	7
ENSMUSGC	100206	Adprhl2	protein_coding	MGI Symbc	4
ENSMUSGC	15199	Hebp1	protein_coding	MGI Symbc	4
ENSMUSGC	20708	Serpib6b	protein_coding	MGI Symbc	4
ENSMUSGC	69573	Hilpda	protein_coding	MGI Symbc	2
ENSMUSGC	54199	Ccr12	protein_coding	MGI Symbc	3
ENSMUSGC	14260	Fmn1	protein_coding	MGI Symbc	9
ENSMUSGC	216964	Trp53i13	protein_coding	MGI Symbc	5

ENSMUSGC	23796	Aplnr	protein_coding	MGI Symbc	2
ENSMUSGC	68813	Dock5	protein_coding	MGI Symbc	3
ENSMUSGC	217835	Rin3	protein_coding	MGI Symbc	7
ENSMUSGC	16613	Klk1b11	protein_coding	MGI Symbc	1
ENSMUSGC	101602	Al467606	protein_coding	MGI Symbc	2
ENSMUSGC	232976	Zfp574	protein_coding	MGI Symbc	4
ENSMUSGC	195522	Zfp691	protein_coding	MGI Symbc	4
ENSMUSGC	218454	Lhfp12	protein_coding	MGI Symbc	9
ENSMUSGC	229841	Cenpe	protein_coding	MGI Symbc	5
ENSMUSGC	244237	Tnfrsf26	protein_coding	MGI Symbc	2
ENSMUSGC	67020	Tmem88	protein_coding	MGI Symbc	1
ENSMUSGC	11555	Adrb2	protein_coding	MGI Symbc	1
ENSMUSGC	56844	Tssc4	protein_coding	MGI Symbc	8
ENSMUSGC	233893	Zfp764	protein_coding	MGI Symbc	2
ENSMUSGC	319675	Cep295	protein_coding	MGI Symbc	14
ENSMUSGC	108961	E2f8	protein_coding	MGI Symbc	4
ENSMUSGC	235505	Cd109	protein_coding	MGI Symbc	2
ENSMUSGC	217517	Stxbp6	protein_coding	MGI Symbc	6
ENSMUSGC	73708	Dppa3	protein_coding	MGI Symbc	2
ENSMUSGC	19659	Rbp1	protein_coding	MGI Symbc	1
ENSMUSGC	224093	Fam43a	protein_coding	MGI Symbc	1
ENSMUSGC	232431	Gprc5a	protein_coding	MGI Symbc	1
ENSMUSGC	17476	Mpeg1	protein_coding	MGI Symbc	1
ENSMUSGC	211949	Spsb4	protein_coding	MGI Symbc	4
ENSMUSGC	268749	Rnf31	protein_coding	MGI Symbc	7
ENSMUSGC	12484	Cd24a	protein_coding	MGI Symbc	3
ENSMUSGC	75219	Dusp18	protein_coding	MGI Symbc	2
ENSMUSGC	217653	Mis18bp1	protein_coding	MGI Symbc	8
ENSMUSGC	74325	Cltb	protein_coding	MGI Symbc	4
ENSMUSGC	73683	Atg16l2	protein_coding	MGI Symbc	17
ENSMUSGC	246746	Cd300lf	protein_coding	MGI Symbc	7
ENSMUSGC	23966	Tenm4	protein_coding	MGI Symbc	12
ENSMUSGC	12495	Entpd1	protein_coding	MGI Symbc	11
ENSMUSGC	213573	Cracr2b	protein_coding	MGI Symbc	9
ENSMUSGC	67702	Rnf149	protein_coding	MGI Symbc	4
ENSMUSGC	70466	Ckap2l	protein_coding	MGI Symbc	1
ENSMUSGC	107305	Vps37c	protein_coding	MGI Symbc	1
ENSMUSGC	192231	Hexim1	protein_coding	MGI Symbc	1
ENSMUSGC	107771	Bmyc	protein_coding	MGI Symbc	1
ENSMUSGC	242297	Fam110b	protein_coding	MGI Symbc	9
ENSMUSGC	72454	Ccdc71	protein_coding	MGI Symbc	3
ENSMUSGC	17381	Mmp12	protein_coding	MGI Symbc	7
ENSMUSGC	268857	Nlrc3	protein_coding	MGI Symbc	4
ENSMUSGC	229323	Gpr171	protein_coding	MGI Symbc	1
ENSMUSGC	244418	Prag1	protein_coding	MGI Symbc	3
ENSMUSGC	16854	Lgals3	protein_coding	MGI Symbc	6
ENSMUSGC	97130	C77080	protein_coding	MGI Symbc	5

ENSMUSGC	17386	Mmp13	protein_coding	MGI Symbc	1
ENSMUSGC	263764	Creg2	protein_coding	MGI Symbc	1
ENSMUSGC	78286	Nav2	protein_coding	MGI Symbc	18
ENSMUSGC	16477	Junb	protein_coding	MGI Symbc	2
ENSMUSGC	68318	Aph1c	protein_coding	MGI Symbc	2
ENSMUSGC	12702	Socs3	protein_coding	MGI Symbc	3
ENSMUSGC	11668	Aldh1a1	protein_coding	MGI Symbc	6
ENSMUSGC	19342	Rab4b	protein_coding	MGI Symbc	8
ENSMUSGC	207818	Smagp	protein_coding	MGI Symbc	2
ENSMUSGC	15936	Ier2	protein_coding	MGI Symbc	1
ENSMUSGC	100494	Zfand2a	protein_coding	MGI Symbc	5
ENSMUSGC	16891	Lipg	protein_coding	MGI Symbc	1
ENSMUSGC	60440	ligp1	protein_coding	MGI Symbc	2
ENSMUSGC	16880	Lifr	protein_coding	MGI Symbc	8
ENSMUSGC	231633	Tmem119	protein_coding	MGI Symbc	2
ENSMUSGC	223881	Rnd1	protein_coding	MGI Symbc	3
ENSMUSGC	74901	Kbtbd11	protein_coding	MGI Symbc	4
ENSMUSGC	16881	Lig1	protein_coding	MGI Symbc	12
ENSMUSGC	320782	Tmem154	protein_coding	MGI Symbc	4
ENSMUSGC	15364	Hmga2	protein_coding	MGI Symbc	3
ENSMUSGC	382090	Cep162	protein_coding	MGI Symbc	4
ENSMUSGC	381801	Tatdn2	protein_coding	MGI Symbc	5
ENSMUSGC	13591	Ebf1	protein_coding	MGI Symbc	7
ENSMUSGC	327957	Scimp	protein_coding	MGI Symbc	2
ENSMUSGC	231532	Arhgap24	protein_coding	MGI Symbc	8
ENSMUSGC	76936	Hnrnpm	protein_coding	MGI Symbc	8
ENSMUSGC	108052	Slc14a1	protein_coding	MGI Symbc	3
ENSMUSGC	11936	Fxyd2	protein_coding	MGI Symbc	13
ENSMUSGC	110196	Fdps	protein_coding	MGI Symbc	7
ENSMUSGC	19245	Ptp4a3	protein_coding	MGI Symbc	4
ENSMUSGC	14784	Grb2	protein_coding	MGI Symbc	5
ENSMUSGC	16554	Kif13b	protein_coding	MGI Symbc	5
ENSMUSGC	232440	H2afj	protein_coding	MGI Symbc	2
ENSMUSGC	241633	Atp8b4	protein_coding	MGI Symbc	5
ENSMUSGC	14969	H2-Eb1	protein_coding	MGI Symbc	1
ENSMUSGC	22260	Nr1h2	protein_coding	MGI Symbc	18
ENSMUSGC	329679	Fnip2	protein_coding	MGI Symbc	6
ENSMUSGC	20315	Cxcl12	protein_coding	MGI Symbc	4
ENSMUSGC	66569	Gdpd1	protein_coding	MGI Symbc	1
ENSMUSGC	18655	Pgk1	protein_coding	MGI Symbc	3
ENSMUSGC	239849	Cd200r4	protein_coding	MGI Symbc	3
ENSMUSGC	74868	Tmem65	protein_coding	MGI Symbc	2
ENSMUSGC	239027	Arhgap22	protein_coding	MGI Symbc	8
ENSMUSGC NA		Gm10134	protein_coding	MGI Symbc	1
ENSMUSGC	66079	Tmem42	protein_coding	MGI Symbc	4
ENSMUSGC	70381	Tecpr1	protein_coding	MGI Symbc	12
ENSMUSGC	277414	Trp53i11	protein_coding	MGI Symbc	8

ENSMUSGC	20661	Sort1	protein_coding	MGI Symbc	3
ENSMUSGC	70385	Spdl1	protein_coding	MGI Symbc	3
ENSMUSGC	234911	Mmp27	protein_coding	MGI Symbc	3
ENSMUSGC	75690	Vsig10l	protein_coding	MGI Symbc	5
ENSMUSGC	232801	Lilra5	protein_coding	MGI Symbc	1
ENSMUSGC	234094	Arhgef10	protein_coding	MGI Symbc	7
ENSMUSGC	70021	Nt5dc2	protein_coding	MGI Symbc	6
ENSMUSGC	12609	Cebpd	protein_coding	MGI Symbc	2
ENSMUSGC	12983	Csf2rb	protein_coding	MGI Symbc	1
ENSMUSGC NA		Ahnak2	protein_coding	MGI Symbc	4
ENSMUSGC NA		Dnmt3aos	antisense_RNA	MGI Symbc	1
ENSMUSGC	14961	H2-Ab1	protein_coding	MGI Symbc	3
ENSMUSGC	545378	Sh2d1b2	protein_coding	MGI Symbc	2
ENSMUSGC	69368	Wdfy1	protein_coding	MGI Symbc	14
ENSMUSGC	241112	Catip	protein_coding	MGI Symbc	4
ENSMUSGC	241062	Pgap1	protein_coding	MGI Symbc	4
ENSMUSGC	1E+08	Gm14548	protein_coding	MGI Symbc	1
ENSMUSGC	54712	Plxnc1	protein_coding	MGI Symbc	5
ENSMUSGC	114679	Selenom	protein_coding	MGI Symbc	3
ENSMUSGC NA		Gm23935	miRNA	MGI Symbc	1
ENSMUSGC NA		Ighm	IG_C_gene	MGI Symbc	2
ENSMUSGC	1E+08	Tgtp2	protein_coding	MGI Symbc	2
ENSMUSGC	14999	H2-DMb1	protein_coding	MGI Symbc	2
ENSMUSGC	277203	Tm4sf19	protein_coding	MGI Symbc	1
ENSMUSGC	77777	Ulbp1	protein_coding	MGI Symbc	5
ENSMUSGC NA		Gm12551	unprocessed_pseudogene	MGI Symbc	1
ENSMUSGC NA		Gm14032	processed_pseudogene	MGI Symbc	1
ENSMUSGC	56464	Ctsf	protein_coding	MGI Symbc	1
ENSMUSGC NA		4930430E1	antisense_RNA	MGI Symbc	2
ENSMUSGC NA		Gm15728	lincRNA	MGI Symbc	2
ENSMUSGC NA		Gm13391	lincRNA	MGI Symbc	2
ENSMUSGC NA		2010013B2	lincRNA	MGI Symbc	1
ENSMUSGC NA		Gm13710	lincRNA	MGI Symbc	2
ENSMUSGC NA		Gm15523	antisense_RNA	MGI Symbc	1
ENSMUSGC NA		Gm17056	antisense_RNA	MGI Symbc	1
ENSMUSGC	381823	Apold1	protein_coding	MGI Symbc	1
ENSMUSGC NA		Gm20513	lincRNA	MGI Symbc	1
ENSMUSGC	668101	Sirpb1b	protein_coding	MGI Symbc	4
ENSMUSGC	666907	Ms4a4a	protein_coding	MGI Symbc	1

description	logFC	fold-change
cyclin D2 [Source:MGI Symbol;Acc:MGI:88314]	8.85E-01	-1.85
serine (or cysteine) peptidase inhibitor, clade F, member 1 [Source:MGI Symbol;Acc:MGI:1913761]	1.47E+00	-2.77
chromatin target of PRMT1 [Source:MGI Symbol;Acc:MGI:1913761]	6.23E-01	-1.54
major facilitator superfamily domain containing 10 [Source:MGI Symbol;Acc:MGI:1913761]	6.93E-01	-1.62
ubiquitin-like, containing PHD and RING finger domains, 1 [Source:MGI Symbol;Acc:MGI:1913761]	-1.20E+00	2.30
acid phosphatase 5, tartrate resistant [Source:MGI Symbol;Acc:MGI:87883]	-7.13E-01	1.64
differentially expressed in FDCP 8 [Source:MGI Symbol;Acc:MGI:1346331]	-5.93E-01	1.51
mesenchyme homeobox 1 [Source:MGI Symbol;Acc:MGI:103220]	2.34E+00	-5.07
forkhead box M1 [Source:MGI Symbol;Acc:MGI:1347487]	-1.04E+00	2.05
pregnancy upregulated non-ubiquitously expressed CaM kinase [Source:MGI Symbol;Acc:MGI:1927470]	7.74E-01	-1.71
sperm associated antigen 5 [Source:MGI Symbol;Acc:MGI:1927470]	-1.08E+00	2.11
nuclear receptor subfamily 1, group H, member 3 [Source:MGI Symbol;Acc:MGI:1927470]	-9.28E-01	1.90
spleen focus forming virus (SFFV) proviral integration oncogene [Source:MGI Symbol;Acc:MGI:1347244]	1.46E+00	-2.76
AXL receptor tyrosine kinase [Source:MGI Symbol;Acc:MGI:1347244]	7.78E-01	-1.71
coiled-coil domain containing 97 [Source:MGI Symbol;Acc:MGI:1196455]	6.79E-01	-1.60
autophagy related 4D, cysteine peptidase [Source:MGI Symbol;Acc:MGI:2444308]	9.82E-01	-1.98
chromatin assembly factor 1, subunit A (p150) [Source:MGI Symbol;Acc:MGI:1351111]	-1.31E+00	2.48
cleft lip and palate associated transmembrane protein 1 [Source:MGI Symbol;Acc:MGI:88057]	7.52E-01	-1.68
apolipoprotein E [Source:MGI Symbol;Acc:MGI:88057]	8.71E-01	-1.83
cyclin-dependent kinase inhibitor 1B [Source:MGI Symbol;Acc:MGI:104565]	6.76E-01	-1.60
protein phosphatase 5, catalytic subunit [Source:MGI Symbol;Acc:MGI:102666]	6.04E-01	-1.52
lipase, hormone sensitive [Source:MGI Symbol;Acc:MGI:96790]	8.92E-01	-1.86
phospholipase D family, member 3 [Source:MGI Symbol;Acc:MGI:1333782]	-8.32E-01	1.78
ring finger protein 215 [Source:MGI Symbol;Acc:MGI:1918923]	9.28E-01	-1.90
ceruloplasmin [Source:MGI Symbol;Acc:MGI:88476]	7.99E-01	-1.74
kinesin family member 20A [Source:MGI Symbol;Acc:MGI:1201682]	-7.82E-01	1.72
interleukin 7 receptor [Source:MGI Symbol;Acc:MGI:96562]	-1.62E+00	3.08
mitogen-activated protein kinase kinase kinase 11 [Source:MGI Symbol;Acc:MGI:1341111]	1.08E+00	-2.11
Spi-C transcription factor (Spi-1/PU.1 related) [Source:MGI Symbol;Acc:MGI:1341111]	7.52E-01	-1.68
sarcoglycan, epsilon [Source:MGI Symbol;Acc:MGI:1329042]	1.04E+00	-2.06
lymphocyte antigen 9 [Source:MGI Symbol;Acc:MGI:96885]	-6.83E-01	1.61
chemokine (C-C motif) ligand 24 [Source:MGI Symbol;Acc:MGI:1928953]	9.75E-01	-1.97
N-myc downstream regulated gene 1 [Source:MGI Symbol;Acc:MGI:1341799]	-1.10E+00	2.15
minichromosome maintenance complex component 5 [Source:MGI Symbol;Acc:MGI:1914111]	-7.98E-01	1.74
anti-silencing function 1B histone chaperone [Source:MGI Symbol;Acc:MGI:1914111]	-8.35E-01	1.78
DnaJ heat shock protein family (Hsp40) member B1 [Source:MGI Symbol;Acc:MGI:1914111]	6.32E-01	-1.55
MRV integration site 1 [Source:MGI Symbol;Acc:MGI:1338023]	1.03E+00	-2.04
adenosine monophosphate deaminase 3 [Source:MGI Symbol;Acc:MGI:1096344]	-6.49E-01	1.57
matrix metalloproteinase 8 [Source:MGI Symbol;Acc:MGI:1202395]	-2.34E+00	5.07
HtrA serine peptidase 1 [Source:MGI Symbol;Acc:MGI:1929076]	-2.03E+00	4.07
gamma-glutamyltransferase 5 [Source:MGI Symbol;Acc:MGI:1346063]	7.81E-01	-1.72
progesterone receptor membrane component 1 [Source:MGI Symbol;Acc:MGI:185901]	6.18E-01	-1.53
NMDA receptor synaptonuclear signaling and neuronal migration factor [Source:MGI Symbol;Acc:MGI:1927344]	7.01E-01	-1.63
geminin [Source:MGI Symbol;Acc:MGI:1927344]	-7.55E-01	1.69
abhydrolase domain containing 16A [Source:MGI Symbol;Acc:MGI:99476]	7.98E-01	-1.74
dimethylarginine dimethylaminohydrolase 2 [Source:MGI Symbol;Acc:MGI:185901]	9.74E-01	-1.96

