Supplemental Material

IL-7-dependent STAT1 activation limits homeostatic CD4 T cell expansion

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Figure S1. STAT1 Tg mice exhibit similar T cell counts and differentiation profiles than WT littermates. **(A)** Schematic representation of the transgene construct of mouse STAT1 cDNA under the control of the human CD2 enhancer/promoter used to generate transgenic (Tg) mice. **(B)** Total cellularity in LNs, spleen and thymus from WT (n= 16, black symbols) and STAT1 Tg (n= 16, red synbols) mice. **(C)** Absolute numbers of CD4 and CD8 T cells were enumerated in the LNs of both groups. **(D)** Gating strategy and percentages of naïve (Tn: $CD44^{low}$ $CD62L^{high}$), central memory (Tcm: $CD44^{high}$ $CD62L^{high}$), effector/effector memory (Teff/em: $CD44^{high}$ $CD62L^{low}$) on gated $CD3^{+}$ $CD4^{+}$ and $CD8^{+}$ lymphocytes in WT and STAT1 Tg littermates are shown. LN cells from WT and STAT1 Tg mice were analyzed by flow cytometry for expression of **(E)** IL-7Rα and **(F)** phosphorylated STAT1 after *in vitro* stimulation with rmIFN-α4 (500 U/ml) or rmIFN-γ (10 ng/ml) in CD4 and CD8 T cells. A nonparametric Mann-Whitney test was performed for comparisons between groups. Data from four independent experiments out of four, including an average of 4 mice per group, are presented as box and whisker plots showing the median value bounded by the first and third quartiles in the box, with whiskers extending to the minimum and maximum values.

Figure S2. IL-7 induces a similar set of STAT1/IFN associated genes in WT and STAT1 Tg T cells. Sorted WT and STAT1 Tg CD4 (n=5 and n=4 respectively) and CD8 (n=6 and n=5 respectively) naïve T cells were treated and analyzed as described in Figure 3. Venn diagrams illustrate **(A)** the overlap between WT and STAT1 Tg DEGs in response to IL-7 or IFN-γ in CD4 and CD8 Naïve T cells; **(B)** the overlap between the DEGs in WT cells stimulated with IFN-γ (green) and the DEGs in STAT1 Tg (red) T cells stimulated with IL-7.

Figure S3. Overexpression of t-STAT1 leads to an enrichment of STAT1/IFN genes in T cells stimulated with IL-7. Sorted WT (n= 3) and STAT1 Tg (n= 3) CD4 Naïve T cells were stimulated or not overnight with rmIL-7 (20 ng/ml) or rmIFN-γ (10 ng/ml). RNA was isolated and gene expression was measured by RNA-seq. Libraries were prepared with 0.25-1 μg of total RNA using the TruSeq RNA Sample Preparation Kit V2 and sequenced for 50 cycles with a HiSeq 2500 instrument (Illumina). 50 bp reads were then mapped onto mouse genome build mm9 using TopHat and further processed using Cufflinks (1). Lists of differentially expressed gene transcripts (DEGs) by IL-7 or IFN-γ stimulation in WT and STAT1 Tg were selected based on gene expression changes of at least 2 fold compared to unstimulated cells. **(A)** Venn diagrams illustrate the overlap between WT (black) and STAT1 Tg (red) DEGs in response to IL-7 in CD4 Naïve T cells. **(B)** Venn diagrams illustrate the overlap between the DEGs in WT cells stimulated with IFN-γ (green) and the DEGs in WT (black) or STAT1 Tg (red) T cells stimulated with IL-7. **(C)** Gene expression of *Bcl2, Cish, Cxcl10, Ifit1, Socs1, Bik, Ifi27* and *Socs2* was measured by quantitative RT-PCR (Quantitect SYBR green PCR system, Qiagen). The primer sequences are presented in Table S9. Gene expression values were normalized to those of *Hprt* in the same sample and fold changes were calculated relative to unstimulated condition for each mouse. Data represent mean ± SE of the $\log_2$ (Fold change) of triplicate samples in two independent experiments. A nonparametric Mann-Whitney test was performed for comparisons between WT (black symbols) and STAT1 Tg (red symbols) cells.

Figure S4. STAT1 overexpression induces a distinct transcriptional program in CD4 T cells stimulated with IL-7. Sorted WT and STAT1 Tg CD4 Naïve T cells were treated and analyzed as described in Figure 3 (90 minutes stimulation) or Figure S3 (overnight stimulation). Lists of

DEGs. their log_2(FC) and adjusted *p* values were generated for these cells and used as input in IPA software. A positive or negative z-score value indicates that a function is predicted to be increased or decreased in T cells stimulated with IL-7. All categories shown are significant ($p < 0.05$). **(A)** Bar graphs show the overall affected categories of diseases and biological functions predicted by IPA analysis in WT (black) and STAT1 Tg (red) CD4 T cells stimulated 90 minutes with IL-7. Top 10 activated annotations and the number of RNAs (#Mol) differentially expressed in each are listed in the tables. **(B)** Bar graphs represent the top 10 diseases or functions annotations associated to Cell Death and Survival, Cellular Growth and Proliferation and Hematological System Development and Function categories predicted by IPA analysis in theses conditions. **(C)** Bar graphs show the overall affected categories of diseases and biological functions predicted by IPA analysis in WT (black) and STAT1 Tg (red) CD4 T cells stimulated overnight with IL-7. Top 10 activated annotations and the number of RNAs (#Mol) differentially expressed in each are listed in the tables. **(D)** Bar graphs represent the top 10 diseases or functions annotations associated to Cell Death and Survival categorie predicted by IPA analysis in theses conditions.

Figure S5. WT and STAT1 Tg donor T cells exhibit similar responses to IL-7 through STAT5 and to IFN-γ through STAT1 after adoptive transfer into $RAG^{-/-}$ mice. Lymphopenic *$RAG^{-/-}$* mice were injected i.v. with $6x10^6$ of CTV-labeled T cells isolated from the LNs of congenic WT (n= 9) or STAT1 Tg (n= 9) mice. The levels of IL-7Rα, p-STAT5 and p-STAT1 of donor T cells were evaluated by flow cytometry in LNs 7 days post-transfer as function of CTV Fluorescence after *in vitro* stimulation with rmIL-7 (1 ng/ml) and IFN-γ (10 ng/ml) respectively. **(A)** The percentages of donor T cells CTV^+ IL-7Rα^{high}, CTV^+ IL-7Rα^{low}, CTV^- IL-7Rα^{high} and CTV^- IL-7Rα^{low} are indicated. The MFIs of IL-7Rα in CD4 and CD8 donor T cells after adoptive

transfer into *RAG*$^{-/-}$ mice (SP and FP) were compared using a nonparametric Mann-Whitney test. **(B)** The percentages of donor T cells CTV^{+} p-STAT5$^{\mathbf{high}}$, CTV^{+} p-STAT5$^{\mathbf{low}}$**,** CTV^{-} p-STAT5$^{\mathbf{high}}$ and CTV^{-} p-STAT5$^{\mathbf{low}}$ are indicated. The MFIs of p-STAT5 in CD4 and CD8 donor T cells before (d0) and after adoptive transfer into *RAG*$^{-/-}$ mice (SP) were compared as described above. **(C)** The percentages of donor T cells CTV^{+} p-STAT1$^{\mathbf{high}}$, CTV^{+} p-STAT1$^{\mathbf{low}}$**,** CTV^{-} p-STAT1$^{\mathbf{high}}$ and CTV^{-} p-STAT1$^{\mathbf{low}}$ are indicated. The MFIs of p-STAT1 in CD4 and CD8 donor T cells before (d0) and after adoptive transfer into *RAG*$^{-/-}$ mice (SP) were compared as described above. Data are presented as box and whisker plots showing the median MFI value bounded by the first and third quartiles in the box, with whiskers extending to the minimum and maximum values from three independent experiments out of three, including an average of 3 mice per group and experiment.

Supplemental References

1. Villarino A, et al. Signal transducer and activator of transcription 5 (STAT5) paralog dose governs T cell effector and regulatory functions. *Elife*. 2016;5:e08384.

Figure S1

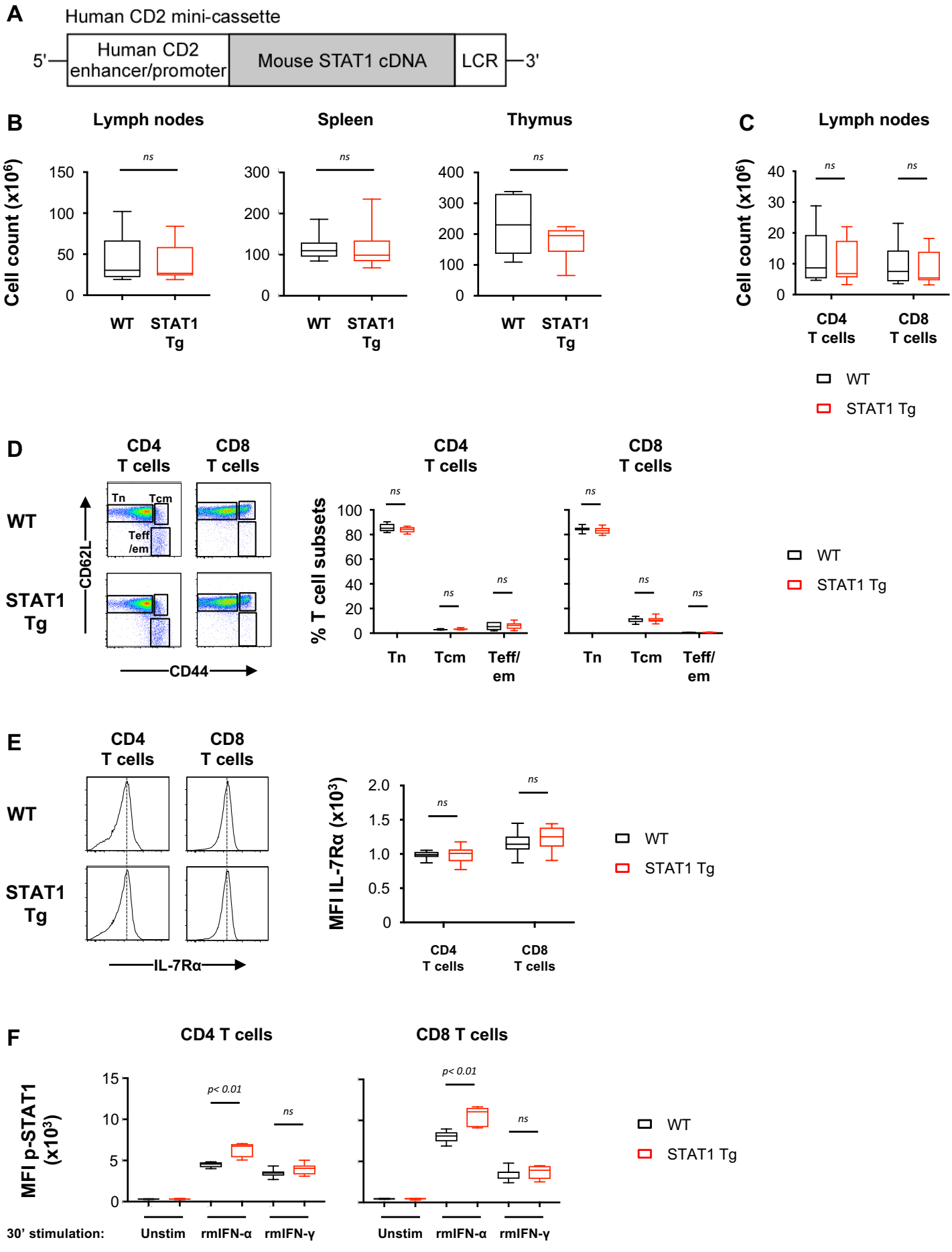
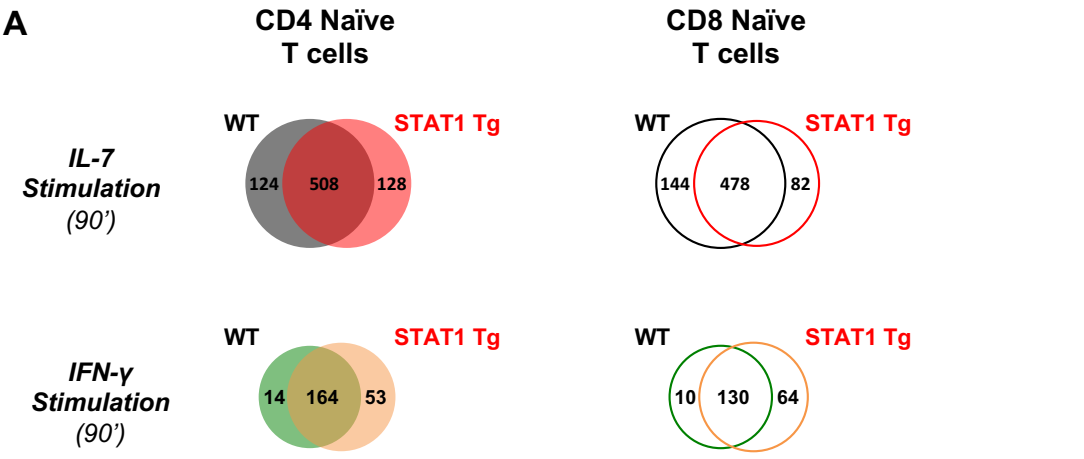

A
Human CD2 mini-cassette
5'
Human CD2 enhancer/promoter
Mouse STAT1 cDNA
LCR
3'
B
Lymph nodes
Spleen
Thymus
Cell count (x10^6)
ns
WT
STAT1 Tg
C
Lymph nodes
CD4 T cells
CD8 T cells
WT
STAT1 Tg
D
CD4 T cells
CD8 T cells
WT
STAT1 Tg
Tn
Tcm
Teff /em
CD62L
CD44
% T cell subsets
Teff/ em
E
MFI IL-7Rα (x10^3)
IL-7Rα
F
MFI p-STAT1 (x10^3)
p< 0.01
30' stimulation:
Unstim
rmIFN-α
rmIFN-γ

Figure S2


A
CD4 Naïve
T cells
CD8 Naïve
T cells
IL-7
Stimulation
(90')
WT
STAT1 Tg
124
508
128
144
478
82
IFN-γ
Stimulation
(90')
14
164
53
10
130
64

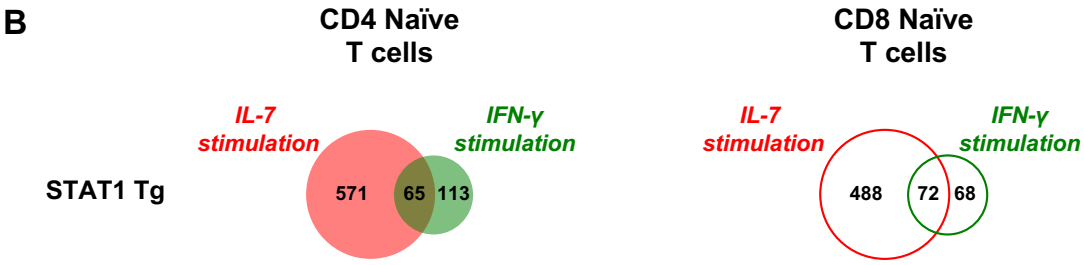

B
CD4 Naïve
T cells
CD8 Naïve
T cells
STAT1 Tg
IL-7
stimulation
IFN-γ
stimulation
571
65
113
488
72
68

Figure S3

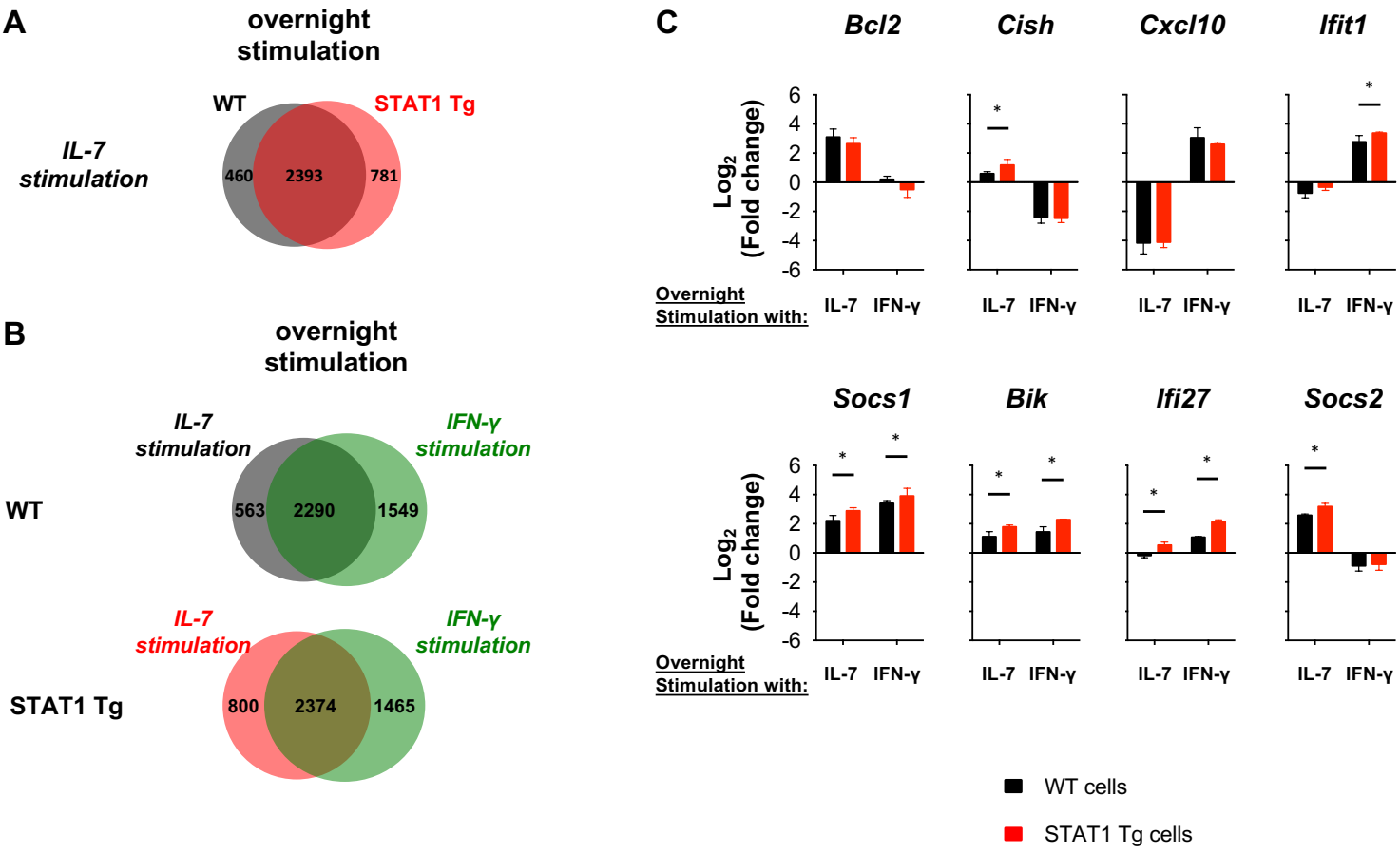
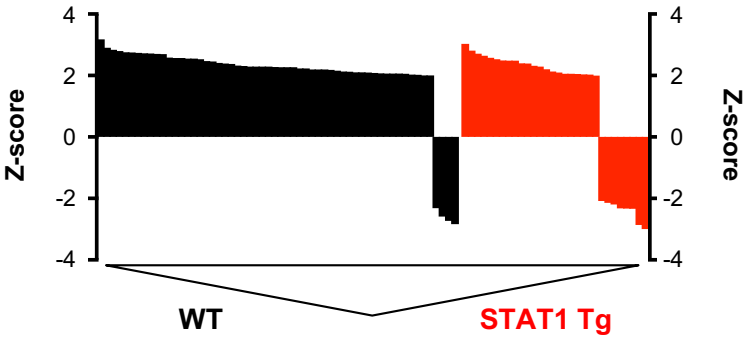

A
overnight stimulation
WT
STAT1 Tg
IL-7 stimulation
460
2393
781
B
overnight stimulation
IL-7 stimulation
IFN-γ stimulation
WT
563
2290
1549
IL-7 stimulation
IFN-γ stimulation
STAT1 Tg
800
2374
1465
C
Bcl2
Cish
Cxcl10
Ifit1
Log2 (Fold change)
Overnight Stimulation with:
IL-7
IFN-γ
Socs1
Bik
Ifi27
Socs2
WT cells
STAT1 Tg cells

Figure S4

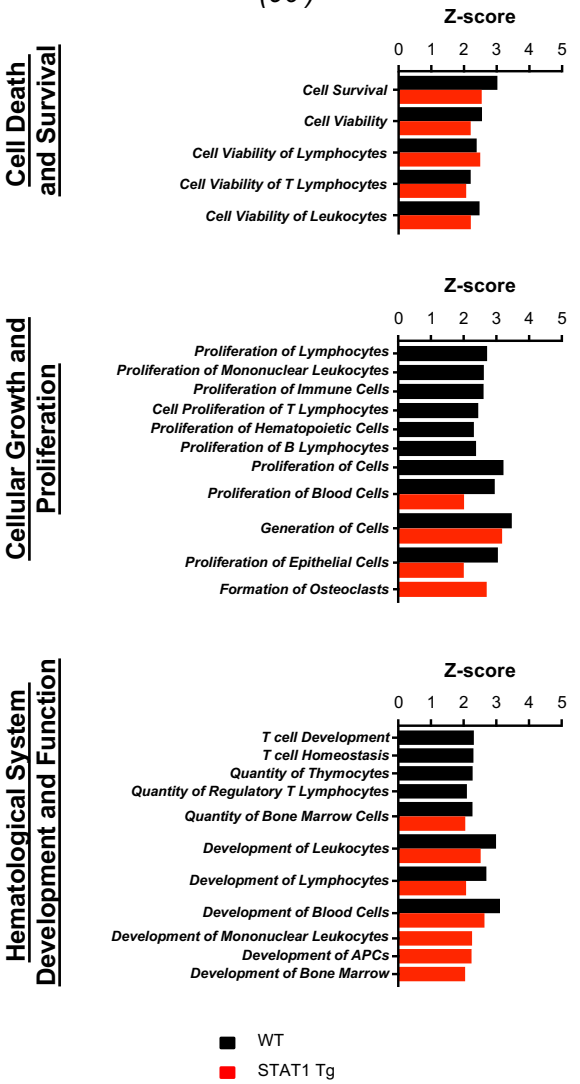
A *IL-7 Stimulation (90')*



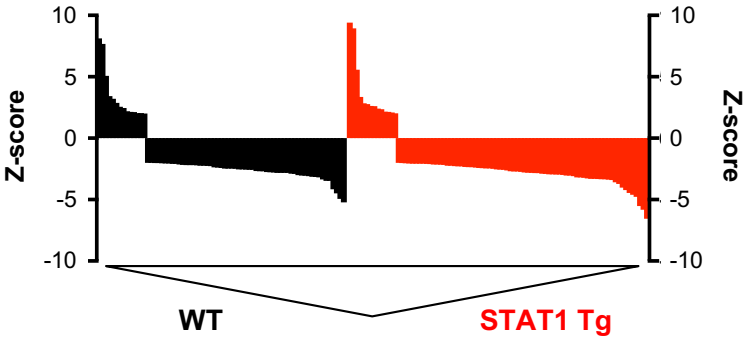
Diseases or Functions Annotation	#Mol
generation of cells	134
proliferation of cells	221
development of blood cells	79
proliferation of epithelial cells	46
cell survival	95
development of leukocytes	77
proliferation of blood cells	89
activation of T lymphocytes	38
transactivation of RNA	48
proliferation of lymphocytes	82

Diseases or Functions Annotation	#Mol
generation of cells	133
formation of osteoclasts	15
cell viability of mononuclear leukocytes	28
development of blood cells	76
transactivation of RNA	46
cell survival	93
development of leukocytes	75
cell viability of lymphocytes	27
activation of cells	86
lymphatic node tumor	48

B *IL-7 Stimulation (90')*



C *IL-7 Stimulation (Overnight)*



Diseases or Functions Annotation	#Mol
organismal death	495
morbidity or mortality	501
cell survival	321
cell viability	296
cellular homeostasis	352
proliferation of cells	809
antibody response	44
survival of organism	169
cell viability of blood cells	74
cell movement	451

Diseases or Functions Annotation	#Mol
organismal death	550
morbidity or mortality	556
cell survival	357
cell viability	329
cell movement	505
cell viability of tumor cell lines	202
survival of organism	183
migration of cells	458
cellular homeostasis	377
proliferation of cells	891

D *IL-7 Stimulation (Overnight)*

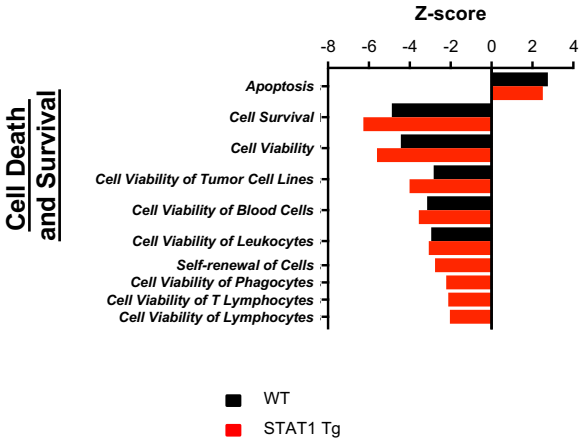


Figure S5

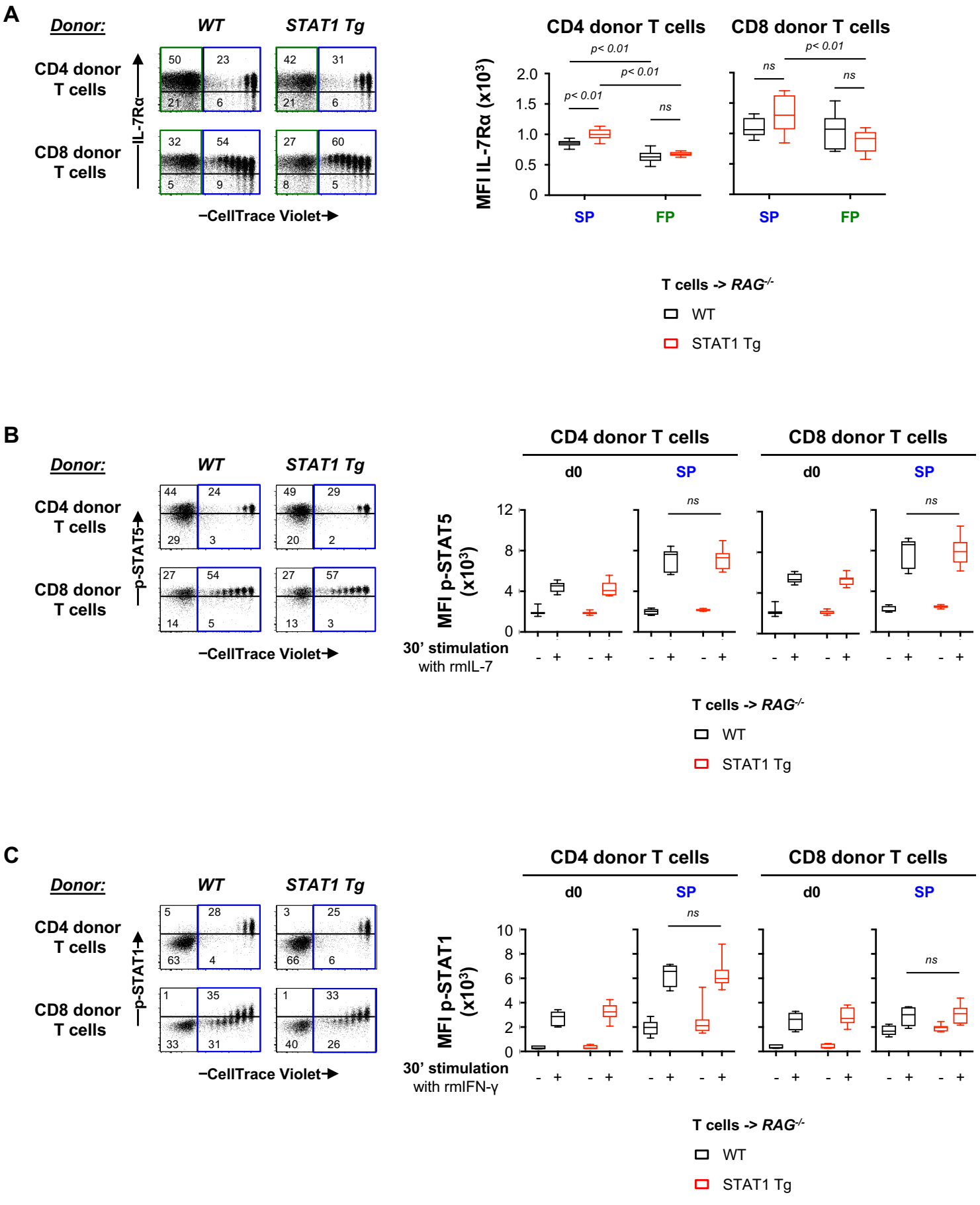

A
Donor:
WT
STAT1 Tg
CD4 donor T cells
CD8 donor T cells
IL-7Rα
50
23
21
6
42
31
21
6
32
54
5
9
27
60
8
5
CellTrace Violet
CD4 donor T cells
CD8 donor T cells
MFI IL-7Rα (x10³)
p< 0.01
p< 0.01
p< 0.01
ns
ns
ns
2.0
1.5
1.0
0.5
0
SP
FP
SP
FP
T cells -> RAG-/-
WT
STAT1 Tg
B
Donor:
WT
STAT1 Tg
CD4 donor T cells
CD8 donor T cells
p-STAT5
44
24
29
3
49
29
20
2
27
54
14
5
27
57
13
3
CellTrace Violet
CD4 donor T cells
CD8 donor T cells
d0
SP
d0
SP
MFI p-STAT5 (x10³)
ns
ns
12
8
4
0
30' stimulation
with rmIL-7
- + - + - + - + - + - + - + - +
T cells -> RAG-/-
WT
STAT1 Tg
C
Donor:
WT
STAT1 Tg
CD4 donor T cells
CD8 donor T cells
p-STAT1
5
28
63
4
3
25
66
6
1
35
33
31
1
33
40
26
CellTrace Violet
CD4 donor T cells
CD8 donor T cells
d0
SP
d0
SP
MFI p-STAT1 (x10³)
ns
ns
10
8
6
4
2
0
30' stimulation
with rmIFN-γ
- + - + - + - + - + - + - + - +
T cells -> RAG-/-
WT
STAT1 Tg

Table S1. Overlapping DEGs by IL-7 and IFN-γ stimulation in WT T cells *(Extented Table 2)*

	IL-7 stimulation		IFN-γ stimulation	
Gene ID	**Log_2 (FC)✚**	**Adjusted *p*-value**	**Log_2 (FC)**	**Adjusted *p*-value**
CD4 Naive T cells				
5730508B09Rik	1.66	9.59E-15	1.19	4.51E-10
5830468F06Rik	3.12	7.80E-24	3.09	4.00E-24
9330175E14Rik	2.16	1.18E-11	2.50	2.44E-13
9530082P21Rik	1.56	1.35E-03	1.38	2.01E-02
Abcg3	1.19	6.93E-04	1.78	3.32E-06
Acvr1c	5.24	3.09E-16	2.77	9.28E-08
Arid5b	1.83	3.36E-06	2.48	1.28E-08
B430306N03Rik	1.42	1.82E-08	1.49	1.91E-08
Bcl3	2.41	5.19E-11	2.88	5.54E-13
Fas	1.11	1.34E-06	1.38	3.90E-08
Gadd45g	3.82	1.37E-09	2.67	1.62E-05
Gata1	2.50	1.48E-06	3.94	5.46E-11
Gbp10	2.92	1.37E-06	6.65	3.01E-16
Gbp11_1	6.05	1.62E-19	4.94	2.28E-16
Gbp4	2.00	4.75E-09	4.22	4.81E-19
Gbp5	2.41	4.13E-11	4.82	4.24E-21
Gbp6_1	2.64	3.42E-05	5.48	2.24E-12
Gbp6_2	1.74	4.11E-04	5.16	3.90E-15
Gm12185	1.70	2.59E-10	3.92	2.24E-22
Gm16174	2.24	1.25E-03	2.01	1.64E-02
Gm26876	3.60	1.28E-09	1.55	1.77E-02
Gm4951	1.01	4.49E-02	3.81	1.37E-11
Gpr155	1.08	1.02E-04	1.41	3.16E-06
Gvin1	1.38	1.11E-03	3.11	3.27E-10
Ifi47	3.34	7.44E-11	4.79	1.69E-15
Igtp	2.64	2.03E-16	5.15	3.73E-27
Iigp1	2.68	1.89E-10	6.61	1.10E-23
Il12rb2	4.42	1.99E-06	2.51	2.71E-02
Il18rap	2.89	2.09E-11	2.61	8.02E-10
Il2rb	1.85	1.05E-14	1.43	4.81E-11
Irf4	2.25	2.76E-06	4.35	2.72E-13
Irf9	1.14	2.48E-11	2.53	4.12E-23
Irgm2	1.35	1.27E-08	4.33	4.57E-25
Jun	2.02	4.89E-10	2.34	1.99E-11