polymerase (DNA directed), epsilon [Source:MGI Symbol;Acc:MGI:1196391]	-1.16E+00	2.23
protocadherin alpha 11 [Source:MGI Symbol;Acc:MGI:1298372]	1.46E+00	-2.75
coiled-coil domain containing 124 [Source:MGI Symbol;Acc:MGI:1916403]	7.06E-01	-1.63
aldehyde dehydrogenase 16 family, member A1 [Source:MGI Symbol;Acc:MGI:191	8.79E-01	-1.84
inhibitor of DNA binding 3 [Source:MGI Symbol;Acc:MGI:96398]	9.03E-01	-1.87
cathepsin D [Source:MGI Symbol;Acc:MGI:88562]	-1.25E+00	2.37
Mid1 interacting protein 1 (gastrulation specific G12-like (zebrafish)) [Source:MGI :	6.51E-01	-1.57
RELT tumor necrosis factor receptor [Source:MGI Symbol;Acc:MGI:2443373]	1.09E+00	-2.14
SERTA domain containing 1 [Source:MGI Symbol;Acc:MGI:1913438]	7.72E-01	-1.71
microsomal glutathione S-transferase 1 [Source:MGI Symbol;Acc:MGI:1913850]	-7.28E-01	1.66
nuclear factor I/B [Source:MGI Symbol;Acc:MGI:103188]	2.02E+00	-4.05
CD163 antigen [Source:MGI Symbol;Acc:MGI:2135946]	9.85E-01	-1.98
Ewing sarcoma breakpoint region 1 [Source:MGI Symbol;Acc:MGI:99960]	6.35E-01	-1.55
hyaluronoglucosaminidase 1 [Source:MGI Symbol;Acc:MGI:96298]	-7.00E-01	1.62
mucolipin 2 [Source:MGI Symbol;Acc:MGI:1915529]	-1.27E+00	2.42
a disintegrin and metallopeptidase domain 19 (meltrin beta) [Source:MGI Symbol;	7.01E-01	-1.63
zinc finger protein 296 [Source:MGI Symbol;Acc:MGI:1926956]	1.89E+00	-3.70
kinesin family member 11 [Source:MGI Symbol;Acc:MGI:1098231]	-8.81E-01	1.84
SH3 binding domain protein 5 like [Source:MGI Symbol;Acc:MGI:1933124]	7.26E-01	-1.65
transient receptor potential cation channel, subfamily V, member 4 [Source:MGI S	7.13E-01	-1.64
ankyrin repeat domain 28 [Source:MGI Symbol;Acc:MGI:2145661]	-6.92E-01	1.62
DnaJ heat shock protein family (Hsp40) member B9 [Source:MGI Symbol;Acc:MGI:	6.00E-01	-1.52
zinc finger, DHHC domain containing 12 [Source:MGI Symbol;Acc:MGI:1913470]	-6.24E-01	1.54
non-SMC condensin I complex, subunit G [Source:MGI Symbol;Acc:MGI:1930197]	-1.14E+00	2.21
leucine rich repeat containing 27 [Source:MGI Symbol;Acc:MGI:1923862]	-2.18E+00	4.52
StAR-related lipid transfer (START) domain containing 13 [Source:MGI Symbol;Acc:	1.13E+00	-2.19
CD274 antigen [Source:MGI Symbol;Acc:MGI:1926446]	-8.58E-01	1.81
interleukin 13 receptor, alpha 1 [Source:MGI Symbol;Acc:MGI:105052]	5.93E-01	-1.51
breast cancer 1, early onset [Source:MGI Symbol;Acc:MGI:104537]	-1.28E+00	2.44
plexin domain containing 1 [Source:MGI Symbol;Acc:MGI:1919574]	-9.92E-01	1.99
C1q and tumor necrosis factor related protein 1 [Source:MGI Symbol;Acc:MGI:191	1.50E+00	-2.83
ras homolog family member T1 [Source:MGI Symbol;Acc:MGI:1926078]	6.52E-01	-1.57
baculoviral IAP repeat-containing 5 [Source:MGI Symbol;Acc:MGI:1203517]	-9.41E-01	1.92
matrix metallopeptidase 9 [Source:MGI Symbol;Acc:MGI:97011]	2.20E+00	-4.61
Ca2+-dependent activator protein for secretion 2 [Source:MGI Symbol;Acc:MGI:24	6.24E-01	-1.54
RAS-related C3 botulinum substrate 3 [Source:MGI Symbol;Acc:MGI:2180784]	1.33E+00	-2.51
v-maf musculoaponeurotic fibrosarcoma oncogene family, protein K (avian) [Sourc	7.20E-01	-1.65
glutathione peroxidase 3 [Source:MGI Symbol;Acc:MGI:105102]	-1.12E+00	2.17
Sp2 transcription factor [Source:MGI Symbol;Acc:MGI:1926162]	6.55E-01	-1.58
secernin 1 [Source:MGI Symbol;Acc:MGI:1917188]	2.20E+00	-4.58
GIPC PDZ domain containing family, member 1 [Source:MGI Symbol;Acc:MGI:1926	8.28E-01	-1.78
cell division cycle 37 [Source:MGI Symbol;Acc:MGI:109531]	6.18E-01	-1.53
glycogenin [Source:MGI Symbol;Acc:MGI:1351614]	-1.11E+00	2.15
solute carrier family 6 (neurotransmitter transporter, creatine), member 8 [Source	-1.10E+00	2.14
lysosomal trafficking regulator [Source:MGI Symbol;Acc:MGI:107448]	-9.96E-01	1.99
F-box protein 5 [Source:MGI Symbol;Acc:MGI:1914391]	-1.03E+00	2.04
centrosomal protein 57-like 1 [Source:MGI Symbol;Acc:MGI:1915511]	-6.85E-01	1.61



cyclin-dependent kinase 1 [Source:MGI Symbol;Acc:MGI:88351]	-1.15E+00	2.22
serum/glucocorticoid regulated kinase 1 [Source:MGI Symbol;Acc:MGI:1340062]	-6.40E-01	1.56
vanin 3 [Source:MGI Symbol;Acc:MGI:1347055]	9.79E-01	-1.97
phosphatase domain containing, paladin 1 [Source:MGI Symbol;Acc:MGI:1351623]	7.47E-01	-1.68
DNA-damage-inducible transcript 4 [Source:MGI Symbol;Acc:MGI:1921997]	1.84E+00	-3.59
E2F transcription factor 7 [Source:MGI Symbol;Acc:MGI:1289147]	-1.73E+00	3.33
oxysterol binding protein-like 8 [Source:MGI Symbol;Acc:MGI:2443807]	-1.08E+00	2.12
pleckstrin homology like domain, family A, member 1 [Source:MGI Symbol;Acc:MGI:104912]	5.89E-01	-1.50
splicing factor 3a, subunit 2 [Source:MGI Symbol;Acc:MGI:104912]	1.09E+00	-2.12
rhomboïd 5 homolog 1 [Source:MGI Symbol;Acc:MGI:104328]	1.03E+00	-2.04
hyaluronan mediated motility receptor (RHAMM) [Source:MGI Symbol;Acc:MGI:104328]	-1.00E+00	2.00
cytoplasmic FMR1 interacting protein 2 [Source:MGI Symbol;Acc:MGI:1924134]	-9.90E-01	1.99
PDZ and LIM domain 4 [Source:MGI Symbol;Acc:MGI:1353470]	7.23E-01	-1.65
spindle and kinetochore associated complex subunit 2 [Source:MGI Symbol;Acc:MGI:104750]	-6.46E-01	1.56
neuronal cell adhesion molecule [Source:MGI Symbol;Acc:MGI:104750]	-3.32E+00	9.99
ribonucleotide reductase M2 [Source:MGI Symbol;Acc:MGI:98181]	-1.10E+00	2.15
DNA methyltransferase 3A [Source:MGI Symbol;Acc:MGI:1261827]	-9.52E-01	1.94
Fas (TNFRSF6) binding factor 1 [Source:MGI Symbol;Acc:MGI:1922033]	1.06E+00	-2.09
PICALM interacting mitotic regulator [Source:MGI Symbol;Acc:MGI:1924434]	-7.63E-01	1.70
cytoglobin [Source:MGI Symbol;Acc:MGI:2149481]	1.47E+00	-2.77
topoisomerase (DNA) II alpha [Source:MGI Symbol;Acc:MGI:98790]	-9.94E-01	1.99
stonin 2 [Source:MGI Symbol;Acc:MGI:1918272]	1.00E+00	-2.00
liver glycogen phosphorylase [Source:MGI Symbol;Acc:MGI:97829]	-8.06E-01	1.75
reticulum 1 [Source:MGI Symbol;Acc:MGI:1933947]	1.05E+00	-2.06
arginase type II [Source:MGI Symbol;Acc:MGI:1330806]	-1.24E+00	2.35
zinc finger protein 36, C3H type-like 1 [Source:MGI Symbol;Acc:MGI:107946]	9.28E-01	-1.90
EF-hand calcium binding domain 11 [Source:MGI Symbol;Acc:MGI:1926017]	-1.61E+00	3.05
ankyrin repeat and SOCS box-containing 2 [Source:MGI Symbol;Acc:MGI:1929743]	1.97E+00	-3.92
transforming growth factor, beta 3 [Source:MGI Symbol;Acc:MGI:98727]	9.68E-01	-1.96
farnesyl diphosphate farnesyl transferase 1 [Source:MGI Symbol;Acc:MGI:102706]	-6.65E-01	1.59
tumor necrosis factor, alpha-induced protein 2 [Source:MGI Symbol;Acc:MGI:104912]	-9.61E-01	1.95
glucosaminyl (N-acetyl) transferase 2, I-branching enzyme [Source:MGI Symbol;Acc:MGI:1924134]	-7.11E-01	1.64
male germ cell-associated kinase [Source:MGI Symbol;Acc:MGI:96913]	-2.77E+00	6.83
PX domain containing 1 [Source:MGI Symbol;Acc:MGI:1914145]	9.39E-01	-1.92
growth arrest and DNA-damage-inducible 45 gamma [Source:MGI Symbol;Acc:MGI:1924134]	1.14E+00	-2.21
AU RNA binding protein/enoyl-coenzyme A hydratase [Source:MGI Symbol;Acc:MGI:1924134]	6.80E-01	-1.60
thioredoxin domain containing 15 [Source:MGI Symbol;Acc:MGI:1916922]	6.51E-01	-1.57
centrosomal protein 72 [Source:MGI Symbol;Acc:MGI:1921720]	-8.38E-01	1.79
multiple C2 domains, transmembrane 1 [Source:MGI Symbol;Acc:MGI:1926021]	-7.41E-01	1.67
thyroid hormone receptor beta [Source:MGI Symbol;Acc:MGI:98743]	1.60E+00	-3.02
TSC22 domain family, member 1 [Source:MGI Symbol;Acc:MGI:109127]	7.55E-01	-1.69
diaphanous related formin 3 [Source:MGI Symbol;Acc:MGI:1927222]	-1.02E+00	2.03
PDZ binding kinase [Source:MGI Symbol;Acc:MGI:1289156]	-1.30E+00	2.46
establishment of sister chromatid cohesion N-acetyltransferase 2 [Source:MGI Symbol;Acc:MGI:1924134]	-1.12E+00	2.18
complement component 6 [Source:MGI Symbol;Acc:MGI:88233]	2.81E+00	-7.00
carboxymethylenebutenolidase-like (Pseudomonas) [Source:MGI Symbol;Acc:MGI:1917904]	-1.82E+00	3.53
ankyrin repeat domain 33B [Source:MGI Symbol;Acc:MGI:1917904]	-7.05E-01	1.63

catenin (cadherin associated protein), delta 2 [Source:MGI Symbol;Acc:MGI:11959	-7.50E-01	1.68
alpha-methylacyl-CoA racemase [Source:MGI Symbol;Acc:MGI:1098273]	7.51E-01	-1.68
low density lipoprotein-related protein 12 [Source:MGI Symbol;Acc:MGI:2443132]	-8.90E-01	1.85
F-box protein 32 [Source:MGI Symbol;Acc:MGI:1914981]	-9.10E-01	1.88
ATPase family, AAA domain containing 2 [Source:MGI Symbol;Acc:MGI:1917722]	-5.85E-01	1.50
collagen, type XIV, alpha 1 [Source:MGI Symbol;Acc:MGI:1341272]	9.93E-01	-1.99
G two S phase expressed protein 1 [Source:MGI Symbol;Acc:MGI:1352755]	-7.59E-01	1.69
synaptogyrin 1 [Source:MGI Symbol;Acc:MGI:1328323]	-6.66E-01	1.59
SH3-domain binding protein 1 [Source:MGI Symbol;Acc:MGI:104603]	9.75E-01	-1.97
tumor necrosis factor receptor superfamily, member 17 [Source:MGI Symbol;Acc:MGI:108445]	1.01E+00	-2.02
class II transactivator [Source:MGI Symbol;Acc:MGI:108445]	1.13E+00	-2.19
hairy and enhancer of split 1 (Drosophila) [Source:MGI Symbol;Acc:MGI:104853]	1.09E+00	-2.12
MAF1 homolog, negative regulator of RNA polymerase III [Source:MGI Symbol;Acc:MGI:1277961]	7.25E-01	-1.65
plectin [Source:MGI Symbol;Acc:MGI:1277961]	-5.90E-01	1.50
activity regulated cytoskeletal-associated protein [Source:MGI Symbol;Acc:MGI:88	1.85E+00	-3.61
activated leukocyte cell adhesion molecule [Source:MGI Symbol;Acc:MGI:1313266]	-1.03E+00	2.04
germinal center associated, signaling and motility [Source:MGI Symbol;Acc:MGI:10	-4.14E+00	17.65
CD200 receptor 1 [Source:MGI Symbol;Acc:MGI:1889024]	-9.15E-01	1.89
ST3 beta-galactoside alpha-2,3-sialyltransferase 6 [Source:MGI Symbol;Acc:MGI:18	1.17E+00	-2.25
stromal cell-derived factor 2-like 1 [Source:MGI Symbol;Acc:MGI:2149842]	7.62E-01	-1.70
leishmanolysin-like (metallopeptidase M8 family) [Source:MGI Symbol;Acc:MGI:24	-1.35E+00	2.54
DNA segment, Chr 16, ERATO Doi 472, expressed [Source:MGI Symbol;Acc:MGI:11	7.21E-01	-1.65
replication factor C (activator 1) 4 [Source:MGI Symbol;Acc:MGI:2146571]	-7.90E-01	1.73
immunoglobulin-like domain containing receptor 1 [Source:MGI Symbol;Acc:MGI:2	1.02E+00	-2.03
chromatin assembly factor 1, subunit B (p60) [Source:MGI Symbol;Acc:MGI:13148	-9.85E-01	1.98
lactalbumin, alpha [Source:MGI Symbol;Acc:MGI:96742]	1.38E+00	-2.61
Rac GTPase-activating protein 1 [Source:MGI Symbol;Acc:MGI:1349423]	-6.52E-01	1.57
SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfa	-7.19E-01	1.65
chemokine (C-X-C motif) ligand 13 [Source:MGI Symbol;Acc:MGI:1888499]	1.60E+00	-3.04
prolyl 3-hydroxylase 3 [Source:MGI Symbol;Acc:MGI:1315208]	-1.11E+00	2.16
CD4 antigen [Source:MGI Symbol;Acc:MGI:88335]	-1.50E+00	2.84
POC1 centriolar protein A [Source:MGI Symbol;Acc:MGI:1917485]	-7.19E-01	1.65
thyroid hormone receptor interactor 6 [Source:MGI Symbol;Acc:MGI:1343458]	1.07E+00	-2.10
transmembrane protein 176A [Source:MGI Symbol;Acc:MGI:1913308]	1.03E+00	-2.04
cell division cycle associated 3 [Source:MGI Symbol;Acc:MGI:1315198]	-7.83E-01	1.72
phosphatidylinositol glycan anchor biosynthesis, class X [Source:MGI Symbol;Acc:M	6.17E-01	-1.53
ribosomal protein S6 kinase, polypeptide 2 [Source:MGI Symbol;Acc:MGI:1342290]	-1.35E+00	2.55
insulin-like growth factor 2 receptor [Source:MGI Symbol;Acc:MGI:96435]	-1.52E+00	2.86
SPARC related modular calcium binding 2 [Source:MGI Symbol;Acc:MGI:1929881]	2.02E+00	-4.05
transcription factor EB [Source:MGI Symbol;Acc:MGI:103270]	-3.96E+00	15.51
FYVE, RhoGEF and PH domain containing 2 [Source:MGI Symbol;Acc:MGI:1347084]	6.40E-01	-1.56
NDC80 kinetochore complex component [Source:MGI Symbol;Acc:MGI:1914302]	-8.99E-01	1.86
E4F transcription factor 1 [Source:MGI Symbol;Acc:MGI:109530]	8.80E-01	-1.84
PHD finger protein 1 [Source:MGI Symbol;Acc:MGI:98647]	1.11E+00	-2.16
regulatory factor X, 2 (influences HLA class II expression) [Source:MGI Symbol;Acc:	6.66E-01	-1.59
BMP and activin membrane-bound inhibitor [Source:MGI Symbol;Acc:MGI:191526]	1.42E+00	-2.67
transporter 2, ATP-binding cassette, sub-family B (MDR/TAP) [Source:MGI Symbol;	1.04E+00	-2.05

calcium-binding tyrosine-(Y)-phosphorylation regulated (fibrousheathin 2) [Source: MGI Symbol;Acc:MGI:1916476]	1.08E+00	-2.11
ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 3 [Source:MGI Symbol;Acc:MGI:1916476]	6.22E-01	-1.54
sorting nexin 24 [Source:MGI Symbol;Acc:MGI:1916476]	-6.32E-01	1.55
CXXC finger 1 (PHD domain) [Source:MGI Symbol;Acc:MGI:1921572]	6.43E-01	-1.56
ribosome binding factor A [Source:MGI Symbol;Acc:MGI:1915981]	1.82E+00	-3.53
neural precursor cell expressed, developmentally down-regulated gene 4-like [Source:MGI Symbol;Acc:MGI:1915981]	-9.21E-01	1.89
CD74 antigen (invariant polypeptide of major histocompatibility complex, class II alpha chain) [Source:MGI Symbol;Acc:MGI:892003]	1.40E+00	-2.63
treacle ribosome biogenesis factor 1 [Source:MGI Symbol;Acc:MGI:892003]	6.09E-01	-1.53
phosphoserine aminotransferase 1 [Source:MGI Symbol;Acc:MGI:2183441]	-7.94E-01	1.73
annexin A1 [Source:MGI Symbol;Acc:MGI:96819]	-7.40E-01	1.67
lysosomal acid lipase A [Source:MGI Symbol;Acc:MGI:96789]	-6.07E-01	1.52
cell division cycle associated 5 [Source:MGI Symbol;Acc:MGI:1915099]	-1.17E+00	2.25
kinesin family member 20B [Source:MGI Symbol;Acc:MGI:2444576]	-7.00E-01	1.62
interleukin 33 [Source:MGI Symbol;Acc:MGI:1924375]	2.04E+00	-4.12
transmembrane protein 134 [Source:MGI Symbol;Acc:MGI:1914240]	1.04E+00	-2.06
RAB1B, member RAS oncogene family [Source:MGI Symbol;Acc:MGI:1923558]	7.48E-01	-1.68
3'-phosphoadenosine 5'-phosphosulfate synthase 2 [Source:MGI Symbol;Acc:MGI:1914240]	-1.10E+00	2.14
ribonuclease H2, subunit C [Source:MGI Symbol;Acc:MGI:1915459]	7.70E-01	-1.71
ribosomal protein S6 kinase, polypeptide 4 [Source:MGI Symbol;Acc:MGI:1930076]	7.87E-01	-1.73
G protein-coupled receptor 137 [Source:MGI Symbol;Acc:MGI:2147529]	7.09E-01	-1.64
tectonic family member 3 [Source:MGI Symbol;Acc:MGI:1914840]	-7.60E-01	1.69
ubiquitin domain containing 1 [Source:MGI Symbol;Acc:MGI:2385092]	7.83E-01	-1.72
nuclear factor of kappa light polypeptide gene enhancer in B cells 2, p49/p100 [Source:MGI Symbol;Acc:MGI:1314633]	9.06E-01	-1.87
deoxyribonuclease 1-like 3 [Source:MGI Symbol;Acc:MGI:1314633]	1.12E+00	-2.17
Ngfi-A binding protein 2 [Source:MGI Symbol;Acc:MGI:107563]	7.54E-01	-1.69
a disintegrin and metallopeptidase domain 8 [Source:MGI Symbol;Acc:MGI:107825]	-1.05E+00	2.07
thymidine kinase 1 [Source:MGI Symbol;Acc:MGI:98763]	-8.02E-01	1.74
HGF-regulated tyrosine kinase substrate [Source:MGI Symbol;Acc:MGI:104681]	7.33E-01	-1.66
family with sequence similarity 20, member C [Source:MGI Symbol;Acc:MGI:21368]	-1.24E+00	2.36
tetraspanin 17 [Source:MGI Symbol;Acc:MGI:1921507]	7.45E-01	-1.68
EYA transcriptional coactivator and phosphatase 1 [Source:MGI Symbol;Acc:MGI:1922962]	-1.99E+00	3.97
transmembrane protein 14A [Source:MGI Symbol;Acc:MGI:1922962]	-1.05E+00	2.06
CD28 antigen [Source:MGI Symbol;Acc:MGI:88327]	-2.81E+00	7.00
cyclin-dependent kinase 15 [Source:MGI Symbol;Acc:MGI:3583944]	-1.70E+00	3.26
collagen, type III, alpha 1 [Source:MGI Symbol;Acc:MGI:88453]	2.14E+00	-4.40
solute carrier family 9 (sodium/hydrogen exchanger), member 4 [Source:MGI Symbol;Acc:MGI:1922962]	-1.36E+00	2.57
sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic tail (SCT) containing 1 [Source:MGI Symbol;Acc:MGI:1922962]	1.08E+00	-2.11
cytochrome P450, family 27, subfamily a, polypeptide 1 [Source:MGI Symbol;Acc:MGI:1922962]	5.99E-01	-1.51
integral membrane protein 2C [Source:MGI Symbol;Acc:MGI:1927594]	8.59E-01	-1.81
phosphodiesterase 6D, cGMP-specific, rod, delta [Source:MGI Symbol;Acc:MGI:127594]	7.12E-01	-1.64
regulator of G-protein signaling 1 [Source:MGI Symbol;Acc:MGI:1354694]	-6.63E-01	1.58
complement component factor h [Source:MGI Symbol;Acc:MGI:88385]	8.99E-01	-1.87
cyclin-dependent kinase 18 [Source:MGI Symbol;Acc:MGI:97518]	-9.67E-01	1.95
pyrroline-5-carboxylate reductase family, member 2 [Source:MGI Symbol;Acc:MGI:1922962]	8.24E-01	-1.77
Ral GEF with PH domain and SH3 binding motif 2 [Source:MGI Symbol;Acc:MGI:1922962]	7.51E-01	-1.68
sterol O-acyltransferase 1 [Source:MGI Symbol;Acc:MGI:104665]	-7.32E-01	1.66
centromere protein F [Source:MGI Symbol;Acc:MGI:1313302]	-7.23E-01	1.65

basic leucine zipper transcription factor, ATF-like 3 [Source:MGI Symbol;Acc:MGI:1	1.18E+00	-2.27
plexin A2 [Source:MGI Symbol;Acc:MGI:107684]	-1.30E+00	2.46
minichromosome maintenance 10 replication initiation factor [Source:MGI Symbo	-1.14E+00	2.21
NUF2, NDC80 kinetochore complex component [Source:MGI Symbol;Acc:MGI:191	-1.03E+00	2.04
plexin domain containing 2 [Source:MGI Symbol;Acc:MGI:1914698]	8.52E-01	-1.81
microtubule associated serine/threonine kinase-like [Source:MGI Symbol;Acc:MGI	-1.05E+00	2.08
growth factor independent 1B [Source:MGI Symbol;Acc:MGI:1276578]	-7.29E+00	156.34
general transcription factor IIIC, polypeptide 5 [Source:MGI Symbol;Acc:MGI:1917	9.50E-01	-1.93
globoside alpha-1,3-N-acetylgalactosaminyltransferase 1 [Source:MGI Symbol;Acc:	1.18E+00	-2.27
olfactomedin 1 [Source:MGI Symbol;Acc:MGI:1860437]	7.72E-01	-1.71
G-protein signalling modulator 1 (AGS3-like, C. elegans) [Source:MGI Symbol;Acc:M	8.77E-01	-1.84
dehydrogenase/reductase (SDR family) member 9 [Source:MGI Symbol;Acc:MGI:2	-2.52E+00	5.72
deoxyuridine triphosphatase [Source:MGI Symbol;Acc:MGI:1346051]	-9.05E-01	1.87
nucleolar and spindle associated protein 1 [Source:MGI Symbol;Acc:MGI:2675669]	-1.18E+00	2.27
RAD51 recombinase [Source:MGI Symbol;Acc:MGI:97890]	-1.13E+00	2.19
kinetochore scaffold 1 [Source:MGI Symbol;Acc:MGI:1923714]	-1.05E+00	2.07
BUB1, mitotic checkpoint serine/threonine kinase [Source:MGI Symbol;Acc:MGI:1	-1.03E+00	2.04
small nuclear ribonucleoprotein B [Source:MGI Symbol;Acc:MGI:98342]	6.97E-01	-1.62
CD93 antigen [Source:MGI Symbol;Acc:MGI:106664]	-8.62E-01	1.82
GIN5 complex subunit 1 (Psf1 homolog) [Source:MGI Symbol;Acc:MGI:1916520]	-6.84E-01	1.61
RanBP-type and C3HC4-type zinc finger containing 1 [Source:MGI Symbol;Acc:MGI	8.68E-01	-1.83
TPX2, microtubule-associated [Source:MGI Symbol;Acc:MGI:1919369]	-1.02E+00	2.03
aurora kinase A [Source:MGI Symbol;Acc:MGI:894678]	-9.13E-01	1.88
RNA binding motif protein 38 [Source:MGI Symbol;Acc:MGI:1889294]	1.77E+00	-3.42
fatty acid binding protein 5, epidermal [Source:MGI Symbol;Acc:MGI:101790]	-1.72E+00	3.29
DSN1 homolog, MIS12 kinetochore complex component [Source:MGI Symbol;Acc:	-7.22E-01	1.65
neutral cholesterol ester hydrolase 1 [Source:MGI Symbol;Acc:MGI:2443191]	-6.98E-01	1.62
ect2 oncogene [Source:MGI Symbol;Acc:MGI:95281]	-8.02E-01	1.74
stress-associated endoplasmic reticulum protein 1 [Source:MGI Symbol;Acc:MGI:9	5.92E-01	-1.51
G-protein signalling modulator 2 (AGS3-like, C. elegans) [Source:MGI Symbol;Acc:M	-6.94E-01	1.62
S-adenosylhomocysteine hydrolase-like 1 [Source:MGI Symbol;Acc:MGI:2385184]	-5.94E-01	1.51
CREB regulated transcription coactivator 2 [Source:MGI Symbol;Acc:MGI:1921593]	8.16E-01	-1.76
family with sequence similarity 198, member B [Source:MGI Symbol;Acc:MGI:1915	-1.58E+00	2.99
a disintegrin and metallopeptidase domain 15 (metargidin) [Source:MGI Symbol;A	9.84E-01	-1.98
zinc finger and BTB domain containing 7B [Source:MGI Symbol;Acc:MGI:102755]	7.07E-01	-1.63
sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and sho	1.24E+00	-2.36
IQ motif containing GTPase activating protein 3 [Source:MGI Symbol;Acc:MGI:302	-9.68E-01	1.96
breast cancer anti-estrogen resistance 3 [Source:MGI Symbol;Acc:MGI:1352501]	-8.50E-01	1.80
GTP binding protein (gene overexpressed in skeletal muscle) [Source:MGI Symbol,	-9.01E-01	1.87
ATPase, H <sup>+</sup> transporting, lysosomal V0 subunit D2 [Source:MGI Symbol;Acc:MGI:1	-2.18E+00	4.55
thiosulfate sulfurtransferase (rhodanese)-like domain containing 3 [Source:MGI Sy	-8.44E-01	1.80
structural maintenance of chromosomes 2 [Source:MGI Symbol;Acc:MGI:106067]	-6.75E-01	1.60
STRA6-like [Source:MGI Symbol;Acc:MGI:1921402]	-2.55E+00	5.87
coiled-coil domain containing 107 [Source:MGI Symbol;Acc:MGI:1913423]	6.33E-01	-1.55
perilipin 2 [Source:MGI Symbol;Acc:MGI:87920]	-7.81E-01	1.72
angiopoietin-like 3 [Source:MGI Symbol;Acc:MGI:1353627]	-1.35E+00	2.56
MYC binding protein [Source:MGI Symbol;Acc:MGI:1891750]	-7.00E-01	1.62

lysophospholipase 2 [Source:MGI Symbol;Acc:MGI:1347000]	8.28E-01	-1.78
RAD54 like ( <i>S. cerevisiae</i> ) [Source:MGI Symbol;Acc:MGI:894697]	-9.28E-01	1.90
Scf/Tal1 interrupting locus [Source:MGI Symbol;Acc:MGI:107477]	-1.40E+00	2.64
hepatocyte growth factor [Source:MGI Symbol;Acc:MGI:96079]	-9.09E-01	1.88
cell division cycle associated 8 [Source:MGI Symbol;Acc:MGI:1196274]	-8.04E-01	1.75
sphingomyelin phosphodiesterase, acid-like 3B [Source:MGI Symbol;Acc:MGI:1916	8.13E-01	-1.76
tRNA selenocysteine 1 associated protein 1 [Source:MGI Symbol;Acc:MGI:1919037	7.02E-01	-1.63
ERBB receptor feedback inhibitor 1 [Source:MGI Symbol;Acc:MGI:1921405]	5.97E-01	-1.51
peroxisomal biogenesis factor 14 [Source:MGI Symbol;Acc:MGI:1927868]	7.38E-01	-1.67
ATPase family, AAA domain containing 3A [Source:MGI Symbol;Acc:MGI:1919214]	7.26E-01	-1.65
ATP binding cassette subfamily G member 3 [Source:MGI Symbol;Acc:MGI:135162	-6.80E-01	1.60
secreted phosphoprotein 1 [Source:MGI Symbol;Acc:MGI:98389]	-1.54E+00	2.91
protein-tyrosine sulfotransferase 2 [Source:MGI Symbol;Acc:MGI:1309516]	7.00E-01	-1.62
WD repeat and SOCS box-containing 2 [Source:MGI Symbol;Acc:MGI:2144041]	-6.94E-01	1.62
phosphoglycerate mutase family member 5 [Source:MGI Symbol;Acc:MGI:191979:	8.80E-01	-1.84
citron [Source:MGI Symbol;Acc:MGI:105313]	-7.54E-01	1.69
transcription factor EC [Source:MGI Symbol;Acc:MGI:1333760]	-6.60E-01	1.58
fascin actin-bundling protein 1 [Source:MGI Symbol;Acc:MGI:1352745]	1.91E+00	-3.76
autism susceptibility candidate 2 [Source:MGI Symbol;Acc:MGI:1919847]	1.87E+00	-3.66
TSC22 domain family, member 4 [Source:MGI Symbol;Acc:MGI:1926079]	7.75E-01	-1.71
minichromosome maintenance complex component 7 [Source:MGI Symbol;Acc:M	-6.63E-01	1.58
transmembrane protein 176B [Source:MGI Symbol;Acc:MGI:1916348]	8.45E-01	-1.80
glycoprotein (transmembrane) nmb [Source:MGI Symbol;Acc:MGI:1934765]	-2.45E+00	5.47
neuropeptide Y [Source:MGI Symbol;Acc:MGI:97374]	-3.08E+00	8.45
MAD2 mitotic arrest deficient-like 1 [Source:MGI Symbol;Acc:MGI:1860374]	-9.07E-01	1.88
plexin A1 [Source:MGI Symbol;Acc:MGI:107685]	-8.36E-01	1.79
basic helix-loop-helix family, member e40 [Source:MGI Symbol;Acc:MGI:1097714]	-9.65E-01	1.95
C-type lectin domain family 4, member d [Source:MGI Symbol;Acc:MGI:1298389]	-6.37E-01	1.56
C-type lectin domain family 4, member b1 [Source:MGI Symbol;Acc:MGI:1917060]	6.59E-01	-1.58
epithelial membrane protein 1 [Source:MGI Symbol;Acc:MGI:107941]	-7.08E-01	1.63
phospholipase B domain containing 1 [Source:MGI Symbol;Acc:MGI:1914107]	1.39E+00	-2.62
RAD18 E3 ubiquitin protein ligase [Source:MGI Symbol;Acc:MGI:1890476]	-6.56E-01	1.58
basic helix-loop-helix family, member e41 [Source:MGI Symbol;Acc:MGI:1930704]	-8.31E-01	1.78
calcium/calmodulin-dependent protein kinase I [Source:MGI Symbol;Acc:MGI:109:	7.39E-01	-1.67
RAD51 associated protein 1 [Source:MGI Symbol;Acc:MGI:1098224]	-1.33E+00	2.51
sialic acid binding Ig-like lectin E [Source:MGI Symbol;Acc:MGI:1932475]	6.09E-01	-1.52
nuclear factor of kappa light polypeptide gene enhancer in B cells inhibitor, beta [S	7.65E-01	-1.70
kinesin family member 22 [Source:MGI Symbol;Acc:MGI:109233]	-8.89E-01	1.85
sulfotransferase family 1A, phenol-preferring, member 1 [Source:MGI Symbol;Acc:	9.42E-01	-1.92
diacylglycerol O-acyltransferase 2 [Source:MGI Symbol;Acc:MGI:1915050]	1.03E+00	-2.04
lymphatic vessel endothelial hyaluronan receptor 1 [Source:MGI Symbol;Acc:MGI:	8.93E-01	-1.86
adrenomedullin [Source:MGI Symbol;Acc:MGI:108058]	1.32E+00	-2.50
BCL2-associated athanogene 3 [Source:MGI Symbol;Acc:MGI:1352493]	6.83E-01	-1.61
polo like kinase 1 [Source:MGI Symbol;Acc:MGI:97621]	-8.08E-01	1.75
crystallin, mu [Source:MGI Symbol;Acc:MGI:102675]	1.29E+00	-2.45
antigen identified by monoclonal antibody Ki 67 [Source:MGI Symbol;Acc:MGI:106	-1.05E+00	2.07
troponin I, skeletal, fast 2 [Source:MGI Symbol;Acc:MGI:105070]	-8.12E-01	1.76