Kat2b	1.70	5.51E-17	1.00	1.34E-09
Kit	2.02	8.39E-07	2.22	3.81E-07
Lrrtm2	2.96	8.47E-06	1.92	1.60E-02
Ly6a	1.32	2.53E-03	3.66	4.50E-12
Mgat4a	1.08	4.65E-08	1.52	1.49E-11
Ms4a6d	3.66	4.21E-14	1.32	2.12E-03
Nlrc5	1.49	1.15E-05	1.97	1.23E-07
Noc4l	1.08	4.91E-10	1.39	8.82E-13
Pim2	3.03	9.26E-29	2.99	1.52E-28
Pmepa1	1.85	9.31E-14	2.17	8.16E-16
Pole2	1.86	3.09E-16	1.18	8.64E-10
Ppa1	1.15	1.78E-04	1.85	6.60E-08
Rbpms	2.54	1.55E-07	1.48	5.98E-03
Rgs1	5.34	2.12E-15	1.33	3.98E-02
Ripk1	1.26	2.12E-15	1.44	3.02E-17
Samhd1	1.16	5.41E-07	1.93	2.41E-12
Slamf1	3.04	3.18E-20	1.85	9.77E-13
Socs1	2.47	2.93E-09	3.37	9.18E-13
Socs3	2.19	8.82E-23	1.60	5.03E-18
Tgtp1	4.27	1.11E-17	6.68	6.95E-25
Tgtp2	2.58	1.04E-16	5.37	1.79E-28
Tnfrsf1b	1.82	7.17E-17	1.08	1.60E-09
Tnfsf8	2.62	2.83E-14	1.39	2.00E-06
Treml2	1.29	4.19E-13	1.38	8.29E-14
Zfp455	1.29	2.01E-05	1.13	7.16E-04
CD8 Naive T cells				
5830468F06Rik	2.27	1.66E-19	2.45	3.73E-20
9330175E14Rik	1.94	9.44E-11	1.88	1.69E-09
9530082P21Rik	1.96	2.75E-05	1.33	3.16E-02
Abcb11	1.63	2.49E-05	1.73	9.17E-05
B430306N03Rik	2.11	1.29E-13	1.13	1.36E-05
Bcl3	3.12	7.66E-15	3.33	5.29E-15
Csf1	2.42	3.64E-06	4.35	1.61E-11
Cyp2s1	-1.25	9.56E-06	1.06	1.48E-03
F2rl2	2.03	5.14E-04	3.22	2.22E-06
Fas	1.00	4.93E-06	1.19	1.73E-06
Gadd45g	5.15	1.07E-13	2.74	1.27E-05
Gata1	3.12	5.10E-09	4.38	2.86E-12
Gbp10	3.19	1.04E-07	6.16	5.29E-15
Gbp11_1	5.25	9.02E-18	4.71	1.63E-15
Gbp4	1.75	4.88E-08	3.53	4.42E-16
Gbp5	1.67	1.55E-07	3.67	1.51E-16
Gbp6_1	2.88	3.60E-06	5.24	1.10E-11

Gbp6_2	1.82	1.07E-04	4.25	3.09E-12
Gem	2.49	3.02E-06	2.60	1.36E-05
Gm12185	2.45	1.66E-15	3.68	4.72E-21
Gm16174	2.19	8.69E-04	2.50	1.50E-03
Gm26876	3.78	1.51E-10	1.86	2.54E-03
Gm4070	1.52	8.60E-03	3.09	2.64E-06
Gm4951	1.27	4.65E-03	2.98	1.87E-08
Gpr155	1.38	5.96E-07	1.61	2.10E-07
Gpr83	3.88	1.27E-11	1.34	3.95E-02
Gvin1	1.95	2.89E-06	3.29	7.28E-11
Gzmb	3.01	4.27E-06	2.54	7.63E-04
Ifi47	3.61	3.08E-12	4.22	1.62E-13
Igtp	3.48	6.54E-21	5.14	8.05E-27
Iigp1	2.62	1.44E-10	6.19	3.57E-22
Il12rb2	3.37	1.06E-04	4.22	2.47E-05
Il18rap	1.82	6.75E-07	1.61	6.88E-05
Irf4	1.11	1.60E-02	2.91	4.18E-08
Irf9	1.25	6.63E-13	2.02	3.16E-19
Irgm1	1.75	6.21E-10	3.99	7.29E-21
Irgm2	1.95	2.03E-13	4.07	7.51E-24
Jun	3.65	2.39E-18	3.47	6.86E-17
Kit	1.71	9.58E-06	2.83	9.73E-10
Lgals3bp	1.13	1.86E-07	1.91	1.13E-12
Lrrtm2	1.75	5.53E-03	2.08	7.97E-03
Ly6a	1.93	4.98E-06	5.11	1.02E-16
Map3k8	4.32	6.10E-17	1.09	2.09E-02
Mthfd2	1.06	2.33E-08	1.57	3.60E-12
Muc1	1.18	4.77E-02	2.70	3.62E-05
Nlrc5	1.10	5.90E-04	1.40	1.86E-04
Noc4l	1.02	1.19E-09	1.13	6.04E-10
Parp14	1.00	1.01E-04	1.88	1.72E-09
Pim2	3.38	1.20E-31	2.99	1.56E-28
Pole2	1.44	4.48E-13	1.10	7.82E-09
Ppa1	1.79	2.05E-08	2.03	7.96E-09
Rgs1	4.81	1.95E-14	1.35	3.74E-02
Ripk1	1.00	9.67E-13	1.03	2.84E-12
Rnf157	1.10	1.29E-03	1.05	1.97E-02
Rtp4	1.52	4.59E-04	3.36	3.97E-10
Samhd1	1.10	7.32E-07	1.91	4.24E-12
Sema4a	1.22	7.31E-08	1.03	2.67E-05
Serpina3g	3.40	1.43E-06	4.75	5.86E-09
Slamf1	2.94	3.95E-20	1.72	1.21E-11
Socs3	1.99	1.17E-21	1.37	1.79E-15

Stat2	1.03	4.53E-06	1.71	2.43E-10
Syt6	4.50	8.62E-11	1.93	1.05E-02
Tgtp1	3.77	2.66E-16	5.38	3.50E-21
Tgtp2	2.59	3.55E-17	4.59	1.05E-25
Tnfsf8	2.27	8.19E-13	1.30	1.03E-05
Treml2	1.43	4.84E-15	1.16	2.26E-11

Lists of DEGs, their $\log_2$(FC) and adjusted *p* values generated for each condition were compared using Venn diagrams to obtain the list of overlapping genes between IL-7 and IFN-γ stimulation in WT T cells. ✚ Fold changes (FC) were calculated relative to unstimulated condition for each sample.

Table S2. Top 15 IPA-predicted activated upstream regulators in WT T cells stimulated for 90 minutes with IFN-γ

Upstream Regulator	Activation Z-score°	*p*-value of overlap⋆
CD4 Naive T cells		
IFNG	8.250	1.13E-54
IRF7	6.104	1.55E-50
IFNA2	5.800	3.85E-40
TNF	5.743	6.58E-21
STAT1	5.646	6.36E-43
IL-1B	5.376	2.55E-21
IFNB1	5.161	1.49E-44
IL-21	5.134	6.24E-36
IRF3	5.061	7.82E-30
IRF1	4.499	8.41E-25
IL-6	4.450	2.89E-18
IFNL1	4.101	5.58E-22
OSM	4.088	1.14E-08
IRF5	3.923	8.05E-21
NFATC2	3.876	2.33E-22
CD8 Naive T cells		
IFNG	7.853	7.08E-52
IRF7	5.617	2.13E-45
IFNA2	5.371	4.50E-34
STAT1	5.271	1.07E-40
IFNB1	5.140	3.74E-39
IL-1B	5.041	5.14E-24
IRF3	4.675	3.72E-26
IL-21	4.640	9.34E-31
TNF	4.513	5.98E-17
IRF1	4.166	2.08E-22
IL-6	3.807	2.72E-20
OSM	3.715	3.11E-10
PRL	3.621	7.72E-19
NFATC2	3.615	2.40E-21
IRF5	3.530	3.99E-17

Lists of differentially expressed gene transcripts (DEGs). their $\log_2$(FC) and adjusted *p* values were generated for each condition and used as input in IPA software. °Activation Z-score are based on a model that assigns random regulation directions for predicted upstream regulators. Z >2 predicts activation of the upstream regulator. ⋆The *p*-value of overlap was used to rank the significance associated for each Upstream Regulator. The *p*-value indicates the significance of the overlap between the genes targeted by the upstream regulator in the database and the experimental dataset.

Table S3. Target genes predicted by IPA with IFNG as activated upstream regulator in WT stimulated for 90 minutes with IL-7 or IFN-γ

	IL-7 stimulation		IFN-γ stimulation	
Gene ID	**Log_2 (FC)✚**	**Adjusted *p*-value**	**Log_2 (FC)**	**Adjusted *p*-value**
CD4 Naive T cells				
Bcl3	2.41	5.19E-11	2.88	5.54E-13
Fas	1.11	1.34E-06	1.38	3.90E-08
Gbp5	2.41	4.13E-11	4.82	4.24E-21
Gbp10	2.92	1.37E-06	6.65	3.01E-16
Gvin1	1.38	1.11E-03	3.11	3.27E-10
Ifi47	3.34	7.44E-11	4.79	1.69E-15
Igtp	2.64	2.03E-16	5.15	3.73E-27
Iigp1	2.68	1.89E-10	6.61	1.10E-23
Il12rb2	4.42	1.99E-06	2.51	2.71E-02
Il18rap	2.89	2.09E-11	2.61	8.02E-10
Irf4	2.25	2.76E-06	4.35	2.72E-13
Irf9	1.14	2.48E-11	2.53	4.12E-23
Irgm2	1.35	1.27E-08	4.33	4.57E-25
Jun	2.02	4.89E-10	2.34	1.99E-11
Ly6a	1.32	2.53E-03	3.66	4.50E-12
Nlrc5	1.49	1.15E-05	1.97	1.23E-07
Pim2	3.03	9.26E-29	2.99	1.52E-28
Ripk1	1.26	2.12E-15	1.44	3.02E-17
Samhd1	1.16	5.41E-07	1.93	2.41E-12
Slamf1	3.04	3.18E-20	1.85	9.77E-13
Socs1	2.47	2.93E-09	3.37	9.18E-13
Socs3	2.19	8.82E-23	1.60	5.03E-18
Tgtp1	4.27	1.11E-17	6.68	6.95E-25
Tnfrsf1b	1.82	7.17E-17	1.08	1.60E-09
CD8 Naive T cells				
Bcl3	3.12	7.66E-15	3.33	5.29E-15
Csf1	2.42	3.64E-06	4.35	1.61E-11
Fas	1.00	4.93E-06	1.19	1.73E-06
Gbp5	1.67	1.55E-07	3.67	1.51E-16
Gbp10	3.19	1.04E-07	6.16	5.29E-15
Gpr83	3.88	1.27E-11	1.34	3.95E-02
Gvin1	1.95	2.89E-06	3.29	7.28E-11
Ifi47	3.61	3.08E-12	4.22	1.62E-13

Igtp	3.48	6.54E-21	5.14	8.05E-27
Iigp1	2.62	1.44E-10	6.19	3.57E-22
Il12rb2	3.37	1.06E-04	4.22	2.47E-05
Il18rap	1.82	6.75E-07	1.61	6.88E-05
Irf4	1.11	1.60E-02	2.91	4.18E-08
Irf9	1.25	6.63E-13	2.02	3.16E-19
Irgm2	1.95	2.03E-13	4.07	7.51E-24
Irgm1	1.76	6.21E-10	4.00	7.29E-21
Jun	3.65	2.39E-18	3.47	6.86E-17
Lgals3bp	1.13	1.86E-07	1.91	1.13E-12
Ly6a	1.93	4.98E-06	5.11	1.02E-16
Map3k8	4.32	6.10E-17	1.09	2.09E-02
Nlrc5	1.10	5.90E-04	1.40	1.86E-04
Pim2	3.38	1.20E-31	2.99	1.56E-28
Ripk1	1.00	9.67E-13	1.03	2.84E-12
Rtp4	1.52	4.59E-04	3.36	3.97E-10
Samhd1	1.10	7.32E-07	1.91	4.24E-12
Sema4a	1.22	7.31E-08	1.03	2.67E-05
Serpina3g	3.40	1.43E-06	4.75	5.86E-09
Slamf1	2.94	3.95E-20	1.72	1.21E-11
Socs3	1.99	1.17E-21	1.37	1.79E-15
Stat2	1.03	4.53E-06	1.72	2.43E-10
Tgtp1	3.77	2.66E-16	5.38	3.50E-21

Lists of DEGs, their $\log_2$(FC) and adjusted *p*-values generated for each condition were used as input in IPA software to obtain a list of predicted upstream regulators (Figure 4A and Table S2) and their target genes among the DEGs. ✚ Fold changes (FC) were calculated relative to unstimulated condition for each sample.

Table S4. Target genes predicted by IPA with STAT1 as activated upstream regulator in WT T cells stimulated for 90 minutes with IL-7 or IFN-γ

	IL-7 stimulation		IFN-γ stimulation	
Gene ID	**Log_2 (FC)**	**Adjusted *p*-value**	**Log_2 (FC)**	**Adjusted *p*-value**
CD4 Naive T cells				
Fas	1.11	1.34E-06	1.38	3.90E-08
Gbp5	2.41	4.13E-11	4.82	4.24E-21
Gbp10	2.92	1.37E-06	6.65	3.01E-16
Ifi47	3.34	7.44E-11	4.79	1.69E-15
Igtp	2.64	2.03E-16	5.15	3.73E-27
Il12rb2	4.42	1.99E-06	2.51	2.71E-02
Irf9	1.14	2.48E-11	2.53	4.12E-23
Jun	2.02	4.89E-10	2.34	1.99E-11
Samhd1	1.16	5.41E-07	1.93	2.41E-12
Socs1	2.47	2.93E-09	3.37	9.18E-13
Socs3	2.19	8.82E-23	1.60	5.03E-18
Tgtp1	4.27	1.11E-17	6.68	6.95E-25
CD8 Naive T cells				
Fas	1.00	4.93E-06	1.19	1.73E-06
Gbp5	1.67	1.55E-07	3.67	1.51E-16
Gbp10	3.19	1.04E-07	6.16	5.29E-15
Gzmb	3.01	4.27E-06	2.54	7.63E-04
Ifi47	3.61	3.08E-12	4.22	1.62E-13
Igtp	3.48	6.54E-21	5.14	8.05E-27
Il12rb2	3.37	1.06E-04	4.22	2.47E-05
Irf9	1.25	6.63E-13	2.02	3.16E-19
Irgm1	1.76	6.21E-10	4.00	7.29E-21
Jun	3.65	2.39E-18	3.47	6.86E-17
Samhd1	1.10	7.32E-07	1.91	4.24E-12
Serpina3g	3.40	1.43E-06	4.75	5.86E-09
Socs3	1.99	1.17E-21	1.37	1.79E-15
Stat2	1.03	4.53E-06	1.72	2.43E-10
Tgtp1	3.77	2.66E-16	5.38	3.50E-21

Lists of DEGs, their log_2(FC) and adjusted *p*-values generated for each condition were used as input in IPA software to obtain a list of predicted upstream regulators (Figure 4A and

Table S2) and their target genes among the DEGs. ✚ Fold changes (FC) were calculated relative to unstimulated condition for each sample.

Table S5. Top 15 IPA-predicted activated upstream regulators in STAT1 Tg T cells stimulated for 90 minutes with IL-7

Upstream Regulator	Activation Z-score°	*p*-value of overlap★
CD4 Naive T cells		
IL-2	4.220	7.93E-32
IRF7	4.101	7.54E-08
IFNG	4.008	2.36E-27
IL-4	3.920	4.06E-34
IL-5	3.638	1.07E-20
CSF2	3.551	3.05E-18
STAT1	3.481	1.37E-14
IL-15	3.388	2.38E-17
EPO	3.377	2.24E-08
STAT5B	3.363	1.87E-13
IL-18	3.298	2.03E-07
STAT4	3.292	1.14E-14
IL-7	3.226	8.91E-21
IL-3	3.221	1.91E-13
IFNA2	2.990	1.21E-10
CD8 Naive T cells		
IFNG	5.577	1.58E-29
IL-2	5.368	1.62E-34
STAT1	5.042	5.64E-18
IRF7	4.620	5.34E-13
IL-1B	4.327	4.42E-19
STAT4	4.149	3.35E-16
IL-5	4.041	3.63E-19
IL-3	4.029	1.29E-13
PRL	3.925	1.28E-14
IL-15	3.867	1.90E-19
IFNA2	3.809	2.22E-14
IL-13	3.703	1.75E-05
IL-18	3.700	4.95E-09
IL-7	3.622	9.08E-25
IL-21	3.587	3.35E-18

Lists of differentially expressed gene transcripts (DEGs). their $\log_2$(FC) and adjusted *p* values were generated for each condition and used as input in IPA software. °Activation Z-score are based on a model that assigns random regulation directions for predicted upstream regulators. Z >2 predicts activation of the upstream regulator. ⋆The *p*-value of overlap was used to rank the significance associated for each Upstream Regulator. The *p*-value indicates the significance of the overlap between the genes targeted by the upstream regulator in the database and the experimental dataset.

Table S6. Top 10 DAVID-predicted enriched Biological processes within DEGs unique to CD4 or CD8 Naive T cells stimulated for 90 minutes with IL-7

WT cells stimulated with IL-7			STAT1 Tg cells stimulated with IL-7		
Description	**Gene counts•**	***p*-value★**	**Description**	**Gene counts**	***p*-value**
CD4 Naive T cells					
Regulation of programmed cell death	16	1.46E-04	**Regulation of programmed cell death**	14	5.82E-03
Regulation of cell death	16	1.55E-04	**Regulation of cell death**	14	6.08E-03
Death	15	2.29E-04	**Death**	16	3.45E-04
Regulation of apoptosis	15	4.35E-04	**Regulation of apoptosis**	14	5.25E-03
Apoptosis	14	2.75E-04	**Apoptosis**	15	3.64E-04
Programmed cell death	14	3.24E-04	**Programmed cell death**	15	4.32E-04
Cell death	14	6.24E-04	**Cell death**	15	8.55E-04
Positive regulation of macromolecule metabolic process	12	2.70E-02	**Phosphate metabolic process**	17	1.87E-02
Intracellular signaling cascade	16	1.70E-02	**Phosphorus metabolic process**	17	1.87E-02
Regulation of cell proliferation	11	2.29E-02	**Cell cycle**	14	1.16E-02
CD8 Naive T cells					
Hemopoietic or lymphoid organ development	8	1.84E-02	**Hemopoietic or lymphoid organ development**	7	1.83E-02
Immune system development	8	2.33E-02	**Immune system development**	7	2.27E-02

Immune response	14	5.76E-04	**Homeostatic process**	11	1.15E-02
Regulation of small GTPase mediated signal transduction	7	2.23E-02	**Regulation of hydrolase activity**	6	1.54E-02
Regulation of Ras protein signal transduction	6	3.00E-02	**Hemopoiesis**	6	3.92E-02
Gland development	6	4.08E-02	**Small GTPase mediated signal transduction**	6	4.33E-02
Tissue homeostasis	5	1.31E-03	**Regulation of GTPase activity**	5	5.06E-03
Multicellular organismal homeostasis	5	4.74E-03	**Homeostasis of number of cells**	5	9.98E-03
Anatomical structure homeostasis	5	8.21E-03	**Regulation of cytokine production**	5	2.00E-02
Lymph node development	4	7.41E-04	**Regulation of cytokine secretion**	4	1.70E-04

Gene Ontology (GO) term enrichment analysis was performed using Database for Annotation, Visualization and Integrated Discovery (DAVID) Bioinformatics Resources 6.7 (https://david.ncifcrf.gov/) to assess the top biological processes associated with the lists of DEGs by IL-7 in WT and STAT1 Tg T cells. Lists of DEGs. their $\log_2$(FC) and adjusted *p* values generated for WT and STAT1 Tg T cells stimulated for 90 minutes with rmIL-7 were used as input in DAVID website. •Gene counts indicate the number of enriched DEGs in the pathway. ★The *p*-value indicates the perturbation of each pathway.

Table S7. Overlapping DEGs by IL-7 and IFN-γ overnight stimulation in WT and STAT1 Tg CD4 Naïve T cells

	WT cells stimulated with IL-7		STAT1 Tg cells stimulated with IL-7		WT cells stimulated with IFN-γ	
Gene ID	**Log_2 (FC)✚**	**Adjusted *p*-value**	**Log_2 (FC)**	**Adjusted *p*-value**	**Log_2 (FC)**	**Adjusted *p*-value**
CD4 Naive T cells						
0610009L18Rik	1.44	1.16E-04	1.49	2.26E-04	1.28	2.61E-04
0610038B21Rik	1.25	1.94E-03	1.16	6.74E-03	1.20	2.45E-03
1110002L01Rik	1.77	1.36E-06	2.18	6.73E-07	2.16	1.81E-07
1110032F04Rik	-1.69	2.90E-07	-1.82	4.53E-07	-1.30	2.04E-06
1190007I07Rik	1.13	3.94E-04	1.61	5.96E-05	1.37	7.55E-05
1300002E11Rik	1.21	2.44E-07	1.33	3.13E-07	1.53	2.38E-08
1700001K19Rik	-1.25	2.15E-02	-1.71	6.99E-03	-1.86	1.69E-03
1700010I14Rik	1.24	3.34E-04	1.07	2.23E-03	1.55	4.67E-05
1700019B03Rik	-2.97	7.71E-04	-4.03	1.80E-04	-4.67	1.71E-05
1700021A07Rik	1.55	3.66E-03	1.29	2.15E-02	1.68	1.99E-03
1700025G04Rik	1.40	2.82E-09	1.58	3.71E-09	1.05	6.06E-09
1700029H14Rik	-1.52	2.15E-03	-2.04	5.97E-04	-2.00	2.54E-04
1700030C12Rik	-1.76	3.22E-02	-1.79	4.91E-02	-2.22	8.39E-03
1700030J22Rik	-1.31	1.32E-02	-1.21	3.52E-02	-1.19	2.03E-02
1700030K09Rik	1.84	4.60E-06	1.45	9.19E-05	2.23	6.73E-07
1700052N19Rik	1.61	7.81E-10	1.76	1.11E-09	1.89	5.00E-11
1700066B19Rik	2.20	2.40E-03	1.84	1.45E-02	2.69	4.98E-04
1700067K01Rik	1.66	4.76E-03	1.72	7.78E-03	1.88	1.87E-03
1810009A15Rik	1.98	6.88E-03	1.64	3.48E-02	2.21	3.06E-03
1810014B01Rik	1.33	4.55E-06	1.32	1.34E-05	1.74	3.56E-07
1810034E14Rik	2.05	2.09E-04	2.34	1.85E-04	3.02	6.78E-06
1810041H14Rik	-1.66	3.64E-04	-2.34	6.06E-05	-1.80	1.72E-04
1810049J17Rik	-1.22	3.81E-03	-1.31	5.14E-03	-1.33	1.96E-03
1810055G02Rik	-1.46	6.57E-07	-1.73	4.45E-07	-2.48	7.07E-09
1810062O18Rik	1.29	1.15E-03	1.59	5.56E-04	1.18	1.95E-03
2010016I18Rik	2.38	1.52E-08	2.61	2.07E-08	2.95	1.48E-09
2010300C02Rik	-1.01	3.25E-02	-1.40	1.03E-02	-1.25	9.83E-03
2010315B03Rik	1.58	1.52E-06	1.60	3.71E-06	2.11	9.88E-08

2310002F09Rik	2.87	8.25E-04	2.05	1.54E-02	2.89	7.04E-04
2310009A05Rik	1.39	2.41E-05	1.36	7.44E-05	1.79	2.18E-06
2310026I22Rik	-1.83	2.49E-02	-2.19	1.79E-02	-2.44	4.45E-03
2310031A07Rik	-1.61	8.93E-04	-2.35	1.12E-04	-1.10	9.88E-03
2310033P09Rik	-1.14	6.86E-09	-1.40	5.61E-09	-1.31	1.00E-09
2410007B07Rik	1.49	5.36E-04	1.90	2.03E-04	1.74	1.39E-04
2500004C02Rik	1.16	4.53E-04	1.23	6.61E-04	1.53	4.10E-05
2510009E07Rik	0.60	8.43E-04	1.09	1.75E-05	1.04	7.93E-06
2610005L07Rik	-1.07	4.43E-06	-1.42	1.18E-06	-1.00	6.43E-06
2610015P09Rik	0.81	1.39E-04	1.07	3.63E-05	1.31	1.97E-06
2610035D17Rik	1.32	7.06E-05	1.36	1.49E-04	1.93	2.34E-06
2610318N02Rik	-1.08	1.03E-03	-1.55	1.55E-04	-1.71	2.19E-05
2610507I01Rik	1.36	8.43E-07	1.30	3.38E-06	1.52	2.37E-07
2700068H02Rik	1.73	1.71E-02	2.33	5.79E-03	1.47	3.59E-02
2700081O15Rik	-0.92	9.31E-04	-1.25	2.10E-04	-1.23	8.08E-05
2700099C18Rik	-2.29	1.11E-05	-2.76	6.28E-06	-2.12	1.78E-05
2810002D19Rik	1.50	2.74E-05	1.69	2.58E-05	1.68	8.35E-06
2810006K23Rik	1.13	5.53E-05	1.73	4.00E-06	1.65	1.72E-06
2810039B14Rik	1.68	1.26E-05	1.44	1.16E-04	1.51	2.54E-05
2810410L24Rik	2.03	1.01E-04	2.05	2.32E-04	1.85	1.87E-04
2810414N06Rik	2.18	1.47E-04	2.72	6.10E-05	2.42	5.27E-05
2810429I04Rik	-2.03	1.45E-03	-2.67	4.45E-04	-2.97	6.70E-05
2900005J15Rik	1.78	5.69E-06	1.63	3.15E-05	1.65	8.55E-06
2900079G21Rik	-1.93	1.12E-02	-1.91	2.16E-02	-2.73	1.05E-03
3110001I22Rik	-2.92	1.60E-03	-2.76	5.10E-03	-2.70	2.55E-03
3110007F17Rik	1.58	3.12E-04	1.06	1.06E-02	1.64	2.01E-04
3110009E18Rik	1.83	1.02E-04	1.60	7.40E-04	2.07	3.18E-05
3110043O21Rik	-2.31	5.23E-07	-2.90	2.39E-07	-2.93	5.09E-08
3110052M02Rik	1.23	9.06E-07	1.23	2.48E-06	1.45	1.63E-07
3110062M04Rik	1.48	4.89E-06	2.03	9.96E-07	2.04	2.48E-07
3632454L22Rik	2.43	3.36E-06	2.32	1.34E-05	3.21	2.33E-07
3830406C13Rik	0.62	1.59E-04	1.02	6.30E-06	1.14	7.04E-07
3830408C21Rik	1.84	7.13E-04	1.80	1.93E-03	2.67	3.06E-05
4632404H12Rik	1.21	1.96E-07	1.59	7.53E-08	1.31	6.68E-08
4831440E17Rik	1.46	5.72E-04	1.21	4.82E-03	1.96	4.56E-05
4833422C13Rik	1.25	2.76E-05	1.10	2.07E-04	2.77	2.67E-08
4930412L05Rik	-1.59	8.53E-03	-2.09	3.13E-03	-1.53	9.88E-03
4930422M22Rik	2.04	2.82E-03	2.77	7.18E-04	2.31	1.07E-03

4930427A07Rik	-2.02	6.00E-05	-2.43	3.43E-05	-1.98	5.95E-05
4930430F08Rik	1.77	2.16E-06	1.51	2.23E-05	2.10	3.79E-07
4930453N24Rik	1.56	2.26E-09	1.74	3.36E-09	1.59	5.16E-10
4930458D05Rik	-1.41	3.24E-02	-2.28	4.12E-03	-1.49	2.33E-02
4930469K13Rik	1.78	1.92E-03	1.64	7.03E-03	1.92	1.02E-03
4930473A02Rik	0.60	3.18E-02	1.26	6.33E-04	1.04	1.02E-03
4930486L24Rik	-1.54	3.82E-03	-1.79	3.00E-03	-1.35	7.87E-03
4930502E09Rik	1.63	4.14E-02	2.35	1.14E-02	2.30	6.14E-03
4930509E16Rik	2.95	9.74E-04	2.16	1.53E-02	2.74	1.52E-03
4930512H18Rik	1.64	2.72E-03	2.34	4.60E-04	2.75	4.38E-05
4930516B21Rik	3.38	1.27E-05	2.06	1.60E-03	3.61	5.90E-06
4930526L06Rik	1.44	2.42E-02	2.35	2.56E-03	2.10	2.30E-03
4930539E08Rik	1.41	1.53E-03	1.35	4.46E-03	1.45	1.11E-03
4930579G24Rik	-1.21	4.91E-05	-1.44	2.90E-05	-1.25	2.98E-05
4930581F22Rik	1.89	4.46E-08	1.93	9.43E-08	1.96	1.75E-08
4930594M22Rik	2.24	2.90E-03	1.80	2.10E-02	1.71	1.37E-02
4931406C07Rik	0.90	3.64E-05	1.33	3.80E-06	1.14	3.98E-06
4931414P19Rik	0.94	2.56E-04	1.67	5.58E-06	1.81	7.74E-07
4933404O12Rik	1.90	4.36E-08	2.12	5.25E-08	1.88	2.51E-08
4933408B17Rik	2.74	7.46E-05	2.78	1.68E-04	3.37	1.10E-05
4933408J17Rik	-2.28	7.45E-03	-1.95	3.20E-02	-2.76	1.92E-03
4933427D14Rik	1.06	1.15E-07	1.40	4.51E-08	1.32	1.29E-08
4933439C10Rik	1.20	1.65E-03	0.99	1.21E-02	1.00	5.14E-03
4933439K11Rik	1.83	1.60E-02	1.97	1.95E-02	1.89	1.23E-02
5330426P16Rik	1.40	9.67E-08	1.60	9.78E-08	1.54	2.75E-08
5430403G16Rik	1.48	1.83E-07	1.31	1.28E-06	1.71	3.66E-08
5430405H02Rik	-1.01	1.80E-07	-1.06	3.44E-07	-1.11	5.71E-08
5730508B09Rik	-1.25	3.14E-06	-1.30	6.19E-06	-1.24	2.77E-06
5830428H23Rik	1.59	2.51E-08	1.69	4.35E-08	1.83	4.45E-09
5830468F06Rik	2.70	8.78E-05	3.21	5.46E-05	2.46	1.65E-04
6030443J06Rik	1.90	8.62E-06	1.44	2.21E-04	2.17	2.13E-06
6030458C11Rik	1.18	4.50E-07	1.29	5.95E-07	1.29	1.52E-07
6330418K02Rik	0.72	4.93E-03	1.18	3.19E-04	1.22	8.70E-05
6330419J24Rik	-2.38	2.63E-03	-3.40	4.62E-04	-3.23	2.46E-04
6330549D23Rik	1.31	1.34E-02	1.47	1.31E-02	1.68	2.61E-03
6430571L13Rik	-1.62	1.41E-03	-1.51	5.01E-03	-2.04	2.20E-04
6530409C15Rik	1.16	1.51E-05	1.25	2.24E-05	1.49	1.47E-06
9230114K14Rik	-2.41	5.58E-07	-2.66	6.82E-07	-2.89	8.68E-08