proteolipid protein 2 [Source:MGI Symbol;Acc:MGI:1298382]	-5.89E-01	1.50
ephrin B1 [Source:MGI Symbol;Acc:MGI:102708]	1.24E+00	-2.37
centromere protein I [Source:MGI Symbol;Acc:MGI:2147897]	-8.80E-01	1.84
adaptor-related protein complex 1, sigma 2 subunit [Source:MGI Symbol;Acc:MGI:1914139]	6.40E-01	-1.56
ring finger protein 128 [Source:MGI Symbol;Acc:MGI:1914139]	-1.02E+00	2.03
tumor necrosis factor (ligand) superfamily, member 13b [Source:MGI Symbol;Acc:MGI:1914139]	6.49E-01	-1.57
hydroxyprostaglandin dehydrogenase 15 (NAD) [Source:MGI Symbol;Acc:MGI:1081914139]	9.03E-01	-1.87
TBC1 domain family, member 9 [Source:MGI Symbol;Acc:MGI:1918560]	-9.26E-01	1.90
homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain containing protein 1 [Source:MGI Symbol;Acc:MGI:1918560]	6.83E-01	-1.60
kinesin family member C3 [Source:MGI Symbol;Acc:MGI:109202]	1.16E+00	-2.23
GINS complex subunit 2 (Psf2 homolog) [Source:MGI Symbol;Acc:MGI:1921019]	-6.21E-01	1.54
kelch-like 36 [Source:MGI Symbol;Acc:MGI:2385305]	1.57E+00	-2.97
RAB3A, member RAS oncogene family [Source:MGI Symbol;Acc:MGI:97843]	8.87E-01	-1.85
Ras-related associated with diabetes [Source:MGI Symbol;Acc:MGI:1930943]	1.26E+00	-2.39
solute carrier family 37 (glycerol-3-phosphate transporter), member 2 [Source:MGI Symbol;Acc:MGI:88311]	-7.63E-01	1.70
cyclin B2 [Source:MGI Symbol;Acc:MGI:88311]	-7.51E-01	1.68
meiosis-specific nuclear structural protein 1 [Source:MGI Symbol;Acc:MGI:107933]	-1.20E+00	2.30
annexin A2 [Source:MGI Symbol;Acc:MGI:88246]	-6.94E-01	1.62
stomatin-like 1 [Source:MGI Symbol;Acc:MGI:1916356]	7.90E-01	-1.73
SPG21, maspardin [Source:MGI Symbol;Acc:MGI:106403]	1.59E+00	-3.02
mitochondrial ribosomal protein L3 [Source:MGI Symbol;Acc:MGI:2137204]	9.41E-01	-1.92
nudix (nucleoside diphosphate linked moiety X)-type motif 16 [Source:MGI Symbol;Acc:MGI:1277955]	8.50E-01	-1.80
bassoon [Source:MGI Symbol;Acc:MGI:1277955]	-2.97E+00	7.82
ataxin 2-like [Source:MGI Symbol;Acc:MGI:2446242]	6.61E-01	-1.58
CD59a antigen [Source:MGI Symbol;Acc:MGI:109177]	-6.80E-01	1.60
pyridoxal (pyridoxine, vitamin B6) kinase [Source:MGI Symbol;Acc:MGI:1351869]	-6.94E-01	1.62
ATP-binding cassette, sub-family C (CFTR/MRP), member 10 [Source:MGI Symbol;Acc:MGI:95541]	1.16E+00	-2.23
FK506 binding protein 1a [Source:MGI Symbol;Acc:MGI:95541]	6.32E-01	-1.55
cysteine dioxygenase 1, cytosolic [Source:MGI Symbol;Acc:MGI:105925]	-1.33E+00	2.51
golgi associated, gamma adaptin ear containing, ARF binding protein 1 [Source:MGI Symbol;Acc:MGI:105925]	1.20E+00	-2.30
DIS3 homolog, exosome endoribonuclease and 3'-5' exoribonuclease [Source:MGI Symbol;Acc:MGI:19236]	-7.69E-01	1.70
LIM domain containing preferred translocation partner in lipoma [Source:MGI Symbol;Acc:MGI:109547]	-5.92E-01	1.51
dynamitin 2 [Source:MGI Symbol;Acc:MGI:109547]	8.07E-01	-1.75
lymphoblastoid leukemia 1 [Source:MGI Symbol;Acc:MGI:96891]	8.86E-01	-1.85
CLOCK interacting protein, circadian [Source:MGI Symbol;Acc:MGI:1919185]	-1.13E+00	2.19
cyclin D3 [Source:MGI Symbol;Acc:MGI:88315]	7.55E-01	-1.69
BRCA1 interacting protein C-terminal helicase 1 [Source:MGI Symbol;Acc:MGI:2446242]	-1.03E+00	2.04
EGF-like repeats and discoidin I-like domains 3 [Source:MGI Symbol;Acc:MGI:13290]	1.46E+00	-2.75
protein phosphatase 1, regulatory subunit 18 [Source:MGI Symbol;Acc:MGI:19236]	7.75E-01	-1.71
carbohydrate sulfotransferase 11 [Source:MGI Symbol;Acc:MGI:1927166]	-1.31E+00	2.48
drebrin 1 [Source:MGI Symbol;Acc:MGI:1931838]	1.61E+00	-3.05
glucosamine (N-acetyl)-6-sulfatase [Source:MGI Symbol;Acc:MGI:1922862]	-6.73E-01	1.59
cDNA sequence BC030867 [Source:MGI Symbol;Acc:MGI:2387601]	-1.12E+00	2.17
guanine nucleotide binding protein, alpha 15 [Source:MGI Symbol;Acc:MGI:95770]	1.05E+00	-2.07
non-SMC condensin I complex, subunit H [Source:MGI Symbol;Acc:MGI:2444777]	-7.52E-01	1.68
ADP-ribosylation factor-like 4D [Source:MGI Symbol;Acc:MGI:1933155]	1.10E+00	-2.15
heparanase [Source:MGI Symbol;Acc:MGI:1343124]	-1.23E+00	2.35

N-acetylglucosamine-1-phosphate transferase, alpha and beta subunits [Source:M	-8.13E-01	1.76
chemokine (C-C motif) ligand 12 [Source:MGI Symbol;Acc:MGI:108224]	8.90E-01	-1.85
PARP1 binding protein [Source:MGI Symbol;Acc:MGI:1922567]	-1.26E+00	2.39
4HAUS augmin-like complex, subunit 8 [Source:MGI Symbol;Acc:MGI:1923728]	-6.15E-01	1.53
fidgetin-like 1 [Source:MGI Symbol;Acc:MGI:1890648]	-8.19E-01	1.76
leukocyte receptor cluster (LRC) member 8 [Source:MGI Symbol;Acc:MGI:2142195]	1.00E+00	-2.01
MPV17 mitochondrial membrane protein-like 2 [Source:MGI Symbol;Acc:MGI:268	1.46E+00	-2.76
tRNA splicing endonuclease subunit 34 [Source:MGI Symbol;Acc:MGI:1913328]	1.20E+00	-2.30
strawberry notch homolog 2 (Drosophila) [Source:MGI Symbol;Acc:MGI:2448490]	8.76E-01	-1.83
maternal embryonic leucine zipper kinase [Source:MGI Symbol;Acc:MGI:106924]	-1.05E+00	2.07
docking protein 3 [Source:MGI Symbol;Acc:MGI:1351490]	1.14E+00	-2.21
mitochondrial ribosomal protein S2 [Source:MGI Symbol;Acc:MGI:2153089]	9.16E-01	-1.89
GRAM domain containing 4 [Source:MGI Symbol;Acc:MGI:2676308]	-9.68E-01	1.96
zinc finger, RAN-binding domain containing 3 [Source:MGI Symbol;Acc:MGI:19183	-1.43E+00	2.70
mannoside acetylglucosaminyltransferase 5 [Source:MGI Symbol;Acc:MGI:894701	-7.53E-01	1.69
leucine-rich repeat kinase 2 [Source:MGI Symbol;Acc:MGI:1913975]	-9.73E-01	1.96
purinergic receptor P2Y, G-protein coupled, 14 [Source:MGI Symbol;Acc:MGI:2155	-6.07E-01	1.52
tubulin-specific chaperone C [Source:MGI Symbol;Acc:MGI:1919976]	1.54E+00	-2.92
caspase recruitment domain family, member 11 [Source:MGI Symbol;Acc:MGI:191	-2.17E+00	4.50
histocompatibility 2, class II antigen A, alpha [Source:MGI Symbol;Acc:MGI:95895]	1.35E+00	-2.55
kinesin family member 15 [Source:MGI Symbol;Acc:MGI:1098258]	-1.40E+00	2.65
kelch-like 13 [Source:MGI Symbol;Acc:MGI:1914705]	8.92E-01	-1.86
mucolin 3 [Source:MGI Symbol;Acc:MGI:1890500]	-2.06E+00	4.17
RIKEN cDNA 2410004B18 gene [Source:MGI Symbol;Acc:MGI:1913671]	6.12E-01	-1.53
DNA replication helicase/nuclease 2 [Source:MGI Symbol;Acc:MGI:2443732]	-8.21E-01	1.77
complement component 1, q subcomponent, alpha polypeptide [Source:MGI Syml	9.00E-01	-1.87
complement component 1, q subcomponent, C chain [Source:MGI Symbol;Acc:MG	8.78E-01	-1.84
unc-93 homolog B1 (C. elegans) [Source:MGI Symbol;Acc:MGI:1859307]	5.98E-01	-1.51
nuclear factor of kappa light polypeptide gene enhancer in B cells inhibitor, delta [!	9.36E-01	-1.91
amyloid beta (A4) precursor protein-binding, family B, member 1 [Source:MGI Syrr	1.44E+00	-2.71
Rho GTPase activating protein 10 [Source:MGI Symbol;Acc:MGI:1925764]	-7.95E-01	1.73
polypeptide N-acetylgalactosaminyltransferase 6 [Source:MGI Symbol;Acc:MGI:18	-8.27E-01	1.77
transforming, acidic coiled-coil containing protein 3 [Source:MGI Symbol;Acc:MGI:	-6.23E-01	1.54
intercellular adhesion molecule 1 [Source:MGI Symbol;Acc:MGI:96392]	6.29E-01	-1.55
calcium and integrin binding family member 2 [Source:MGI Symbol;Acc:MGI:1929	1.08E+00	-2.11
discs, large (Drosophila) homolog-associated protein 5 [Source:MGI Symbol;Acc:M	-7.85E-01	1.72
transducer of ErbB-2.1 [Source:MGI Symbol;Acc:MGI:1349721]	6.34E-01	-1.55
cyclin-dependent kinase inhibitor 3 [Source:MGI Symbol;Acc:MGI:1919641]	-7.73E-01	1.71
histocompatibility 2, class II, locus DMA [Source:MGI Symbol;Acc:MGI:95921]	8.37E-01	-1.79
DDHD domain containing 1 [Source:MGI Symbol;Acc:MGI:2150302]	-8.44E-01	1.80
CD81 antigen [Source:MGI Symbol;Acc:MGI:1096398]	9.68E-01	-1.96
transglutaminase 2, C polypeptide [Source:MGI Symbol;Acc:MGI:98731]	-6.93E-01	1.62
REST corepressor 1 [Source:MGI Symbol;Acc:MGI:106340]	-7.27E-01	1.66
retinoic acid receptor, alpha [Source:MGI Symbol;Acc:MGI:97856]	8.67E-01	-1.82
DENN/MADD domain containing 4C [Source:MGI Symbol;Acc:MGI:1914769]	-8.07E-01	1.75
ring finger protein 144B [Source:MGI Symbol;Acc:MGI:2384986]	-1.05E+00	2.07
CDKN2A interacting protein [Source:MGI Symbol;Acc:MGI:1918175]	8.45E-01	-1.80

prolyl 3-hydroxylase 2 [Source:MGI Symbol;Acc:MGI:2146663]	2.15E+00	-4.45
SLAM family member 7 [Source:MGI Symbol;Acc:MGI:1922595]	-6.14E-01	1.53
sestrin 1 [Source:MGI Symbol;Acc:MGI:2155278]	7.61E-01	-1.70
Ttk protein kinase [Source:MGI Symbol;Acc:MGI:1194921]	-1.14E+00	2.20
CDC16 cell division cycle 16 [Source:MGI Symbol;Acc:MGI:1917207]	7.25E-01	-1.65
ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 [Source:MGI S	1.42E+00	-2.68
Josephin domain containing 2 [Source:MGI Symbol;Acc:MGI:1913374]	7.48E-01	-1.68
left right determination factor 1 [Source:MGI Symbol;Acc:MGI:107405]	1.53E+00	-2.88
protein regulator of cytokinesis 1 [Source:MGI Symbol;Acc:MGI:1858961]	-1.01E+00	2.02
alanyl (membrane) aminopeptidase [Source:MGI Symbol;Acc:MGI:5000466]	-1.40E+00	2.63
runt related transcription factor 2 [Source:MGI Symbol;Acc:MGI:99829]	-1.07E+00	2.11
AT-hook transcription factor [Source:MGI Symbol;Acc:MGI:2140340]	6.33E-01	-1.55
ring finger protein 122 [Source:MGI Symbol;Acc:MGI:1916117]	1.09E+00	-2.13
THAP domain containing, apoptosis associated protein 3 [Source:MGI Symbol;Acc:	7.20E-01	-1.65
zinc finger CCCH type containing 10 [Source:MGI Symbol;Acc:MGI:2143670]	7.13E-01	-1.64
zinc finger protein 335 [Source:MGI Symbol;Acc:MGI:2682313]	1.28E+00	-2.43
solute carrier family 26, member 11 [Source:MGI Symbol;Acc:MGI:2444589]	-7.34E-01	1.66
prostaglandin E receptor 4 (subtype EP4) [Source:MGI Symbol;Acc:MGI:104311]	1.16E+00	-2.24
GRAM domain containing 1B [Source:MGI Symbol;Acc:MGI:1925037]	-1.01E+00	2.01
PCNA clamp associated factor [Source:MGI Symbol;Acc:MGI:1915276]	-1.03E+00	2.04
G protein-coupled receptor 34 [Source:MGI Symbol;Acc:MGI:1346334]	6.62E-01	-1.58
NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 4-like 2 [Source:MGI Sym	2.37E+00	-5.18
protein phosphatase 1, regulatory (inhibitor) subunit 15A [Source:MGI Symbol;Acc	6.25E-01	-1.54
zinc finger, MYND-type containing 15 [Source:MGI Symbol;Acc:MGI:3603821]	7.54E-01	-1.69
ATPase, Na <sup>+</sup> /K <sup>+</sup> transporting, alpha 3 polypeptide [Source:MGI Symbol;Acc:MGI:8	-9.96E-01	1.99
Rho guanine nucleotide exchange factor (GEF) 1 [Source:MGI Symbol;Acc:MGI:135	7.99E-01	-1.74
macrophage galactose N-acetyl-galactosamine specific lectin 2 [Source:MGI Symbc	1.06E+00	-2.08
Rho guanine nucleotide exchange factor (GEF) 10-like [Source:MGI Symbol;Acc:MC	7.73E-01	-1.71
neuroblastoma, suppression of tumorigenicity 1 [Source:MGI Symbol;Acc:MGI:104	3.19E+00	-9.12
phospholipase A2, group IID [Source:MGI Symbol;Acc:MGI:1341796]	1.94E+00	-3.84
Dmx-like 2 [Source:MGI Symbol;Acc:MGI:2444630]	-7.94E-01	1.73
MyoD family inhibitor domain containing [Source:MGI Symbol;Acc:MGI:104611]	-8.05E-01	1.75
cyclin B1 [Source:MGI Symbol;Acc:MGI:88302]	-1.18E+00	2.27
kinesin family member 14 [Source:MGI Symbol;Acc:MGI:1098226]	-1.42E+00	2.68
interferon regulatory factor 8 [Source:MGI Symbol;Acc:MGI:96395]	6.19E-01	-1.54
NOP53 ribosome biogenesis factor [Source:MGI Symbol;Acc:MGI:2154441]	9.46E-01	-1.93
ubiquitin associated domain containing 2 [Source:MGI Symbol;Acc:MGI:1916139]	6.06E-01	-1.52
transmembrane and coiled-coil domains 2 [Source:MGI Symbol;Acc:MGI:1916125]	8.99E-01	-1.86
arylsulfatase B [Source:MGI Symbol;Acc:MGI:88075]	6.56E-01	-1.58
claspin [Source:MGI Symbol;Acc:MGI:2445153]	-1.81E+00	3.51
ADP-ribosylhydrolase like 2 [Source:MGI Symbol;Acc:MGI:2140364]	8.80E-01	-1.84
heme binding protein 1 [Source:MGI Symbol;Acc:MGI:1333880]	-1.82E+00	3.53
serine (or cysteine) peptidase inhibitor, clade B, member 6b [Source:MGI Symbol;/	-1.66E+00	3.16
hypoxia inducible lipid droplet associated [Source:MGI Symbol;Acc:MGI:1916823]	-1.20E+00	2.30
chemokine (C-C motif) receptor-like 2 [Source:MGI Symbol;Acc:MGI:1920904]	-9.92E-01	1.99
formin 1 [Source:MGI Symbol;Acc:MGI:101815]	-6.65E-01	1.59
transformation related protein 53 inducible protein 13 [Source:MGI Symbol;Acc:M	9.26E-01	-1.90



apelin receptor [Source:MGI Symbol;Acc:MGI:1346086]	2.30E+00	-4.91
dedicator of cytokinesis 5 [Source:MGI Symbol;Acc:MGI:2652871]	-9.62E-01	1.95
Ras and Rab interactor 3 [Source:MGI Symbol;Acc:MGI:2385708]	-7.34E-01	1.66
kallikrein 1-related peptidase b11 [Source:MGI Symbol;Acc:MGI:892023]	-5.67E+00	50.81
expressed sequence AI467606 [Source:MGI Symbol;Acc:MGI:2141979]	8.56E-01	-1.81
zinc finger protein 574 [Source:MGI Symbol;Acc:MGI:2442951]	9.95E-01	-1.99
zinc finger protein 691 [Source:MGI Symbol;Acc:MGI:3041163]	9.52E-01	-1.94
lipoma HMGIC fusion partner-like 2 [Source:MGI Symbol;Acc:MGI:2145236]	-1.10E+00	2.14
centromere protein E [Source:MGI Symbol;Acc:MGI:1098230]	-9.09E-01	1.88
tumor necrosis factor receptor superfamily, member 26 [Source:MGI Symbol;Acc:MGI:2145236]	-9.69E-01	1.96
transmembrane protein 88 [Source:MGI Symbol;Acc:MGI:1914270]	8.30E-01	-1.78
adrenergic receptor, beta 2 [Source:MGI Symbol;Acc:MGI:87938]	5.90E-01	-1.51
tumor-suppressing subchromosomal transferable fragment 4 [Source:MGI Symbol;Acc:MGI:2145236]	8.06E-01	-1.75
zinc finger protein 764 [Source:MGI Symbol;Acc:MGI:2443580]	8.48E-01	-1.80
centrosomal protein 295 [Source:MGI Symbol;Acc:MGI:2442521]	-6.08E-01	1.52
E2F transcription factor 8 [Source:MGI Symbol;Acc:MGI:1922038]	-1.18E+00	2.27
CD109 antigen [Source:MGI Symbol;Acc:MGI:2445221]	-1.68E+00	3.20
syntaxin binding protein 6 (amisyn) [Source:MGI Symbol;Acc:MGI:2384963]	9.36E-01	-1.91
developmental pluripotency-associated 3 [Source:MGI Symbol;Acc:MGI:1920958]	-9.50E-01	1.93
retinol binding protein 1, cellular [Source:MGI Symbol;Acc:MGI:97876]	1.03E+00	-2.05
family with sequence similarity 43, member A [Source:MGI Symbol;Acc:MGI:26763]	1.22E+00	-2.33
G protein-coupled receptor, family C, group 5, member A [Source:MGI Symbol;Acc:MGI:26763]	-1.07E+00	2.10
macrophage expressed gene 1 [Source:MGI Symbol;Acc:MGI:1333743]	-1.24E+00	2.36
splA/ryanodine receptor domain and SOCS box containing 4 [Source:MGI Symbol;Acc:MGI:1333743]	-3.40E+00	10.54
ring finger protein 31 [Source:MGI Symbol;Acc:MGI:1934704]	7.90E-01	-1.73
CD24a antigen [Source:MGI Symbol;Acc:MGI:88323]	-1.26E+00	2.39
dual specificity phosphatase 18 [Source:MGI Symbol;Acc:MGI:1922469]	-9.66E-01	1.95
MIS18 binding protein 1 [Source:MGI Symbol;Acc:MGI:2145099]	-7.68E-01	1.70
clathrin, light polypeptide (Lcb) [Source:MGI Symbol;Acc:MGI:1921575]	6.31E-01	-1.55
autophagy related 16-like 2 (S. cerevisiae) [Source:MGI Symbol;Acc:MGI:1920933]	7.22E-01	-1.65
CD300 molecule like family member F [Source:MGI Symbol;Acc:MGI:2442359]	-1.44E+00	2.72
teneurin transmembrane protein 4 [Source:MGI Symbol;Acc:MGI:2447063]	-3.47E+00	11.06
ectonucleoside triphosphate diphosphohydrolase 1 [Source:MGI Symbol;Acc:MGI:2447063]	-5.94E-01	1.51
calcium release activated channel regulator 2B [Source:MGI Symbol;Acc:MGI:24463]	1.05E+00	-2.08
ring finger protein 149 [Source:MGI Symbol;Acc:MGI:2677438]	-7.08E-01	1.63
cytoskeleton associated protein 2-like [Source:MGI Symbol;Acc:MGI:1917716]	-7.07E-01	1.63
vacuolar protein sorting 37C [Source:MGI Symbol;Acc:MGI:2147661]	6.07E-01	-1.52
hexamethylene bis-acetamide inducible 1 [Source:MGI Symbol;Acc:MGI:2385923]	1.02E+00	-2.02
brain expressed myelocytomatosis oncogene [Source:MGI Symbol;Acc:MGI:88184]	1.11E+00	-2.16
family with sequence similarity 110, member B [Source:MGI Symbol;Acc:MGI:19163]	9.23E-01	-1.90
coiled-coil domain containing 71 [Source:MGI Symbol;Acc:MGI:1919704]	-6.02E-01	1.52
matrix metalloproteinase 12 [Source:MGI Symbol;Acc:MGI:97005]	-1.61E+00	3.05
NLR family, CARD domain containing 3 [Source:MGI Symbol;Acc:MGI:2444070]	-6.68E-01	1.59
G protein-coupled receptor 171 [Source:MGI Symbol;Acc:MGI:2442043]	-8.03E-01	1.74
PEAK1 related kinase activating pseudokinase 1 [Source:MGI Symbol;Acc:MGI:1190]	7.11E-01	-1.64
lectin, galactose binding, soluble 3 [Source:MGI Symbol;Acc:MGI:96778]	-6.57E-01	1.58
expressed sequence C77080 [Source:MGI Symbol;Acc:MGI:2140651]	-1.20E+00	2.30

matrix metalloproteinase 13 [Source:MGI Symbol;Acc:MGI:1340026]	1.07E+00	-2.10
cellular repressor of E1A-stimulated genes 2 [Source:MGI Symbol;Acc:MGI:192833]	-1.28E+00	2.43
neuron navigator 2 [Source:MGI Symbol;Acc:MGI:2183691]	-8.85E-01	1.85
jun B proto-oncogene [Source:MGI Symbol;Acc:MGI:96647]	1.09E+00	-2.12
aph1 homolog C, gamma secretase subunit [Source:MGI Symbol;Acc:MGI:1915568]	-7.23E-01	1.65
suppressor of cytokine signaling 3 [Source:MGI Symbol;Acc:MGI:1201791]	7.56E-01	-1.69
aldehyde dehydrogenase family 1, subfamily A1 [Source:MGI Symbol;Acc:MGI:135]	1.97E+00	-3.91
RAB4B, member RAS oncogene family [Source:MGI Symbol;Acc:MGI:105071]	7.65E-01	-1.70
small cell adhesion glycoprotein [Source:MGI Symbol;Acc:MGI:2448476]	6.22E-01	-1.54
immediate early response 2 [Source:MGI Symbol;Acc:MGI:104815]	1.26E+00	-2.40
zinc finger, AN1-type domain 2A [Source:MGI Symbol;Acc:MGI:2140729]	-7.89E-01	1.73
lipase, endothelial [Source:MGI Symbol;Acc:MGI:1341803]	-3.92E+00	15.19
interferon inducible GTPase 1 [Source:MGI Symbol;Acc:MGI:1926259]	9.22E-01	-1.89
leukemia inhibitory factor receptor [Source:MGI Symbol;Acc:MGI:96788]	1.19E+00	-2.28
transmembrane protein 119 [Source:MGI Symbol;Acc:MGI:2385228]	8.32E-01	-1.78
Rho family GTPase 1 [Source:MGI Symbol;Acc:MGI:2444878]	7.88E-01	-1.73
kelch repeat and BTB (POZ) domain containing 11 [Source:MGI Symbol;Acc:MGI:1926259]	1.39E+00	-2.61
ligase I, DNA, ATP-dependent [Source:MGI Symbol;Acc:MGI:101789]	-6.30E-01	1.55
transmembrane protein 154 [Source:MGI Symbol;Acc:MGI:2444725]	-1.27E+00	2.42
high mobility group AT-hook 2 [Source:MGI Symbol;Acc:MGI:101761]	-4.79E+00	27.75
centrosomal protein 162 [Source:MGI Symbol;Acc:MGI:1925343]	-5.94E-01	1.51
TatD DNase domain containing 2 [Source:MGI Symbol;Acc:MGI:3576210]	-1.17E+00	2.25
early B cell factor 1 [Source:MGI Symbol;Acc:MGI:95275]	1.19E+00	-2.29
SLP adaptor and CSK interacting membrane protein [Source:MGI Symbol;Acc:MGI:1926467]	6.13E-01	-1.53
Rho GTPase activating protein 24 [Source:MGI Symbol;Acc:MGI:1922647]	-1.25E+00	2.37
heterogeneous nuclear ribonucleoprotein M [Source:MGI Symbol;Acc:MGI:1926467]	5.96E-01	-1.51
solute carrier family 14 (urea transporter), member 1 [Source:MGI Symbol;Acc:MGI:1926467]	1.09E+00	-2.13
FXD domain-containing ion transport regulator 2 [Source:MGI Symbol;Acc:MGI:1926467]	9.24E-01	-1.90
farnesyl diphosphate synthetase [Source:MGI Symbol;Acc:MGI:104888]	-5.93E-01	1.51
protein tyrosine phosphatase 4a3 [Source:MGI Symbol;Acc:MGI:1277098]	8.61E-01	-1.82
growth factor receptor bound protein 2 [Source:MGI Symbol;Acc:MGI:95805]	-6.14E-01	1.53
kinesin family member 13B [Source:MGI Symbol;Acc:MGI:1098265]	-7.26E-01	1.65
H2A histone family, member J [Source:MGI Symbol;Acc:MGI:3606192]	1.18E+00	-2.27
ATPase, class I, type 8B, member 4 [Source:MGI Symbol;Acc:MGI:1859664]	-9.34E-01	1.91
histocompatibility 2, class II antigen E beta [Source:MGI Symbol;Acc:MGI:95901]	1.60E+00	-3.03
nuclear receptor subfamily 1, group H, member 2 [Source:MGI Symbol;Acc:MGI:1926467]	5.90E-01	-1.51
folliculin interacting protein 2 [Source:MGI Symbol;Acc:MGI:2683054]	-1.21E+00	2.32
chemokine (C-X-C motif) ligand 12 [Source:MGI Symbol;Acc:MGI:103556]	2.35E+00	-5.09
glycerophosphodiester phosphodiesterase domain containing 1 [Source:MGI Symbol;Acc:MGI:1926467]	-1.04E+00	2.06
phosphoglycerate kinase 1 [Source:MGI Symbol;Acc:MGI:97555]	-7.43E-01	1.67
CD200 receptor 4 [Source:MGI Symbol;Acc:MGI:3036289]	-1.38E+00	2.61
transmembrane protein 65 [Source:MGI Symbol;Acc:MGI:1922118]	-1.06E+00	2.08
Rho GTPase activating protein 22 [Source:MGI Symbol;Acc:MGI:2443418]	7.71E-01	-1.71
predicted gene 10134 [Source:MGI Symbol;Acc:MGI:3642322]	1.29E+00	-2.44
transmembrane protein 42 [Source:MGI Symbol;Acc:MGI:1277176]	9.08E-01	-1.88
tectonin beta-propeller repeat containing 1 [Source:MGI Symbol;Acc:MGI:191763]	-5.97E-01	1.51
transformation related protein 53 inducible protein 11 [Source:MGI Symbol;Acc:MGI:1926467]	2.11E+00	-4.30

sortilin 1 [Source:MGI Symbol;Acc:MGI:1338015]	-1.57E+00	2.97
spindle apparatus coiled-coil protein 1 [Source:MGI Symbol;Acc:MGI:1917635]	-8.72E-01	1.83
matrix metalloproteinase 27 [Source:MGI Symbol;Acc:MGI:3039232]	-1.93E+00	3.80
V-set and immunoglobulin domain containing 10 like [Source:MGI Symbol;Acc:MG	9.60E-01	-1.95
leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 5	1.09E+00	-2.12
Rho guanine nucleotide exchange factor (GEF) 10 [Source:MGI Symbol;Acc:MGI:24	1.61E+00	-3.06
5'-nucleotidase domain containing 2 [Source:MGI Symbol;Acc:MGI:1917271]	-9.85E-01	1.98
CCAAT/enhancer binding protein (C/EBP), delta [Source:MGI Symbol;Acc:MGI:103!	9.78E-01	-1.97
colony stimulating factor 2 receptor, beta, low-affinity (granulocyte-macrophage)	-6.45E-01	1.56
AHNAK nucleoprotein 2 [Source:MGI Symbol;Acc:MGI:2144831]	-1.56E+00	2.95
DNA methyltransferase 3A, opposite strand [Source:MGI Symbol;Acc:MGI:364168!	-1.88E+00	3.68
histocompatibility 2, class II antigen A, beta 1 [Source:MGI Symbol;Acc:MGI:10307	1.67E+00	-3.19
SH2 domain containing 1B2 [Source:MGI Symbol;Acc:MGI:3622649]	-7.20E-01	1.65
WD repeat and FYVE domain containing 1 [Source:MGI Symbol;Acc:MGI:1916618]	-8.24E-01	1.77
ciliogenesis associated TTC17 interacting protein [Source:MGI Symbol;Acc:MGI:26!	9.12E-01	-1.88
post-GPI attachment to proteins 1 [Source:MGI Symbol;Acc:MGI:2443342]	-6.42E-01	1.56
predicted gene 14548 [Source:MGI Symbol;Acc:MGI:3709645]	-6.74E-01	1.60
plexin C1 [Source:MGI Symbol;Acc:MGI:1890127]	-1.05E+00	2.07
selenoprotein M [Source:MGI Symbol;Acc:MGI:2149786]	6.94E-01	-1.62
predicted gene, 23935 [Source:MGI Symbol;Acc:MGI:5453712]	8.12E-01	-1.76
immunoglobulin heavy constant mu [Source:MGI Symbol;Acc:MGI:96448]	6.76E-01	-1.60
T cell specific GTPase 2 [Source:MGI Symbol;Acc:MGI:3710083]	6.34E-01	-1.55
histocompatibility 2, class II, locus Mb1 [Source:MGI Symbol;Acc:MGI:95922]	9.44E-01	-1.92
transmembrane 4 L six family member 19 [Source:MGI Symbol;Acc:MGI:3645933]	-1.43E+00	2.69
UL16 binding protein 1 [Source:MGI Symbol;Acc:MGI:1925027]	-8.41E-01	1.79
predicted gene 12551 [Source:MGI Symbol;Acc:MGI:3651664]	-1.90E+00	3.73
predicted gene 14032 [Source:MGI Symbol;Acc:MGI:3650861]	-1.08E+00	2.11
cathepsin F [Source:MGI Symbol;Acc:MGI:1861434]	7.31E-01	-1.66
RIKEN cDNA 4930430E12 gene [Source:MGI Symbol;Acc:MGI:1918889]	-1.15E+00	2.22
predicted gene 15728 [Source:MGI Symbol;Acc:MGI:3783171]	-1.19E+00	2.29
predicted gene 13391 [Source:MGI Symbol;Acc:MGI:3651526]	-1.30E+00	2.45
RIKEN cDNA 2010013B24 gene [Source:MGI Symbol;Acc:MGI:1919329]	9.80E-01	-1.97
predicted gene 13710 [Source:MGI Symbol;Acc:MGI:3650894]	-9.14E-01	1.88
predicted gene 15523 [Source:MGI Symbol;Acc:MGI:3782970]	9.53E-01	-1.94
predicted gene 17056 [Source:MGI Symbol;Acc:MGI:4937883]	-1.93E+00	3.81
apolipoprotein L domain containing 1 [Source:MGI Symbol;Acc:MGI:2685921]	-1.36E+00	2.56
predicted gene 20513 [Source:MGI Symbol;Acc:MGI:5141978]	2.25E+00	-4.77
signal-regulatory protein beta 1B [Source:MGI Symbol;Acc:MGI:3779828]	-8.07E-01	1.75
membrane-spanning 4-domains, subfamily A, member 4A [Source:MGI Symbol;Acc	9.38E-01	-1.92

Cl.L	Cl.R	AveExpr	t	P.Value	adj.P.Val
0.591805	1.18E+00	5.747895	6.133159	5.44E-07	8.63E-05
1.009373	1.93E+00	3.836669	6.467016	2.00E-07	4.08E-05
0.350658	8.94E-01	4.216671	4.650931	4.71E-05	2.27E-03
0.309613	1.08E+00	5.071944	3.671168	8.10E-04	1.43E-02
-1.61515	-7.88E-01	4.056303	-5.90199	1.09E-06	1.49E-04
-1.1157	-3.09E-01	7.649212	-3.59026	1.02E-03	1.61E-02
-0.85868	-3.27E-01	4.865249	-4.52972	6.74E-05	2.88E-03
1.263598	3.42E+00	1.722442	4.413132	9.52E-05	3.66E-03
-1.55703	-5.16E-01	2.038653	-4.04449	2.79E-04	7.32E-03
0.341402	1.21E+00	3.908578	3.63384	8.99E-04	1.51E-02
-1.56057	-5.98E-01	2.72116	-4.55145	6.32E-05	2.77E-03
-1.34267	-5.13E-01	4.744025	-4.5433	6.48E-05	2.81E-03
0.699555	2.23E+00	5.522247	3.893269	4.31E-04	9.50E-03
0.496252	1.06E+00	7.332156	5.610444	2.63E-06	3.13E-04
0.318085	1.04E+00	5.206772	3.822495	5.28E-04	1.09E-02
0.457819	1.51E+00	2.718585	3.803937	5.56E-04	1.12E-02
-2.01393	-6.03E-01	0.768338	-3.76598	6.20E-04	1.20E-02
0.365072	1.14E+00	5.000535	3.945745	3.71E-04	8.57E-03
0.515599	1.23E+00	13.74116	4.978659	1.77E-05	1.21E-03
0.359504	9.91E-01	4.877486	4.341853	1.17E-04	4.17E-03
0.287233	9.21E-01	5.048124	3.872754	4.57E-04	9.88E-03
0.515356	1.27E+00	4.033591	4.807309	2.95E-05	1.67E-03
-1.07956	-5.84E-01	9.89234	-6.81791	7.04E-08	1.81E-05
0.424403	1.43E+00	2.943782	3.74448	6.59E-04	1.25E-02
0.343851	1.25E+00	6.195432	3.566037	1.09E-03	1.66E-02
-1.1192	-4.45E-01	4.174918	-4.71154	3.93E-05	2.00E-03
-2.05564	-1.19E+00	4.72937	-7.65371	6.11E-09	2.71E-06
0.530938	1.62E+00	3.266999	4.011318	3.07E-04	7.59E-03
0.447248	1.06E+00	4.534839	5.011952	1.60E-05	1.12E-03
0.538374	1.55E+00	4.455016	4.199013	1.78E-04	5.48E-03
-0.98858	-3.77E-01	7.539815	-4.53667	6.61E-05	2.85E-03
0.46575	1.49E+00	5.649878	3.8871	4.39E-04	9.63E-03
-1.40852	-7.95E-01	5.98313	-7.28993	1.76E-08	6.26E-06
-1.21352	-3.83E-01	5.603849	-3.90315	4.19E-04	9.28E-03
-1.20626	-4.63E-01	5.471378	-4.56337	6.10E-05	2.70E-03
0.360096	9.04E-01	8.371466	4.722644	3.80E-05	1.97E-03
0.587066	1.46E+00	3.930582	4.751196	3.49E-05	1.85E-03
-0.89856	-3.99E-01	5.596125	-5.27725	7.19E-06	6.28E-04
-3.46964	-1.22E+00	1.578886	-4.22501	1.65E-04	5.20E-03
-3.03141	-1.02E+00	-0.01437	-4.08924	2.45E-04	6.73E-03
0.362877	1.20E+00	3.668541	3.792103	5.75E-04	1.15E-02
0.31238	9.24E-01	6.82097	4.106229	2.34E-04	6.43E-03
0.348232	1.05E+00	2.562223	4.037903	2.85E-04	7.37E-03
-1.11425	-3.95E-01	3.723236	-4.26074	1.49E-04	4.84E-03
0.504022	1.09E+00	5.098164	5.513746	3.52E-06	3.62E-04
0.569701	1.38E+00	3.742057	4.889911	2.30E-05	1.44E-03