9330151L19Rik	1.18	1.15E-06	1.31	1.38E-06	1.06	2.16E-06
9330161L09Rik	-2.33	1.18E-05	-1.70	4.06E-04	-1.67	1.66E-04
9330175E14Rik	1.55	3.35E-09	1.74	4.39E-09	2.76	3.59E-11
9430038I01Rik	-0.86	2.82E-04	-1.34	2.01E-05	-1.42	3.78E-06
9830147E19Rik	2.23	1.23E-04	1.71	2.19E-03	1.76	7.23E-04
A230056P14Rik	4.21	5.96E-05	4.55	8.16E-05	3.29	3.79E-04
A330017A19Rik	1.36	9.72E-03	1.85	2.93E-03	1.43	6.70E-03
A430046D13Rik	1.42	1.92E-07	1.66	1.59E-07	2.01	8.56E-09
A430105I19Rik	1.74	2.51E-05	2.44	4.00E-06	2.30	1.86E-06
A530072M11Rik	1.01	9.93E-04	1.38	2.20E-04	1.78	8.32E-06
A530083I20Rik	1.39	1.62E-06	1.19	1.61E-05	2.15	3.08E-08
A630023P12Rik	1.01	1.16E-06	0.98	4.15E-06	1.71	1.22E-08
A930005H10Rik	1.09	4.67E-07	1.19	6.19E-07	1.39	4.27E-08
A930007I19Rik	-1.51	1.78E-05	-1.31	1.53E-04	-1.16	1.40E-04
A930024E05Rik	-2.64	2.86E-06	-2.64	7.97E-06	-2.00	2.52E-05
Aaed1	1.20	1.33E-07	1.04	1.01E-06	1.57	9.97E-09
Aar2	-0.94	1.43E-07	-1.02	1.99E-07	-1.13	2.17E-08
Aars	-1.08	1.81E-07	-1.07	5.14E-07	-1.16	6.38E-08
Aasdh	0.71	1.82E-06	1.00	3.02E-07	1.10	3.45E-08
Abca1	-2.29	3.04E-05	-2.99	8.63E-06	-2.57	9.43E-06
Abca5	-1.47	3.89E-04	-1.40	1.33E-03	-1.42	4.49E-04
Abcb11	3.08	1.14E-06	3.80	5.66E-07	2.81	1.93E-06
Abcb1a	-2.33	1.48E-06	-2.75	1.07E-06	-2.57	4.80E-07
Abcb1b	-1.54	1.53E-06	-1.46	6.69E-06	-1.80	3.13E-07
Abcb4	-1.89	1.69E-04	-1.35	4.55E-03	-1.71	3.33E-04
Abcb9	-1.90	2.16E-06	-2.01	3.68E-06	-2.42	2.05E-07
Abcd4	1.08	5.66E-07	1.11	1.19E-06	1.20	1.57E-07
Abcg1	-1.71	2.00E-08	-2.02	1.75E-08	-2.23	1.44E-09
Abcg4	1.55	5.55E-03	2.46	4.97E-04	1.85	1.55E-03
Abhd14a	1.79	4.85E-07	1.75	1.59E-06	1.14	1.70E-05
Abhd14b	1.32	8.19E-07	1.50	7.77E-07	1.52	1.80E-07
Abi2	-1.25	3.80E-07	-1.23	1.16E-06	-1.23	2.88E-07
Abl2	-1.16	5.68E-08	-1.25	9.10E-08	-1.43	7.19E-09
Acaa1a	1.05	7.08E-08	1.17	8.59E-08	1.23	1.22E-08
Acacb	-2.08	4.37E-04	-1.83	2.58E-03	-2.85	2.88E-05
Acad12	1.35	7.72E-05	0.83	6.58E-03	1.61	1.46E-05
Acadsb	2.01	2.40E-05	2.51	1.01E-05	1.82	4.65E-05
Acbd5	-1.41	3.91E-07	-1.48	7.08E-07	-1.50	1.66E-07

Acer2	-1.39	8.67E-08	-1.52	1.20E-07	-2.10	2.50E-09
Acot13	1.24	1.24E-06	1.37	1.48E-06	1.41	3.12E-07
Acot2	-1.62	1.96E-07	-1.98	1.18E-07	-1.77	6.28E-08
Acot7	-1.19	6.88E-03	-1.10	2.04E-02	-2.40	3.06E-05
Acox1	-1.18	3.19E-08	-1.33	3.89E-08	-1.45	3.65E-09
Acp5	1.26	1.32E-08	1.24	3.52E-08	1.41	2.65E-09
Acrbp	1.28	5.77E-06	1.69	1.60E-06	1.72	3.70E-07
Acsl1	-0.92	8.54E-08	-1.10	6.55E-08	-1.44	1.98E-09
Acsl3	-1.70	1.81E-07	-1.81	2.90E-07	-2.26	1.25E-08
Acsm3	1.93	1.47E-02	2.67	4.11E-03	2.49	2.82E-03
Acss1	1.09	2.79E-08	0.91	2.49E-07	1.55	1.25E-09
Actb	1.55	8.72E-09	1.59	1.82E-08	1.25	1.61E-08
Actrt3	-2.77	9.42E-04	-3.25	6.63E-04	-2.04	6.78E-03
Acvr2a	-1.22	3.64E-07	-1.19	1.26E-06	-1.76	1.39E-08
Acvr2b	1.47	3.21E-03	1.70	2.51E-03	1.14	1.38E-02
Acyp1	1.08	5.87E-07	1.17	8.24E-07	1.49	2.91E-08
Adam22	1.72	3.72E-07	2.25	1.28E-07	2.04	6.22E-08
Adam8	1.55	2.73E-03	1.90	1.46E-03	1.68	1.44E-03
Adamts14	-1.93	1.22E-05	-2.37	5.83E-06	-2.45	1.23E-06
Adamts3	-2.60	7.64E-04	-2.81	1.01E-03	-3.46	6.99E-05
Adamtsl4	4.42	9.89E-09	4.92	1.27E-08	2.45	4.10E-07
Adap1	-1.60	1.76E-02	-1.77	1.90E-02	-1.53	2.07E-02
Adat1	1.60	5.62E-08	2.06	2.83E-08	2.09	4.40E-09
Adcy5	1.08	6.79E-03	1.95	2.27E-04	1.19	3.33E-03
Adcy6	1.21	1.44E-08	1.25	2.89E-08	1.42	2.03E-09
Add1	1.14	3.79E-11	1.10	1.97E-10	1.41	1.81E-12
Adgrg1	-1.81	3.01E-02	-1.98	3.38E-02	-3.15	9.07E-04
Adgrg3	-1.63	4.82E-04	-1.85	4.39E-04	-3.59	5.03E-07
Adgrg5	-1.28	5.56E-04	-1.41	6.43E-04	-1.88	2.11E-05
Adgrl2	-3.20	2.69E-05	-4.32	5.90E-06	-5.32	2.72E-07
Adprh	1.04	1.72E-06	1.11	2.76E-06	1.15	5.77E-07
Aebp2	-1.14	5.78E-08	-1.30	6.39E-08	-1.34	9.74E-09
Aff1	-2.34	7.74E-08	-2.79	6.07E-08	-2.72	1.42E-08
Aff4	-1.59	3.89E-08	-1.75	5.03E-08	-1.69	1.26E-08
Ager	2.32	6.13E-09	2.48	1.01E-08	2.72	7.86E-10
Agfg2	1.13	5.05E-08	1.13	1.30E-07	1.12	3.08E-08
Aggf1	-0.99	2.56E-07	-1.11	2.77E-07	-1.02	1.33E-07
Agpat9	-3.10	8.80E-05	-4.35	1.40E-05	-5.09	1.04E-06

Agrp	2.08	4.36E-03	1.65	3.09E-02	2.88	3.72E-04
Ahnak	-1.79	1.34E-06	-2.12	9.10E-07	-2.06	3.02E-07
AI467606	1.40	1.67E-09	1.44	3.54E-09	1.85	7.74E-11
AI504432	1.57	1.52E-04	1.41	8.44E-04	1.54	1.57E-04
Aida	0.93	1.51E-07	1.05	1.53E-07	2.06	3.39E-10
Aig1	-1.59	6.11E-07	-2.02	2.48E-07	-1.53	6.23E-07
Aim1	-1.19	8.54E-08	-1.24	1.65E-07	-2.32	4.67E-10
Aim1l	-1.14	1.35E-02	-1.81	1.40E-03	-1.21	8.72E-03
Airn	1.57	2.28E-06	1.59	5.68E-06	1.49	2.81E-06
Ak6	-1.04	5.64E-07	-0.99	2.44E-06	-1.17	1.53E-07
Akap2	-1.33	1.19E-05	-1.60	7.15E-06	-1.92	4.06E-07
Akr1e1	1.35	2.46E-06	1.47	3.48E-06	1.09	1.24E-05
Akr7a5	1.10	2.17E-05	1.03	9.87E-05	1.06	2.54E-05
Aldh1l2	2.04	4.00E-05	1.69	4.66E-04	2.69	3.05E-06
Alg6	1.05	3.65E-05	1.31	1.51E-05	1.30	4.82E-06
Alkbh2	1.16	4.62E-06	1.34	3.88E-06	1.38	8.15E-07
Als2cr12	1.64	6.31E-04	2.04	2.84E-04	1.56	8.32E-04
Amd1	-1.93	8.93E-07	-2.44	3.75E-07	-2.65	4.56E-08
Amd2	-2.45	2.20E-05	-1.91	4.21E-04	-2.01	9.72E-05
Amdhd2	0.95	3.27E-05	1.04	4.20E-05	1.15	5.11E-06
Amigo1	1.90	1.07E-06	1.71	7.16E-06	1.50	6.41E-06
Amn1	1.28	1.46E-06	1.53	9.15E-07	1.75	7.93E-08
Ampd1	-1.20	1.49E-05	-1.31	1.95E-05	-1.84	3.03E-07
Amt	2.05	3.33E-08	1.96	1.07E-07	2.13	1.26E-08
Amy1	1.42	1.04E-04	1.43	2.55E-04	1.94	6.38E-06
Anapc7	-1.04	1.01E-08	-1.09	1.75E-08	-1.13	2.26E-09
Angptl6	2.17	7.16E-06	2.30	1.22E-05	2.10	7.89E-06
Ankrd13c	-1.39	2.55E-07	-1.52	3.41E-07	-1.41	1.56E-07
Ankrd13d	1.24	8.43E-07	1.20	2.93E-06	1.49	1.29E-07
Ankrd50	-2.24	3.03E-07	-2.71	1.82E-07	-2.89	2.58E-08
Ankrd53	1.94	8.27E-04	1.63	5.88E-03	2.36	1.59E-04
Ankzf1	0.98	1.03E-07	1.02	1.90E-07	1.35	5.37E-09
Anln	-1.07	2.13E-02	-1.53	5.30E-03	-2.08	2.21E-04
Anxa4	1.82	1.80E-05	2.08	1.60E-05	1.41	1.34E-04
Anxa7	1.01	1.13E-07	1.25	6.80E-08	1.28	1.13E-08
Ap1m2	-0.82	3.40E-04	-1.42	1.01E-05	-1.17	1.53E-05
Ap1s3	-1.04	4.68E-06	-0.97	2.34E-05	-1.08	2.85E-06
Ap3s2	0.98	2.36E-08	1.13	2.37E-08	1.14	3.78E-09

Ap5b1	1.31	5.63E-07	1.12	5.70E-06	1.66	5.39E-08
Apbb1	1.71	2.03E-05	1.68	6.23E-05	1.52	4.65E-05
Apcdd1	-2.17	1.58E-02	-2.28	2.23E-02	-3.66	4.46E-04
Apex1	-1.43	7.69E-08	-1.64	7.76E-08	-2.42	1.04E-09
Aph1b	-1.14	1.98E-02	-1.18	2.91E-02	-1.68	1.62E-03
Aplf	1.14	5.26E-06	1.40	2.61E-06	1.32	1.20E-06
Apmap	-1.07	2.80E-08	-1.22	2.94E-08	-1.18	6.96E-09
Apobec2	1.42	1.18E-03	1.85	3.89E-04	1.99	7.27E-05
Apobec3	1.07	5.30E-07	1.16	7.27E-07	2.15	1.83E-09
Apol8	-3.22	8.42E-05	-3.47	1.17E-04	-4.47	4.32E-06
Apol9a	-2.98	1.68E-03	-3.64	9.05E-04	-3.06	1.25E-03
Apol9b	-3.05	3.08E-05	-3.54	2.37E-05	-2.66	8.48E-05
Appbp2	-1.04	1.47E-07	-1.08	2.97E-07	-1.20	2.96E-08
Arc	-1.36	5.13E-05	-1.49	6.36E-05	-2.03	1.38E-06
Areg	-3.08	4.63E-06	-1.96	4.97E-04	-3.02	4.47E-06
Arf4	-1.61	1.19E-07	-1.83	1.24E-07	-2.00	1.36E-08
Arhgap12	1.78	2.12E-09	1.87	3.71E-09	1.30	4.52E-09
Arhgap17	-1.00	4.43E-08	-1.14	4.63E-08	-1.23	5.36E-09
Arhgap20	-2.83	4.52E-04	-1.97	1.13E-02	-2.48	1.10E-03
Arhgef10	-2.70	5.13E-06	-3.72	9.94E-07	-1.66	2.57E-04
Arhgef5	-1.12	4.38E-04	-1.20	6.07E-04	-1.23	1.88E-04
Arid4b	-1.08	9.57E-08	-1.05	3.02E-07	-1.09	5.26E-08
Arid5a	-1.28	4.09E-08	-1.45	4.55E-08	-1.55	5.25E-09
Arih1	-1.00	2.79E-08	-1.05	5.10E-08	-1.08	8.17E-09
Arih2	-1.23	1.01E-08	-1.33	1.55E-08	-1.24	3.88E-09
Arl10	2.89	3.43E-08	2.99	6.80E-08	2.92	1.62E-08
Arl3	1.17	6.69E-07	1.30	7.52E-07	1.20	3.87E-07
Arl4d	-1.57	1.42E-03	-1.29	1.07E-02	-1.63	9.81E-04
Arl5b	-2.08	8.98E-07	-2.53	5.10E-07	-2.67	8.00E-08
Arl8b	-1.19	2.39E-07	-1.37	2.26E-07	-1.41	4.02E-08
Armc3	0.80	3.15E-03	1.54	5.20E-05	1.59	1.24E-05
Armcx1	-0.90	2.88E-03	-1.16	1.11E-03	-1.90	6.52E-06
Armcx4	-2.29	1.27E-05	-2.80	6.39E-06	-4.27	5.00E-08
Armcx5	-1.58	4.30E-04	-1.78	4.19E-04	-2.29	1.72E-05
Armcx6	-1.01	1.70E-03	-1.15	1.52E-03	-1.70	2.28E-05
Arntl2	1.88	9.46E-03	1.91	1.64E-02	1.61	2.11E-02
Arpc1a	-0.94	9.42E-09	-1.03	1.33E-08	-1.11	1.28E-09
Arrdc3	-1.00	2.01E-06	-1.10	2.49E-06	-1.10	6.69E-07

Arsk	1.51	4.44E-07	1.58	8.23E-07	2.00	3.03E-08
Art2b	2.45	8.03E-09	3.13	5.57E-09	4.48	7.35E-11
Art5	-1.47	2.41E-02	-1.87	1.22E-02	-2.18	2.04E-03
Asah1	1.03	6.13E-09	1.04	1.33E-08	1.02	2.43E-09
Ascl3	1.33	2.14E-03	1.71	8.13E-04	1.80	1.98E-04
Asf1a	-1.07	1.18E-04	-1.46	2.34E-05	-1.04	1.30E-04
Asgr1	-1.96	1.80E-02	-1.87	3.93E-02	-3.23	6.32E-04
Aspm	-2.30	2.80E-05	-2.40	5.34E-05	-2.63	7.39E-06
Asrgl1	1.47	4.52E-08	1.59	6.80E-08	1.66	9.77E-09
Atad2	-1.87	2.49E-07	-2.18	2.13E-07	-2.11	6.27E-08
Atad3aos	1.15	4.69E-04	1.07	1.87E-03	1.36	1.07E-04
Atad5	-1.92	5.20E-07	-2.20	4.84E-07	-3.37	4.53E-09
Atcay	-1.01	9.10E-03	-1.37	2.64E-03	-1.56	4.05E-04
Atf1	-0.96	1.18E-07	-1.07	1.47E-07	-1.09	2.71E-08
Atf3	-3.12	2.45E-04	-4.49	3.27E-05	-4.84	5.27E-06
Atf4	-1.05	9.22E-07	-1.13	1.35E-06	-1.35	8.24E-08
Atf5	-0.88	3.20E-03	-1.18	9.70E-04	-1.03	9.67E-04
Atg101	-1.03	1.08E-06	-1.27	5.65E-07	-1.16	3.02E-07
Atg14	-1.28	3.98E-08	-1.39	5.60E-08	-1.11	6.22E-08
Atg2a	-1.20	4.17E-08	-1.40	3.98E-08	-1.31	1.16E-08
Atg7	-1.56	2.90E-08	-1.63	5.47E-08	-1.49	2.03E-08
Atl2	-1.46	3.72E-07	-1.69	3.09E-07	-1.72	6.66E-08
Atp1a2	-2.13	3.83E-05	-1.29	4.09E-03	-2.41	1.15E-05
Atp6v0d1	-1.37	2.41E-08	-1.47	3.87E-08	-1.41	9.08E-09
Atp6v0e2	-1.48	6.56E-03	-1.26	2.99E-02	-1.75	1.97E-03
Atp6v1e1	-1.41	1.75E-08	-1.49	2.97E-08	-1.51	4.89E-09
Atp6v1g2	1.04	4.25E-03	1.83	1.52E-04	1.61	1.51E-04
Atp6v1h	-1.09	2.00E-08	-1.17	3.04E-08	-1.43	1.42E-09
Atxn7l1os2	1.10	3.67E-08	0.87	4.96E-07	1.11	1.71E-08
AU020206	1.33	2.10E-07	1.52	2.05E-07	1.63	2.71E-08
AU022252	0.94	1.43E-07	1.06	1.53E-07	1.10	2.68E-08
Aurka	-0.99	5.58E-03	-1.21	3.17E-03	-1.15	1.92E-03
AV099323	1.55	1.57E-02	2.07	5.45E-03	2.81	2.38E-04
Avil	1.30	3.42E-05	1.47	3.17E-05	3.07	1.96E-08
Avl9	-1.50	2.33E-07	-1.71	2.29E-07	-1.66	6.71E-08
AW146154	1.96	2.49E-03	2.35	1.59E-03	2.37	5.75E-04
Axl	-2.54	2.23E-04	-3.12	1.08E-04	-2.74	1.06E-04
Azin1	-1.34	1.60E-07	-1.54	1.47E-07	-1.54	3.32E-08

B130034C11Rik	2.62	7.33E-08	2.60	1.98E-07	2.88	2.04E-08
B3galnt2	1.10	3.38E-07	1.18	5.19E-07	1.15	1.63E-07
B3gnt3	1.26	5.82E-04	1.26	1.36E-03	1.76	3.46E-05
B3gnt5	1.12	1.22E-06	1.23	1.54E-06	2.62	1.35E-09
B3gnt7	-1.81	9.65E-03	-1.85	1.64E-02	-1.42	3.29E-02
B3gnt9	1.54	9.11E-04	1.65	1.29E-03	1.61	5.89E-04
B430212C06Rik	1.54	9.26E-04	1.96	3.50E-04	1.84	2.10E-04
B4galt1	-1.19	1.54E-08	-1.34	1.81E-08	-1.29	3.88E-09
B630019A10Rik	1.05	2.93E-07	1.06	7.20E-07	2.48	4.13E-10
Bace1	1.45	1.40E-07	1.80	7.72E-08	1.75	1.96E-08
Bach1	-1.26	3.73E-07	-1.37	5.15E-07	-1.10	8.16E-07
Bach2it1	-1.59	3.07E-03	-2.05	1.16E-03	-1.39	6.75E-03
Bag3	-1.40	1.72E-05	-1.63	1.36E-05	-1.21	5.09E-05
Bag4	-1.04	2.89E-05	-1.19	2.56E-05	-1.12	1.24E-05
Baiap2	-1.54	1.38E-07	-1.95	6.90E-08	-2.06	9.08E-09
Bambi	-1.96	7.07E-04	-2.45	3.09E-04	-2.99	1.94E-05
Banp	1.20	7.31E-06	1.08	4.85E-05	1.41	1.49E-06
Bap1	-1.03	3.19E-08	-1.05	7.19E-08	-1.04	1.48E-08
Basp1	-1.13	3.45E-05	-1.38	1.63E-05	-1.51	2.23E-06
Batf	-1.44	1.98E-05	-1.66	1.68E-05	-1.59	7.27E-06
Bbs10	1.45	2.48E-07	1.29	1.76E-06	2.02	1.22E-08
BC017158	1.12	2.64E-07	1.03	1.41E-06	1.02	4.05E-07
BC025920	1.97	1.10E-06	2.09	1.88E-06	2.57	8.62E-08
BC030499	1.12	8.83E-04	1.33	6.00E-04	1.53	6.63E-05
BC049352	1.64	3.94E-04	2.28	7.22E-05	1.01	1.00E-02
BC051226	1.37	2.19E-06	1.61	1.59E-06	1.93	8.68E-08
BC068281	1.26	5.10E-07	1.64	1.82E-07	1.37	1.78E-07
BC094916	1.25	7.45E-08	1.42	7.75E-08	2.60	2.79E-10
BC106179	1.90	2.16E-02	1.94	3.40E-02	3.38	4.54E-04
BC147527	2.08	7.26E-07	2.60	3.36E-07	3.15	1.76E-08
Bcar1	-2.29	1.39E-02	-3.96	8.02E-04	-2.86	3.21E-03
Bcat1	-2.24	2.40E-03	-2.72	1.37E-03	-3.04	2.18E-04
Bcl10	-1.51	1.08E-07	-1.66	1.41E-07	-1.69	2.64E-08
Bcl2a1a	-1.70	3.58E-03	-1.62	9.82E-03	-1.97	1.16E-03
Bcl2a1b	-2.31	1.45E-07	-2.89	7.70E-08	-2.86	1.68E-08
Bcl2l11	-1.08	8.57E-09	-1.09	1.96E-08	-1.94	8.35E-11
Bcl2l12	1.44	1.66E-06	1.22	1.76E-05	1.27	3.84E-06
Bcl2l13	-1.32	2.96E-08	-1.47	3.83E-08	-1.60	3.77E-09

Bcl2l15	1.46	2.71E-03	1.55	3.92E-03	1.97	2.56E-04
Bdkrb1	2.00	5.79E-03	1.62	3.43E-02	1.98	5.65E-03
BE692007	1.58	5.62E-08	1.94	3.73E-08	2.82	5.48E-10
Bend3	-2.10	4.12E-08	-2.43	4.22E-08	-3.05	1.56E-09
Bend4	-2.87	1.84E-05	-4.13	2.36E-06	-3.39	3.57E-06
Bend5	-2.08	4.23E-03	-1.85	1.68E-02	-2.46	1.24E-03
Bhlha15	0.59	9.49E-04	1.45	1.78E-06	1.01	1.14E-05
Bhlhe40	-2.64	5.37E-07	-3.60	1.36E-07	-3.92	1.54E-08
Bhlhe41	-3.43	6.96E-05	-4.55	1.74E-05	-5.26	1.45E-06
Bin2	1.17	9.14E-09	1.26	1.44E-08	1.04	8.28E-09
Blm	-1.81	2.41E-07	-2.05	2.47E-07	-2.03	6.35E-08
Bloc1s3	1.13	3.53E-07	1.06	1.69E-06	1.40	4.36E-08
Blvrb	1.02	9.39E-04	0.79	1.08E-02	1.54	2.89E-05
Bmp2k	-1.53	2.07E-07	-1.56	4.66E-07	-1.66	7.07E-08
Bpgm	-1.57	1.12E-06	-1.67	1.85E-06	-1.39	2.44E-06
Bpnt1	-1.40	7.13E-07	-1.84	2.31E-07	-1.82	5.92E-08
Brat1	1.02	5.60E-09	1.08	8.67E-09	1.21	6.16E-10
Brca1	-1.54	2.83E-05	-1.65	4.23E-05	-1.11	3.42E-04
Brms1l	0.99	3.17E-07	1.20	1.90E-07	1.26	3.00E-08
Bsdc1	-1.32	2.41E-08	-1.52	2.43E-08	-1.55	3.65E-09
Btaf1	-1.04	3.01E-08	-1.04	7.36E-08	-1.13	7.90E-09
Btbd10	-1.05	2.32E-06	-1.07	5.33E-06	-1.27	3.39E-07
Btg1	-1.22	1.24E-06	-1.45	8.56E-07	-1.18	1.26E-06
Btg2	-1.21	1.24E-06	-1.43	8.39E-07	-1.06	2.91E-06
Btg3	-1.20	1.31E-06	-1.30	1.86E-06	-1.79	3.31E-08
Btnl7-ps	1.82	3.35E-05	1.66	1.88E-04	3.11	2.72E-07
Bud31	-1.12	4.60E-07	-1.24	5.48E-07	-1.31	8.69E-08
Bzw2	-1.30	4.31E-08	-1.41	6.55E-08	-1.98	1.20E-09
C030039L03Rik	0.94	2.05E-06	1.01	3.08E-06	1.18	2.18E-07
C130036L24Rik	1.89	3.98E-08	2.08	5.25E-08	2.08	1.01E-08
C130046K22Rik	1.21	1.02E-04	1.17	3.25E-04	1.51	1.36E-05
C1qtnf9	1.28	6.17E-03	2.01	5.89E-04	1.33	4.39E-03
C230037L18Rik	1.93	5.65E-08	1.77	2.69E-07	2.13	1.49E-08
C230038L03Rik	-2.49	6.44E-05	-2.55	1.39E-04	-3.70	1.79E-06
C230062I16Rik	2.41	3.95E-05	2.93	2.01E-05	2.48	2.55E-05
C2cd2	1.12	2.41E-07	1.02	1.42E-06	1.02	3.70E-07
C330018D20Rik	0.93	3.39E-06	1.03	4.03E-06	1.52	4.14E-08
C330027C09Rik	-2.57	1.95E-04	-3.34	5.96E-05	-3.42	1.53E-05

C430002N11Rik	-2.85	8.14E-05	-1.22	4.53E-02	-1.26	2.08E-02
C77080	-1.79	1.67E-04	-1.04	1.50E-02	-1.74	1.77E-04
C920009B18Rik	-2.58	2.05E-04	-2.40	8.67E-04	-2.83	8.39E-05
C920025E04Rik	1.17	3.76E-06	1.12	1.41E-05	1.39	6.30E-07
Cabp4	0.78	3.36E-02	1.50	1.35E-03	1.42	7.94E-04
Cacna2d4	1.79	6.03E-09	1.78	1.41E-08	2.20	5.47E-10
Cacnb3	1.14	6.72E-05	0.72	4.96E-03	2.23	1.72E-07
Calca	-1.81	2.57E-04	-1.96	3.45E-04	-2.09	7.18E-05
Calm2	-1.02	1.84E-07	-1.09	3.09E-07	-1.16	4.22E-08
Camk2n1	0.93	4.24E-04	1.38	4.53E-05	1.13	8.16E-05
Camsap2	-1.53	4.52E-08	-1.74	4.88E-08	-1.99	3.62E-09
Car11	1.33	8.95E-05	0.90	4.01E-03	1.36	6.44E-05
Card9	1.20	1.72E-06	0.84	8.85E-05	1.09	3.06E-06
Carhsp1	-1.00	1.75E-07	-1.17	1.42E-07	-1.08	5.98E-08
Carns1	1.30	1.95E-08	1.28	5.09E-08	1.79	9.76E-10
Casc4	-1.67	3.66E-07	-1.87	4.02E-07	-2.39	1.47E-08
Casc5	-2.07	8.82E-06	-2.09	2.19E-05	-1.67	4.45E-05
Casp3	-1.26	4.41E-06	-1.30	9.01E-06	-1.99	6.87E-08
Casp9	1.60	1.52E-08	1.56	4.27E-08	1.61	6.28E-09
Cass4	1.02	1.44E-02	0.98	3.07E-02	1.76	3.15E-04
Casz1	-2.01	1.08E-07	-2.48	6.52E-08	-2.14	4.04E-08
Cbx5	1.47	8.10E-09	1.59	1.22E-08	1.52	2.43E-09
Ccbl1	1.17	3.53E-07	1.04	2.51E-06	1.02	7.93E-07
Ccdc101	1.05	4.79E-07	1.14	6.93E-07	1.23	8.67E-08
Ccdc106	0.98	3.85E-02	1.36	1.31E-02	1.58	2.34E-03
Ccdc107	1.07	1.97E-06	1.04	6.75E-06	1.03	2.16E-06
Ccdc117	-1.96	3.97E-07	-2.35	2.56E-07	-2.23	9.19E-08
Ccdc136	1.78	2.24E-02	2.16	1.46E-02	1.52	4.50E-02
Ccdc163	1.32	1.72E-06	1.52	1.44E-06	1.58	2.83E-07
Ccdc167	1.68	4.45E-04	1.91	4.02E-04	1.57	6.51E-04
Ccdc175	1.60	3.51E-03	2.55	2.65E-04	1.30	1.16E-02
Ccdc18	1.06	5.82E-04	0.65	2.70E-02	1.33	8.87E-05
Ccdc181	0.89	1.04E-03	1.09	5.56E-04	1.72	4.10E-06
Ccdc186	-1.09	9.07E-07	-1.12	1.93E-06	-1.14	4.37E-07
Ccdc39	1.18	4.37E-04	2.20	6.97E-06	1.81	1.10E-05
Ccdc51	1.01	3.10E-05	1.16	2.66E-05	1.10	1.27E-05
Ccdc73	1.35	3.26E-05	2.08	2.38E-06	1.79	2.42E-06
Ccdc8	-2.03	2.60E-02	-2.19	3.16E-02	-2.28	1.33E-02

Ccdc86	-0.98	5.35E-06	-1.08	6.19E-06	-1.44	1.50E-07
Ccin	1.93	4.34E-03	3.36	1.76E-04	1.25	4.36E-02
Ccnb2	2.11	3.78E-04	2.69	1.41E-04	2.90	2.40E-05
Ccne1	2.20	3.01E-08	1.96	1.63E-07	2.50	6.22E-09
Ccne2	-2.16	2.46E-05	-2.74	9.01E-06	-2.78	2.31E-06
Ccnk	-1.17	2.37E-08	-1.26	3.62E-08	-1.23	7.94E-09
Ccno	-1.92	6.15E-03	-1.99	9.74E-03	-2.73	4.68E-04
Ccnt1	-1.23	6.50E-08	-1.37	8.28E-08	-1.35	1.83E-08
Ccnyl1	-1.37	1.10E-06	-1.54	1.17E-06	-1.70	1.31E-07
Ccpg1	-1.41	1.43E-07	-1.70	9.92E-08	-1.17	4.46E-07
Ccr2	-1.11	1.32E-03	-1.24	1.35E-03	-1.64	5.32E-05
Ccr4	-1.90	1.14E-04	-2.06	1.55E-04	-3.53	4.65E-07
Ccr7	-1.54	1.92E-08	-1.84	1.60E-08	-2.18	7.94E-10
Ccr8	-3.09	6.53E-04	-4.58	7.31E-05	-5.81	2.90E-06
Ccrl2	-1.89	1.19E-03	-2.18	9.83E-04	-1.55	4.17E-03
Cd164l2	-3.07	1.40E-05	-2.69	1.12E-04	-4.54	3.85E-07
Cd200r1	1.62	4.53E-08	2.23	1.60E-08	1.56	3.43E-08
Cd24a	-2.42	7.32E-05	-3.42	1.09E-05	-3.88	1.05E-06
Cd44	-1.83	5.85E-07	-2.20	3.59E-07	-2.37	4.72E-08
Cd46	1.41	5.24E-07	1.45	1.15E-06	2.00	2.13E-08
Cd47	1.17	2.83E-09	1.19	6.05E-09	1.21	7.08E-10
Cd48	1.75	1.04E-09	1.89	1.36E-09	1.27	1.57E-09
Cd69	-3.12	4.00E-05	-4.27	7.72E-06	-4.57	1.22E-06
Cd7	1.11	9.06E-05	1.51	1.88E-05	1.76	1.43E-06
Cd83	-2.22	1.45E-04	-2.79	5.79E-05	-2.90	1.30E-05
Cd86	-2.51	1.89E-06	-2.95	1.35E-06	-1.74	3.47E-05
Cd9	0.99	1.09E-06	1.11	1.17E-06	1.79	7.11E-09
Cdc20	-0.98	9.94E-05	-1.34	2.06E-05	-1.32	6.96E-06
Cdc25b	2.18	5.89E-09	1.95	2.61E-08	2.96	3.00E-10
Cdc27	-1.27	1.73E-07	-1.33	3.24E-07	-1.51	2.89E-08
Cdc42se1	1.14	7.90E-10	1.26	1.11E-09	1.33	6.69E-11
Cdc45	-1.60	8.77E-05	-1.30	1.10E-03	-1.85	2.17E-05
Cdca2	-1.37	3.05E-05	-0.91	1.84E-03	-1.63	5.59E-06
Cdh1	-3.11	2.57E-04	-3.05	7.28E-04	-3.41	1.08E-04
Cdh23	1.12	1.60E-06	0.94	1.91E-05	1.80	2.28E-08
Cdh24	-1.07	2.57E-06	-0.92	2.43E-05	-1.24	5.72E-07
Cdk11b	-1.50	3.01E-08	-1.75	2.94E-08	-1.78	4.43E-09
Cdk17	-1.09	4.36E-08	-1.25	4.55E-08	-1.04	3.40E-08

Cdkn1a	-3.16	1.98E-04	-4.07	6.50E-05	-5.15	2.60E-06
Cdkn2aip	-1.11	2.29E-07	-1.11	6.55E-07	-1.09	1.81E-07
Cdo1	0.75	3.29E-02	1.27	3.17E-03	1.34	8.92E-04
Cdpf1	1.38	2.53E-07	1.18	2.54E-06	1.76	2.44E-08
Cdt1	-1.35	5.72E-07	-1.63	3.42E-07	-1.80	3.66E-08
Ceacam1	-1.38	9.48E-03	-2.40	4.70E-04	-1.10	2.91E-02
Cebpa	-1.09	2.81E-02	-2.62	1.84E-04	-1.89	8.35E-04
Cecr6	-1.13	3.18E-03	-1.69	3.87E-04	-1.43	5.35E-04
Celf3	1.84	2.60E-05	2.05	2.84E-05	2.38	2.35E-06
Cenpc1	-0.99	4.43E-08	-1.00	9.87E-08	-1.61	7.67E-10
Cenpe	-1.99	1.29E-05	-2.46	5.87E-06	-1.91	1.53E-05
Cenpi	-1.53	6.33E-04	-1.86	3.49E-04	-1.65	3.08E-04
Cenpl	-2.01	1.04E-06	-2.53	4.34E-07	-2.69	6.34E-08
Cenpq	-1.27	1.42E-06	-1.17	7.69E-06	-1.22	1.60E-06
Cenpw	-1.47	1.69E-03	-1.59	2.12E-03	-1.58	8.93E-04
Cep120	-1.35	1.06E-07	-1.45	1.64E-07	-1.34	6.73E-08
Cep19	1.11	1.84E-05	0.78	8.15E-04	1.16	1.09E-05
Cep55	-2.32	2.39E-04	-1.95	2.10E-03	-2.08	4.93E-04
Cep57	-0.97	1.42E-06	-1.10	1.46E-06	-1.06	5.35E-07
Cep68	1.05	5.76E-09	1.10	9.54E-09	1.27	5.48E-10
Cep76	-1.03	4.20E-06	-1.20	3.14E-06	-1.23	6.78E-07
Cep83os	0.80	7.41E-05	1.14	1.01E-05	1.34	6.94E-07
Cep85l	-1.40	7.86E-07	-1.60	7.15E-07	-1.47	3.81E-07
Cfap43	-0.97	7.10E-09	-1.31	3.71E-09	-1.07	1.36E-09
Cfap97	0.97	1.86E-07	1.02	3.35E-07	1.34	9.98E-09
Chaf1a	-2.39	5.16E-04	-3.18	1.33E-04	-3.33	2.95E-05
Chd1	-1.07	1.51E-07	-1.16	2.06E-07	-1.08	8.46E-08
Chd2	-1.42	4.72E-08	-1.47	9.42E-08	-1.22	8.63E-08
Chd7	-1.85	3.95E-08	-2.09	4.51E-08	-1.98	1.24E-08
Chdh	-1.37	1.46E-05	-1.65	8.21E-06	-1.90	6.84E-07
Chek1	-1.76	7.79E-05	-2.37	1.73E-05	-2.71	1.59E-06
Chek2	1.93	1.08E-07	1.91	2.96E-07	1.88	8.00E-08
Chka	-1.86	4.05E-06	-2.39	1.38E-06	-2.78	9.95E-08
Chl1	-3.46	2.29E-04	-2.75	2.88E-03	-4.84	1.18E-05
Chn2	-2.02	3.59E-05	-2.41	2.14E-05	-2.23	1.30E-05
Chrm3	-2.25	1.50E-02	-3.12	4.19E-03	-2.69	4.81E-03
Chrna2	-2.22	5.37E-04	-2.31	9.29E-04	-2.32	3.41E-04
Chrnb1	1.04	2.62E-05	1.15	3.02E-05	1.13	1.06E-05

Chrnb2	1.07	8.10E-07	1.03	3.28E-06	1.28	1.33E-07
Chrne	-1.81	2.75E-04	-3.25	5.89E-06	-2.24	4.15E-05
Chst12	1.66	8.83E-07	1.75	1.57E-06	1.59	9.11E-07
Chst2	-3.07	5.55E-03	-4.77	5.75E-04	-6.98	8.26E-06
Ciart	-2.86	3.78E-03	-3.39	2.59E-03	-5.43	2.31E-05
Cir1	-1.16	6.19E-07	-1.21	1.16E-06	-1.03	1.26E-06
Cirh1a	-1.11	5.68E-08	-1.23	7.67E-08	-1.44	4.91E-09
Cited1	-1.42	1.22E-02	-1.71	8.05E-03	-1.36	1.44E-02
Cited2	-1.47	1.66E-06	-1.79	9.06E-07	-1.62	5.64E-07
Ckap2	-1.95	1.68E-06	-2.25	1.42E-06	-3.07	2.82E-08
Ckap2l	-2.24	1.34E-04	-2.85	4.86E-05	-2.69	2.44E-05
Ckb	-0.96	1.68E-05	-1.39	2.04E-06	-1.89	4.02E-08
Cks2	-2.06	3.79E-05	-2.29	4.13E-05	-4.04	9.31E-08
Clcf1	0.97	3.37E-08	1.06	4.55E-08	1.15	5.08E-09
Cldn4	1.91	9.08E-04	1.86	2.54E-03	1.07	3.08E-02
Cldnd1	-0.96	2.36E-07	-1.10	2.19E-07	-1.15	3.62E-08
Cltc	-1.41	4.60E-08	-1.53	6.82E-08	-1.67	7.17E-09
Cmah	1.51	7.84E-10	1.54	1.27E-09	2.04	2.23E-11
Cnbp	-1.08	4.36E-08	-1.14	7.58E-08	-1.18	1.15E-08
Cnga1	2.73	6.04E-09	2.90	1.00E-08	3.67	3.29E-10
Cnksr3	-1.18	7.92E-09	-1.38	8.39E-09	-1.22	2.33E-09
Cnnm4	-1.29	1.64E-06	-1.69	4.86E-07	-1.48	3.62E-07
Cnot6	-1.20	7.99E-08	-1.18	2.39E-07	-1.24	3.72E-08
Cnp	1.42	4.70E-09	1.50	8.39E-09	1.61	6.79E-10
Cnst	-1.32	1.40E-08	-1.39	2.43E-08	-1.41	3.73E-09
Coa7	-1.01	8.55E-06	-1.25	3.88E-06	-1.10	3.23E-06
Coasy	1.31	6.68E-06	1.54	4.59E-06	1.67	6.30E-07
Cobll1	-2.35	3.88E-04	-1.73	7.33E-03	-2.82	7.86E-05
Col11a2	1.22	2.96E-08	1.30	4.71E-08	1.51	3.17E-09
Col23a1	0.96	1.08E-04	1.21	4.15E-05	1.54	1.61E-06
Colq	-2.75	9.65E-05	-2.46	5.64E-04	-2.44	2.21E-04
Cops2	-0.97	1.75E-06	-1.06	2.45E-06	-1.14	3.38E-07
Cops8	-1.11	1.59E-08	-1.14	3.26E-08	-1.18	4.42E-09
Coq10b	-2.55	2.04E-06	-3.08	1.17E-06	-3.52	9.80E-08
Coq3	1.03	7.03E-07	0.93	4.66E-06	1.02	5.68E-07
Coq4	1.20	1.43E-04	1.10	6.79E-04	1.41	3.34E-05
Coq7	-1.28	4.74E-04	-1.81	7.57E-05	-1.65	5.43E-05
Corin	1.03	7.52E-04	1.15	7.89E-04	1.25	1.49E-04

Cpd	-2.82	3.05E-05	-3.38	1.80E-05	-4.61	3.58E-07
Cpne1	1.16	4.51E-08	1.10	1.66E-07	1.27	1.26E-08
Cpq	-1.78	6.87E-04	-2.14	4.10E-04	-1.42	3.08E-03
Cpsf4l	1.09	6.77E-03	1.42	2.50E-03	1.46	8.38E-04
Cpt2	0.88	6.47E-05	1.39	3.84E-06	1.07	1.07E-05
Crbn	-1.61	3.72E-07	-1.71	6.09E-07	-1.24	2.39E-06
Crebl2	2.11	3.03E-09	2.37	3.96E-09	1.57	7.05E-09
Crebrf	-1.49	1.59E-07	-1.50	3.92E-07	-1.08	1.59E-06
Creg1	-1.42	1.16E-07	-1.45	2.49E-07	-1.70	1.69E-08
Crem	-2.36	3.32E-06	-2.83	2.04E-06	-4.09	2.58E-08
Crip2	-2.34	1.50E-05	-2.19	6.94E-05	-2.11	3.05E-05
Crlf1	-1.80	3.89E-02	-1.95	4.47E-02	-1.74	4.27E-02
Crnkl1	-1.02	1.04E-07	-1.05	2.13E-07	-1.13	2.69E-08
Crtam	-1.67	1.57E-05	-1.90	1.44E-05	-1.60	1.88E-05
Cry2	-1.21	6.36E-07	-1.52	2.93E-07	-1.40	1.38E-07
Crybg3	1.97	6.25E-07	1.56	1.19E-05	2.11	2.58E-07
Cryzl1	1.27	4.28E-07	1.49	3.22E-07	1.66	3.26E-08
Csad	0.97	9.80E-07	1.34	2.01E-07	1.22	1.04E-07
Csrp1	-1.62	3.42E-08	-1.91	2.97E-08	-1.96	4.33E-09
Cst7	-1.49	8.41E-04	-1.79	4.86E-04	-1.81	1.60E-04
Ctdp1	-1.49	1.64E-08	-1.62	2.41E-08	-1.56	5.22E-09
Cth	-1.95	1.33E-03	-2.29	9.63E-04	-1.89	1.51E-03
Ctla2a	-1.14	4.12E-02	-1.62	1.22E-02	-4.86	8.41E-07
Ctla2b	-3.27	2.08E-03	-4.15	8.59E-04	-5.42	3.48E-05
Ctnnal1	-0.62	6.48E-03	-1.03	4.20E-04	-1.39	1.13E-05
Ctnnbip1	-2.42	3.82E-04	-2.33	1.22E-03	-2.18	7.61E-04
Ctsk	1.69	3.94E-04	1.67	1.06E-03	1.34	2.03E-03
Ctsl	-1.02	6.33E-06	-1.19	4.54E-06	-1.30	6.13E-07
Cul2	-1.16	2.52E-07	-1.30	2.88E-07	-1.29	6.93E-08
Cwc25	-1.24	1.53E-06	-1.50	8.69E-07	-1.37	4.95E-07
Cx3cr1	-2.89	3.06E-03	-3.78	1.03E-03	-4.63	7.57E-05
Cxcr4	-2.13	2.85E-07	-2.46	2.48E-07	-1.99	3.48E-07
Cxcr5	-1.11	2.19E-02	-1.89	1.65E-03	-1.09	2.21E-02
Cxxc5	1.64	2.99E-04	1.82	3.31E-04	2.46	8.83E-06
Cyb561a3	0.94	2.31E-06	1.25	6.02E-07	1.26	1.47E-07
Cystm1	-2.85	3.22E-04	-2.93	6.26E-04	-3.81	2.54E-05
D130017N08Rik	2.11	2.63E-07	2.24	4.59E-07	2.73	2.28E-08
D15Ertd621e	-1.31	2.50E-07	-1.46	2.96E-07	-1.50	5.51E-08

D230017M19Rik	1.67	2.18E-03	1.92	1.83E-03	1.93	7.04E-04
D2hgdh	1.22	9.27E-09	1.17	2.80E-08	1.57	6.92E-10
D330041H03Rik	0.82	3.82E-06	1.07	1.23E-06	1.19	1.24E-07
D3Ertd751e	1.04	5.54E-06	1.13	7.49E-06	1.30	6.37E-07
D6Ertd474e	1.70	5.64E-04	1.37	5.54E-03	2.34	3.72E-05
D730003I15Rik	1.13	8.29E-04	0.92	7.20E-03	1.11	8.28E-04
D8Ertd82e	-1.12	1.23E-05	-1.44	4.11E-06	-2.49	1.29E-08
D930048N14Rik	2.19	5.45E-06	2.05	2.61E-05	1.81	2.30E-05
Daf2	2.32	1.87E-05	3.04	5.25E-06	2.54	7.12E-06
Dag1	1.10	4.79E-08	1.04	1.79E-07	2.56	9.44E-11
Dand5	3.16	3.09E-07	3.26	6.48E-07	3.59	7.45E-08
Dapp1	-1.18	1.38E-07	-1.16	3.96E-07	-1.47	1.49E-08
Dbf4	-1.64	9.23E-07	-1.89	8.08E-07	-2.01	1.18E-07
Dbn1	-1.56	6.84E-03	-1.65	9.99E-03	-2.08	8.93E-04
Dbp	1.94	2.08E-09	2.01	3.71E-09	1.34	5.81E-09
Dcakd	1.05	4.37E-04	1.66	2.67E-05	1.31	6.10E-05
Dcdc2b	1.79	7.40E-03	1.91	9.73E-03	2.72	3.58E-04
Dclre1a	-1.32	3.74E-05	-1.06	5.26E-04	-1.47	1.19E-05
Dclre1c	-1.14	2.23E-07	-1.18	4.59E-07	-1.34	4.04E-08
Dcp1b	1.11	9.89E-08	1.12	2.34E-07	1.28	1.93E-08
Ddhd1	-0.95	1.85E-07	-1.17	1.08E-07	-1.17	2.28E-08
Ddias	-1.91	2.68E-05	-2.65	4.72E-06	-2.37	3.46E-06
Ddx3x	-1.24	6.50E-07	-1.38	7.28E-07	-1.62	5.09E-08
Decr1	0.99	5.21E-07	1.06	7.73E-07	1.15	1.03E-07
Degs2	1.06	3.79E-03	1.88	1.29E-04	2.39	5.32E-06
Dennd1c	0.87	3.05E-07	1.07	1.68E-07	1.31	7.98E-09
Dennd4a	-2.26	3.64E-07	-2.52	4.13E-07	-2.81	4.15E-08
Dennd6a	1.08	1.37E-07	1.13	2.40E-07	1.26	2.44E-08
Depdc1b	1.29	6.62E-04	0.98	9.01E-03	1.03	2.98E-03
Dgat1	-1.89	1.03E-08	-2.20	1.02E-08	-2.24	1.36E-09
Dgat2	-1.15	1.36E-02	-1.17	2.35E-02	-1.98	3.17E-04
Dguok	1.35	2.63E-09	1.53	3.71E-09	1.66	2.27E-10
Dhcr24	1.66	6.03E-09	1.84	8.39E-09	1.26	1.47E-08
Dhdh	1.06	1.58E-02	1.12	2.14E-02	1.31	4.22E-03
Dhrs1	1.02	2.96E-07	0.95	1.34E-06	1.25	3.67E-08
Dhrs3	-2.07	1.96E-04	-2.62	7.34E-05	-3.55	1.65E-06
Dhrs7	1.26	9.38E-07	1.11	7.43E-06	1.37	3.41E-07
Dhx38	-1.23	1.03E-08	-1.36	1.40E-08	-1.36	2.08E-09

Dhx40	-1.32	8.58E-08	-1.47	1.02E-07	-1.74	6.57E-09
Dhx8	-1.07	4.39E-08	-1.16	6.76E-08	-1.14	1.49E-08
Dio2	-1.18	2.50E-02	-1.65	7.45E-03	-1.09	3.50E-02
Dixdc1	2.26	3.04E-05	3.14	5.21E-06	2.87	3.22E-06
Dlk1	-1.26	2.98E-02	-3.05	1.97E-04	-2.40	4.58E-04
Dmbt1	1.26	3.27E-03	1.45	2.70E-03	1.72	2.88E-04
Dnah17	1.44	5.78E-08	1.31	3.05E-07	1.42	3.72E-08
Dnajb4	-1.41	3.36E-06	-1.57	3.79E-06	-1.71	4.91E-07
Dnajb6	-1.33	7.35E-08	-1.43	1.12E-07	-1.41	2.74E-08
Dnajb9	-1.85	2.33E-05	-2.22	1.36E-05	-2.20	4.29E-06
Dnajc12	-0.57	4.78E-04	-1.01	1.16E-05	-1.26	4.95E-07
Dntt	1.22	2.49E-07	1.06	2.13E-06	2.15	2.32E-09
Dnttip2	-0.97	4.29E-06	-1.07	5.16E-06	-1.24	4.16E-07
Doc2g	1.07	9.14E-05	0.86	1.21E-03	1.07	7.82E-05
Dock4	-1.47	2.56E-06	-1.31	1.90E-05	-2.59	1.83E-08
Dock6	1.12	6.50E-07	1.07	2.70E-06	1.23	2.18E-07
Dok3	1.24	3.97E-03	1.75	7.74E-04	1.61	5.37E-04
Donson	-1.11	1.34E-07	-1.13	2.98E-07	-1.08	1.03E-07
Dos	-1.02	3.24E-06	-1.37	7.93E-07	-1.52	8.20E-08
Dot1l	-0.94	2.10E-07	-1.04	2.48E-07	-1.16	2.53E-08
Dpm1	-1.15	4.55E-03	-2.43	3.90E-05	-1.91	9.31E-05
Dqx1	0.96	5.51E-05	1.10	4.57E-05	1.59	5.80E-07
Dscc1	-1.22	2.96E-04	-0.85	7.93E-03	-1.56	3.29E-05
Dst_1	3.34	3.43E-08	3.48	6.57E-08	1.34	4.04E-05
Dtl	-3.48	3.01E-03	-5.02	4.89E-04	-7.33	7.04E-06
Dtnbp1	-1.10	3.66E-08	-1.28	3.44E-08	-1.52	1.93E-09
Dtx1	-1.94	3.20E-07	-2.42	1.65E-07	-2.86	1.03E-08
Dtx4	-2.82	7.40E-06	-3.59	2.73E-06	-1.45	1.39E-03
Dusp1	-2.22	1.62E-06	-2.87	5.44E-07	-3.11	7.02E-08
Dusp10	-2.74	5.65E-06	-3.62	1.52E-06	-4.04	1.59E-07
Dusp14	-1.68	8.72E-03	-2.60	9.96E-04	-2.19	1.35E-03
Dusp16	-2.92	6.60E-06	-3.73	2.40E-06	-4.86	6.75E-08
Dusp19	1.58	6.81E-03	2.14	1.99E-03	1.59	6.18E-03
Dusp4	-3.08	3.45E-04	-4.72	2.82E-05	-5.41	2.59E-06
Dusp5	-2.12	5.88E-06	-2.77	1.78E-06	-4.63	7.84E-09
Dusp6	-2.26	5.36E-06	-3.00	1.40E-06	-3.20	2.11E-07
Dusp7	2.48	2.21E-09	2.47	5.43E-09	2.65	3.89E-10
Dusp8	-3.13	3.58E-03	-5.10	2.36E-04	-5.29	5.97E-05

Dynlt1c	1.04	2.08E-04	1.15	2.31E-04	1.52	7.26E-06
Dyrk3	-1.73	2.14E-02	-1.62	4.93E-02	-2.33	3.31E-03
Dzip3	1.67	7.58E-08	1.94	6.99E-08	1.91	1.55E-08
E030042O20Rik	1.41	1.38E-03	1.10	1.40E-02	2.09	5.37E-05
E2f1	-1.09	6.33E-07	-1.29	4.44E-07	-1.46	4.02E-08
E2f7	-2.70	9.67E-04	-3.74	1.96E-04	-5.04	5.04E-06
E330020D12Rik	1.00	1.56E-02	1.61	1.68E-03	1.87	1.98E-04
E330034G19Rik	1.24	2.32E-03	1.65	6.92E-04	1.56	3.99E-04
Ebpl	1.15	1.17E-06	1.05	6.87E-06	1.07	1.71E-06
Edaradd	1.76	4.02E-04	1.16	1.38E-02	2.04	1.05E-04
Eea1	-1.07	5.77E-05	-1.20	5.96E-05	-1.58	1.70E-06
Eed	-0.95	3.22E-08	-1.05	4.27E-08	-1.03	9.15E-09
Eepd1	-1.56	1.13E-03	-1.47	3.75E-03	-2.48	2.36E-05
Efcab5	1.88	1.42E-05	1.98	2.56E-05	1.87	1.28E-05
Efcab7	1.23	6.98E-03	1.20	1.51E-02	1.10	1.24E-02
Efcab9	1.18	2.66E-02	2.25	9.86E-04	1.78	2.09E-03
Efnb2	-1.84	4.68E-04	-2.34	1.79E-04	-2.53	3.12E-05
Efnb3	2.28	1.58E-06	2.15	7.20E-06	2.48	5.90E-07
Egf	-1.41	6.03E-05	-1.74	2.79E-05	-1.49	3.26E-05
Egfr	4.60	1.60E-06	3.76	2.33E-05	1.94	1.55E-03
Egln3	-1.08	1.87E-04	-1.21	1.88E-04	-1.29	3.75E-05
Egr1	-2.57	9.16E-06	-3.42	2.28E-06	-3.46	5.58E-07
Egr2	-2.99	1.05E-03	-4.62	8.83E-05	-5.32	8.42E-06
Egr3	-3.03	1.72E-04	-4.56	1.56E-05	-5.18	1.51E-06
Ehd2	-1.31	2.80E-02	-1.53	2.22E-02	-1.77	4.55E-03
Ehd4	-2.29	3.22E-06	-2.77	1.82E-06	-3.88	2.90E-08
Eif2ak3	-2.15	1.53E-07	-2.42	1.66E-07	-3.01	7.30E-09
Eif3j1	-1.01	2.90E-06	-1.02	7.91E-06	-1.30	2.66E-07
Eif5	-1.05	1.38E-07	-1.11	2.32E-07	-1.09	6.51E-08
Elavl1	-1.01	4.12E-08	-1.05	7.79E-08	-1.06	1.56E-08
Ell2	-2.59	2.12E-06	-3.35	7.22E-07	-3.50	1.26E-07
Elmsan1	-2.37	1.77E-07	-2.99	8.76E-08	-3.14	1.27E-08
Elovl2	-3.13	4.30E-03	-2.62	2.32E-02	-3.60	1.52E-03
Elovl4	-2.94	1.32E-03	-3.23	1.54E-03	-3.93	1.23E-04
Elp5	-0.88	2.90E-06	-1.11	1.15E-06	-1.03	5.41E-07
Emc3	-1.17	6.12E-08	-1.19	1.37E-07	-1.18	3.27E-08
Emc9	1.89	1.59E-08	2.03	2.49E-08	2.16	2.79E-09
Eme1	-1.91	3.97E-04	-2.17	3.64E-04	-2.35	6.60E-05

Emid1	-1.08	1.20E-03	-0.86	1.15E-02	-1.40	1.50E-04
Emilin1	-1.18	2.35E-05	-1.33	2.27E-05	-1.22	1.45E-05
Eml4	-1.40	3.56E-08	-1.54	4.60E-08	-1.68	4.91E-09
Emp1	-2.80	2.01E-03	-4.31	1.90E-04	-6.14	2.97E-06
Endod1	-1.20	4.79E-04	-1.42	3.24E-04	-1.31	2.20E-04
Endou	-1.80	1.74E-02	-2.68	3.14E-03	-2.27	4.06E-03
Enkur	-3.25	8.35E-05	-4.50	1.48E-05	-3.96	1.31E-05
Epas1	-1.28	1.06E-07	-1.66	4.55E-08	-2.30	9.34E-10
Epc2	-1.28	7.06E-08	-1.31	1.49E-07	-1.17	8.40E-08
Eprs	-0.94	3.40E-09	-1.06	4.19E-09	-1.27	1.66E-10
Eps15	1.04	1.30E-08	1.12	1.96E-08	1.31	1.10E-09
Ern1	-1.24	5.93E-07	-1.20	2.14E-06	-1.80	2.03E-08
Errfi1	-1.14	8.48E-05	-1.45	3.08E-05	-1.88	1.01E-06
Espn	2.13	2.84E-08	2.31	4.36E-08	1.99	2.30E-08
Etf1	-1.16	3.52E-07	-1.29	4.04E-07	-1.32	8.01E-08
Ets2	-2.12	3.90E-07	-2.68	1.73E-07	-2.32	1.29E-07
Evpl	-1.38	2.85E-04	-1.49	3.80E-04	-1.28	4.61E-04
Exo1	-2.06	1.45E-04	-2.66	4.65E-05	-2.60	1.75E-05
Exoc3l	0.84	8.07E-03	1.29	1.00E-03	1.55	8.50E-05
Exoc5	-0.96	9.07E-07	-1.02	1.51E-06	-1.13	1.67E-07
Extl2	-1.21	1.77E-05	-1.43	1.25E-05	-1.86	3.54E-07
Eya2	-1.25	1.05E-04	-1.11	6.33E-04	-1.96	1.90E-06
F2r	-1.03	1.39E-06	-1.41	2.91E-07	-1.18	3.26E-07
F2rl3	2.33	5.45E-07	1.97	5.91E-06	1.23	9.68E-05
F730043M19Rik	-1.26	5.93E-03	-1.26	1.19E-02	-2.30	6.09E-05
F730311O21Rik	1.56	8.69E-06	1.66	1.38E-05	4.27	2.21E-09
F830016B08Rik	1.48	6.05E-03	2.41	4.41E-04	4.00	2.04E-06
Fads1	1.37	3.62E-07	1.41	7.84E-07	1.36	2.68E-07
Fam102a	1.05	7.04E-08	1.15	9.21E-08	1.40	4.87E-09
Fam103a1	-1.29	1.97E-07	-1.27	6.08E-07	-1.26	1.62E-07
Fam107b	-1.96	4.87E-07	-2.37	2.93E-07	-1.81	6.75E-07
Fam111a	0.73	1.39E-07	1.01	4.11E-08	1.19	2.41E-09
Fam122b	1.11	3.47E-08	1.23	4.48E-08	1.57	1.50E-09
Fam160a2	1.26	2.18E-08	1.33	3.89E-08	1.29	8.85E-09
Fam161b	-1.37	6.02E-05	-1.15	5.83E-04	-1.02	5.52E-04
Fam169b	1.05	8.35E-08	1.16	1.05E-07	1.28	1.06E-08
Fam173a	1.25	1.50E-07	1.23	4.38E-07	1.27	8.22E-08
Fam173b	1.46	3.12E-07	1.68	2.88E-07	1.99	1.83E-08

Fam186b	1.67	3.24E-04	1.91	2.77E-04	1.33	1.63E-03
Fam193b	1.00	1.28E-07	1.11	1.62E-07	1.15	2.71E-08
Fam213a	1.42	1.78E-07	1.40	5.23E-07	1.20	4.87E-07
Fam222a	-1.56	3.67E-05	-2.12	7.23E-06	-1.68	1.58E-05
Fam53a	1.12	5.83E-08	1.13	1.38E-07	1.40	6.27E-09
Fam83d	-2.72	9.14E-04	-4.17	8.03E-05	-3.27	1.96E-04
Fam89a	1.12	2.43E-06	1.07	9.84E-06	1.48	1.72E-07
Fancg	1.07	3.42E-06	0.99	1.71E-05	1.35	3.41E-07
Fanci	-1.74	8.34E-07	-1.90	1.15E-06	-1.10	3.50E-05
Fancm	-1.48	4.46E-08	-1.50	1.03E-07	-1.75	7.34E-09
Far2	1.38	1.05E-03	2.07	1.09E-04	1.20	2.43E-03
Fasl	-1.73	6.22E-06	-1.99	5.26E-06	-2.43	2.56E-07
Fastkd1	1.28	1.81E-07	1.39	2.54E-07	1.45	4.32E-08
Fbxl12os	1.19	9.19E-05	1.04	6.64E-04	2.04	7.45E-07
Fbxl14	-1.62	2.08E-02	-1.53	4.68E-02	-1.40	4.00E-02
Fbxl18	1.62	1.47E-08	1.75	2.16E-08	2.02	1.39E-09
Fbxl8	1.33	6.11E-07	1.25	2.76E-06	1.51	1.47E-07
Fbxo10	1.53	3.04E-06	1.26	4.24E-05	1.44	4.07E-06
Fbxo17	3.59	4.70E-09	3.30	1.73E-08	2.58	1.54E-08
Fbxo27	1.05	1.21E-02	1.43	3.57E-03	1.70	4.12E-04
Fbxo32	-1.60	1.70E-07	-1.91	1.21E-07	-1.51	1.80E-07
Fbxo33	-1.50	6.93E-07	-1.65	8.68E-07	-1.54	4.05E-07
Fbxo34	-1.75	5.92E-08	-2.16	3.93E-08	-2.13	7.83E-09
Fbxo44	-1.28	1.50E-02	-1.48	1.24E-02	-2.50	1.23E-04
Fbxo8	-1.31	8.68E-08	-1.44	1.10E-07	-1.34	4.35E-08
Fcer1g	1.14	1.52E-02	1.07	3.69E-02	1.17	1.23E-02
Fen1	-1.42	1.67E-08	-1.71	1.40E-08	-1.57	3.73E-09
Fer1l5	1.36	1.30E-05	1.52	1.39E-05	1.67	1.83E-06
Fgf22	-1.81	1.12E-02	-1.58	4.05E-02	-1.75	1.25E-02
Fgfbp3	0.89	7.68E-03	1.46	5.53E-04	1.31	4.61E-04
Fgfr1	-2.33	3.86E-04	-3.07	1.08E-04	-2.61	1.35E-04
Fgfr3	-2.25	3.94E-04	-2.35	6.72E-04	-2.75	6.87E-05
Fgfrl1	-0.86	8.81E-04	-1.03	5.11E-04	-1.38	1.64E-05
Fgr	-2.43	3.84E-03	-1.83	3.60E-02	-2.18	7.08E-03
Fhod1	1.36	5.72E-07	1.27	2.77E-06	1.46	2.16E-07
Fignl1	-2.29	5.59E-05	-2.83	2.54E-05	-1.67	6.22E-04
Fkbp2	0.99	6.25E-05	1.29	1.81E-05	1.07	2.67E-05
Fkbpl	1.12	2.04E-04	0.82	4.40E-03	1.54	1.21E-05