-1.74736	-5.66E-01	1.351976	-3.97719	3.39E-04	8.11E-03
0.663124	2.26E+00	1.108752	3.717967	7.10E-04	1.31E-02
0.384571	1.03E+00	5.114864	4.459154	8.31E-05	3.39E-03
0.365892	1.39E+00	3.94642	3.479529	1.38E-03	1.96E-02
0.452628	1.35E+00	7.86443	4.073896	2.57E-04	6.95E-03
-1.5174	-9.77E-01	12.80922	-9.37003	5.17E-11	9.45E-08
0.298204	1.00E+00	4.609663	3.749396	6.49E-04	1.23E-02
0.704751	1.48E+00	4.487429	5.704931	1.98E-06	2.45E-04
0.453691	1.09E+00	8.143032	4.92263	2.09E-05	1.36E-03
-1.04897	-4.07E-01	7.278768	-4.60912	5.33E-05	2.43E-03
0.84015	3.19E+00	2.171235	3.481616	1.37E-03	1.95E-02
0.550702	1.42E+00	8.634719	4.605024	5.39E-05	2.45E-03
0.332387	9.38E-01	5.765065	4.258873	1.50E-04	4.84E-03
-1.07454	-3.26E-01	3.458756	-3.80042	5.62E-04	1.13E-02
-1.59667	-9.50E-01	5.423686	-7.99219	2.32E-09	1.29E-06
0.344902	1.06E+00	5.596274	4.000347	3.17E-04	7.77E-03
1.106337	2.67E+00	0.943729	4.901939	2.22E-05	1.42E-03
-1.36822	-3.94E-01	3.088145	-3.67289	8.06E-04	1.42E-02
0.322945	1.13E+00	2.49004	3.656669	8.43E-04	1.46E-02
0.350289	1.07E+00	6.378284	3.994661	3.23E-04	7.84E-03
-1.06923	-3.15E-01	2.85974	-3.72952	6.87E-04	1.28E-02
0.398863	8.00E-01	7.225838	6.06565	6.67E-07	1.01E-04
-0.91225	-3.36E-01	3.57021	-4.40029	9.89E-05	3.71E-03
-1.67972	-6.02E-01	3.388681	-4.30186	1.32E-04	4.42E-03
-2.93388	-1.42E+00	2.043032	-5.82759	1.37E-06	1.83E-04
0.526355	1.73E+00	1.18671	3.804434	5.56E-04	1.12E-02
-1.23624	-4.81E-01	5.733443	-4.61513	5.23E-05	2.42E-03
0.428789	7.56E-01	6.588344	7.350372	1.47E-08	5.40E-06
-1.96007	-6.09E-01	1.559694	-3.86047	4.74E-04	1.01E-02
-1.47648	-5.07E-01	1.403462	-4.15864	2.01E-04	5.87E-03
0.904389	2.10E+00	3.458534	5.104979	1.21E-05	9.27E-04
0.367935	9.36E-01	4.79443	4.664232	4.52E-05	2.20E-03
-1.35935	-5.22E-01	4.301322	-4.56726	6.03E-05	2.69E-03
1.281473	3.13E+00	4.214619	4.851921	2.58E-05	1.54E-03
0.271397	9.76E-01	4.602715	3.595419	1.00E-03	1.60E-02
0.57984	2.08E+00	0.038067	3.599992	9.88E-04	1.59E-02
0.341499	1.10E+00	6.400787	3.861638	4.72E-04	1.01E-02
-1.45155	-7.88E-01	8.441911	-6.86062	6.21E-08	1.70E-05
0.300771	1.01E+00	3.620722	3.75356	6.42E-04	1.23E-02
1.055466	3.34E+00	0.069849	3.910989	4.10E-04	9.19E-03
0.413923	1.24E+00	4.07433	4.06074	2.67E-04	7.11E-03
0.309034	9.27E-01	5.854981	4.063146	2.65E-04	7.08E-03
-1.42785	-7.85E-01	7.828277	-6.99255	4.20E-08	1.28E-05
-1.42539	-7.71E-01	4.531001	-6.81972	7.01E-08	1.81E-05
-1.41164	-5.80E-01	3.31251	-4.86104	2.51E-05	1.51E-03
-1.50369	-5.52E-01	2.29698	-4.38788	1.03E-04	3.79E-03
-1.07922	-2.91E-01	3.00851	-3.53336	1.19E-03	1.76E-02

-1.56527	-7.30E-01	4.318895	-5.58526	2.84E-06	3.28E-04
-0.86106	-4.19E-01	9.03696	-5.87612	1.18E-06	1.59E-04
0.490827	1.47E+00	2.897842	4.071823	2.58E-04	6.97E-03
0.407816	1.09E+00	5.353986	4.472681	7.98E-05	3.28E-03
0.815338	2.87E+00	1.27798	3.63962	8.84E-04	1.51E-02
-2.7269	-7.40E-01	0.384796	-3.54486	1.15E-03	1.72E-02
-1.40366	-7.63E-01	5.868418	-6.8639	6.15E-08	1.70E-05
0.277645	9.00E-01	5.322276	3.842328	4.99E-04	1.05E-02
0.556899	1.61E+00	2.601693	4.172756	1.93E-04	5.72E-03
0.458234	1.60E+00	2.215258	3.654827	8.47E-04	1.46E-02
-1.48083	-5.22E-01	3.486127	-4.2421	1.57E-04	5.00E-03
-1.35939	-6.21E-01	4.275365	-5.44525	4.33E-06	4.28E-04
0.405571	1.04E+00	5.248577	4.62414	5.10E-05	2.37E-03
-1.0215	-2.71E-01	2.671668	-3.49622	1.32E-03	1.90E-02
-5.20544	-1.44E+00	0.337698	-3.57928	1.05E-03	1.63E-02
-1.52401	-6.85E-01	5.655235	-5.35143	5.75E-06	5.26E-04
-1.15995	-7.45E-01	6.672806	-9.32149	5.89E-11	9.45E-08
0.455048	1.67E+00	1.655079	3.558296	1.11E-03	1.68E-02
-1.17527	-3.51E-01	3.417095	-3.76039	6.30E-04	1.21E-02
0.687445	2.25E+00	1.835852	3.821044	5.30E-04	1.09E-02
-1.41946	-5.69E-01	5.846627	-4.75211	3.48E-05	1.85E-03
0.52478	1.48E+00	1.58534	4.270291	1.45E-04	4.75E-03
-1.12031	-4.91E-01	5.86017	-5.20261	9.01E-06	7.32E-04
0.5692	1.52E+00	1.705394	4.455554	8.40E-05	3.41E-03
-1.93442	-5.37E-01	5.100909	-3.59191	1.01E-03	1.61E-02
0.554967	1.30E+00	6.522113	5.053087	1.41E-05	1.04E-03
-2.32287	-8.93E-01	0.704607	-4.56631	6.05E-05	2.69E-03
1.012008	2.93E+00	0.572589	4.177306	1.90E-04	5.69E-03
0.437153	1.50E+00	3.564655	3.703437	7.39E-04	1.34E-02
-0.99278	-3.37E-01	3.664833	-4.1197	2.25E-04	6.34E-03
-1.50373	-4.19E-01	6.094971	-3.59765	9.94E-04	1.60E-02
-1.07726	-3.45E-01	4.491494	-3.94584	3.71E-04	8.57E-03
-4.01944	-1.53E+00	-0.37652	-4.51735	7.00E-05	2.96E-03
0.456045	1.42E+00	3.007532	3.949465	3.67E-04	8.54E-03
0.702904	1.59E+00	6.830025	5.261261	7.55E-06	6.51E-04
0.2887	1.07E+00	3.930751	3.529268	1.20E-03	1.78E-02
0.284944	1.02E+00	4.546053	3.610644	9.59E-04	1.55E-02
-1.20483	-4.72E-01	2.705486	-4.6443	4.80E-05	2.30E-03
-1.00961	-4.72E-01	6.046648	-5.60267	2.69E-06	3.17E-04
0.695027	2.50E+00	1.821206	3.597367	9.95E-04	1.60E-02
0.340327	1.17E+00	6.087183	3.698625	7.49E-04	1.35E-02
-1.54101	-5.03E-01	1.544096	-3.99955	3.18E-04	7.77E-03
-1.90167	-7.01E-01	3.930597	-4.40277	9.81E-05	3.70E-03
-1.68491	-5.62E-01	2.424432	-4.0654	2.63E-04	7.06E-03
1.311404	4.30E+00	3.478963	3.810961	5.45E-04	1.11E-02
-2.81578	-8.22E-01	0.353846	-3.7052	7.36E-04	1.34E-02
-1.07108	-3.39E-01	3.410378	-3.91469	4.06E-04	9.11E-03

-1.12551	-3.74E-01	2.203496	-4.05193	2.73E-04	7.21E-03
0.333406	1.17E+00	2.077998	3.654354	8.49E-04	1.46E-02
-1.21461	-5.66E-01	5.823696	-5.57757	2.91E-06	3.33E-04
-1.31091	-5.09E-01	4.593328	-4.61344	5.26E-05	2.42E-03
-0.88661	-2.83E-01	4.095862	-3.94039	3.77E-04	8.69E-03
0.599871	1.39E+00	4.32816	5.132134	1.11E-05	8.66E-04
-1.17639	-3.42E-01	2.661535	-3.69439	7.58E-04	1.36E-02
-0.99394	-3.38E-01	5.624394	-4.1232	2.22E-04	6.32E-03
0.522899	1.43E+00	4.774224	4.381025	1.05E-04	3.86E-03
0.452392	1.57E+00	2.116941	3.669354	8.14E-04	1.43E-02
0.769023	1.50E+00	4.923927	6.311553	3.19E-07	5.93E-05
0.540008	1.63E+00	3.743534	4.042848	2.81E-04	7.34E-03
0.441555	1.01E+00	5.625283	5.199816	9.08E-06	7.33E-04
-0.84029	-3.39E-01	7.370693	-4.77486	3.25E-05	1.76E-03
1.085801	2.62E+00	6.018032	4.905617	2.20E-05	1.42E-03
-1.32738	-7.24E-01	5.256573	-6.89857	5.55E-08	1.58E-05
-6.44225	-1.84E+00	-2.17182	-3.65553	8.46E-04	1.46E-02
-1.21151	-6.19E-01	5.970732	-6.26981	3.61E-07	6.53E-05
0.825869	1.51E+00	5.807365	6.949501	4.77E-08	1.39E-05
0.445778	1.08E+00	5.617916	4.890492	2.30E-05	1.44E-03
-1.89238	-7.99E-01	1.087568	-4.99812	1.67E-05	1.16E-03
0.317987	1.12E+00	3.277592	3.633534	9.00E-04	1.51E-02
-1.10671	-4.73E-01	4.036529	-5.0676	1.35E-05	1.02E-03
0.577227	1.47E+00	2.417572	4.650397	4.71E-05	2.27E-03
-1.35154	-6.18E-01	3.926363	-5.45169	4.25E-06	4.26E-04
0.607452	2.16E+00	0.853395	3.622268	9.28E-04	1.53E-02
-1.0316	-2.73E-01	4.268921	-3.49294	1.33E-03	1.91E-02
-1.13874	-3.00E-01	2.290148	-3.4833	1.37E-03	1.95E-02
0.775292	2.43E+00	7.095932	3.929408	3.89E-04	8.87E-03
-1.71155	-5.14E-01	1.178004	-3.77561	6.03E-04	1.18E-02
-1.89418	-1.11E+00	5.27277	-7.81411	3.86E-09	1.90E-06
-1.05788	-3.80E-01	3.277061	-4.31272	1.28E-04	4.36E-03
0.473908	1.67E+00	1.802418	3.63756	8.89E-04	1.51E-02
0.839893	1.22E+00	8.707199	10.91703	9.68E-13	1.24E-08
-1.17409	-3.92E-01	3.712243	-4.06919	2.60E-04	7.00E-03
0.287712	9.46E-01	4.416889	3.805417	5.54E-04	1.12E-02
-2.08474	-6.20E-01	0.014841	-3.75218	6.44E-04	1.23E-02
-1.98615	-1.05E+00	4.628707	-6.54707	1.58E-07	3.49E-05
0.865485	3.17E+00	0.339622	3.557802	1.11E-03	1.68E-02
-4.8354	-3.08E+00	4.140478	-9.12829	9.90E-11	1.27E-07
0.422826	8.57E-01	8.130402	5.983923	8.53E-07	1.24E-04
-1.33786	-4.60E-01	3.656487	-4.15945	2.00E-04	5.87E-03
0.415658	1.34E+00	3.142631	3.848276	4.91E-04	1.04E-02
0.51044	1.72E+00	1.744842	3.750639	6.47E-04	1.23E-02
0.337047	9.95E-01	2.51766	4.113255	2.29E-04	6.39E-03
0.613767	2.22E+00	2.426594	3.586609	1.03E-03	1.61E-02
0.605079	1.47E+00	5.841565	4.864563	2.49E-05	1.51E-03

0.474363	1.68E+00	2.375107	3.628018	9.14E-04	1.52E-02
0.273407	9.71E-01	4.601932	3.62406	9.24E-04	1.53E-02
-0.86326	-4.00E-01	4.414336	-5.54299	3.23E-06	3.53E-04
0.349617	9.37E-01	4.448757	4.447707	8.60E-05	3.47E-03
0.783723	2.85E+00	3.416933	3.568255	1.08E-03	1.66E-02
-1.34552	-4.96E-01	3.201238	-4.40653	9.71E-05	3.68E-03
1.097061	1.69E+00	14.89458	9.506141	3.60E-11	9.45E-08
0.296681	9.21E-01	5.648399	3.960397	3.56E-04	8.31E-03
-1.25367	-3.34E-01	3.911817	-3.50675	1.28E-03	1.86E-02
-1.05063	-4.29E-01	9.839848	-4.82988	2.76E-05	1.60E-03
-0.80937	-4.05E-01	10.01536	-6.10776	5.88E-07	9.20E-05
-1.7296	-6.11E-01	2.26819	-4.25096	1.53E-04	4.92E-03
-1.04447	-3.55E-01	3.597935	-4.11858	2.25E-04	6.34E-03
1.008012	3.08E+00	1.927659	4.011734	3.07E-04	7.59E-03
0.551869	1.53E+00	1.713454	4.327485	1.22E-04	4.25E-03
0.330096	1.17E+00	6.523862	3.634889	8.96E-04	1.51E-02
-1.4938	-6.98E-01	3.781469	-5.59311	2.77E-06	3.24E-04
0.416332	1.12E+00	3.854759	4.422212	9.27E-05	3.61E-03
0.383835	1.19E+00	3.616014	3.963457	3.53E-04	8.28E-03
0.340704	1.08E+00	3.326446	3.908016	4.14E-04	9.24E-03
-1.01715	-5.04E-01	4.394986	-6.01385	7.80E-07	1.15E-04
0.349011	1.22E+00	3.225712	3.663184	8.28E-04	1.44E-02
0.490527	1.32E+00	4.636422	4.430757	9.04E-05	3.56E-03
0.665346	1.57E+00	4.857348	5.026764	1.53E-05	1.09E-03
0.365974	1.14E+00	2.916214	3.946201	3.71E-04	8.57E-03
-1.36457	-7.31E-01	8.002686	-6.7209	9.39E-08	2.27E-05
-1.20642	-3.98E-01	4.397065	-4.03332	2.89E-04	7.41E-03
0.370783	1.09E+00	4.696996	4.110884	2.30E-04	6.39E-03
-1.70387	-7.76E-01	4.561139	-5.42589	4.59E-06	4.47E-04
0.326647	1.16E+00	3.357556	3.617689	9.40E-04	1.54E-02
-3.10372	-8.75E-01	0.531086	-3.6264	9.18E-04	1.52E-02
-1.52447	-5.66E-01	1.747778	-4.43116	9.03E-05	3.56E-03
-3.41062	-2.21E+00	3.937147	-9.46205	4.05E-11	9.45E-08
-2.5025	-9.05E-01	0.386519	-4.33335	1.20E-04	4.22E-03
0.937617	3.34E+00	4.415347	3.616717	9.43E-04	1.54E-02
-2.08902	-6.33E-01	2.811509	-3.79653	5.68E-04	1.13E-02
0.454142	1.70E+00	1.026273	3.507286	1.28E-03	1.86E-02
0.297696	9.01E-01	5.800767	4.036927	2.86E-04	7.37E-03
0.479904	1.24E+00	6.767257	4.601525	5.45E-05	2.46E-03
0.399407	1.02E+00	2.982223	4.630408	5.00E-05	2.36E-03
-0.88394	-4.42E-01	8.893231	-6.09996	6.02E-07	9.30E-05
0.509508	1.29E+00	8.88743	4.686056	4.24E-05	2.11E-03
-1.45808	-4.76E-01	3.46149	-3.99694	3.20E-04	7.80E-03
0.548568	1.10E+00	4.160396	6.073065	6.52E-07	9.97E-05
0.407916	1.09E+00	4.118777	4.445693	8.65E-05	3.47E-03
-0.96478	-4.98E-01	8.480108	-6.37182	2.66E-07	5.12E-05
-1.09234	-3.53E-01	3.205772	-3.96994	3.46E-04	8.18E-03



0.843775	1.52E+00	3.322873	7.090304	3.15E-08	1.01E-05
-1.90777	-6.84E-01	2.042064	-4.30048	1.33E-04	4.43E-03
-1.65907	-6.23E-01	2.917449	-4.47252	7.99E-05	3.28E-03
-1.51169	-5.49E-01	2.966606	-4.34536	1.16E-04	4.17E-03
0.397013	1.31E+00	4.891465	3.803351	5.57E-04	1.12E-02
-1.5287	-5.80E-01	1.931015	-4.51537	7.04E-05	2.97E-03
-8.97002	-5.61E+00	0.982612	-8.80393	2.40E-10	2.56E-07
0.657488	1.24E+00	3.68954	6.593052	1.37E-07	3.15E-05
0.71516	1.65E+00	2.620158	5.141648	1.08E-05	8.56E-04
0.335383	1.21E+00	3.526201	3.59281	1.01E-03	1.60E-02
0.398486	1.36E+00	1.674371	3.721069	7.03E-04	1.31E-02
-3.59511	-1.44E+00	1.591773	-4.73439	3.67E-05	1.91E-03
-1.40023	-4.10E-01	2.157506	-3.71351	7.19E-04	1.32E-02
-1.62713	-7.35E-01	4.404841	-5.37879	5.29E-06	4.92E-04
-1.75597	-5.03E-01	1.778533	-3.65997	8.35E-04	1.45E-02
-1.53475	-5.70E-01	2.569625	-4.43444	8.94E-05	3.56E-03
-1.51656	-5.42E-01	3.19679	-4.29326	1.35E-04	4.50E-03
0.344589	1.05E+00	7.086608	4.018328	3.01E-04	7.51E-03
-1.10576	-6.18E-01	8.128303	-7.18719	2.37E-08	7.81E-06
-1.07631	-2.91E-01	2.821297	-3.53728	1.18E-03	1.74E-02
0.395845	1.34E+00	4.403265	3.732417	6.81E-04	1.28E-02
-1.41645	-6.25E-01	4.277959	-5.24231	7.99E-06	6.72E-04
-1.28129	-5.45E-01	3.644146	-5.0403	1.47E-05	1.07E-03
0.826894	2.72E+00	4.715461	3.805023	5.55E-04	1.12E-02
-2.28453	-1.15E+00	5.456974	-6.13759	5.37E-07	8.63E-05
-1.08558	-3.57E-01	3.268172	-4.02549	2.95E-04	7.49E-03
-0.89088	-5.06E-01	7.633183	-7.37161	1.38E-08	5.23E-06
-1.19202	-4.12E-01	3.365492	-4.17936	1.89E-04	5.68E-03
0.340182	8.44E-01	7.619913	4.775678	3.24E-05	1.76E-03
-1.05384	-3.35E-01	2.810248	-3.92491	3.94E-04	8.92E-03
-0.9163	-2.71E-01	4.532229	-3.73995	6.67E-04	1.25E-02
0.516469	1.12E+00	5.401212	5.532936	3.33E-06	3.53E-04
-1.99583	-1.16E+00	4.070583	-7.70615	5.26E-09	2.41E-06
0.452489	1.52E+00	5.879973	3.759015	6.32E-04	1.21E-02
0.370938	1.04E+00	2.884624	4.271603	1.44E-04	4.75E-03
0.718188	1.76E+00	5.95453	4.840798	2.67E-05	1.58E-03
-1.44417	-4.92E-01	3.011126	-4.13035	2.18E-04	6.21E-03
-1.27662	-4.24E-01	3.028591	-4.04767	2.77E-04	7.27E-03
-1.38693	-4.14E-01	4.75628	-3.76199	6.27E-04	1.21E-02
-2.92848	-1.44E+00	5.967586	-5.96353	9.07E-07	1.29E-04
-1.16096	-5.27E-01	3.740482	-5.41222	4.79E-06	4.59E-04
-1.00656	-3.43E-01	5.309911	-4.13424	2.15E-04	6.17E-03
-3.17639	-1.93E+00	2.474958	-8.33141	8.89E-10	7.14E-07
0.277807	9.89E-01	3.649886	3.619003	9.37E-04	1.54E-02
-0.99962	-5.62E-01	10.66663	-7.2518	1.96E-08	6.81E-06
-2.05404	-6.55E-01	0.423719	-3.934	3.84E-04	8.80E-03
-1.04831	-3.52E-01	3.653535	-4.08266	2.50E-04	6.80E-03

0.408962	1.25E+00	4.466033	4.013698	3.05E-04	7.58E-03
-1.31459	-5.42E-01	3.373781	-4.88183	2.36E-05	1.47E-03
-2.05763	-7.43E-01	1.780551	-4.32703	1.23E-04	4.25E-03
-1.27659	-5.42E-01	3.876703	-5.02958	1.52E-05	1.09E-03
-1.21425	-3.94E-01	4.677693	-3.98391	3.33E-04	8.01E-03
0.493713	1.13E+00	4.260774	5.168401	9.98E-06	7.96E-04
0.349205	1.06E+00	3.452059	4.04061	2.82E-04	7.35E-03
0.304739	8.90E-01	6.106928	4.14782	2.07E-04	5.99E-03
0.351335	1.12E+00	3.346953	3.876799	4.52E-04	9.84E-03
0.304635	1.15E+00	3.176789	3.501057	1.30E-03	1.88E-02
-1.00728	-3.53E-01	4.942039	-4.22159	1.67E-04	5.21E-03
-2.40891	-6.78E-01	10.71211	-3.62216	9.29E-04	1.53E-02
0.400594	1.00E+00	5.102148	4.745214	3.55E-05	1.87E-03
-1.04561	-3.42E-01	3.737702	-4.00403	3.14E-04	7.70E-03
0.383045	1.38E+00	1.550989	3.596045	9.99E-04	1.60E-02
-1.10206	-4.07E-01	3.646663	-4.40926	9.63E-05	3.67E-03
-0.99577	-3.24E-01	4.80404	-3.99398	3.23E-04	7.84E-03
0.842456	2.98E+00	0.519015	3.632407	9.02E-04	1.51E-02
0.914616	2.83E+00	-0.52861	3.972722	3.44E-04	8.15E-03
0.344864	1.20E+00	4.40812	3.660622	8.34E-04	1.45E-02
-0.94327	-3.82E-01	4.77384	-4.79315	3.08E-05	1.70E-03
0.662102	1.03E+00	10.00753	9.379073	5.05E-11	9.45E-08
-3.11536	-1.79E+00	9.840645	-7.51548	9.12E-09	3.66E-06
-3.85956	-2.30E+00	1.280325	-8.01509	2.17E-09	1.28E-06
-1.32876	-4.85E-01	3.794886	-4.36937	1.08E-04	3.96E-03
-1.15165	-5.21E-01	4.606871	-5.38848	5.14E-06	4.82E-04
-1.39361	-5.36E-01	8.464249	-4.5685	6.01E-05	2.69E-03
-0.98674	-2.88E-01	7.222701	-3.70708	7.32E-04	1.34E-02
0.342946	9.75E-01	5.012356	4.23623	1.60E-04	5.07E-03
-1.04104	-3.75E-01	8.744471	-4.31797	1.26E-04	4.32E-03
1.045329	1.74E+00	6.887231	8.187843	1.33E-09	9.00E-07
-0.97533	-3.37E-01	3.168874	-4.17446	1.92E-04	5.72E-03
-1.18655	-4.76E-01	6.675645	-4.75121	3.49E-05	1.85E-03
0.441914	1.04E+00	6.021579	5.053678	1.41E-05	1.04E-03
-1.89456	-7.57E-01	2.210024	-4.73676	3.64E-05	1.91E-03
0.310577	9.07E-01	7.236398	4.147448	2.07E-04	5.99E-03
0.41682	1.11E+00	6.477133	4.463243	8.21E-05	3.36E-03
-1.28164	-4.97E-01	3.778115	-4.60604	5.38E-05	2.45E-03
0.540187	1.34E+00	6.365687	4.763687	3.36E-05	1.81E-03
0.59772	1.46E+00	3.287378	4.833216	2.73E-05	1.60E-03
0.41559	1.37E+00	8.316591	3.79792	5.66E-04	1.13E-02
0.714917	1.93E+00	4.048068	4.421359	9.29E-05	3.61E-03
0.293014	1.07E+00	7.094039	3.555632	1.12E-03	1.69E-02
-1.26509	-3.52E-01	2.725908	-3.59526	1.00E-03	1.60E-02
0.66511	1.92E+00	0.000476	4.189239	1.84E-04	5.60E-03
-1.45689	-6.43E-01	4.872759	-5.24152	8.01E-06	6.72E-04
-1.19466	-4.29E-01	2.593279	-4.30528	1.31E-04	4.39E-03

-0.87542	-3.03E-01	4.836471	-4.17951	1.89E-04	5.68E-03
0.55506	1.93E+00	0.41656	3.666584	8.20E-04	1.43E-02
-1.33183	-4.29E-01	2.987977	-3.9618	3.54E-04	8.30E-03
0.286666	9.93E-01	6.410063	3.679013	7.92E-04	1.41E-02
-1.44176	-5.97E-01	3.431093	-4.90207	2.22E-05	1.42E-03
0.359057	9.39E-01	3.68492	4.546777	6.41E-05	2.79E-03
0.463086	1.34E+00	8.104688	4.16714	1.96E-04	5.76E-03
-1.37293	-4.79E-01	4.088458	-4.21101	1.72E-04	5.33E-03
0.507836	8.57E-01	8.20442	7.93588	2.72E-09	1.46E-06
0.680602	1.63E+00	2.990649	4.938035	2.00E-05	1.33E-03
-0.94346	-2.98E-01	4.100953	-3.90518	4.17E-04	9.24E-03
0.735484	2.40E+00	1.78909	3.825013	5.24E-04	1.09E-02
0.403424	1.37E+00	1.897803	3.724405	6.97E-04	1.30E-02
0.844663	1.67E+00	4.410663	6.187177	4.63E-07	7.75E-05
-0.98515	-5.40E-01	7.492739	-6.9569	4.67E-08	1.39E-05
-1.07355	-4.28E-01	4.836453	-4.71987	3.83E-05	1.98E-03
-1.86375	-5.43E-01	0.999694	-3.70088	7.45E-04	1.35E-02
-1.01659	-3.71E-01	9.5961	-4.36325	1.10E-04	4.02E-03
0.428951	1.15E+00	4.886158	4.446009	8.64E-05	3.47E-03
0.80277	2.38E+00	5.894963	4.093648	2.42E-04	6.66E-03
0.498913	1.38E+00	3.366537	4.325222	1.23E-04	4.27E-03
0.409364	1.29E+00	3.47396	3.916097	4.04E-04	9.08E-03
-4.45306	-1.48E+00	-1.58398	-4.05884	2.68E-04	7.11E-03
0.294409	1.03E+00	3.949214	3.662898	8.29E-04	1.44E-02
-1.06528	-2.95E-01	2.830126	-3.58989	1.02E-03	1.61E-02
-0.90558	-4.83E-01	7.977387	-6.66617	1.11E-07	2.58E-05
0.593766	1.73E+00	1.475184	4.160457	2.00E-04	5.86E-03
0.28185	9.82E-01	7.10921	3.666483	8.20E-04	1.43E-02
-2.07839	-5.76E-01	-0.08363	-3.58874	1.02E-03	1.61E-02
0.507416	1.89E+00	3.862289	3.518591	1.24E-03	1.82E-02
-1.19668	-3.42E-01	1.768841	-3.65811	8.40E-04	1.45E-02
-0.81034	-3.74E-01	6.150647	-5.5086	3.58E-06	3.65E-04
0.366078	1.25E+00	6.629605	3.718716	7.08E-04	1.31E-02
0.389044	1.38E+00	4.217525	3.620954	9.32E-04	1.53E-02
-1.4952	-7.72E-01	4.966114	-6.37049	2.67E-07	5.12E-05
0.332169	1.18E+00	4.015452	3.625603	9.20E-04	1.52E-02
-1.54908	-5.12E-01	2.824469	-4.03576	2.86E-04	7.38E-03
0.824528	2.09E+00	1.421041	4.670174	4.44E-05	2.18E-03
0.427433	1.12E+00	6.586115	4.530387	6.73E-05	2.88E-03
-2.03145	-5.87E-01	2.010978	-3.68387	7.81E-04	1.39E-02
0.911585	2.30E+00	1.081674	4.691438	4.17E-05	2.08E-03
-1.00083	-3.46E-01	7.193069	-4.17684	1.90E-04	5.69E-03
-1.70011	-5.39E-01	2.079829	-3.91852	4.01E-04	9.04E-03
0.623298	1.48E+00	4.337519	4.996319	1.68E-05	1.16E-03
-1.11416	-3.90E-01	4.582388	-4.22279	1.66E-04	5.21E-03
0.611984	1.59E+00	3.237008	4.561347	6.14E-05	2.70E-03
-1.94712	-5.17E-01	4.324271	-3.49852	1.31E-03	1.89E-02

-1.1518	-4.74E-01	3.987251	-4.8712	2.44E-05	1.51E-03
0.548852	1.23E+00	9.645091	5.298995	6.74E-06	6.00E-04
-1.89111	-6.23E-01	1.195024	-4.02698	2.94E-04	7.47E-03
-0.81268	-4.17E-01	5.962341	-6.31374	3.17E-07	5.93E-05
-1.22244	-4.16E-01	3.219497	-4.12792	2.19E-04	6.24E-03
0.497834	1.51E+00	3.122432	4.029952	2.91E-04	7.45E-03
0.647177	2.28E+00	3.012677	3.639683	8.84E-04	1.51E-02
0.659926	1.74E+00	2.467587	4.511804	7.11E-05	2.99E-03
0.411097	1.34E+00	6.700735	3.828981	5.18E-04	1.08E-02
-1.54435	-5.60E-01	2.534468	-4.34028	1.18E-04	4.17E-03
0.647125	1.64E+00	4.775013	4.679648	4.32E-05	2.13E-03
0.58187	1.25E+00	3.462683	5.573451	2.94E-06	3.34E-04
-1.49521	-4.42E-01	2.157406	-3.73413	6.78E-04	1.27E-02
-1.89887	-9.66E-01	3.145571	-6.23668	3.99E-07	7.01E-05
-1.0973	-4.09E-01	5.768083	-4.44299	8.72E-05	3.49E-03
-1.45255	-4.92E-01	2.41583	-4.11489	2.28E-04	6.37E-03
-0.90184	-3.13E-01	4.883678	-4.18703	1.85E-04	5.61E-03
0.754587	2.33E+00	0.884309	3.972086	3.44E-04	8.15E-03
-2.68797	-1.65E+00	2.966895	-8.49159	5.69E-10	4.86E-07
1.081411	1.62E+00	12.08632	10.22123	5.57E-12	3.58E-08
-2.02996	-7.79E-01	2.30475	-4.56202	6.13E-05	2.70E-03
0.420625	1.36E+00	3.084937	3.84474	4.95E-04	1.05E-02
-2.72603	-1.40E+00	3.392239	-6.29227	3.38E-07	6.19E-05
0.29248	9.32E-01	2.960234	3.888567	4.37E-04	9.61E-03
-1.25652	-3.85E-01	2.5754	-3.82325	5.27E-04	1.09E-02
0.537068	1.26E+00	9.833779	5.038255	1.48E-05	1.07E-03
0.555885	1.20E+00	9.671627	5.534646	3.31E-06	3.53E-04
0.336692	8.59E-01	10.10167	4.650723	4.71E-05	2.27E-03
0.614974	1.26E+00	6.985284	5.916819	1.04E-06	1.46E-04
0.741329	2.14E+00	1.982946	4.186659	1.85E-04	5.61E-03
-1.13087	-4.58E-01	3.659981	-4.79931	3.02E-05	1.69E-03
-1.2261	-4.29E-01	4.976549	-4.21588	1.70E-04	5.27E-03
-0.93135	-3.15E-01	5.012639	-4.10804	2.32E-04	6.43E-03
0.470419	7.88E-01	9.148255	8.050533	1.96E-09	1.26E-06
0.595858	1.56E+00	2.722885	4.54714	6.40E-05	2.79E-03
-1.17033	-4.00E-01	3.443757	-4.14369	2.10E-04	6.03E-03
0.390223	8.78E-01	7.096788	5.282813	7.07E-06	6.26E-04
-1.17459	-3.71E-01	2.827809	-3.90548	4.17E-04	9.24E-03
0.638678	1.04E+00	9.013345	8.56046	4.69E-10	4.30E-07
-1.30667	-3.82E-01	2.978696	-3.70645	7.33E-04	1.34E-02
0.600622	1.34E+00	10.05858	5.349717	5.78E-06	5.26E-04
-0.9846	-4.02E-01	7.584764	-4.83069	2.75E-05	1.60E-03
-0.99928	-4.55E-01	4.68026	-5.43256	4.50E-06	4.41E-04
0.438789	1.30E+00	3.365528	4.111809	2.30E-04	6.39E-03
-1.13543	-4.78E-01	3.161988	-4.98743	1.72E-05	1.19E-03
-1.47802	-6.28E-01	3.813338	-5.03124	1.51E-05	1.09E-03
0.515654	1.17E+00	3.684642	5.208881	8.84E-06	7.27E-04