Fktn	1.19	4.38E-06	1.22	9.96E-06	1.30	1.62E-06
Flad1	1.21	3.95E-08	1.29	6.26E-08	1.59	2.79E-09
Flcn	-1.23	2.47E-08	-1.39	2.94E-08	-1.18	1.66E-08
Flot1	1.14	5.29E-05	1.11	1.70E-04	1.28	1.65E-05
Fmnl3	-1.12	2.06E-08	-1.29	2.13E-08	-1.28	3.65E-09
Fmo5	1.80	3.49E-08	2.05	3.87E-08	2.39	2.35E-09
Fn3k	1.76	2.05E-06	1.11	2.50E-04	1.98	5.73E-07
Fn3krp	1.01	5.53E-06	0.88	4.72E-05	1.43	2.20E-07
Fndc4	-1.83	2.41E-02	-2.64	5.82E-03	-2.24	7.23E-03
Fosb	-3.43	2.15E-03	-5.77	9.94E-05	-6.69	8.85E-06
Fosl2	-3.27	1.68E-04	-4.88	1.62E-05	-7.04	1.96E-07
Foxd2os	1.54	4.97E-07	1.52	1.54E-06	1.57	3.12E-07
Foxj3	-0.99	2.90E-07	-1.07	4.54E-07	-1.02	1.63E-07
Foxq1	-3.05	2.68E-03	-4.60	3.07E-04	-3.23	1.66E-03
Fra10ac1	1.14	4.62E-07	1.24	6.29E-07	1.18	2.53E-07
Frat2	-1.53	2.68E-07	-1.90	1.44E-07	-1.80	4.92E-08
Frmd4b	-2.69	1.17E-05	-3.51	3.34E-06	-3.53	8.84E-07
Frmd6	-1.03	1.60E-06	-1.21	1.18E-06	-1.36	1.12E-07
Frmd8	1.41	4.69E-09	1.43	8.76E-09	1.58	6.76E-10
Frmpd1	-2.19	1.11E-02	-3.25	1.85E-03	-3.32	6.07E-04
Frs3	0.90	5.47E-03	1.04	4.76E-03	1.21	6.45E-04
Fscn1	-2.17	1.28E-02	-2.00	3.48E-02	-1.82	3.00E-02
Fst	-3.21	8.85E-04	-3.99	4.12E-04	-3.91	1.69E-04
Fus	-1.56	7.95E-08	-1.69	1.13E-07	-1.78	1.69E-08
Fut7	2.16	6.46E-04	2.90	1.59E-04	1.29	1.70E-02
Fxyd7	2.18	9.41E-03	2.00	2.78E-02	2.50	3.67E-03
Fyco1	1.30	7.06E-08	1.45	8.75E-08	1.67	6.46E-09
G430095P16Rik	3.66	1.78E-05	2.81	3.95E-04	2.66	2.17E-04
Gab3	2.30	2.52E-08	2.18	8.82E-08	1.32	1.20E-06
Gabarapl1	-1.34	2.14E-07	-1.53	2.16E-07	-1.70	2.20E-08
Gabbr1	0.93	4.56E-08	1.04	5.78E-08	1.03	1.19E-08
Gabpb1	-2.24	1.14E-07	-2.61	9.91E-08	-2.59	2.24E-08
Gadd45b	-2.76	1.51E-06	-3.53	5.62E-07	-2.31	5.44E-06
Galnt11	1.03	7.67E-08	1.08	1.43E-07	1.10	2.71E-08
Gareml	-1.83	2.49E-02	-2.32	1.28E-02	-1.97	1.60E-02
Gata1	2.73	3.48E-07	3.04	4.05E-07	3.84	1.55E-08
Gbp11_1	2.56	5.64E-08	2.85	7.05E-08	2.49	3.95E-08
Gch1	-2.67	7.35E-07	-3.41	2.87E-07	-4.10	1.62E-08

Gdap2	-0.96	1.08E-07	-1.12	9.49E-08	-1.21	1.11E-08
Gdpd3	2.07	3.99E-05	2.01	1.35E-04	1.88	7.71E-05
Gem	-3.15	8.47E-04	-4.18	2.33E-04	-5.05	1.58E-05
Gemin8	0.63	4.89E-03	1.19	1.06E-04	1.22	2.84E-05
Gfi1	-1.83	2.34E-07	-2.21	1.50E-07	-2.48	1.42E-08
Gfod1	-2.29	5.71E-07	-2.73	3.77E-07	-3.74	8.23E-09
Gfpt2	-2.60	5.21E-05	-2.57	1.47E-04	-2.81	2.29E-05
Ggt1	-2.08	1.65E-05	-2.30	1.90E-05	-2.72	1.29E-06
Ghr	1.61	6.53E-03	2.77	3.23E-04	3.34	2.34E-05
Gimap6	-1.17	4.00E-07	-1.29	4.84E-07	-1.02	8.85E-07
Ginm1	-0.96	5.44E-08	-1.03	8.53E-08	-1.12	9.44E-09
Gipc1	1.06	2.37E-06	1.11	4.58E-06	1.09	1.44E-06
Gk5	-1.16	1.63E-06	-1.27	2.13E-06	-1.36	3.15E-07
Gkap1	1.19	1.77E-02	1.33	1.83E-02	1.30	1.03E-02
Gla	-2.54	2.23E-07	-3.28	9.10E-08	-3.51	1.15E-08
Glce	-1.19	1.12E-06	-1.39	8.51E-07	-1.52	1.05E-07
Gli1	1.72	6.85E-05	1.49	5.54E-04	1.75	5.22E-05
Glipr2	2.06	2.09E-08	2.01	5.91E-08	1.29	4.08E-07
Gls2	-3.29	5.79E-03	-4.89	8.39E-04	-5.09	2.26E-04
Glt8d1	1.67	4.21E-07	1.80	6.09E-07	2.10	4.40E-08
Gltscr1l	1.28	6.80E-07	1.21	3.02E-06	1.48	1.43E-07
Gm10033	1.66	7.47E-05	2.03	3.63E-05	1.75	4.03E-05
Gm10044	1.25	5.40E-03	1.21	1.27E-02	1.49	1.52E-03
Gm10069	1.80	2.70E-06	2.15	1.69E-06	2.59	9.11E-08
Gm10125	-2.45	1.42E-05	-2.46	3.66E-05	-2.07	5.02E-05
Gm10311	1.24	1.30E-04	1.11	7.55E-04	2.01	1.77E-06
Gm10505	1.54	1.11E-04	0.78	2.43E-02	2.87	4.52E-07
Gm10516	1.66	6.94E-03	2.74	4.78E-04	2.41	4.73E-04
Gm10521	2.49	1.65E-09	2.74	1.95E-09	2.48	3.36E-10
Gm10548	1.28	1.55E-04	1.43	1.65E-04	1.39	6.97E-05
Gm10557	-1.79	7.51E-07	-1.52	7.97E-06	-1.71	8.10E-07
Gm10640	1.38	1.95E-04	1.66	1.07E-04	2.81	3.66E-07
Gm10644	1.56	4.48E-03	2.17	1.01E-03	1.91	1.04E-03
Gm10658	-1.82	1.57E-03	-1.18	3.87E-02	-2.29	2.50E-04
Gm10676	1.28	1.33E-05	1.37	2.09E-05	1.27	1.23E-05
Gm10767	1.13	1.40E-03	1.63	2.08E-04	1.29	4.48E-04
Gm10814	1.50	6.42E-04	2.69	1.50E-05	2.50	8.23E-06
Gm11110	0.83	1.50E-03	1.21	2.10E-04	1.04	2.44E-04

Gm11346	2.28	8.75E-07	2.07	5.33E-06	2.90	8.17E-08
Gm11427	2.28	8.67E-09	2.52	1.16E-08	2.82	8.30E-10
Gm11537	1.37	1.31E-05	1.89	2.45E-06	1.37	1.11E-05
Gm11707	-2.34	2.59E-07	-2.75	2.07E-07	-2.25	2.48E-07
Gm11767	0.78	2.99E-02	1.13	7.25E-03	1.02	6.22E-03
Gm11769	-1.74	3.24E-04	-2.38	6.71E-05	-2.69	7.34E-06
Gm11978	-1.50	2.27E-02	-2.12	6.00E-03	-2.30	1.49E-03
Gm12107	1.53	5.52E-03	1.92	2.56E-03	1.67	2.76E-03
Gm12121	1.04	1.11E-02	1.28	6.21E-03	1.58	6.17E-04
Gm12216	0.71	6.04E-04	1.02	8.87E-05	3.23	2.41E-09
Gm12319	0.99	8.24E-04	1.10	8.82E-04	1.42	4.25E-05
Gm12367	-1.88	4.55E-03	-2.45	1.68E-03	-1.49	1.69E-02
Gm12709	-2.00	5.32E-03	-3.97	7.73E-05	-3.38	9.77E-05
Gm12743	2.88	2.76E-07	2.54	2.06E-06	3.07	1.11E-07
Gm12847	0.89	2.11E-03	1.20	5.32E-04	1.32	9.11E-05
Gm12942	1.68	8.77E-06	1.76	1.67E-05	2.03	1.41E-06
Gm13270	1.79	3.37E-03	2.24	1.56E-03	2.31	4.79E-04
Gm13307	1.28	2.11E-02	1.38	2.59E-02	1.82	2.31E-03
Gm13387	2.41	2.38E-04	2.41	5.74E-04	2.91	4.31E-05
Gm13421	1.71	6.80E-04	2.18	2.56E-04	2.79	1.04E-05
Gm14027	1.31	8.10E-04	2.11	4.72E-05	1.85	4.53E-05
Gm14085	2.12	1.60E-08	2.09	4.44E-08	2.18	5.90E-09
Gm14168	-1.60	6.09E-05	-1.93	3.35E-05	-1.92	1.07E-05
Gm14308	1.12	4.18E-07	1.46	1.49E-07	1.32	7.50E-08
Gm14403	0.93	2.06E-03	1.05	1.91E-03	1.01	1.00E-03
Gm14420	1.11	1.16E-03	0.81	1.71E-02	1.17	7.03E-04
Gm14435	1.07	1.04E-03	0.86	9.41E-03	1.32	1.83E-04
Gm14455	1.55	1.46E-04	2.10	3.11E-05	2.17	7.02E-06
Gm14634	-1.66	6.71E-03	-1.88	6.22E-03	-1.54	9.58E-03
Gm14703	1.56	7.56E-04	1.21	9.15E-03	2.20	4.25E-05
Gm15008	-2.25	3.14E-03	-1.62	3.90E-02	-2.19	3.42E-03
Gm15327	-2.10	1.45E-02	-2.68	6.68E-03	-2.28	8.16E-03
Gm15340	-3.81	4.27E-06	-5.77	3.97E-07	-5.19	2.35E-07
Gm15506	2.22	3.71E-03	3.83	1.58E-04	3.70	7.06E-05
Gm15545	0.82	1.72E-03	1.34	9.43E-05	1.14	1.21E-04
Gm15674	2.19	6.04E-09	2.58	6.05E-09	2.73	5.15E-10
Gm15675	3.07	3.85E-04	2.56	3.25E-03	3.28	2.01E-04
Gm15706	-1.21	5.20E-04	-1.29	7.84E-04	-1.24	3.86E-04

Gm15708	2.00	9.73E-05	2.10	1.69E-04	2.66	7.51E-06
Gm15728	-2.71	5.05E-03	-2.09	3.89E-02	-3.18	1.54E-03
Gm15787	-1.69	1.46E-02	-1.59	3.52E-02	-1.31	4.82E-02
Gm15834	1.32	2.36E-03	1.19	9.16E-03	1.71	3.04E-04
Gm15850	2.45	1.05E-03	1.98	9.23E-03	3.53	5.09E-05
Gm16001	-1.74	1.82E-07	-1.84	3.00E-07	-1.74	1.18E-07
Gm1604b	2.20	1.17E-03	1.67	1.43E-02	2.07	1.66E-03
Gm16062	-1.90	7.65E-04	-1.14	3.53E-02	-1.67	1.78E-03
Gm16083	2.43	6.34E-06	2.44	1.68E-05	2.95	9.35E-07
Gm16085	1.63	1.06E-02	1.64	1.95E-02	2.74	2.57E-04
Gm16124	1.00	8.82E-06	1.34	2.07E-06	1.23	1.13E-06
Gm16286	-1.33	8.49E-07	-1.79	2.20E-07	-1.58	1.50E-07
Gm16302	1.25	2.20E-02	2.68	3.01E-04	1.50	7.36E-03
Gm16565	-2.60	6.83E-05	-3.64	1.08E-05	-2.45	9.71E-05
Gm16576	1.71	1.80E-07	1.94	1.77E-07	2.05	2.64E-08
Gm16586	1.22	4.76E-07	1.59	1.66E-07	1.32	1.73E-07
Gm16754	1.60	1.44E-02	2.52	1.67E-03	1.49	2.00E-02
Gm16845	1.09	4.37E-04	0.59	4.15E-02	1.30	9.32E-05
Gm17167	1.23	5.84E-03	1.38	5.74E-03	1.69	5.72E-04
Gm17173	0.88	5.21E-03	1.95	3.06E-05	1.17	6.51E-04
Gm1720	2.41	3.17E-03	3.59	4.13E-04	1.95	1.09E-02
Gm17231	1.03	9.44E-06	1.24	5.51E-06	1.02	8.36E-06
Gm17641	-1.60	2.27E-04	-1.97	1.08E-04	-1.28	1.12E-03
Gm17655	1.02	1.37E-03	1.38	3.33E-04	1.06	9.21E-04
Gm1818	-1.78	7.20E-04	-1.27	1.39E-02	-2.07	1.94E-04
Gm18190	1.81	4.36E-04	2.16	2.72E-04	1.86	3.21E-04
Gm18752	1.87	1.06E-03	2.37	4.32E-04	2.29	1.99E-04
Gm19261	1.66	5.55E-03	2.79	3.11E-04	2.38	3.83E-04
Gm19557	-2.77	1.79E-05	-2.29	2.22E-04	-3.90	7.43E-07
Gm20425	-2.24	1.49E-02	-4.20	4.87E-04	-3.54	6.63E-04
Gm20457	-1.25	2.28E-05	-1.27	5.22E-05	-1.25	1.88E-05
Gm20496	1.34	2.28E-03	1.58	1.59E-03	1.33	2.15E-03
Gm20517	-1.02	2.19E-05	-0.85	2.52E-04	-1.06	1.31E-05
Gm20521	1.48	2.66E-04	1.27	1.92E-03	1.66	9.22E-05
Gm20627	2.97	1.13E-04	4.35	1.26E-05	4.72	1.79E-06
Gm20663	2.52	5.52E-09	2.97	5.57E-09	4.26	7.32E-11
Gm20939	2.19	6.02E-08	1.97	3.41E-07	2.14	4.15E-08
Gm21092	-1.33	1.10E-06	-1.46	1.40E-06	-1.20	2.00E-06

Gm2163	1.38	7.89E-05	1.33	2.77E-04	1.68	1.22E-05
Gm21811	-1.45	7.06E-08	-1.47	1.61E-07	-1.31	9.42E-08
Gm21974	0.93	1.25E-03	1.08	9.76E-04	1.01	5.91E-04
Gm21987	1.69	9.09E-03	1.80	1.21E-02	1.67	9.00E-03
Gm26510	1.88	5.36E-06	1.77	2.43E-05	2.66	2.11E-07
Gm26541	1.12	7.02E-08	1.28	7.50E-08	1.30	1.30E-08
Gm26621	-1.05	1.41E-02	-1.22	1.17E-02	-1.22	5.39E-03
Gm26637	2.16	3.14E-05	1.44	1.79E-03	2.71	3.73E-06
Gm26667	-1.43	2.36E-03	-1.39	6.01E-03	-3.00	5.32E-06
Gm26685	1.14	1.05E-04	0.88	1.77E-03	2.01	6.45E-07
Gm26690	-1.01	1.82E-04	-0.73	4.27E-03	-1.14	5.67E-05
Gm26740	2.25	1.40E-08	2.59	1.47E-08	3.41	3.98E-10
Gm26756	-2.92	2.57E-03	-3.29	2.48E-03	-2.42	7.87E-03
Gm26767	-1.64	2.04E-07	-1.87	2.00E-07	-1.77	7.25E-08
Gm26782	1.33	3.99E-07	1.83	9.80E-08	1.48	1.11E-07
Gm26804	-1.37	4.41E-04	-1.21	2.63E-03	-1.92	2.52E-05
Gm26810	1.87	5.86E-04	3.09	2.58E-05	2.24	1.22E-04
Gm26826	-1.18	7.79E-03	-1.31	8.15E-03	-1.68	6.35E-04
Gm26853	-2.40	5.61E-04	-2.44	1.19E-03	-1.80	4.03E-03
Gm26879	1.57	3.06E-02	1.75	3.16E-02	1.40	4.85E-02
Gm26884	-2.34	1.25E-03	-3.15	3.12E-04	-3.81	2.19E-05
Gm26908	3.01	2.97E-04	4.17	5.44E-05	2.78	4.84E-04
Gm26920	1.75	1.57E-05	1.61	8.14E-05	1.51	4.64E-05
Gm27042	1.69	2.22E-05	1.52	1.43E-04	1.01	1.21E-03
Gm28042	2.81	2.52E-08	2.84	5.77E-08	1.89	3.05E-07
Gm28046	2.12	2.85E-04	2.73	9.44E-05	2.10	2.68E-04
Gm28068	1.04	4.24E-04	1.08	7.72E-04	2.50	2.12E-07
Gm2822	2.42	1.00E-03	2.21	4.10E-03	2.83	2.66E-04
Gm28557	1.34	2.05E-06	1.75	6.30E-07	1.58	3.71E-07
Gm28727	1.37	3.30E-06	1.56	3.05E-06	2.58	1.38E-08
Gm28869	1.00	2.38E-02	1.03	3.44E-02	1.60	1.15E-03
Gm28935	1.58	3.78E-04	2.35	3.87E-05	2.42	9.42E-06
Gm29642	1.29	3.36E-02	1.52	2.56E-02	2.08	1.82E-03
Gm30948	3.44	7.16E-06	3.93	6.44E-06	6.42	2.90E-08
Gm32391	1.63	2.96E-03	1.37	1.68E-02	2.19	3.14E-04
Gm33280	1.24	7.05E-07	2.06	4.55E-08	2.02	9.98E-09
Gm33994	1.65	7.73E-06	1.74	1.37E-05	1.56	1.04E-05
Gm3604	1.48	3.24E-05	1.98	7.35E-06	1.97	2.24E-06

Gm37065	2.57	4.03E-07	2.70	7.38E-07	2.88	1.07E-07
Gm38250	1.87	6.03E-03	2.96	5.45E-04	1.57	1.52E-02
Gm38293	1.62	4.11E-03	1.40	1.86E-02	3.12	2.26E-05
Gm4070	2.47	1.66E-05	2.33	7.34E-05	5.31	2.14E-08
Gm4258	-2.38	4.16E-02	-3.50	1.01E-02	-3.95	2.06E-03
Gm4419	1.05	1.73E-02	2.54	7.86E-05	1.85	3.43E-04
Gm4577	2.08	2.26E-03	2.49	1.45E-03	3.98	1.14E-05
Gm4951	2.98	7.48E-04	2.97	1.79E-03	7.28	3.55E-07
Gm5106	-1.65	2.42E-03	-2.95	7.03E-05	-1.79	1.27E-03
Gm5113	1.53	1.78E-06	1.44	8.20E-06	1.72	4.94E-07
Gm5141	1.49	4.91E-05	1.76	3.29E-05	1.78	8.92E-06
Gm527	-1.10	3.19E-05	-1.02	1.57E-04	-1.24	9.25E-06
Gm5533	1.76	2.10E-03	1.99	1.98E-03	2.61	8.95E-05
Gm5538	1.32	7.16E-05	1.43	9.68E-05	3.41	1.93E-08
Gm5595	1.95	1.61E-03	1.66	9.63E-03	1.85	2.10E-03
Gm5616	-1.10	3.30E-02	-1.61	7.48E-03	-1.34	1.07E-02
Gm590	-2.06	4.58E-03	-1.81	1.89E-02	-1.55	2.17E-02
Gm6225	-1.85	7.65E-03	-2.17	5.72E-03	-1.93	5.33E-03
Gm6297	1.66	3.44E-04	1.39	2.91E-03	2.26	2.36E-05
Gm6483	-1.51	1.93E-07	-1.54	4.33E-07	-1.39	2.58E-07
Gm6904	1.24	9.72E-04	1.17	3.26E-03	2.40	3.69E-06
Gm6939	1.83	1.91E-07	1.67	1.09E-06	2.00	6.04E-08
Gm7598	1.97	5.61E-04	1.63	4.72E-03	3.56	3.47E-06
Gm7967	1.42	3.55E-04	1.93	7.89E-05	2.71	1.27E-06
Gm8251	1.99	5.10E-08	2.13	8.13E-08	2.33	8.73E-09
Gm8898	1.30	5.78E-07	1.38	1.03E-06	1.47	1.50E-07
Gm9581	2.28	6.28E-05	2.65	4.68E-05	3.03	4.61E-06
Gm9967	1.66	1.58E-02	1.70	2.52E-02	2.85	3.79E-04
Gmnn	-0.95	3.92E-06	-1.24	1.17E-06	-1.09	9.53E-07
Gna13	-1.48	1.34E-07	-1.72	1.17E-07	-1.45	1.03E-07
Gna15	3.07	3.31E-04	3.33	4.26E-04	2.91	4.41E-04
Gnat1	-3.61	2.31E-03	-5.25	3.45E-04	-6.22	2.87E-05
Gne	1.10	8.46E-08	1.06	2.81E-07	1.00	1.05E-07
Gng10	-0.85	3.62E-02	-1.26	8.05E-03	-1.16	6.25E-03
Gnl3	-1.06	1.31E-06	-1.21	1.25E-06	-2.05	5.22E-09
Gnrh1	1.86	1.99E-04	2.01	2.65E-04	2.02	8.54E-05
Golga1	0.94	2.03E-08	1.18	1.26E-08	1.05	4.17E-09
Golph3	-1.42	6.87E-08	-1.50	1.23E-07	-1.53	2.23E-08

Golt1b	-1.32	3.08E-07	-1.43	4.30E-07	-1.71	2.57E-08
Got1	-1.94	1.51E-07	-2.31	1.08E-07	-1.84	1.51E-07
Gpatch3	-1.27	3.52E-07	-1.52	2.45E-07	-1.25	2.78E-07
Gpbp1	-1.05	4.62E-08	-1.08	9.67E-08	-1.15	1.25E-08
Gpbp1l1	-1.10	7.35E-08	-1.04	2.78E-07	-1.00	8.77E-08
Gpn3	-1.03	1.11E-08	-1.17	1.27E-08	-1.08	3.40E-09
Gpnmb	-2.56	8.23E-05	-2.89	7.87E-05	-1.31	9.45E-03
Gpr132	-1.89	4.53E-08	-2.26	3.73E-08	-1.99	1.66E-08
Gpr137	0.99	3.65E-04	1.30	1.06E-04	1.38	2.04E-05
Gpr146	1.59	8.13E-03	1.90	5.64E-03	1.59	7.52E-03
Gpr180	1.20	1.65E-07	1.28	2.54E-07	1.28	6.21E-08
Gpr182	1.38	1.85E-06	1.50	2.62E-06	1.72	2.18E-07
Gpr3	-2.59	3.30E-02	-3.44	1.36E-02	-3.27	8.77E-03
Gpr68	-1.37	1.21E-02	-1.37	2.30E-02	-1.45	8.18E-03
Gprc5a	-2.67	2.65E-05	-3.10	2.00E-05	-3.89	8.16E-07
Gprc5b	1.55	1.01E-08	1.48	3.25E-08	2.17	4.66E-10
Gpx7	-1.17	6.31E-03	-1.09	1.89E-02	-1.28	3.22E-03
Gramd1c	-1.10	2.58E-04	-1.13	5.17E-04	-1.57	1.11E-05
Gramd3	-2.37	1.66E-07	-2.86	1.08E-07	-2.38	1.03E-07
Grhl1	-1.76	2.79E-04	-2.14	1.50E-04	-2.75	5.75E-06
Grhl2	-2.22	1.55E-04	-1.75	2.18E-03	-1.10	1.72E-02
Grifin	2.00	1.92E-07	2.63	7.17E-08	2.86	7.83E-09
Grm6	1.64	5.54E-05	1.68	1.18E-04	2.34	2.16E-06
Gstt2	1.27	3.20E-06	0.86	2.05E-04	1.56	4.05E-07
Gstz1	1.17	2.52E-06	1.33	2.39E-06	1.41	3.79E-07
Gtf2ird1	-1.70	2.28E-06	-2.01	1.58E-06	-2.69	3.70E-08
Gtpbp4	-1.01	1.29E-07	-1.03	2.85E-07	-1.29	1.18E-08
Gtse1	-0.77	1.36E-02	-1.15	2.17E-03	-1.01	2.24E-03
Guca1b	0.92	4.43E-05	1.01	5.28E-05	1.22	3.28E-06
Gucd1	1.85	1.04E-09	1.93	1.83E-09	2.11	9.44E-11
Gvin1	2.67	1.67E-09	3.36	1.11E-09	4.31	2.23E-11
Gypc	-1.67	1.40E-08	-1.89	1.60E-08	-1.83	3.17E-09
H2-DMa	0.94	4.09E-06	1.19	1.52E-06	1.44	8.48E-08
H2-K2	1.70	2.13E-07	1.80	3.64E-07	2.21	1.74E-08
H2-Q1	1.86	3.99E-06	1.45	8.68E-05	2.01	1.63E-06
H2-T23	1.10	1.17E-07	1.10	2.98E-07	2.99	8.24E-11
H2afz	-1.67	1.54E-06	-1.96	1.14E-06	-2.32	7.33E-08
H3f3b	-1.21	3.83E-07	-1.44	2.66E-07	-1.27	1.79E-07

H60b	-3.49	2.16E-04	-4.88	3.63E-05	-3.59	1.52E-04
Habp4	1.29	7.18E-08	1.45	8.13E-08	1.60	8.17E-09
Hacl1	1.07	6.27E-07	1.05	1.95E-06	1.40	4.82E-08
Hal	2.33	1.95E-04	2.93	7.79E-05	1.87	9.43E-04
Haus3	-1.19	3.46E-05	-0.93	6.64E-04	-1.27	1.68E-05
Haus6	-1.11	1.37E-06	-1.21	1.90E-06	-1.18	6.40E-07
Hbp1	-1.94	2.03E-07	-2.06	3.42E-07	-1.90	1.65E-07
Hbs1l	-1.60	1.02E-07	-1.88	8.39E-08	-1.77	2.74E-08
Hcn3	1.55	4.79E-08	1.35	3.40E-07	1.17	2.63E-07
Hdac5	-1.04	5.20E-08	-1.24	4.35E-08	-1.07	2.34E-08
Hecw2	-2.00	3.33E-03	-2.43	1.96E-03	-2.67	3.76E-04
Hepacam2	3.14	3.75E-04	2.68	2.72E-03	2.03	7.25E-03
Hexim1	-1.43	1.64E-06	-1.85	5.42E-07	-1.45	1.08E-06
Hey1	-2.62	8.92E-05	-3.76	1.16E-05	-3.81	3.01E-06
Hey2	-2.16	1.43E-03	-2.62	7.92E-04	-2.43	5.31E-04
Hif1a	-1.00	3.21E-06	-1.07	4.84E-06	-1.57	5.33E-08
Hif1an	-1.03	1.85E-08	-1.12	2.63E-08	-1.18	3.21E-09
Hif3a	-2.45	4.42E-04	-2.25	1.89E-03	-2.35	5.37E-04
Hint3	1.18	4.13E-06	1.41	2.60E-06	1.41	7.23E-07
Hip1r	-1.59	2.04E-06	-1.83	1.76E-06	-1.58	1.66E-06
Hist1h1a	-2.73	1.75E-04	-3.64	4.29E-05	-3.86	7.97E-06
Hist1h1c	-1.83	9.02E-05	-2.29	3.75E-05	-1.60	2.35E-04
Hist1h1d	-2.40	1.71E-02	-3.63	2.72E-03	-3.28	2.28E-03
Hist1h1e	-3.56	3.18E-03	-4.74	9.58E-04	-3.98	1.34E-03
Hist1h2ac	-2.63	4.82E-03	-2.91	5.25E-03	-3.44	6.82E-04
Hist1h2ak	-2.71	1.48E-04	-1.91	4.40E-03	-2.31	4.54E-04
Hist1h3a	-3.28	2.37E-03	-3.14	6.55E-03	-3.08	3.30E-03
Hist1h3e	-2.69	5.29E-03	-2.52	1.49E-02	-2.76	4.03E-03
Hist1h3f	-1.54	3.18E-02	-1.89	2.02E-02	-2.58	1.26E-03
Hist1h4d	-1.67	3.37E-02	-2.49	7.23E-03	-2.62	2.26E-03
Hist1h4n	-3.02	7.87E-03	-3.51	6.34E-03	-3.70	1.92E-03
Hist2h2be	1.76	1.85E-06	1.66	8.24E-06	2.83	2.69E-08
Hist2h4	2.00	1.16E-04	2.36	8.02E-05	3.50	8.05E-07
Hivep1	-1.64	6.63E-08	-1.71	1.27E-07	-1.09	1.21E-06
Hivep3	-1.48	1.72E-06	-1.51	4.00E-06	-2.20	4.60E-08
Hk2	-1.99	9.24E-03	-1.93	2.04E-02	-4.70	1.19E-05
Hlf	-1.37	2.98E-02	-2.44	1.87E-03	-2.17	1.75E-03
Hmcn2	1.99	3.20E-04	1.66	2.69E-03	1.44	2.97E-03

Hmgb3	-1.68	2.03E-05	-1.77	3.45E-05	-2.68	2.84E-07
Hmmr	-1.29	2.79E-03	-1.22	7.91E-03	-1.44	1.14E-03
Hmox1	-1.25	3.22E-02	-2.26	1.88E-03	-2.20	8.98E-04
Hnrnpa1	-1.00	2.87E-08	-1.08	4.51E-08	-1.38	1.49E-09
Hnrnph1	-1.20	7.52E-07	-1.29	1.17E-06	-1.38	1.70E-07
Homer1	-1.40	8.67E-07	-1.48	1.52E-06	-1.86	5.92E-08
Homer3	1.55	2.32E-07	1.42	1.29E-06	1.55	1.57E-07
Homez	1.40	3.66E-06	1.40	9.61E-06	1.78	3.47E-07
Hook1	-1.11	1.99E-07	-1.18	3.35E-07	-1.39	2.14E-08
Hook3	1.03	8.22E-08	1.20	7.09E-08	1.12	2.45E-08
Hpgds	-1.91	1.01E-05	-2.17	9.29E-06	-2.15	3.03E-06
Hsd11b1	-2.08	3.41E-06	-2.37	3.20E-06	-1.85	7.62E-06
Hsd17b14	1.58	1.47E-02	2.07	5.76E-03	1.49	1.87E-02
Hsd3b7	1.14	1.71E-05	1.71	1.50E-06	1.44	1.76E-06
Hsp90aa1	-1.38	2.44E-05	-1.35	7.64E-05	-1.97	9.19E-07
Hspa13	-0.90	1.10E-06	-1.02	1.11E-06	-1.06	2.03E-07
Hspa1b	-2.68	1.75E-03	-2.81	2.81E-03	-4.68	1.82E-05
Hspa2	-2.17	1.30E-05	-2.96	2.71E-06	-2.83	1.08E-06
Hspa4	-1.07	1.44E-08	-1.11	2.83E-08	-1.35	1.31E-09
Hspa4l	-2.04	3.04E-07	-2.41	2.29E-07	-2.29	8.00E-08
Hspa5	-2.06	2.35E-07	-2.42	1.86E-07	-2.69	1.90E-08
Hspbap1	1.06	3.18E-08	1.10	6.38E-08	1.02	2.27E-08
Hyal2	1.81	4.01E-05	1.27	1.61E-03	1.03	2.81E-03
Iah1	0.89	6.78E-05	1.12	2.58E-05	1.05	1.35E-05
Iba57	-1.36	5.33E-07	-1.71	2.31E-07	-1.59	9.91E-08
Icos	-1.89	8.20E-07	-2.35	3.90E-07	-2.33	1.03E-07
Icosl	-1.60	1.49E-05	-1.49	7.03E-05	-1.91	2.59E-06
Ict1	1.01	3.11E-08	0.98	9.10E-08	1.41	1.44E-09
Idh1	2.08	4.68E-08	2.11	1.09E-07	1.91	5.10E-08
Ier3	-1.79	2.51E-02	-1.80	4.19E-02	-2.61	2.41E-03
Ier5	-1.35	4.54E-08	-1.58	4.36E-08	-1.48	1.28E-08
Ier5l	-2.51	6.98E-03	-4.44	2.82E-04	-4.51	8.39E-05
Ifi203	1.39	5.94E-08	1.71	4.09E-08	2.83	2.70E-10
Ifit2	0.91	2.38E-06	1.06	1.91E-06	2.55	7.04E-10
Ifitm10	1.15	1.67E-03	0.71	4.97E-02	1.33	5.11E-04
Ifngr2	-1.90	1.62E-07	-2.31	1.02E-07	-2.63	8.42E-09
Ifrd1	-2.18	1.11E-07	-2.77	5.48E-08	-2.86	8.73E-09
Ift122	1.01	2.04E-04	0.71	5.79E-03	1.67	2.43E-06

Ift52	0.94	1.17E-05	1.01	1.73E-05	1.17	1.42E-06
Igsf23	-0.97	4.12E-05	-1.02	6.91E-05	-1.74	2.19E-07
Igsf8	-1.07	3.90E-05	-1.39	1.21E-05	-1.76	4.55E-07
Igtp	0.73	2.49E-04	1.28	5.89E-06	3.79	4.66E-10
Ikbip	1.19	4.21E-04	1.84	3.18E-05	1.03	1.14E-03
Ikzf2	-1.03	1.35E-02	-0.88	4.99E-02	-1.06	1.07E-02
Ikzf5	-1.79	1.88E-04	-2.05	1.62E-04	-1.70	2.44E-04
Il17rd	-0.73	1.09E-02	-1.33	3.75E-04	-1.31	1.52E-04
Il20ra	-1.29	1.99E-04	-1.59	9.39E-05	-1.22	2.58E-04
Il21r	-1.86	2.37E-08	-2.38	1.31E-08	-2.69	9.19E-10
Ildr1	-2.03	3.11E-03	-2.06	5.87E-03	-1.86	4.99E-03
Ilf3	-1.34	4.69E-09	-1.44	7.23E-09	-1.74	2.79E-10
Impg2	0.89	2.46E-04	1.41	1.56E-05	1.46	3.30E-06
Incenp	-1.06	6.18E-08	-1.11	1.18E-07	-1.37	5.30E-09
Ing3	-1.44	4.08E-07	-1.74	2.42E-07	-1.56	1.45E-07
Ipmk	-1.17	1.19E-06	-1.30	1.31E-06	-1.24	5.36E-07
Iqcb1	-1.12	5.99E-06	-1.42	2.21E-06	-1.45	5.04E-07
Iqcd	2.59	2.38E-05	1.24	1.24E-02	3.14	3.74E-06
Iqck	1.93	7.13E-04	1.18	3.07E-02	2.46	9.09E-05
Irak1bp1	-1.38	1.20E-02	-1.47	1.57E-02	-1.32	1.43E-02
Irak4	0.95	5.64E-07	1.12	4.15E-07	1.22	5.04E-08
Irf2bp2	-1.79	1.42E-09	-2.12	1.11E-09	-1.90	2.03E-10
Irf4	-2.65	5.85E-06	-3.64	1.16E-06	-1.01	8.51E-03
Irs1	1.18	2.07E-02	1.16	3.85E-02	1.00	4.25E-02
Irs2	-2.25	1.51E-07	-2.67	1.13E-07	-2.48	4.26E-08
Isca1	-1.31	2.61E-08	-1.58	2.07E-08	-1.55	3.88E-09
Isoc2b	1.05	1.76E-03	1.12	2.41E-03	1.60	5.67E-05
Itga10	0.97	2.76E-05	1.43	3.08E-06	1.40	9.96E-07
Itga2	1.74	3.77E-04	1.99	3.28E-04	2.48	1.78E-05
Itga4	1.19	2.43E-08	1.07	1.18E-07	1.71	9.72E-10
Itih4	-2.62	6.80E-03	-2.27	2.81E-02	-2.22	1.62E-02
Itih5	3.26	2.87E-08	3.34	6.01E-08	1.93	1.05E-06
Itk	-1.00	1.24E-08	-1.02	2.69E-08	-1.35	6.87E-10
Itpkb	-1.79	2.41E-08	-2.04	2.71E-08	-2.34	1.83E-09
Itsn1	2.25	5.21E-07	1.87	6.66E-06	1.96	1.23E-06
Izumo4	1.45	3.62E-07	1.28	2.63E-06	1.83	3.58E-08
Jmjd1c	-1.59	1.15E-07	-1.78	1.31E-07	-1.70	4.15E-08
Jmy	-2.37	2.42E-07	-2.94	1.31E-07	-2.86	3.48E-08

Josd1	-1.58	3.68E-08	-1.99	2.13E-08	-2.08	2.61E-09
Josd2	1.39	2.70E-07	1.47	4.63E-07	1.54	7.70E-08
Junb	-2.13	7.04E-08	-2.71	3.80E-08	-2.81	5.13E-09
Jund	-0.83	5.89E-05	-1.22	6.09E-06	-1.43	4.21E-07
Kank3	1.88	1.65E-04	1.78	6.19E-04	1.30	2.34E-03
Kantr_2	1.50	1.14E-06	1.50	3.13E-06	1.46	1.09E-06
Kat2b	1.54	7.94E-09	1.55	1.82E-08	1.72	1.43E-09
Katna1	-1.22	2.50E-07	-1.40	2.31E-07	-1.37	6.39E-08
Kbtbd11	1.49	4.36E-09	1.18	3.54E-08	2.63	4.94E-11
Kbtbd3	1.75	1.67E-07	1.71	5.13E-07	1.13	4.54E-06
Kcna2	1.10	2.41E-06	0.61	7.71E-04	1.94	1.65E-08
Kcnj14	-1.68	3.67E-02	-2.06	2.35E-02	-1.67	3.53E-02
Kcnk7	-1.65	2.19E-02	-2.07	1.20E-02	-2.19	3.84E-03
Kcnq5	-1.31	5.69E-03	-1.27	1.35E-02	-1.90	3.75E-04
Kctd10	-1.38	2.92E-08	-1.38	7.31E-08	-1.40	1.32E-08
Kctd12	-1.65	3.12E-07	-1.98	2.06E-07	-2.43	1.02E-08
Kctd12b	-2.10	6.61E-06	-2.42	5.43E-06	-2.24	3.02E-06
Kctd21	2.65	3.31E-06	3.15	2.16E-06	3.01	8.45E-07
Kdm2b	-2.23	2.18E-07	-2.60	1.82E-07	-3.00	1.37E-08
Kdm5a	-1.44	6.87E-08	-1.52	1.18E-07	-1.43	4.09E-08
Kdm6a	-1.25	2.26E-05	-1.29	4.61E-05	-1.27	1.61E-05
Kdm6b	-1.43	2.51E-07	-1.76	1.41E-07	-1.72	3.84E-08
Kif11	-2.12	8.02E-06	-2.65	3.41E-06	-3.21	1.75E-07
Kif13a	1.27	8.08E-06	1.02	1.39E-04	1.05	3.37E-05
Kif18a	-2.05	8.82E-06	-2.59	3.36E-06	-2.31	2.50E-06
Kif18b	-1.62	2.24E-02	-1.95	1.51E-02	-1.56	2.54E-02
Kif20a	-1.01	1.12E-02	-0.92	3.20E-02	-1.28	2.28E-03
Kif22	1.60	1.66E-07	1.61	4.21E-07	2.01	1.81E-08
Kif23	-1.52	1.22E-06	-1.80	8.27E-07	-2.01	8.20E-08
Kif3a	1.04	1.44E-06	1.03	4.44E-06	1.95	7.06E-09
Kif4	-1.91	2.15E-03	-1.85	5.54E-03	-1.24	2.56E-02
Kif5c	0.98	6.68E-05	1.10	6.75E-05	1.01	4.37E-05
Kif7	-1.24	1.14E-05	-0.91	3.69E-04	-1.45	2.36E-06
Kifc1	2.49	1.13E-08	2.31	4.38E-08	2.37	6.88E-09
Kifc5b	1.11	3.60E-07	0.76	2.30E-05	1.09	2.87E-07
Klc2	1.04	3.68E-08	0.93	2.06E-07	1.03	2.17E-08
Klc3	2.00	2.41E-08	1.89	8.45E-08	1.40	2.00E-07
Klf10	-1.47	3.69E-06	-1.71	2.82E-06	-2.16	1.03E-07

Klf4	-2.91	6.48E-05	-4.68	3.27E-06	-4.79	7.37E-07
Klhdc1	2.45	1.67E-09	2.41	3.71E-09	2.00	1.36E-09
Klhdc4	-1.20	1.23E-06	-1.22	2.97E-06	-1.65	6.35E-08
Klhl11	-1.17	1.25E-06	-1.30	1.46E-06	-1.22	6.66E-07
Klhl12	-1.21	4.12E-08	-1.33	5.48E-08	-1.33	1.03E-08
Klhl20	1.11	1.14E-07	1.37	7.05E-08	1.30	2.04E-08
Klhl26	1.24	6.87E-08	1.21	2.09E-07	1.32	2.41E-08
Klhl35	1.15	7.40E-03	1.54	2.35E-03	1.31	2.98E-03
Klhl42	0.96	3.77E-06	1.04	5.51E-06	1.58	4.41E-08
Klhl8	0.96	3.15E-04	1.30	6.69E-05	1.08	1.06E-04
Klrb1f	-3.28	3.19E-04	-2.00	1.86E-02	-3.02	5.31E-04
Kmt2d	0.98	1.02E-07	1.05	1.61E-07	1.10	2.54E-08
Kncn	-1.69	1.51E-02	-1.70	2.70E-02	-1.63	1.71E-02
Knstrn	1.02	7.36E-05	1.05	1.51E-04	1.53	1.85E-06
Kpna1	-1.61	1.86E-07	-1.84	1.80E-07	-2.30	7.85E-09
Kras	-0.97	5.80E-06	-1.00	1.21E-05	-1.21	6.86E-07
Krcc1	1.24	8.13E-06	1.14	4.38E-05	1.88	1.75E-07
l7Rn6	1.22	1.83E-07	1.23	4.58E-07	1.35	5.10E-08
Lacc1	-2.36	1.33E-02	-2.19	3.46E-02	-2.77	4.66E-03
Lactb2	1.40	5.48E-08	1.66	4.55E-08	1.57	1.26E-08
Lad1	-2.47	2.89E-03	-3.52	5.05E-04	-5.08	8.20E-06
Lamb3	1.64	2.37E-08	1.85	2.80E-08	1.95	3.33E-09
Lamc1	2.02	3.49E-07	1.65	5.00E-06	1.62	1.63E-06
Lamtor4	1.19	1.05E-07	1.25	1.81E-07	1.51	9.95E-09
Lancl2	-1.38	7.22E-06	-1.78	2.24E-06	-1.65	1.17E-06
Larp1b	-0.79	1.65E-05	-1.02	5.53E-06	-1.34	1.52E-07
Larp7	-1.14	1.97E-07	-1.29	2.02E-07	-1.26	5.66E-08
Lca5	1.00	4.41E-06	0.96	1.77E-05	1.50	1.13E-07
Ldlr	2.51	3.16E-09	2.71	5.51E-09	2.11	2.99E-09
Lect1	1.10	1.00E-02	0.90	4.99E-02	2.56	1.64E-05
Lemd3	-1.51	5.41E-07	-1.81	3.52E-07	-1.70	1.48E-07
Leo1	-1.48	7.10E-08	-1.58	1.14E-07	-1.88	7.11E-09
Leprotl1	0.85	1.73E-08	1.02	1.40E-08	1.09	1.35E-09
Lfng	1.68	2.70E-08	1.81	4.35E-08	1.08	4.72E-07
Lgals4	1.11	3.90E-08	1.07	1.27E-07	1.31	6.06E-09
Lgals7	-1.96	1.61E-02	-3.41	9.42E-04	-2.90	1.22E-03
Lgalsl	-0.92	1.33E-03	-1.00	1.68E-03	-1.31	7.64E-05
Lif	-2.91	8.34E-04	-4.24	1.10E-04	-5.27	5.44E-06

Lincpint	-1.82	1.58E-05	-2.20	8.44E-06	-2.62	5.42E-07
Litaf	-1.87	2.64E-07	-2.41	1.11E-07	-1.73	3.58E-07
Lman1l	-1.09	2.66E-03	-0.87	2.06E-02	-1.64	1.06E-04
Lman2l	0.87	5.96E-06	1.14	1.74E-06	1.24	2.23E-07
Lmna	-3.08	9.75E-05	-4.18	2.06E-05	-5.10	1.10E-06
Lmnb1	-1.00	7.85E-09	-1.08	1.12E-08	-1.21	8.04E-10
Lmtk2	-1.22	5.84E-08	-1.41	5.60E-08	-1.37	1.37E-08
Lonrf1	-1.48	4.60E-07	-1.94	1.52E-07	-2.77	2.58E-09
Lonrf3	-3.23	3.49E-04	-3.42	5.49E-04	-6.01	1.58E-06
Loxl4	-1.13	2.37E-03	-1.41	1.14E-03	-1.59	1.59E-04
Lpar4	-2.86	4.05E-06	-2.62	2.33E-05	-2.47	1.18E-05
Lpar5	2.44	5.01E-08	2.62	7.81E-08	2.14	7.70E-08
Lpin1	-1.56	4.43E-08	-1.67	7.05E-08	-2.02	3.69E-09
Lpin2	-1.39	2.98E-06	-1.40	7.76E-06	-1.24	6.50E-06
Lrig1	-1.66	2.03E-08	-1.97	1.74E-08	-1.95	3.04E-09
Lrp12	-1.46	3.35E-06	-1.42	1.22E-05	-1.06	4.22E-05
Lrpap1	-1.22	1.24E-08	-1.30	2.01E-08	-1.52	1.14E-09
Lrrc16b	1.37	2.36E-02	2.40	1.48E-03	1.20	4.12E-02
Lrrc20	1.44	7.84E-06	1.85	2.55E-06	1.30	1.53E-05
Lrrc23	-1.56	5.86E-04	-1.74	6.11E-04	-1.50	6.97E-04
Lrrc51	2.19	1.68E-03	2.13	4.31E-03	2.39	7.98E-04
Lrrc61	1.11	7.07E-06	0.97	5.72E-05	1.63	1.91E-07
Lrrc75b	1.31	3.83E-06	1.55	2.61E-06	1.31	2.96E-06
Lsg1	-0.97	8.66E-08	-1.06	1.17E-07	-1.05	2.69E-08
Lsm10	0.97	1.16E-04	1.16	7.11E-05	1.39	4.78E-06
Lsm8	-1.48	9.68E-08	-1.45	2.82E-07	-1.67	2.18E-08
Lst1	1.81	2.04E-04	1.02	2.06E-02	1.97	8.62E-05
Ltv1	-1.08	2.67E-08	-1.04	8.45E-08	-1.47	1.46E-09
Luzp1	-2.23	6.88E-07	-2.65	4.72E-07	-2.95	4.77E-08
Lypd3	-2.34	2.70E-05	-2.09	1.83E-04	-2.28	2.85E-05
Lyrm9	1.74	1.02E-08	1.86	1.66E-08	1.83	2.95E-09
Lysmd2	1.15	4.76E-04	1.25	6.03E-04	2.35	9.54E-07
Lysmd3	-1.21	4.81E-06	-1.33	6.19E-06	-1.32	1.92E-06
Lztr1	0.99	5.61E-09	1.03	9.75E-09	1.14	7.23E-10
Maf	-2.63	3.62E-05	-3.43	1.04E-05	-2.90	1.31E-05
Mafa	-1.61	6.98E-03	-3.13	1.33E-04	-1.41	1.40E-02
Maff	-2.20	3.40E-08	-2.93	1.47E-08	-2.36	1.03E-08
Magi2	1.51	1.95E-03	1.45	5.47E-03	1.60	1.16E-03

Magoh	-0.91	1.88E-06	-1.01	2.17E-06	-1.23	1.05E-07
Mansc1	1.35	1.69E-04	1.56	1.35E-04	1.47	7.51E-05
Mansc4	2.09	1.30E-03	2.97	2.21E-04	2.42	3.96E-04
Maoa	-1.59	8.19E-03	-1.60	1.55E-02	-3.06	6.02E-05
Map10	1.00	2.50E-03	0.77	2.44E-02	1.75	2.81E-05
Map1lc3a	-1.95	3.90E-07	-2.54	1.42E-07	-2.76	1.64E-08
Map1lc3b	-2.39	7.49E-07	-2.12	5.53E-06	-2.53	3.35E-07
Map2	-2.46	1.69E-04	-2.14	1.19E-03	-3.40	9.52E-06
Map2k3	-0.90	6.47E-08	-1.09	4.61E-08	-1.26	3.08E-09
Map2k3os	1.54	3.04E-03	1.88	1.68E-03	1.05	2.65E-02
Map3k1	-1.53	2.08E-08	-1.86	1.58E-08	-1.69	4.65E-09
Map3k14	-1.63	1.24E-08	-1.94	1.05E-08	-1.51	9.02E-09
Map3k15	1.59	3.07E-06	1.56	9.96E-06	1.72	1.21E-06
Map3k2	-1.19	3.73E-07	-1.36	3.52E-07	-1.19	2.68E-07
Map3k6	-1.66	2.25E-02	-2.36	5.69E-03	-1.99	7.54E-03
Map3k8	-1.56	1.37E-06	-1.88	8.24E-07	-2.09	8.55E-08
Map3k9	-1.14	1.58E-07	-1.30	1.56E-07	-1.19	6.96E-08
Map4k5	-1.36	1.23E-06	-1.45	2.06E-06	-1.50	4.07E-07
Mapk6	-0.94	9.18E-07	-1.02	1.20E-06	-1.10	1.66E-07
Mapk8	-1.12	3.52E-07	-1.24	4.29E-07	-1.28	8.00E-08
March6	-1.11	5.99E-08	-1.16	1.07E-07	-1.07	4.32E-08
March7	-1.15	3.05E-07	-1.21	5.48E-07	-1.19	1.65E-07
Marcksl1	-2.50	4.88E-07	-2.78	5.61E-07	-3.60	1.75E-08
Marveld1	1.18	4.48E-08	1.06	2.27E-07	1.26	1.43E-08
Marveld2	-0.88	4.14E-02	-1.05	2.94E-02	-1.39	2.81E-03
Masp2	1.40	2.31E-03	1.96	4.49E-04	1.48	1.38E-03
Mast1	1.77	2.80E-03	2.02	2.54E-03	2.05	9.26E-04
Matn1	-1.52	7.74E-03	-1.82	5.16E-03	-1.55	6.37E-03
Mavs	1.37	3.02E-07	1.45	5.31E-07	1.35	2.39E-07
Mblac2	1.44	8.83E-07	1.30	5.83E-06	1.66	1.99E-07
Mcam	-1.90	1.38E-03	-3.73	1.67E-05	-3.38	1.16E-05
Mcee	1.66	5.31E-08	1.57	2.00E-07	1.47	7.98E-08
Mcm4	-1.13	1.52E-07	-1.23	2.07E-07	-1.14	8.77E-08
Mcm5	-1.11	1.59E-08	-1.14	3.25E-08	-1.34	1.95E-09
Mctp2	-1.33	9.95E-08	-1.58	7.63E-08	-1.40	4.02E-08
Mdk	1.04	3.62E-03	1.23	2.47E-03	1.34	5.33E-04
Mecp2	0.92	2.18E-08	1.05	2.31E-08	1.26	1.17E-09
Med11	-0.93	4.62E-07	-1.08	3.64E-07	-1.01	1.55E-07

Med12l	-1.57	4.88E-06	-1.51	1.77E-05	-1.82	1.07E-06
Med13	-1.41	4.69E-08	-1.43	1.10E-07	-1.46	2.03E-08
Med16	-1.47	1.43E-07	-1.69	1.36E-07	-1.49	8.03E-08
Med20	-0.96	2.86E-02	-1.45	5.22E-03	-1.16	9.39E-03
Med26	-0.96	2.23E-06	-1.12	1.71E-06	-1.24	1.97E-07
Med7	-2.22	5.21E-06	-2.67	3.05E-06	-1.97	1.20E-05
Mef2d	-1.21	2.52E-08	-1.33	3.47E-08	-1.45	3.48E-09
Megf9	-1.36	1.75E-06	-1.39	4.07E-06	-1.70	1.98E-07
Mettl20	3.00	7.17E-09	3.32	9.51E-09	2.79	4.48E-09
Mettl21a	0.98	1.47E-05	1.11	1.31E-05	1.27	1.20E-06
Mettl4	1.20	4.04E-06	1.22	9.47E-06	1.62	2.40E-07
Mettl6	-1.07	2.17E-07	-1.16	3.10E-07	-1.26	3.81E-08
Mex3c	-1.21	5.36E-07	-1.33	7.04E-07	-1.38	1.25E-07
Mfsd10	-0.98	2.85E-05	-1.04	4.64E-05	-1.23	3.30E-06
Mfsd6	-1.36	6.61E-09	-1.62	6.31E-09	-1.47	1.46E-09
Mfsd7c	1.60	2.20E-02	2.01	1.19E-02	1.97	6.31E-03
Mgat4a	-1.15	2.18E-08	-1.01	1.24E-07	-1.32	3.75E-09
Mgea5	-1.27	3.43E-08	-1.26	8.67E-08	-1.17	3.16E-08
Mgst2	1.94	2.77E-09	2.03	5.57E-09	2.29	2.99E-10
Mgst3	1.23	4.16E-04	1.04	3.16E-03	1.23	3.66E-04
Mical2	2.20	2.65E-05	1.21	5.69E-03	2.84	2.44E-06
Micall1	1.19	3.03E-09	1.14	8.67E-09	1.33	4.66E-10
Mid1	-0.96	6.81E-04	-1.30	1.59E-04	-1.49	1.57E-05
Miip	1.25	7.69E-08	1.22	2.39E-07	1.45	1.46E-08
Mina	1.68	4.19E-10	1.83	5.67E-10	1.70	5.19E-11
Mir142hg	1.08	2.40E-08	1.14	4.36E-08	1.28	3.54E-09
Mir22hg	-2.89	8.39E-03	-2.68	2.39E-02	-3.47	2.40E-03
Mis18bp1	-1.45	1.32E-03	-1.37	4.17E-03	-1.57	6.57E-04
Mknk2	-0.96	7.27E-08	-1.11	7.01E-08	-1.15	1.13E-08
Mlycd	1.10	9.81E-06	0.89	1.56E-04	1.33	1.54E-06
Mmgt2	1.63	3.27E-09	1.87	3.71E-09	1.62	9.96E-10
Mn1	-1.27	3.98E-03	-0.97	3.45E-02	-1.89	1.94E-04
Mob2	-1.48	2.18E-08	-1.64	2.72E-08	-1.51	8.72E-09
Mob3a	1.41	2.72E-08	1.45	5.76E-08	1.65	4.49E-09
Mocos	1.28	1.30E-04	1.07	1.27E-03	1.28	1.16E-04
Morf4l2	-2.04	4.52E-07	-2.32	4.38E-07	-2.77	2.57E-08
Mov10	2.45	7.42E-09	2.70	9.93E-09	1.38	2.19E-07
Mphosph6	-0.89	1.99E-04	-1.11	8.78E-05	-1.51	1.83E-06

Mpp1	0.92	8.98E-08	1.04	9.92E-08	1.03	2.18E-08
Mpp2	-1.08	1.80E-03	-1.25	1.38E-03	-1.89	1.78E-05
Mpp4	1.51	2.04E-04	2.24	2.14E-05	2.25	6.18E-06
Mpv17l	1.49	1.13E-02	1.68	1.06E-02	2.20	7.48E-04
Mpzl1	-2.64	4.95E-05	-3.55	1.12E-05	-3.87	1.54E-06
Mpzl3	-1.48	1.39E-07	-1.58	2.28E-07	-2.32	3.01E-09
Mroh3	-1.39	1.01E-02	-2.05	1.77E-03	-1.19	2.18E-02
Mroh8	0.88	4.54E-02	1.04	3.52E-02	1.87	3.69E-04
Mrpl14	1.03	3.41E-06	1.13	4.37E-06	1.13	1.17E-06
Mrpl34	0.94	6.52E-05	1.13	3.68E-05	1.04	2.42E-05
Mrps22	-1.11	1.80E-07	-1.08	6.09E-07	-1.22	5.47E-08
Mrvi1	-1.01	2.50E-04	-1.22	1.43E-04	-1.39	1.49E-05
Ms4a4b	2.24	7.90E-10	2.47	1.11E-09	2.21	1.81E-10
Ms4a4c	2.36	6.21E-08	2.63	7.74E-08	2.32	4.09E-08
Ms4a6b	1.28	4.19E-10	1.54	2.39E-10	1.27	5.19E-11
Ms4a6c	3.10	2.62E-09	3.31	4.19E-09	2.87	1.15E-09
Ms4a6d	2.94	3.30E-07	3.39	2.92E-07	1.57	5.37E-05
Msh2	1.06	1.92E-08	1.03	5.48E-08	1.10	6.84E-09
Msra	-1.11	1.82E-07	-1.18	2.91E-07	-1.12	1.04E-07
Mss51	1.42	4.41E-05	1.93	8.99E-06	1.71	7.82E-06
Mt1	-2.97	4.55E-05	-3.05	9.58E-05	-2.91	4.59E-05
Mtbp	-1.21	3.22E-08	-1.22	7.74E-08	-1.48	3.88E-09
Mtcp1_1	1.06	2.46E-06	1.32	1.13E-06	1.40	1.76E-07
Mterf1b	1.71	6.79E-07	1.97	5.89E-07	2.06	1.02E-07
Mtfp1	1.66	4.39E-03	2.55	4.61E-04	1.68	3.67E-03
Mtfr2	-1.68	3.57E-05	-1.59	1.48E-04	-2.11	4.21E-06
Mthfsd	1.14	2.56E-04	1.10	8.09E-04	1.34	6.32E-05
Mtmr10	-2.03	2.67E-06	-2.29	2.70E-06	-1.96	2.86E-06
Mtmr12	-1.04	2.43E-08	-1.14	3.43E-08	-1.17	5.27E-09
Mtmr2	-1.08	1.32E-07	-1.15	2.16E-07	-1.15	5.06E-08
Mtss1l	-1.43	3.15E-03	-1.34	9.51E-03	-1.76	6.34E-04
Muc3	-2.03	3.71E-03	-1.62	2.61E-02	-1.97	4.14E-03
Mustn1	1.27	1.66E-04	1.27	3.91E-04	1.51	3.27E-05
Mut	1.00	9.08E-06	1.12	9.27E-06	1.34	5.72E-07
Mvb12a	1.07	2.37E-06	0.99	1.30E-05	1.20	6.69E-07
Mx1	-1.92	8.92E-03	-2.93	1.19E-03	-1.45	3.71E-02
Mx2	-1.91	2.99E-06	-2.24	2.19E-06	-1.13	2.15E-04
Mxd1	-1.69	9.14E-07	-1.92	9.05E-07	-2.38	3.89E-08

Mxd3	-1.98	1.71E-03	-2.33	1.24E-03	-2.53	2.45E-04
Mxd4	-1.11	5.62E-08	-1.22	7.81E-08	-1.34	7.98E-09
Mxi1	-1.15	1.74E-07	-1.35	1.40E-07	-1.16	1.04E-07
Myb	-3.14	1.23E-04	-4.38	2.08E-05	-4.39	6.15E-06
Mybl1	-1.07	2.52E-04	-1.05	6.95E-04	-1.09	1.90E-04
Myl4	-1.94	5.78E-03	-2.27	4.45E-03	-3.18	1.39E-04
Mylip	-1.29	1.62E-07	-1.31	3.87E-07	-1.00	9.16E-07
Mylpf	0.94	1.81E-05	1.27	3.79E-06	1.19	1.82E-06
Myo1a	1.66	4.46E-05	1.98	2.74E-05	2.44	1.33E-06
Myof	3.04	1.58E-03	3.01	3.71E-03	1.89	2.62E-02
Mypop	1.68	3.38E-05	1.28	7.37E-04	1.84	1.34E-05
Mypopos	1.73	5.04E-05	1.95	4.77E-05	1.91	1.76E-05
Myrfl	1.18	1.36E-02	1.16	2.73E-02	2.17	1.78E-04
Mzf1	1.34	1.67E-03	0.88	3.89E-02	1.88	1.10E-04
N4bp2l1	0.84	2.48E-06	1.13	6.09E-07	1.63	8.67E-09
N6amt2	0.98	8.02E-06	1.09	9.31E-06	1.21	1.03E-06
Naalad2	1.87	5.97E-05	0.96	1.51E-02	2.77	1.69E-06
Nab1	-1.37	1.80E-07	-1.55	1.86E-07	-1.77	1.53E-08
Nab2	-1.06	6.27E-07	-1.32	3.11E-07	-1.70	1.03E-08
Nacad	1.73	4.39E-07	1.91	5.27E-07	2.34	2.54E-08
Nacc2	2.41	5.44E-09	2.72	6.27E-09	3.72	1.18E-10
Nadsyn1	1.25	2.18E-06	1.27	5.45E-06	1.49	3.73E-07
Naglu	1.33	1.89E-07	1.30	5.89E-07	1.42	7.35E-08
Napa	-1.12	1.66E-08	-1.19	2.76E-08	-1.37	1.83E-09
Napepld	2.56	5.94E-08	2.82	7.86E-08	1.43	4.83E-06
Nasp	-1.16	2.01E-07	-1.23	3.32E-07	-1.44	2.31E-08
Ncapg2	-2.29	8.75E-06	-2.61	7.74E-06	-2.56	2.67E-06
Ncbp1	-1.30	9.42E-09	-1.46	1.11E-08	-1.65	7.63E-10
Ncln	1.87	2.12E-09	1.97	3.71E-09	2.32	1.53E-10
Ndel1	-1.25	5.20E-08	-1.45	5.01E-08	-1.45	9.54E-09
Ndnf	-1.82	1.53E-03	-2.98	8.45E-05	-2.64	7.43E-05
Ndrg2	1.21	1.59E-07	1.26	3.00E-07	1.06	3.03E-07
Nebl	-3.05	3.74E-04	-3.44	3.54E-04	-4.22	2.21E-05
Neil1	-0.97	5.67E-07	-1.19	3.21E-07	-1.08	1.69E-07
Neil2	1.72	6.26E-04	1.62	2.26E-03	2.44	3.19E-05
Nek2	-2.10	7.26E-04	-2.68	2.77E-04	-3.14	2.46E-05
Neto2	-1.11	5.57E-08	-1.02	2.52E-07	-1.42	4.94E-09
Neurl3	-2.29	5.62E-07	-2.71	3.94E-07	-1.49	1.69E-05