1.244102	3.06E+00	0.653696	4.808891	2.94E-05	1.67E-03
-0.87794	-3.49E-01	7.583092	-4.71689	3.87E-05	1.99E-03
0.48942	1.03E+00	6.808954	5.687544	2.09E-06	2.55E-04
-1.62355	-6.55E-01	1.830147	-4.77966	3.21E-05	1.75E-03
0.321405	1.13E+00	3.841056	3.649197	8.61E-04	1.48E-02
0.744127	2.10E+00	5.256769	4.263767	1.48E-04	4.82E-03
0.337127	1.16E+00	3.656071	3.699661	7.47E-04	1.35E-02
0.673258	2.38E+00	-0.06112	3.631775	9.04E-04	1.51E-02
-1.44426	-5.84E-01	5.045305	-4.78761	3.13E-05	1.72E-03
-1.8325	-9.63E-01	7.539948	-6.52667	1.67E-07	3.64E-05
-1.6634	-4.85E-01	2.152069	-3.70523	7.36E-04	1.34E-02
0.262187	1.00E+00	5.221604	3.468119	1.42E-03	2.00E-02
0.587743	1.60E+00	1.987403	4.400455	9.88E-05	3.71E-03
0.380504	1.06E+00	4.201846	4.307926	1.30E-04	4.38E-03
0.339997	1.09E+00	2.670158	3.881623	4.46E-04	9.76E-03
0.561062	2.00E+00	1.486086	3.610542	9.59E-04	1.55E-02
-1.03104	-4.37E-01	6.36694	-5.02355	1.54E-05	1.09E-03
0.686859	1.64E+00	3.755659	4.953474	1.90E-05	1.29E-03
-1.34059	-6.80E-01	5.045336	-6.21758	4.23E-07	7.33E-05
-1.4398	-6.24E-01	3.753366	-5.13627	1.10E-05	8.61E-04
0.304978	1.02E+00	7.628416	3.764779	6.22E-04	1.20E-02
1.238621	3.51E+00	1.014309	4.25035	1.54E-04	4.92E-03
0.36033	8.90E-01	9.847018	4.796432	3.05E-05	1.69E-03
0.459627	1.05E+00	4.779745	5.206298	8.91E-06	7.28E-04
-1.45403	-5.37E-01	4.573451	-4.40995	9.61E-05	3.67E-03
0.36818	1.23E+00	4.00845	3.768458	6.15E-04	1.20E-02
0.598357	1.51E+00	8.511123	4.691166	4.17E-05	2.08E-03
0.377262	1.17E+00	5.257456	3.968696	3.48E-04	8.18E-03
1.40965	4.97E+00	-1.76448	3.639484	8.85E-04	1.51E-02
0.929529	2.95E+00	4.720544	3.898061	4.26E-04	9.38E-03
-1.13629	-4.52E-01	4.188155	-4.71084	3.94E-05	2.00E-03
-1.12912	-4.82E-01	5.176903	-5.05374	1.41E-05	1.04E-03
-1.73408	-6.26E-01	2.615584	-4.32834	1.22E-04	4.25E-03
-2.10655	-7.38E-01	0.661757	-4.2222	1.67E-04	5.21E-03
0.327498	9.11E-01	6.736327	4.311597	1.28E-04	4.36E-03
0.534155	1.36E+00	5.779997	4.665253	4.51E-05	2.20E-03
0.340054	8.71E-01	4.773995	4.632937	4.96E-05	2.36E-03
0.479884	1.32E+00	2.262232	4.357111	1.12E-04	4.06E-03
0.303329	1.01E+00	2.716347	3.778567	5.98E-04	1.18E-02
-2.56689	-1.06E+00	1.140782	-4.86817	2.46E-05	1.51E-03
0.378261	1.38E+00	2.752531	3.563557	1.09E-03	1.67E-02
-2.68786	-9.49E-01	5.541509	-4.24714	1.55E-04	4.95E-03
-2.38708	-9.31E-01	0.751619	-4.62773	5.04E-05	2.36E-03
-1.73421	-6.69E-01	7.282916	-4.58275	5.76E-05	2.60E-03
-1.29375	-6.90E-01	9.063073	-6.67886	1.06E-07	2.53E-05
-0.98609	-3.43E-01	3.18869	-4.19788	1.79E-04	5.48E-03
0.43426	1.42E+00	1.884497	3.825124	5.24E-04	1.09E-02

0.99795	3.59E+00	1.753979	3.593797	1.01E-03	1.60E-02
-1.48995	-4.35E-01	2.972488	-3.7058	7.34E-04	1.34E-02
-0.96385	-5.05E-01	6.093666	-6.50448	1.79E-07	3.77E-05
-8.0918	-3.24E+00	-2.36445	-4.7468	3.54E-05	1.87E-03
0.419184	1.29E+00	5.064507	3.980779	3.36E-04	8.07E-03
0.421413	1.57E+00	1.925674	3.523841	1.22E-03	1.80E-02
0.514322	1.39E+00	3.183032	4.415799	9.44E-05	3.65E-03
-1.46052	-7.39E-01	7.683048	-6.19372	4.54E-07	7.75E-05
-1.24046	-5.77E-01	4.011327	-5.56363	3.03E-06	3.38E-04
-1.36009	-5.77E-01	4.768096	-5.02364	1.54E-05	1.09E-03
0.401281	1.26E+00	4.246298	3.930404	3.88E-04	8.86E-03
0.324082	8.57E-01	7.380047	4.501944	7.32E-05	3.07E-03
0.428973	1.18E+00	4.193853	4.339861	1.18E-04	4.17E-03
0.373734	1.32E+00	1.658642	3.63219	9.03E-04	1.51E-02
-0.95552	-2.61E-01	2.945296	-3.55505	1.12E-03	1.69E-02
-1.86975	-4.91E-01	1.604547	-3.47793	1.39E-03	1.96E-02
-2.48202	-8.76E-01	1.48959	-4.24545	1.56E-04	4.96E-03
0.409626	1.46E+00	2.469598	3.611169	9.58E-04	1.55E-02
-1.4598	-4.39E-01	1.468905	-3.78024	5.95E-04	1.17E-02
0.428466	1.64E+00	2.484526	3.468558	1.42E-03	2.00E-02
0.564602	1.88E+00	1.533252	3.781019	5.94E-04	1.17E-02
-1.65284	-4.93E-01	2.415641	-3.75977	6.31E-04	1.21E-02
-1.80369	-6.79E-01	8.719893	-4.4829	7.75E-05	3.24E-03
-5.32894	-1.47E+00	-2.02256	-3.57519	1.06E-03	1.64E-02
0.472706	1.11E+00	4.180163	5.061053	1.38E-05	1.04E-03
-1.98891	-5.23E-01	3.464809	-3.48048	1.38E-03	1.95E-02
-1.47987	-4.52E-01	4.461209	-3.8183	5.34E-04	1.09E-02
-1.16934	-3.66E-01	3.653619	-3.88135	4.46E-04	9.76E-03
0.335592	9.27E-01	4.295534	4.334771	1.20E-04	4.22E-03
0.358162	1.09E+00	3.357928	4.030256	2.91E-04	7.45E-03
-1.77512	-1.11E+00	6.33624	-8.83272	2.21E-10	2.56E-07
-5.15044	-1.78E+00	-0.22779	-4.18496	1.86E-04	5.61E-03
-0.82363	-3.65E-01	8.728143	-5.25868	7.61E-06	6.51E-04
0.453131	1.66E+00	2.071533	3.561647	1.10E-03	1.67E-02
-1.0467	-3.70E-01	5.564625	-4.25008	1.54E-04	4.92E-03
-1.05968	-3.54E-01	4.475611	-4.07034	2.59E-04	6.99E-03
0.320418	8.94E-01	5.538575	4.299039	1.33E-04	4.44E-03
0.591669	1.44E+00	4.96099	4.865544	2.48E-05	1.51E-03
0.714182	1.51E+00	2.754768	5.663344	2.24E-06	2.72E-04
0.402909	1.44E+00	2.277488	3.604761	9.75E-04	1.57E-02
-0.93598	-2.69E-01	3.683403	-3.66794	8.17E-04	1.43E-02
-2.26974	-9.49E-01	7.228958	-4.94926	1.93E-05	1.30E-03
-0.97433	-3.61E-01	4.771645	-4.42665	9.15E-05	3.58E-03
-1.22039	-3.85E-01	3.176257	-3.90661	4.15E-04	9.24E-03
0.392141	1.03E+00	4.093909	4.527433	6.79E-05	2.89E-03
-0.95439	-3.59E-01	9.991361	-4.47804	7.86E-05	3.26E-03
-1.85335	-5.49E-01	0.490751	-3.7419	6.63E-04	1.25E-02

0.673312	1.47E+00	5.93135	5.447519	4.30E-06	4.28E-04
-1.98458	-5.81E-01	1.536458	-3.71391	7.18E-04	1.32E-02
-1.21449	-5.55E-01	4.006342	-5.45254	4.24E-06	4.26E-04
0.678177	1.49E+00	7.500209	5.410293	4.81E-06	4.59E-04
-0.96235	-4.84E-01	5.30963	-6.13685	5.38E-07	8.63E-05
0.515019	9.97E-01	7.642623	6.372444	2.66E-07	5.12E-05
0.91723	3.02E+00	0.995653	3.803179	5.58E-04	1.12E-02
0.362724	1.17E+00	1.771092	3.862213	4.71E-04	1.01E-02
0.291254	9.52E-01	3.60484	3.821606	5.29E-04	1.09E-02
0.741655	1.78E+00	5.638116	4.930422	2.04E-05	1.34E-03
-1.03918	-5.39E-01	7.429113	-6.40265	2.43E-07	4.87E-05
-5.14902	-2.70E+00	-0.08545	-6.51205	1.75E-07	3.74E-05
0.442544	1.40E+00	7.104483	3.905727	4.16E-04	9.24E-03
0.830977	1.55E+00	7.776706	6.722683	9.34E-08	2.27E-05
0.417636	1.25E+00	6.015764	4.080437	2.52E-04	6.83E-03
0.36894	1.21E+00	3.611364	3.820297	5.31E-04	1.09E-02
0.757918	2.01E+00	2.193677	4.480765	7.80E-05	3.25E-03
-0.9515	-3.09E-01	4.847544	-3.98406	3.33E-04	8.01E-03
-1.60252	-9.44E-01	4.826048	-7.85567	3.42E-09	1.76E-06
-6.50119	-3.09E+00	-3.42889	-5.70443	1.98E-06	2.45E-04
-0.93133	-2.58E-01	3.233638	-3.58349	1.03E-03	1.62E-02
-1.85185	-4.85E-01	1.586574	-3.47242	1.41E-03	1.98E-02
0.510677	1.88E+00	3.437108	3.548811	1.14E-03	1.71E-02
0.402199	8.24E-01	5.529716	5.906301	1.08E-06	1.49E-04
-1.60661	-8.87E-01	4.519983	-7.03845	3.67E-08	1.15E-05
0.279091	9.13E-01	7.00973	3.818206	5.34E-04	1.09E-02
0.573892	1.61E+00	3.763188	4.288923	1.37E-04	4.54E-03
0.468238	1.38E+00	5.032282	4.116785	2.27E-04	6.35E-03
-0.9112	-2.74E-01	3.903213	-3.77817	5.99E-04	1.18E-02
0.544129	1.18E+00	4.300957	5.518037	3.48E-06	3.60E-04
-0.82065	-4.08E-01	6.407675	-6.04406	7.12E-07	1.06E-04
-1.13233	-3.20E-01	2.751553	-3.63453	8.97E-04	1.51E-02
0.671913	1.69E+00	4.270977	4.705947	3.99E-05	2.03E-03
-1.17958	-6.88E-01	6.353444	-7.7263	4.96E-09	2.36E-06
1.263779	1.93E+00	10.98509	9.682201	2.26E-11	9.45E-08
0.272177	9.08E-01	5.074005	3.769917	6.13E-04	1.20E-02
-1.53758	-8.88E-01	5.189703	-7.58773	7.40E-09	3.06E-06
1.110013	3.59E+00	2.781953	3.851164	4.87E-04	1.04E-02
-1.30737	-7.79E-01	6.277017	-8.01186	2.19E-09	1.28E-06
-1.13552	-3.50E-01	3.159306	-3.84279	4.98E-04	1.05E-02
-1.72681	-1.04E+00	5.307044	-8.22537	1.20E-09	8.54E-07
-1.42631	-6.88E-01	4.400538	-5.81684	1.41E-06	1.85E-04
0.372235	1.17E+00	4.00093	3.926976	3.92E-04	8.91E-03
0.970121	1.61E+00	5.103056	8.227136	1.19E-09	8.54E-07
0.39387	1.42E+00	1.387114	3.588623	1.02E-03	1.61E-02
-0.91474	-2.79E-01	4.576728	-3.81737	5.36E-04	1.09E-02
1.030684	3.18E+00	2.139485	3.9788	3.38E-04	8.10E-03

-2.12122	-1.02E+00	3.314793	-5.8026	1.47E-06	1.91E-04
-1.1932	-5.51E-01	4.079588	-5.51941	3.46E-06	3.60E-04
-2.80921	-1.04E+00	0.179607	-4.42801	9.11E-05	3.58E-03
0.422758	1.50E+00	1.438619	3.628491	9.12E-04	1.52E-02
0.640832	1.53E+00	7.398437	4.951406	1.92E-05	1.29E-03
0.970273	2.25E+00	3.254	5.103524	1.21E-05	9.27E-04
-1.44727	-5.23E-01	2.476131	-4.32987	1.22E-04	4.25E-03
0.462918	1.49E+00	1.697111	3.857913	4.77E-04	1.02E-02
-0.93812	-3.52E-01	7.701632	-4.47521	7.92E-05	3.28E-03
-2.04555	-1.08E+00	4.022404	-6.5622	1.51E-07	3.39E-05
-2.4406	-1.32E+00	1.365335	-6.78991	7.65E-08	1.93E-05
1.301187	2.04E+00	11.22956	9.162291	9.04E-11	1.27E-07
-1.07819	-3.62E-01	4.083855	-4.08458	2.49E-04	6.78E-03
-1.28013	-3.68E-01	4.461771	-3.66764	8.18E-04	1.43E-02
0.407485	1.42E+00	1.886205	3.672758	8.06E-04	1.42E-02
-0.96667	-3.18E-01	4.062623	-4.01848	3.01E-04	7.51E-03
-1.04996	-2.98E-01	3.594973	-3.639	8.86E-04	1.51E-02
-1.34005	-7.53E-01	4.949036	-7.23538	2.06E-08	6.96E-06
0.403699	9.85E-01	4.467352	4.85116	2.59E-05	1.54E-03
0.455478	1.17E+00	4.881791	4.626815	5.06E-05	2.36E-03
0.388834	9.63E-01	9.131939	4.783329	3.17E-05	1.74E-03
0.267033	1.00E+00	4.342613	3.510277	1.27E-03	1.85E-02
0.720556	1.17E+00	7.726415	8.566961	4.61E-10	4.30E-07
-1.87582	-9.80E-01	2.889528	-6.47034	1.98E-07	4.08E-05
-1.29009	-3.91E-01	2.486077	-3.79755	5.67E-04	1.13E-02
-2.91979	-8.81E-01	-0.91769	-3.787	5.84E-04	1.16E-02
-1.65665	-4.96E-01	0.131865	-3.769	6.14E-04	1.20E-02
0.388829	1.07E+00	5.321318	4.341231	1.18E-04	4.17E-03
-1.49121	-8.09E-01	5.610376	-6.84228	6.55E-08	1.75E-05
-1.81114	-5.78E-01	1.889422	-3.93721	3.80E-04	8.75E-03
-1.79554	-7.95E-01	2.364916	-5.25942	7.59E-06	6.51E-04
0.531161	1.43E+00	1.499949	4.433331	8.97E-05	3.56E-03
-1.42542	-4.03E-01	3.148694	-3.63115	9.06E-04	1.52E-02
0.407725	1.50E+00	0.554683	3.549723	1.14E-03	1.71E-02
-2.99268	-8.71E-01	-0.25823	-3.69766	7.51E-04	1.35E-02
-2.12311	-5.89E-01	4.462796	-3.58982	1.02E-03	1.61E-02
1.454308	3.05E+00	0.44527	5.725632	1.86E-06	2.34E-04
-1.23721	-3.76E-01	3.432715	-3.80752	5.51E-04	1.12E-02
0.593218	1.28E+00	9.19084	5.529071	3.36E-06	3.54E-04