Nfe2l3	0.90	6.48E-03	1.71	1.40E-04	1.55	1.06E-04
Nfil3	-2.07	3.38E-06	-2.71	9.94E-07	-3.25	5.53E-08
Nfkb1	-1.41	1.44E-08	-1.53	2.10E-08	-1.44	5.25E-09
Nfkb2	-2.03	4.53E-08	-2.32	4.71E-08	-2.67	3.42E-09
Nfkbia	-1.84	3.98E-08	-2.05	4.72E-08	-1.95	1.32E-08
Nfkbib	-1.56	3.14E-07	-1.79	2.88E-07	-2.09	2.04E-08
Nfkbid	-2.55	2.21E-07	-3.38	7.75E-08	-3.07	3.32E-08
Nfkbie	-1.55	1.65E-08	-2.00	8.76E-09	-1.47	1.05E-08
Nfyc	-1.19	4.70E-09	-1.18	1.01E-08	-1.22	1.22E-09
Ngfrap1	-1.01	1.37E-07	-1.18	1.13E-07	-1.40	7.20E-09
Nhsl1	-1.52	1.12E-05	-1.91	4.55E-06	-1.51	9.78E-06
Nicn1	1.50	3.06E-05	1.92	1.02E-05	1.21	1.56E-04
Nif3l1	-0.89	3.15E-06	-1.11	1.36E-06	-1.20	1.92E-07
Nim1k	1.40	5.29E-04	1.07	7.21E-03	1.25	1.09E-03
Ninj1	-2.08	2.25E-07	-2.63	1.06E-07	-2.93	1.03E-08
Nipa1	4.68	2.44E-08	4.25	1.14E-07	3.03	3.99E-07
Nipa2	-1.19	4.07E-08	-1.36	4.32E-08	-1.22	1.75E-08
Nkrf	-1.26	1.66E-06	-1.46	1.32E-06	-1.91	3.78E-08
Nlrc4	-1.20	9.20E-04	-1.00	6.87E-03	-1.03	2.32E-03
Nmrk1	-1.14	1.49E-05	-1.13	4.25E-05	-1.28	4.39E-06
Nol10	-1.83	2.99E-08	-2.02	4.11E-08	-2.40	2.23E-09
Nol11	-1.18	3.11E-07	-1.19	8.01E-07	-1.47	3.52E-08
Nop58	-1.11	4.70E-07	-1.11	1.27E-06	-1.82	6.74E-09
Notch4	2.03	5.35E-07	1.97	1.83E-06	2.63	4.32E-08
Noxred1	1.58	8.17E-03	1.66	1.18E-02	1.64	6.08E-03
Npat	-1.17	5.48E-08	-1.15	1.53E-07	-1.11	4.38E-08
Npb	1.44	9.31E-03	1.28	3.26E-02	1.48	7.24E-03
Nptn	-0.99	1.04E-06	-1.03	2.14E-06	-1.01	6.68E-07
Nptx1	-2.66	1.70E-03	-4.13	1.48E-04	-5.07	8.32E-06
Nr1d2	-1.84	2.14E-07	-2.15	1.76E-07	-2.05	5.90E-08
Nr4a1	-3.12	1.95E-04	-4.79	1.46E-05	-5.83	7.75E-07
Nr4a2	-3.48	1.52E-02	-6.12	8.07E-04	-8.56	1.82E-05
Nr4a3	-3.35	9.27E-04	-5.44	5.11E-05	-6.88	2.04E-06
Nradd	1.35	2.38E-04	1.52	2.29E-04	1.53	7.45E-05
Nrip1	-1.70	1.27E-06	-1.93	1.24E-06	-1.48	3.26E-06
Nt5dc3	-1.22	7.70E-07	-1.42	6.09E-07	-1.80	2.29E-08
Nthl1	1.86	6.66E-05	1.51	8.54E-04	2.30	9.10E-06
Ntn4	4.63	9.35E-06	3.94	9.56E-05	1.77	1.14E-02

Ntrk3	-1.50	1.12E-05	-1.79	6.82E-06	-1.66	3.91E-06
Nuak1	-2.04	4.90E-03	-2.80	1.21E-03	-2.24	2.38E-03
Nucb2	-0.86	4.46E-04	-1.37	2.81E-05	-1.20	2.55E-05
Nudcd1	1.29	2.91E-07	1.25	1.01E-06	1.31	1.81E-07
Nudt15	-1.43	8.24E-08	-1.82	4.39E-08	-1.44	4.69E-08
Nudt18	1.43	7.31E-08	1.26	5.07E-07	1.67	1.29E-08
Nudt2	1.55	1.02E-04	1.81	7.56E-05	1.18	7.66E-04
Nudt22	1.56	3.02E-06	1.42	1.77E-05	1.45	4.57E-06
Nudt4	-0.85	2.04E-06	-1.06	9.30E-07	-1.42	2.25E-08
Nudt5	1.32	4.58E-08	1.40	7.81E-08	1.32	2.55E-08
Nudt7	1.72	5.79E-06	1.87	7.84E-06	1.99	1.27E-06
Nufip1	-0.94	1.10E-06	-1.13	6.64E-07	-1.05	3.37E-07
Nup210l	1.66	4.33E-07	1.86	4.90E-07	2.26	2.46E-08
Nup37	1.07	1.84E-05	1.22	1.62E-05	1.14	9.04E-06
Nup62cl	-1.57	4.50E-02	-1.82	3.80E-02	-1.95	1.43E-02
Nup98	-1.62	3.66E-08	-1.82	4.38E-08	-2.04	3.57E-09
Nxnl1	3.16	8.78E-06	4.41	1.47E-06	3.47	3.12E-06
Nxpe3	1.87	7.11E-10	1.90	1.11E-09	2.10	5.19E-11
Nyap1	1.99	1.26E-06	1.69	1.34E-05	1.96	1.09E-06
Oas1b	1.46	3.16E-08	1.73	2.70E-08	3.02	1.34E-10
Oas1c	1.09	8.19E-08	0.87	1.19E-06	1.58	3.07E-09
Oat	-1.41	5.55E-05	-1.54	7.06E-05	-1.51	2.64E-05
Ocel1	1.34	1.56E-08	1.39	2.98E-08	1.60	2.02E-09
Ociad2	1.30	1.23E-02	2.26	6.58E-04	1.54	4.07E-03
Odc1	-3.11	2.59E-06	-4.17	6.43E-07	-5.84	1.13E-08
Ogg1	0.96	6.71E-06	1.08	6.82E-06	1.05	2.48E-06
Olfr755-ps1	1.19	4.68E-03	1.58	1.47E-03	2.41	1.74E-05
Olfr99	1.42	1.17E-04	1.84	3.49E-05	2.37	1.18E-06
Oma1	1.43	5.78E-08	1.60	7.19E-08	1.62	1.32E-08
Optn	-1.63	2.51E-05	-1.55	1.01E-04	-2.44	6.11E-07
Orai1	-1.11	1.01E-07	-1.50	3.44E-08	-1.71	2.48E-09
Orai3	1.40	3.08E-06	1.71	1.57E-06	1.82	2.49E-07
Orc1	-2.74	3.40E-05	-3.40	1.53E-05	-3.06	1.11E-05
Orc6	-1.17	1.23E-06	-1.28	1.69E-06	-1.34	3.06E-07
Orm1	0.72	2.41E-02	1.13	3.48E-03	1.07	2.07E-03
Oser1	-1.35	2.40E-07	-1.46	3.51E-07	-1.39	1.31E-07
Otub2	-1.40	1.49E-04	-1.71	7.24E-05	-1.59	4.37E-05
Otulin	-1.26	2.89E-08	-1.44	2.97E-08	-1.29	1.16E-08

Ovgp1	1.38	4.07E-08	1.33	1.31E-07	1.68	5.08E-09
Oxld1	1.56	2.47E-05	1.19	5.34E-04	1.75	7.39E-06
Oxnad1	1.50	6.12E-08	1.40	2.54E-07	1.44	4.97E-08
P2rx7	-1.25	9.25E-04	-1.21	2.68E-03	-1.77	5.05E-05
P2ry10	-1.72	6.18E-07	-1.93	6.92E-07	-2.43	2.63E-08
P2ry14	-3.10	1.64E-03	-5.28	6.56E-05	-6.00	6.89E-06
P2ry2	-2.52	3.67E-05	-3.91	2.52E-06	-5.23	5.85E-08
Pabpc1l	-1.29	1.93E-04	-1.38	2.87E-04	-1.44	6.92E-05
Pacsin3	-1.77	2.75E-05	-1.96	3.19E-05	-2.04	6.72E-06
Padi2	-1.85	2.90E-06	-2.10	2.86E-06	-1.53	1.23E-05
Pafah1b3	1.14	3.26E-04	0.88	4.65E-03	1.63	1.38E-05
Pag1	-1.25	7.44E-09	-1.26	1.69E-08	-1.36	1.57E-09
Pagr1a	1.37	4.60E-08	1.46	7.73E-08	1.87	2.68E-09
Paip2b	-1.35	2.05E-07	-1.48	2.68E-07	-1.51	5.40E-08
Pak1	-1.21	7.07E-06	-1.31	9.61E-06	-1.29	3.21E-06
Pank1	1.06	3.69E-04	1.09	6.86E-04	1.31	5.81E-05
Pank2	1.08	1.67E-09	1.11	3.54E-09	1.31	1.18E-10
Papln	-1.51	1.88E-02	-1.39	4.91E-02	-2.09	2.42E-03
Paqr3	-1.99	1.12E-04	-2.28	9.38E-05	-2.28	3.01E-05
Paqr7	1.78	2.35E-09	1.71	6.70E-09	2.34	1.18E-10
Parp11	0.89	3.24E-05	1.22	5.98E-06	2.49	5.28E-09
Parp16	2.35	1.33E-08	2.10	6.63E-08	2.71	2.17E-09
Pbx2	1.36	2.56E-08	1.53	2.97E-08	1.76	2.04E-09
Pbx4	1.65	4.47E-05	0.99	5.00E-03	1.24	3.98E-04
Pck2	1.25	3.74E-08	1.30	7.36E-08	1.78	1.59E-09
Pcmtd2	0.84	8.02E-07	1.05	3.59E-07	1.31	1.56E-08
Pcna	-1.41	3.12E-07	-1.59	3.17E-07	-1.87	2.14E-08
Pcnxl2	3.80	4.64E-06	3.03	8.21E-05	4.06	2.06E-06
Pcolce	2.32	4.43E-08	2.35	1.02E-07	3.07	3.16E-09
Pcsk1	1.12	4.06E-03	1.24	4.45E-03	2.10	2.88E-05
Pcyox1	1.24	6.65E-08	1.06	5.78E-07	1.07	1.29E-07
Pcyt1a	-0.98	1.14E-05	-1.13	9.69E-06	-1.21	1.59E-06
Pdcd1	-1.33	2.29E-03	-1.82	5.44E-04	-1.93	1.19E-04
Pdcd1lg2	-3.00	5.03E-05	-3.41	4.52E-05	-3.38	1.53E-05
Pddc1	1.17	5.41E-08	1.14	1.66E-07	1.50	4.92E-09
Pde2a	1.48	4.70E-09	1.24	2.90E-08	2.05	2.03E-10
Pde4b	-1.56	6.81E-08	-1.84	5.77E-08	-1.21	3.46E-07
Pde4d	-1.83	1.13E-07	-2.07	1.20E-07	-2.29	1.22E-08

Pde5a	2.45	4.92E-07	2.81	4.48E-07	2.23	7.82E-07
Pde6b	2.52	2.95E-04	2.04	3.18E-03	3.07	5.11E-05
Pde6d	1.44	1.06E-08	1.61	1.33E-08	1.71	1.38E-09
Pde6g	1.83	1.68E-02	2.41	6.58E-03	3.02	5.62E-04
Pdhx	-1.12	1.01E-06	-1.15	2.33E-06	-1.23	3.40E-07
Pdk2	1.14	1.80E-07	1.11	5.72E-07	1.54	1.10E-08
Pdss1	-1.07	1.20E-06	-1.08	2.96E-06	-1.70	1.89E-08
Pdxk	-0.79	1.44E-06	-1.01	5.25E-07	-1.05	9.33E-08
Penk	-1.91	6.63E-03	-3.16	4.40E-04	-1.99	4.73E-03
Per1	-2.40	1.10E-07	-3.11	4.71E-08	-3.24	7.00E-09
Per2	-3.17	2.60E-05	-4.27	5.71E-06	-5.23	2.76E-07
Pex6	1.78	1.27E-08	1.95	1.74E-08	2.19	1.31E-09
Pfkp	-1.38	1.94E-07	-1.61	1.64E-07	-1.46	8.11E-08
Pgpep1	1.92	2.67E-06	1.37	1.16E-04	1.67	6.98E-06
Phactr2	-1.12	1.78E-07	-0.83	5.04E-06	-1.45	1.50E-08
Phactr4	1.07	1.55E-07	0.86	2.24E-06	1.19	4.09E-08
Phf11d	0.52	3.30E-02	1.17	4.25E-04	1.80	3.70E-06
Phf23	1.62	1.11E-08	1.87	1.12E-08	1.76	2.59E-09
Phf5a	-1.13	1.56E-08	-1.09	4.71E-08	-1.19	4.73E-09
Phf6	-1.80	2.27E-08	-2.09	2.20E-08	-2.16	2.98E-09
Phlda1	-1.98	2.64E-06	-2.34	1.85E-06	-3.58	1.54E-08
Phlda3	2.53	8.83E-05	1.30	2.01E-02	1.84	9.56E-04
Phldb1	1.78	2.38E-06	1.88	4.13E-06	1.59	5.09E-06
Phyhd1	2.26	1.27E-03	1.69	1.68E-02	2.65	3.45E-04
Pi4k2a	-1.12	1.38E-07	-1.24	1.64E-07	-1.19	5.20E-08
Pi4k2b	-1.21	1.55E-06	-1.31	2.22E-06	-1.43	2.74E-07
Pigh	1.09	2.53E-06	1.14	4.87E-06	1.11	1.71E-06
Pigv	1.07	1.10E-06	1.25	8.52E-07	1.70	1.84E-08
Pigx	1.00	2.18E-08	1.08	3.29E-08	1.04	7.83E-09
Pik3ap1	-1.18	4.51E-03	-1.85	4.15E-04	-1.78	1.95E-04
Pik3r1	-1.08	4.26E-08	-1.30	3.34E-08	-1.02	3.63E-08
Pik3r5	1.43	3.33E-08	1.40	9.58E-08	1.27	4.32E-08
Pja2	0.98	2.69E-08	1.02	5.11E-08	1.16	3.87E-09
Pla2g4c	1.47	2.31E-03	2.10	3.91E-04	1.48	1.97E-03
Plagl1	-3.29	1.79E-03	-3.88	1.23E-03	-5.68	2.03E-05
Plau	-1.29	2.17E-02	1.23	4.54E-02	-1.22	2.60E-02
Plaur	-2.88	1.06E-04	-4.17	1.30E-05	-4.21	3.51E-06
Plcb3	1.57	2.71E-06	1.69	4.08E-06	1.31	1.08E-05

Plcxd2	-1.91	3.84E-08	-2.24	3.49E-08	-2.62	2.09E-09
Plekhg5	1.17	1.11E-04	0.92	1.68E-03	1.03	2.67E-04
Plekhh1	1.24	6.20E-03	1.20	1.44E-02	1.21	6.44E-03
Plin3	1.05	5.19E-07	1.31	2.48E-07	1.26	7.68E-08
Plk2	-2.38	2.54E-04	-3.13	7.22E-05	-4.38	1.22E-06
Plk3	-1.60	4.47E-06	-1.99	1.92E-06	-2.09	3.41E-07
Plk4	-1.58	1.82E-05	-1.90	1.01E-05	-1.87	3.45E-06
Pllp	1.86	4.61E-04	1.07	3.19E-02	2.59	2.66E-05
Plod3	1.61	1.83E-08	1.58	4.97E-08	1.77	4.31E-09
Plp1	1.15	1.38E-06	1.38	8.98E-07	1.31	3.42E-07
Plscr4	1.51	1.84E-02	2.82	6.78E-04	1.98	3.35E-03
Plxna1	-0.77	1.16E-05	-1.02	3.16E-06	-1.68	1.39E-08
Pmaip1	-1.98	9.20E-04	-2.47	4.15E-04	-2.13	4.87E-04
Pmepa1	-1.33	3.07E-08	-1.46	4.33E-08	-1.89	1.34E-09
Pno1	-1.74	8.02E-06	-1.72	2.32E-05	-2.24	7.02E-07
Pnpla8	-1.50	6.74E-07	-1.73	5.88E-07	-1.67	1.95E-07
Pnrc1	-1.27	3.13E-07	-1.53	2.00E-07	-1.20	3.39E-07
Poc1a	-1.06	1.17E-02	-1.22	9.87E-03	-1.51	1.03E-03
Poldip3	-0.95	6.22E-08	-1.03	9.19E-08	-1.01	2.17E-08
Polg	-1.02	3.98E-08	-1.15	4.55E-08	-1.01	2.28E-08
Polg2	-1.46	1.38E-07	-1.87	6.54E-08	-1.85	1.36E-08
Polk	1.03	1.62E-05	1.21	1.19E-05	1.06	1.08E-05
Poll	1.01	3.14E-05	1.15	2.71E-05	1.16	7.84E-06
Polr2d	-1.17	1.98E-06	-1.38	1.48E-06	-1.58	1.18E-07
Pom121	-1.00	7.88E-08	-1.11	9.44E-08	-1.27	7.30E-09
Pomk	1.08	1.24E-06	1.19	1.52E-06	1.27	2.40E-07
Pop4	-1.12	4.93E-06	-1.11	1.52E-05	-1.19	2.47E-06
Pou2f2	1.05	2.71E-05	1.09	5.13E-05	1.09	1.69E-05
Ppfia1	-0.91	1.64E-08	-1.04	1.74E-08	-1.14	1.46E-09
Ppil4	-1.15	1.09E-07	-1.18	2.29E-07	-1.16	5.88E-08
Ppm1e	1.25	1.31E-04	1.17	5.45E-04	1.09	3.41E-04
Ppm1m	1.75	6.18E-08	1.68	2.11E-07	1.44	1.72E-07
Ppp1r13l	2.39	2.49E-06	2.55	4.12E-06	1.43	1.68E-04
Ppp1r15a	-1.83	3.72E-07	-2.34	1.48E-07	-2.33	3.51E-08
Ppp1r16b	-1.91	6.18E-08	-2.13	7.55E-08	-1.05	5.67E-06
Ppp1r18os	1.24	3.26E-02	1.66	1.26E-02	1.72	4.75E-03
Ppp1r3e	1.64	2.55E-08	1.59	7.76E-08	1.30	7.85E-08
Ppp1r3f	1.75	7.94E-09	1.73	2.01E-08	1.46	1.07E-08

Ppp1r3fos	1.91	1.73E-04	2.39	7.08E-05	1.05	1.07E-02
Ppp1r9b	1.06	5.86E-08	0.99	2.43E-07	1.02	4.40E-08
Ppp2ca	-1.45	1.12E-06	-1.79	5.77E-07	-1.94	7.25E-08
Ppp2r1b	-1.00	7.56E-08	-1.16	7.33E-08	-1.28	7.20E-09
Ppp2r2a	-1.04	2.36E-07	-1.07	4.95E-07	-1.05	1.41E-07
Ppp2r2d	-1.25	6.06E-07	-1.36	8.54E-07	-1.44	1.32E-07
Ppp2r3a	1.21	1.54E-05	1.55	5.16E-06	1.30	6.46E-06
Ppp3r1	-1.22	9.07E-07	-1.50	4.93E-07	-1.32	3.41E-07
Pptc7	-0.94	1.17E-08	-1.04	1.56E-08	-1.02	2.83E-09
Prdm1	0.97	9.07E-07	1.28	2.74E-07	1.27	6.87E-08
Prdm8	-1.92	1.88E-03	-2.38	9.23E-04	-1.53	7.69E-03
Prdx6	-1.42	6.13E-09	-1.58	8.67E-09	-1.83	4.66E-10
Prep	-0.99	4.00E-08	-1.02	8.10E-08	-1.38	2.03E-09
Prkab2	-0.94	4.99E-06	-1.06	4.80E-06	-1.87	1.25E-08
Prkar1b	2.63	4.17E-06	2.89	5.17E-06	2.00	3.55E-05
Prkd2	1.08	6.89E-09	1.06	1.74E-08	1.75	1.18E-10
Prkx	-0.95	4.07E-07	-1.07	4.21E-07	-1.11	7.70E-08
Prlr	-1.77	6.88E-03	-2.01	6.39E-03	-1.85	4.71E-03
Prmt2	2.01	2.49E-08	1.70	1.86E-07	1.85	2.23E-08
Pros1	1.73	1.24E-03	2.15	5.77E-04	1.06	2.39E-02
Proser3	2.13	2.03E-08	2.16	4.51E-08	2.93	1.04E-09
Prox2	0.99	6.81E-04	1.43	9.50E-05	1.01	5.46E-04
Prpf38a	-1.14	5.02E-08	-1.23	7.74E-08	-1.24	1.46E-08
Prpf40b	1.08	1.51E-07	1.05	4.83E-07	1.11	7.45E-08
Prps1l3	-1.20	6.09E-04	-0.92	8.15E-03	-1.38	1.77E-04
Prr11	-2.06	2.42E-03	-1.77	1.26E-02	-1.90	3.80E-03
Prr12	0.96	1.32E-06	1.04	1.89E-06	1.02	6.16E-07
Prrg2	0.83	2.16E-03	1.06	8.62E-04	1.29	6.56E-05
Prrt2	2.50	1.10E-06	2.28	6.63E-06	2.53	7.43E-07
Prss36	0.96	3.91E-02	1.33	1.33E-02	1.35	5.74E-03
Psd	-2.00	4.64E-06	-1.93	1.71E-05	-2.53	4.91E-07
Psen1	-0.94	2.28E-07	-1.01	3.34E-07	-1.17	2.45E-08
Psmb8	0.94	2.33E-08	1.10	2.13E-08	1.74	2.02E-10
Psmb9	0.87	1.27E-06	1.14	4.14E-07	2.78	2.03E-10
Psmd9	-1.14	6.27E-06	-1.20	1.07E-05	-1.13	5.19E-06
Pspc1	-1.48	1.38E-07	-1.72	1.23E-07	-1.85	1.53E-08
Pstk	2.16	5.36E-05	2.24	1.01E-04	2.10	5.67E-05
Pstpip2	-2.02	1.75E-04	-2.22	2.04E-04	-1.66	7.15E-04

Ptbp1	-1.25	8.67E-09	-1.42	1.01E-08	-1.47	1.20E-09
Ptbp2	-1.06	2.82E-07	-1.15	3.87E-07	-1.14	1.01E-07
Ptdss2	1.33	5.45E-07	1.38	1.11E-06	1.45	1.85E-07
Ptp4a1	-2.97	2.56E-07	-3.63	1.53E-07	-3.20	9.56E-08
Ptpn22	-1.20	2.12E-08	-1.40	2.07E-08	-1.42	2.99E-09
Ptpru	-1.72	2.32E-02	-2.12	1.38E-02	-2.23	4.70E-03
Ptrf	-2.50	4.12E-04	-1.59	1.78E-02	-2.11	1.33E-03
Pts	1.12	4.65E-07	0.90	7.88E-06	1.59	1.90E-08
Pura	0.90	7.63E-07	1.06	5.48E-07	1.18	5.65E-08
Pvrl1	-1.64	1.67E-02	-2.34	3.98E-03	-2.43	1.28E-03
Pwwp2b	-1.84	6.19E-05	-2.19	3.94E-05	-2.65	2.30E-06
Pxmp4	1.34	6.70E-09	1.55	7.67E-09	1.37	2.24E-09
Pygl	-1.90	1.98E-04	-3.19	7.24E-06	-2.39	2.59E-05
Pyhin1	0.87	1.27E-07	1.03	9.85E-08	1.64	8.28E-10
Qk	-1.14	3.72E-07	-1.23	5.26E-07	-1.20	1.62E-07
Qprt	1.47	4.02E-09	1.47	8.67E-09	2.09	1.43E-10
Qrich2	0.98	4.10E-03	1.46	5.49E-04	1.52	1.44E-04
R74862	1.28	1.51E-04	1.56	7.53E-05	1.83	6.04E-06
Rab11fip5	-1.55	2.42E-05	-1.60	4.89E-05	-1.77	6.45E-06
Rab5a	-1.03	3.74E-06	-0.99	1.43E-05	-1.05	2.62E-06
Rab5b	0.91	6.72E-07	1.21	1.88E-07	1.20	4.55E-08
Rab6b	1.91	7.85E-09	1.98	1.49E-08	2.12	1.43E-09
Rabgap1l	1.71	1.67E-09	1.81	2.88E-09	1.10	7.34E-09
Racgap1	1.54	8.60E-08	1.04	5.26E-06	1.18	4.94E-07
Rad54b	-1.76	2.64E-03	-1.34	2.56E-02	-1.56	5.37E-03
Ramp3	-3.40	8.51E-04	-5.36	5.92E-05	-6.28	4.77E-06
Ranbp2	-1.18	3.46E-07	-1.24	6.36E-07	-1.22	1.88E-07
Rap1b	-1.16	6.59E-07	-1.27	8.56E-07	-1.12	6.21E-07
Rap1gap2	-3.21	1.87E-02	-3.98	1.07E-02	-4.69	1.64E-03
Raph1	-1.68	8.55E-08	-1.81	1.27E-07	-1.49	1.40E-07
Rarg	1.53	8.81E-08	1.76	8.23E-08	1.45	7.80E-08
Rasal1	-1.95	1.41E-06	-2.38	7.60E-07	-2.93	3.54E-08
Rasgef1b	-2.25	1.16E-05	-2.88	3.98E-06	-3.22	4.12E-07
Rasgrp4	-2.93	8.38E-03	-3.89	2.85E-03	-4.59	3.30E-04
Rassf3	-1.36	1.74E-07	-1.65	1.13E-07	-1.54	4.21E-08
Rassf8	-2.08	5.92E-05	-2.44	4.23E-05	-1.84	1.41E-04
Rbbp8	-1.86	1.32E-07	-2.21	9.65E-08	-2.47	9.15E-09
Rbbp9	1.47	1.50E-07	1.25	1.47E-06	1.89	1.37E-08

Rbm12	-2.12	5.14E-04	-2.35	5.63E-04	-2.32	2.25E-04
Rbm14	-1.37	1.96E-05	-1.51	2.42E-05	-1.17	6.57E-05
Rbm18	-1.04	2.97E-08	-1.12	4.62E-08	-1.07	1.22E-08
Rbm20	1.12	3.01E-02	1.22	3.48E-02	1.60	3.68E-03
Rbm27	-1.09	3.27E-07	-1.14	6.10E-07	-1.14	1.49E-07
Rbm3	-1.09	8.52E-08	-1.29	6.99E-08	-1.37	9.28E-09
Rbm39	-1.07	1.15E-07	-1.11	2.26E-07	-1.05	8.29E-08
Rbpj	-1.46	3.97E-07	-1.49	9.37E-07	-1.59	1.38E-07
Rbpms	2.60	8.71E-05	2.63	1.97E-04	1.51	4.45E-03
Rcl1	-1.27	4.79E-08	-1.26	1.34E-07	-1.92	1.43E-09
Rcn1	2.32	3.97E-08	2.51	5.78E-08	1.27	3.30E-06
Rcor3	1.38	4.31E-08	1.36	1.22E-07	1.59	8.14E-09
Rdh5	1.75	6.21E-08	1.63	2.72E-07	2.38	3.77E-09
Rdm1	1.83	1.50E-07	1.73	6.14E-07	2.20	2.17E-08
Recql4	-2.21	1.11E-05	-2.74	4.97E-06	-2.66	1.81E-06
Rel	-2.14	3.23E-07	-2.56	2.23E-07	-2.31	1.18E-07
Rela	-1.09	2.18E-08	-1.25	2.35E-08	-1.10	9.78E-09
Relb	-2.16	8.81E-08	-2.50	8.23E-08	-2.70	9.54E-09
Rell1	-1.54	1.66E-07	-2.01	6.66E-08	-2.34	4.40E-09
Relt	1.02	1.38E-07	1.02	3.76E-07	1.15	3.29E-08
Rem2	-1.77	1.75E-02	-1.63	4.50E-02	-1.84	1.29E-02
Reps1	-1.63	1.79E-08	-1.90	1.74E-08	-1.96	2.21E-09
Rest	-1.17	2.36E-07	-1.39	1.74E-07	-1.17	1.67E-07
Rfc3	-1.41	1.71E-05	-1.40	5.04E-05	-1.52	7.84E-06
Rfesd	1.19	1.58E-05	1.32	1.90E-05	1.89	2.45E-07
Rgl1	-2.94	2.46E-06	-2.99	5.92E-06	-3.07	1.32E-06
Rgs14	0.94	8.68E-08	1.01	1.42E-07	1.24	6.75E-09
Rgs16	-2.55	8.80E-03	-3.08	5.59E-03	-4.09	2.92E-04
Rgs2	-3.01	5.60E-05	-4.19	9.25E-06	-4.52	1.40E-06
Rhbdf1	-2.41	6.79E-03	-2.91	4.28E-03	-3.06	1.24E-03
Rhbdl3	1.35	2.14E-05	1.12	2.52E-04	1.04	1.64E-04
Rhod	-2.15	4.37E-04	-3.14	5.35E-05	-1.36	9.29E-03
Rhog	-1.23	1.48E-08	-1.44	1.41E-08	-1.45	2.04E-09
Rhpn2	-2.94	7.78E-05	-2.80	2.89E-04	-4.10	3.75E-06
Rilpl2	-0.92	4.94E-07	-1.33	8.25E-08	-1.09	8.24E-08
Rin2	-2.16	3.01E-04	-3.49	1.57E-05	-3.74	2.50E-06
Riok1	-1.81	2.33E-07	-2.08	2.18E-07	-2.30	2.28E-08
Ripk2	-1.82	5.78E-08	-1.93	9.81E-08	-1.81	3.40E-08

Rlf	-1.34	1.88E-07	-1.47	2.43E-07	-1.36	1.12E-07
Rlim	-1.31	2.05E-07	-1.41	2.97E-07	-1.51	4.21E-08
Rmi2	2.22	3.21E-08	2.52	3.52E-08	2.89	2.44E-09
Rmnd1	1.02	7.89E-09	1.16	8.67E-09	1.21	9.40E-10
Rnaset2b	1.06	9.63E-08	1.03	3.16E-07	1.04	6.68E-08
Rnd1	-1.41	3.34E-03	-1.56	3.60E-03	-1.79	5.45E-04
Rnf103	-1.15	2.53E-07	-1.32	2.34E-07	-1.10	2.62E-07
Rnf125	-2.22	1.38E-06	-2.74	6.74E-07	-2.70	1.96E-07
Rnf135	0.98	4.95E-04	1.41	6.51E-05	1.74	3.39E-06
Rnf145	-1.48	5.21E-08	-1.62	7.26E-08	-1.42	3.96E-08
Rnf149	-1.11	9.69E-08	-1.32	7.58E-08	-1.31	1.58E-08
Rnf185	-1.01	6.26E-06	-1.23	3.40E-06	-1.12	2.06E-06
Rnf19a	-1.78	3.33E-07	-2.09	2.60E-07	-2.08	6.48E-08
Rnf19b	-1.14	7.13E-07	-1.22	1.17E-06	-1.10	7.38E-07
Rnf2	-1.10	8.01E-07	-1.15	1.45E-06	-1.16	3.53E-07
Rnf208	-1.53	2.65E-02	-1.89	1.61E-02	-2.09	4.14E-03
Rnf24	-1.98	2.29E-07	-2.36	1.66E-07	-2.70	1.36E-08
Rnf32	1.61	1.35E-05	1.42	1.01E-04	2.63	1.56E-07
Rnf39	-2.76	8.28E-04	-3.50	3.26E-04	-1.55	2.80E-02
Rnf4	-1.22	1.50E-07	-1.28	2.68E-07	-1.34	4.35E-08
Rnf41	1.00	2.63E-09	1.08	4.20E-09	1.09	4.66E-10
Rnf5	1.52	6.57E-09	1.58	1.27E-08	1.51	2.57E-09
Rora	-1.97	2.90E-07	-2.40	1.75E-07	-2.04	1.55E-07
RP23-113O9.4	2.01	9.81E-04	1.35	2.45E-02	2.66	9.70E-05
RP23-286M3.5	2.12	7.73E-03	2.33	8.70E-03	3.29	3.23E-04
RP23-364E18.2	2.21	3.27E-05	2.80	1.20E-05	3.27	9.02E-07
RP23-441I24.5	1.14	5.54E-05	1.78	3.55E-06	1.94	4.55E-07
RP24-140D11.4	-2.45	1.30E-04	-1.97	1.61E-03	-2.19	2.77E-04
RP24-492O4.9	-1.27	3.64E-02	-1.43	3.59E-02	-1.99	2.50E-03
Rp2h	1.22	1.09E-07	1.30	1.73E-07	1.28	4.39E-08
Rpl22l1	-1.36	1.99E-07	-1.21	1.38E-06	-1.65	2.81E-08
Rpl23a	-1.02	2.49E-06	-0.99	8.70E-06	-1.37	1.52E-07
Rprd1a	1.11	7.05E-07	1.52	1.66E-07	1.34	1.02E-07
Rps6kl1	-1.86	5.62E-06	-2.19	3.79E-06	-2.03	2.04E-06
Rrad	-1.92	1.05E-07	-2.39	5.96E-08	-2.48	8.94E-09
Rras	0.89	1.78E-04	1.10	8.45E-05	1.21	1.22E-05
Rras2	-1.93	1.54E-07	-2.16	1.74E-07	-2.67	8.17E-09
Rrm2b	1.70	2.90E-08	1.77	5.29E-08	1.94	5.30E-09

Rrp12	-1.29	2.82E-08	-1.37	4.61E-08	-2.13	4.66E-10
Rrp15	-1.31	6.19E-07	-1.54	4.68E-07	-2.11	9.98E-09
Rslcan18	1.63	3.83E-02	2.27	1.26E-02	2.00	1.27E-02
Rsph10b	1.49	8.71E-04	1.94	2.80E-04	2.52	1.02E-05
Rufy4	1.48	7.47E-05	1.18	1.04E-03	1.75	1.51E-05
Rundc3b	-1.24	8.07E-07	-1.24	2.17E-06	-1.12	1.40E-06
Rwdd3	0.99	5.59E-04	1.11	5.61E-04	1.40	2.92E-05
Rybp	-1.35	4.97E-07	-1.49	6.14E-07	-1.53	1.26E-07
S100a10	1.36	1.65E-09	1.60	1.27E-09	1.69	8.35E-11
S100a11	1.12	3.90E-05	1.12	1.01E-04	1.09	4.11E-05
S1pr4	0.99	4.12E-08	1.10	4.94E-08	1.35	2.37E-09
Sag	1.47	5.85E-07	1.30	4.68E-06	2.09	2.40E-08
Samd1	1.69	1.59E-08	1.64	4.62E-08	1.67	7.73E-09
Samd14	1.23	2.29E-03	0.89	3.08E-02	1.50	4.90E-04
Samd8	-1.74	1.37E-07	-2.01	1.24E-07	-2.00	2.82E-08
Samd9l	0.75	1.04E-05	1.03	2.00E-06	1.82	5.77E-09
Samhd1	1.31	1.52E-08	1.61	1.05E-08	4.09	6.19E-12
Samsn1	-1.44	3.96E-06	-1.62	3.99E-06	-2.01	1.72E-07
Sap30bp	-1.08	1.53E-08	-1.19	2.01E-08	-1.14	4.59E-09
Sapcd2	-2.01	4.03E-03	-3.21	3.21E-04	-3.06	1.64E-04
Sarm1	2.04	6.04E-09	2.04	1.40E-08	1.84	4.44E-09
Sass6	0.75	2.08E-04	1.09	2.52E-05	1.12	6.11E-06
Sbsn	1.58	1.53E-07	1.38	1.15E-06	2.11	1.02E-08
Sbspon	1.73	1.30E-02	1.52	4.40E-02	2.30	1.99E-03
Scai	0.87	1.06E-07	1.10	5.48E-08	1.16	7.30E-09
Scamp1	-1.85	9.62E-05	-2.39	2.97E-05	-3.07	1.01E-06
Scarf1	2.10	6.00E-07	2.64	2.68E-07	2.49	1.03E-07
Scd1	-1.24	4.07E-04	-1.94	2.68E-05	-1.43	1.09E-04
Scd2	-2.17	1.80E-07	-2.68	1.02E-07	-2.85	1.38E-08
Scfd2	-0.79	1.68E-05	-1.05	4.38E-06	-1.14	5.99E-07
Scn11a	-1.36	3.91E-02	-3.08	4.97E-04	-2.07	3.37E-03
Scrn3	1.11	3.71E-06	0.96	3.48E-05	1.61	1.20E-07
Scrt1	-1.73	4.39E-03	-1.78	7.51E-03	-1.32	2.00E-02
Sdad1	-1.06	2.37E-08	-1.11	4.51E-08	-1.28	2.99E-09
Sdc1	-1.56	3.07E-02	-2.39	5.29E-03	-2.67	1.05E-03
Sde2	-1.23	1.95E-07	-1.47	1.38E-07	-1.38	5.00E-08
Sdhaf3	1.50	5.92E-06	1.43	2.31E-05	1.43	7.21E-06
Sec14l1	1.13	1.79E-06	1.17	3.60E-06	1.22	6.93E-07

Sec24d	-1.06	3.85E-07	-1.11	7.14E-07	-1.62	9.07E-09
Sec62	-1.06	6.47E-08	-1.05	1.73E-07	-1.08	3.28E-08
Sele	0.80	8.25E-03	1.65	1.01E-04	2.57	6.78E-07
Selk	-1.18	2.56E-08	-1.31	3.33E-08	-1.30	6.36E-09
Sell	1.71	7.11E-10	1.76	1.11E-09	2.54	8.65E-12
Selo	1.21	3.74E-08	1.22	8.68E-08	1.35	8.78E-09
Senp8	2.18	3.07E-07	1.98	1.82E-06	2.67	4.02E-08
Sepn1	-1.89	1.71E-06	-2.07	2.21E-06	-2.66	7.16E-08
Sept4	2.49	7.96E-07	2.38	3.16E-06	2.00	4.07E-06
Serf1	1.95	8.85E-05	1.89	2.85E-04	1.34	1.40E-03
Serinc1	-1.51	1.88E-07	-1.65	2.54E-07	-1.57	8.57E-08
Sertad3	1.53	1.57E-08	1.80	1.47E-08	1.66	3.88E-09
Sesn2	-1.68	3.45E-05	-2.25	8.04E-06	-2.56	7.64E-07
Sf3b4	-0.92	1.31E-07	-1.02	1.61E-07	-1.12	1.71E-08
Sfmbt1	-1.18	5.49E-07	-1.28	7.39E-07	-1.23	2.68E-07
Sfpq	-1.31	5.78E-08	-1.33	1.32E-07	-1.41	1.85E-08
Sfxn4	1.32	1.84E-06	1.66	7.51E-07	1.95	5.03E-08
Sgip1	-2.04	6.48E-04	-2.19	9.07E-04	-2.49	1.19E-04
Sgms1	-1.94	5.72E-07	-2.27	4.39E-07	-1.39	7.56E-06
Sgtb	-2.75	6.26E-06	-3.89	9.66E-07	-4.03	1.82E-07
Sh2d2a	-1.74	4.64E-08	-2.00	4.71E-08	-1.48	9.56E-08
Sh2d3c	2.19	5.89E-09	2.13	1.59E-08	2.47	9.32E-10
Sh2d5	1.66	8.82E-03	1.88	8.31E-03	2.12	1.63E-03
Sh3d21	-1.12	1.00E-02	-1.11	1.96E-02	-1.05	1.32E-02
Sh3pxd2a	-1.19	1.21E-08	-1.27	1.97E-08	-1.37	1.97E-09
Shb	-2.22	4.13E-06	-2.77	1.85E-06	-3.95	2.56E-08
Shcbp1	-2.73	1.05E-02	-2.84	1.57E-02	-3.77	1.14E-03
Shd	-1.99	1.82E-02	-2.42	1.18E-02	-2.13	1.17E-02
Shisa8	1.59	1.63E-03	1.78	1.68E-03	1.67	1.06E-03
Siah2	-1.29	3.19E-07	-1.46	3.10E-07	-1.46	7.72E-08
Sidt2	-1.02	2.99E-08	-1.15	3.52E-08	-1.13	7.11E-09
Sigirr	1.81	2.63E-09	1.68	8.67E-09	2.18	2.32E-10
Sik1	-2.62	3.97E-06	-3.46	1.10E-06	-4.13	6.38E-08
Sike1	1.52	2.33E-08	1.71	2.71E-08	1.84	2.89E-09
Sirt3	1.03	8.94E-05	0.94	4.52E-04	1.18	2.28E-05
Sirt5	1.38	2.61E-05	1.89	5.15E-06	1.46	1.36E-05
Sirt6	1.23	1.45E-07	1.07	1.11E-06	1.45	2.43E-08
Six1	-2.72	4.82E-03	-4.71	2.08E-04	-5.58	1.65E-05

Six4	-3.06	1.02E-03	-4.31	1.81E-04	-5.17	1.27E-05
Ska3	-2.18	3.37E-03	-2.83	1.20E-03	-3.00	2.93E-04
Ski	-0.95	2.08E-09	-1.12	1.95E-09	-1.04	2.83E-10
Skil	-2.04	2.13E-07	-2.33	2.06E-07	-2.40	3.84E-08
Slamf6	2.09	1.65E-09	2.25	2.25E-09	1.09	2.80E-08
Slbp	-0.85	7.51E-05	-1.10	2.34E-05	-1.51	4.68E-07
Slc15a1	-2.85	3.17E-03	-3.09	3.92E-03	-3.56	5.76E-04
Slc16a1	-1.64	8.74E-07	-1.98	5.16E-07	-2.72	1.05E-08
Slc16a13	1.07	1.75E-04	0.87	1.94E-03	1.00	2.63E-04
Slc16a3	-1.40	3.07E-04	-1.79	1.12E-04	-1.63	7.99E-05
Slc16a4	1.10	1.01E-02	1.44	3.74E-03	1.05	1.19E-02
Slc17a5	1.28	6.13E-09	1.26	1.58E-08	1.52	7.15E-10
Slc17a9	2.80	4.70E-09	3.01	7.55E-09	1.52	1.47E-07
Slc19a2	-0.98	1.02E-04	-1.04	1.57E-04	-1.04	5.20E-05
Slc1a4	-3.44	8.00E-04	-2.82	6.74E-03	-3.78	3.46E-04
Slc22a15	-1.61	1.78E-04	-1.10	6.15E-03	-2.06	1.91E-05
Slc22a23	1.11	3.38E-04	1.09	9.34E-04	2.58	2.20E-07
Slc23a2	-1.03	1.07E-07	-1.12	1.54E-07	-1.08	4.45E-08
Slc25a19	1.02	2.35E-09	1.01	5.69E-09	1.04	5.75E-10
Slc25a23	1.07	7.19E-07	1.17	1.02E-06	1.04	7.09E-07
Slc25a25	-0.93	1.29E-08	-1.08	1.27E-08	-1.44	3.10E-10
Slc25a27	2.65	1.38E-08	2.56	4.17E-08	2.98	2.53E-09
Slc25a36	-1.43	2.82E-08	-1.68	2.55E-08	-1.56	7.46E-09
Slc25a45	1.08	5.61E-09	1.22	7.05E-09	1.46	2.93E-10
Slc26a10	-1.66	2.70E-05	-2.22	6.28E-06	-1.39	1.03E-04
Slc26a6	0.83	1.78E-04	1.10	4.38E-05	1.14	9.75E-06
Slc27a3	2.29	9.15E-06	2.95	2.94E-06	2.76	1.44E-06
Slc27a5	1.26	2.21E-03	1.41	2.29E-03	1.88	9.44E-05
Slc2a4rg-ps	1.58	5.76E-09	1.73	8.39E-09	2.09	3.29E-10
Slc30a1	-1.55	5.71E-07	-1.66	9.15E-07	-1.62	2.94E-07
Slc31a1	-1.66	2.71E-07	-1.82	3.62E-07	-2.19	2.04E-08
Slc35a5	0.85	1.55E-05	1.06	6.43E-06	1.31	2.98E-07
Slc35d1	-1.60	1.68E-07	-1.69	2.87E-07	-2.00	1.84E-08
Slc35d2	1.28	4.65E-07	1.15	3.05E-06	1.94	1.18E-08
Slc35f5	-1.87	1.80E-03	-2.22	1.18E-03	-1.86	1.71E-03
Slc38a10	-1.01	1.52E-07	-1.13	1.67E-07	-1.24	1.95E-08
Slc38a2	-1.26	1.67E-07	-1.36	2.50E-07	-1.76	8.46E-09
Slc38a3	-2.95	3.51E-04	-3.64	1.65E-04	-3.42	9.40E-05

Slc39a2	1.35	1.07E-04	1.77	2.91E-05	1.67	1.53E-05
Slc3a2	-1.58	1.84E-07	-1.86	1.42E-07	-1.62	9.69E-08
Slc4a10	2.34	1.07E-06	2.72	8.61E-07	2.82	1.62E-07
Slc4a4	-1.88	1.36E-02	-2.96	1.56E-03	-2.76	1.03E-03
Slc5a2	-2.92	2.93E-04	-3.32	2.68E-04	-4.80	3.84E-06
Slc6a19	1.27	2.37E-04	0.80	1.20E-02	2.73	2.90E-07
Slc6a19os	2.60	2.82E-03	3.10	1.87E-03	1.54	4.86E-02
Slc6a8	-1.21	5.98E-03	-1.45	3.99E-03	-1.23	5.01E-03
Slc7a1	-1.36	8.63E-09	-1.49	1.27E-08	-2.18	1.85E-10
Slc7a3	1.23	2.05E-03	2.08	8.85E-05	1.70	1.57E-04
Slc7a5	-1.90	3.01E-06	-2.02	4.98E-06	-3.68	1.03E-08
Slfn1	1.06	1.13E-08	1.21	1.28E-08	1.67	2.63E-10
Slk	-1.05	4.31E-07	-1.14	5.89E-07	-1.23	8.29E-08
Slpi	1.14	2.25E-02	1.56	7.29E-03	1.42	5.91E-03
Slx1b	1.21	2.97E-06	1.26	5.76E-06	1.31	1.14E-06
Smad6	-2.27	9.25E-04	-3.63	5.67E-05	-1.59	9.01E-03
Smad7	-1.37	9.93E-09	-1.52	1.27E-08	-1.34	4.76E-09
Smarca5	-1.07	1.27E-06	-1.16	1.76E-06	-1.23	2.89E-07
Smarcd3	2.32	7.87E-06	2.11	4.61E-05	3.34	2.66E-07
Smarce1	-1.04	2.33E-09	-1.04	5.61E-09	-1.15	3.54E-10
Smim13	-1.25	1.64E-06	-1.40	1.87E-06	-1.41	4.61E-07
Smim3	-2.00	1.80E-03	-3.15	1.36E-04	-2.89	9.16E-05
Smndc1	-1.04	9.38E-07	-1.08	1.92E-06	-1.11	4.00E-07
Smox	-1.56	3.38E-07	-1.85	2.36E-07	-2.06	2.40E-08
Snn	1.62	1.30E-08	1.53	4.51E-08	1.31	2.70E-08
Snrpd1	-1.08	2.33E-06	-1.12	4.96E-06	-1.82	2.29E-08
Snx18	-1.88	4.07E-08	-2.25	3.20E-08	-2.40	3.65E-09
Snx32	2.50	1.28E-07	2.39	4.67E-07	2.81	3.12E-08
Snx9	-0.92	7.48E-04	-1.07	5.42E-04	-1.38	2.29E-05
Socs1	2.30	4.12E-08	2.17	1.51E-07	3.03	2.99E-09
Sorbs3	1.53	5.80E-06	1.44	2.55E-05	1.37	1.19E-05
Sord	-1.12	2.20E-05	-1.05	9.63E-05	-1.52	1.30E-06
Sos1	-1.10	3.53E-08	-1.15	6.86E-08	-1.20	9.74E-09
Sowahc	-1.07	2.17E-02	-1.74	2.26E-03	-1.64	1.44E-03
Sox4	-1.71	1.82E-07	-2.02	1.39E-07	-2.14	2.02E-08
Sp3os	2.13	1.04E-06	2.16	2.55E-06	2.43	2.54E-07
Spag1	0.89	1.07E-05	1.16	3.29E-06	1.36	2.24E-07
Spag4	-2.86	7.24E-05	-3.69	2.29E-05	-4.79	6.95E-07

Spag5	-2.14	1.64E-04	-2.29	2.36E-04	-3.94	7.38E-07
Spag9	-1.19	5.31E-08	-1.19	1.31E-07	-1.30	1.48E-08
Spata13	-1.36	1.17E-08	-1.57	1.22E-08	-1.24	9.74E-09
Spata2	-1.35	1.03E-07	-1.50	1.27E-07	-1.61	1.62E-08
Spata32	-2.25	2.59E-02	-2.48	2.82E-02	-2.33	2.03E-02
Spata9	1.53	6.70E-03	1.97	2.75E-03	2.41	2.37E-04
Spatc1	1.13	4.81E-02	1.46	2.46E-02	1.54	9.17E-03
Spatc1l	2.04	6.82E-03	2.11	1.09E-02	2.04	6.22E-03
Spc25	1.15	1.08E-02	1.59	2.91E-03	1.29	4.90E-03
Spdl1	-1.55	1.12E-04	-1.66	1.67E-04	-1.88	1.82E-05
Spef1	1.59	7.14E-05	1.09	3.08E-03	1.70	3.63E-05
Spice1	1.24	4.36E-09	1.38	5.65E-09	1.83	1.18E-10
Spon1	-2.64	7.60E-07	-3.35	3.09E-07	-3.90	2.24E-08
Sppl2b	1.07	6.51E-06	0.87	9.39E-05	1.22	1.66E-06
Spred1	-1.88	2.16E-06	-2.17	1.86E-06	-1.73	3.59E-06
Spred2	-2.43	3.19E-07	-2.95	1.91E-07	-3.09	3.04E-08
Sprtn	-0.94	1.40E-08	-1.14	1.05E-08	-1.11	1.95E-09
Spsb1	-1.97	1.09E-07	-2.55	4.74E-08	-2.20	2.77E-08
Spty2d1	-1.13	2.65E-06	-1.28	2.70E-06	-1.24	9.49E-07
Sqrdl	1.38	1.33E-07	1.26	7.08E-07	1.27	1.63E-07
Sqstm1	-1.09	4.70E-09	-1.18	7.05E-09	-1.21	7.25E-10
Srebf1	-0.91	7.75E-07	-1.04	7.24E-07	-1.00	2.61E-07
Srek1	-0.98	6.39E-08	-1.05	9.87E-08	-1.05	2.17E-08
Srfbp1	-1.13	3.73E-07	-1.30	3.30E-07	-1.44	3.55E-08
Srgn	-1.77	4.69E-08	-2.05	4.54E-08	-1.17	7.74E-07
Srp54a	-1.41	2.42E-02	-2.12	4.44E-03	-2.41	7.31E-04
Srpr	-0.94	2.82E-09	-1.06	3.71E-09	-1.04	4.66E-10
Srr	0.88	1.66E-03	1.04	1.20E-03	1.22	1.22E-04
Srrd	-1.31	1.48E-05	-1.30	4.21E-05	-1.29	1.42E-05
Ss18	-1.46	3.21E-08	-1.61	4.41E-08	-1.42	2.04E-08
Ssh2	-1.28	4.19E-08	-1.27	1.08E-07	-1.28	2.20E-08
Stac3	1.87	5.15E-04	2.72	6.60E-05	2.11	1.77E-04
Stard3nl	1.14	2.44E-08	1.14	6.01E-08	1.28	5.15E-09
Stat4	1.06	4.17E-08	1.05	1.13E-07	1.00	3.41E-08
Stat5a	-2.36	3.67E-08	-2.78	3.20E-08	-2.77	5.87E-09
Stau1	-1.07	1.18E-07	-1.09	2.68E-07	-1.09	6.06E-08
Stil	-3.13	5.00E-04	-4.32	9.71E-05	-5.03	8.35E-06
Stk17b	-1.34	3.73E-07	-1.58	2.89E-07	-1.23	5.60E-07

Stkld1	1.13	2.80E-02	1.84	3.10E-03	1.66	2.59E-03
Stmn1	1.09	2.12E-07	1.11	4.85E-07	1.62	6.51E-09
Stom	-2.41	1.86E-04	-2.45	3.96E-04	-2.66	7.12E-05
Stoml1	1.04	2.28E-07	0.94	1.40E-06	1.50	8.77E-09
Ston1	1.24	1.67E-03	1.23	3.97E-03	1.53	3.16E-04
Strap	-1.02	1.52E-08	-1.05	3.07E-08	-1.29	1.34E-09
Strc	1.66	2.14E-04	1.58	7.57E-04	2.68	3.23E-06
Strip2	-2.24	1.16E-02	-1.94	4.22E-02	-3.23	9.33E-04
Stt3b	-1.20	6.37E-08	-1.30	9.63E-08	-1.43	1.02E-08
Stx11	-1.93	2.64E-05	-2.23	2.05E-05	-2.69	1.21E-06
Stx16	1.00	9.80E-09	1.07	1.53E-08	1.28	7.41E-10
Stx2	1.86	2.03E-08	1.81	5.65E-08	1.90	7.98E-09
Stx6	-1.11	7.23E-07	-1.31	5.24E-07	-1.25	1.89E-07
Stxbp1	1.51	3.98E-08	1.43	1.38E-07	1.91	3.73E-09
Stxbp4	1.17	9.04E-05	1.30	9.97E-05	1.37	1.95E-05
Sub1	-1.53	5.83E-08	-1.67	8.10E-08	-1.85	7.83E-09
Sult1a1	1.29	4.72E-04	1.45	4.61E-04	1.56	9.10E-05
Sult2b1	-1.37	5.80E-04	-1.25	2.53E-03	-1.02	4.31E-03
Sumf2	1.31	2.29E-07	1.25	8.65E-07	1.50	4.84E-08
Sumo1	-1.13	4.43E-08	-1.14	1.03E-07	-1.16	1.87E-08
Supt6	-0.97	5.60E-09	-1.01	9.41E-09	-1.12	7.13E-10
Supv3l1	-1.09	2.40E-06	-1.15	4.21E-06	-1.49	1.25E-07
Susd4	-1.08	1.12E-02	-0.95	3.94E-02	-1.48	1.34E-03
Susd6	-1.23	5.67E-09	-1.38	7.28E-09	-1.01	7.82E-09
Suv39h2	-1.38	1.38E-05	-1.45	2.52E-05	-1.95	5.76E-07
Syde1	1.50	1.28E-05	1.45	4.43E-05	1.47	1.26E-05
Syde2	-2.19	3.06E-04	-3.16	4.01E-05	-4.41	6.70E-07
Syf2	-1.19	6.13E-09	-1.25	1.05E-08	-1.11	3.73E-09
Syn1	1.06	5.72E-04	1.04	1.56E-03	1.33	8.56E-05
Syn3	2.58	8.37E-07	2.96	7.48E-07	2.78	3.24E-07
Syne2	1.40	1.38E-08	1.43	2.82E-08	1.42	5.08E-09
Synj2	-1.20	1.53E-06	-1.11	7.71E-06	-1.53	1.45E-07
Sypl	-1.80	9.18E-06	-2.00	1.02E-05	-1.49	3.76E-05
Sys1	-1.20	1.68E-05	-1.36	1.61E-05	-1.51	1.88E-06
Sytl2	-2.59	1.59E-05	-3.10	9.49E-06	-3.15	2.35E-06
Sytl3	-3.07	4.71E-04	-3.46	4.64E-04	-2.31	3.33E-03
Tab3	-1.03	9.23E-06	-1.11	1.39E-05	-1.21	1.88E-06
Tacc1	-1.19	6.84E-08	-1.27	1.15E-07	-1.38	1.32E-08

Tacc3	-1.22	3.34E-06	-1.55	1.26E-06	-1.19	3.22E-06
Taco1os	-2.03	7.81E-03	-1.71	3.54E-02	-1.77	1.57E-02
Taf4b	-2.22	1.81E-07	-2.65	1.28E-07	-2.97	1.20E-08
Taf5l	-0.92	7.55E-04	-1.14	3.38E-04	-1.16	1.02E-04
Taf7	-1.96	2.23E-04	-1.42	5.23E-03	-1.59	9.66E-04
Tagap1	1.25	4.12E-08	1.16	1.70E-07	1.19	3.03E-08
Tagln	-0.87	3.21E-03	-1.13	1.15E-03	-1.00	1.07E-03
Tagln2	1.00	8.63E-09	1.11	1.14E-08	1.04	2.59E-09
Tagln3	3.16	3.96E-06	3.50	4.69E-06	3.63	9.34E-07
Tanc1	-1.27	4.31E-08	-1.26	1.13E-07	-1.35	1.45E-08
Tatdn2	-1.24	1.83E-07	-1.38	2.25E-07	-1.30	8.40E-08
Tbc1d10c	1.03	7.51E-07	1.10	1.21E-06	1.13	2.39E-07
Tbc1d15	-1.65	1.25E-07	-1.82	1.58E-07	-1.84	3.28E-08
Tbc1d24	1.70	4.57E-07	1.78	8.27E-07	1.55	6.91E-07
Tbc1d30	-2.03	1.02E-07	-2.44	7.48E-08	-2.02	6.33E-08
Tbc1d4	-1.60	1.93E-06	-1.72	3.01E-06	-1.39	5.18E-06
Tbxa2r	0.85	1.48E-06	1.04	7.37E-07	1.25	4.27E-08
Tbxas1	1.30	3.82E-02	1.38	4.79E-02	2.60	4.50E-04
Tceal1	-3.18	2.09E-03	-4.41	4.36E-04	-5.66	1.89E-05
Tceal3	-2.13	4.60E-03	-3.44	3.36E-04	-4.92	5.52E-06
Tcp11l1	2.77	8.83E-04	1.57	4.99E-02	2.41	2.14E-03
Tcp11l2	-1.66	5.17E-08	-1.84	6.86E-08	-1.72	2.20E-08
Tctex1d1	-1.48	1.05E-02	-2.29	1.27E-03	-1.75	3.34E-03
Tdg	-1.38	8.42E-08	-1.50	1.14E-07	-1.59	1.64E-08
Tdp2	-1.16	1.20E-06	-1.22	2.26E-06	-1.33	2.89E-07
Tdrkh	1.27	6.50E-08	1.71	2.37E-08	1.57	7.42E-09
Tec	2.15	5.48E-09	2.26	8.76E-09	1.50	2.21E-08
Tecpr1	1.31	1.87E-08	1.37	3.57E-08	1.24	1.30E-08
Teddm3	2.21	5.59E-03	1.65	4.83E-02	2.27	4.29E-03
Tespa1	-1.53	4.12E-08	-1.75	4.41E-08	-1.34	6.15E-08
Tex15	-2.14	6.65E-04	-2.18	1.35E-03	-2.57	1.40E-04
Tex22	1.39	3.12E-03	1.68	1.88E-03	1.54	1.40E-03
Tex30	-1.18	8.52E-06	-1.33	8.72E-06	-1.51	8.08E-07
Tfap4	1.64	5.89E-09	1.53	1.96E-08	1.50	3.73E-09
Tfb1m	1.02	2.63E-04	0.96	9.87E-04	1.35	2.19E-05
Tfb2m	-1.54	5.99E-07	-1.59	1.25E-06	-1.75	1.46E-07
Tfcp2	1.28	7.40E-08	1.08	7.41E-07	1.51	1.29E-08
Tfe3	-1.14	8.69E-08	-1.22	1.40E-07	-1.27	2.24E-08

Tfip11	-1.19	9.89E-09	-1.47	7.55E-09	-1.35	1.57E-09
Tgfb1i1	0.74	5.18E-04	1.10	5.64E-05	1.31	3.84E-06
Tgfb3	-2.75	2.57E-04	-4.58	1.01E-05	-3.66	2.09E-05
Tgif1	-2.55	5.83E-07	-3.15	2.96E-07	-2.92	1.35E-07
Tgif2	-2.57	1.48E-08	-3.29	8.67E-09	-3.80	4.70E-10
Tgm1	-1.86	4.53E-02	-2.20	3.59E-02	-2.38	1.23E-02
Tgoln1	-1.31	7.35E-08	-1.42	1.08E-07	-1.45	1.99E-08
Tha1	1.71	5.86E-06	1.47	5.80E-05	2.47	1.94E-07
Thap2	1.79	5.81E-08	2.00	7.05E-08	1.90	2.09E-08
Thap3	1.62	5.50E-07	1.64	1.37E-06	2.02	6.00E-08
Thbs1	-2.51	9.95E-03	-2.71	1.21E-02	-3.47	1.07E-03
Them6	1.06	4.46E-06	0.86	6.52E-05	1.18	1.34E-06
Thra	1.76	2.63E-09	1.83	5.57E-09	2.26	1.85E-10
Thumpd1	-1.05	1.01E-07	-1.15	1.38E-07	-1.29	1.25E-08
Tia1	1.51	6.82E-08	1.68	8.48E-08	1.65	1.97E-08
Ticrr	-2.72	1.34E-03	-3.50	4.93E-04	-3.90	7.21E-05
Tigit	-3.35	8.31E-03	-5.74	4.53E-04	-6.52	5.57E-05
Timm23	-1.25	5.67E-09	-1.31	9.75E-09	-1.52	5.47E-10
Timm8a2	1.05	9.59E-04	0.98	3.47E-03	1.82	9.64E-06
Timmdc1	0.96	4.55E-08	1.04	7.05E-08	1.13	7.58E-09
Tinf2	-1.07	1.18E-07	-1.33	6.52E-08	-1.07	7.09E-08
Tiprl	-1.47	4.37E-07	-1.80	2.46E-07	-1.75	7.21E-08
Tlcd2	-1.44	5.88E-03	-1.49	9.51E-03	-1.82	1.08E-03
Tle4	-1.65	1.30E-08	-1.81	1.74E-08	-1.53	9.58E-09
Tlr1	2.10	1.67E-09	2.28	2.53E-09	1.61	2.33E-09
Tm2d2	-1.06	2.28E-06	-1.14	3.50E-06	-1.16	7.85E-07
Tm6sf2	0.99	3.01E-02	1.67	2.81E-03	1.51	2.34E-03
Tm7sf2	1.51	1.57E-07	1.42	6.74E-07	1.26	4.78E-07
Tma16	-0.98	9.29E-05	-1.23	3.70E-05	-1.39	3.74E-06
Tmc3	1.44	9.89E-04	1.44	2.26E-03	2.04	5.51E-05
Tmc4	1.53	8.03E-09	1.76	8.67E-09	1.86	8.67E-10
Tmc6	1.11	3.94E-09	1.00	1.58E-08	1.24	5.94E-10
Tmc8	1.19	2.79E-08	1.09	1.18E-07	1.42	3.87E-09
Tmco6	1.24	2.64E-07	1.35	3.67E-07	1.64	1.93E-08
Tmem129	1.15	3.29E-07	1.20	6.49E-07	1.40	4.60E-08
Tmem132a	1.87	6.84E-03	2.69	1.32E-03	2.11	2.90E-03
Tmem143	1.50	7.72E-07	1.32	6.21E-06	1.86	9.06E-08
Tmem154	1.47	9.15E-05	1.67	8.66E-05	1.87	1.01E-05

Tmem194	1.14	4.22E-08	1.29	4.78E-08	1.60	2.08E-09
Tmem220	1.27	1.96E-02	2.25	1.10E-03	1.43	9.51E-03
Tmem221	2.63	1.34E-06	2.78	2.37E-06	3.25	1.67E-07
Tmem222	-1.07	6.53E-08	-1.19	8.39E-08	-1.29	9.63E-09
Tmem230	1.01	1.09E-07	0.97	3.97E-07	1.36	7.30E-09
Tmem248	-1.45	3.19E-08	-1.62	4.10E-08	-1.60	8.04E-09
Tmem251	-1.71	7.36E-03	-1.49	2.91E-02	-2.26	1.03E-03
Tmem38a	1.14	5.59E-05	1.08	2.21E-04	1.16	4.21E-05
Tmem71	1.35	1.96E-09	1.38	3.71E-09	2.11	3.75E-11
Tmem80	1.22	4.76E-09	1.27	8.67E-09	1.54	3.60E-10
Tmem88	-3.11	1.20E-03	-3.22	2.11E-03	-3.91	1.84E-04
Tmie	1.25	8.09E-07	1.40	8.76E-07	1.76	3.32E-08
Tmod4	1.50	3.73E-04	1.35	1.90E-03	1.73	1.04E-04
Tmprss13	3.22	1.63E-04	3.18	4.54E-04	4.37	1.07E-05
Tmtc1	2.24	1.40E-03	1.76	1.37E-02	2.77	2.55E-04
Tmtc4	1.24	4.97E-06	1.55	2.16E-06	1.66	3.13E-07
Tmx4	-1.05	4.08E-07	-1.14	5.94E-07	-1.06	2.70E-07
Tnfaip3	-3.11	2.53E-05	-4.37	3.99E-06	-4.63	6.62E-07
Tnfaip8	-1.82	7.35E-08	-2.07	7.79E-08	-2.88	1.56E-09
Tnfaip8l1	1.36	2.21E-07	1.41	4.61E-07	1.34	1.74E-07
Tnfrsf10b	-2.08	9.58E-07	-2.88	2.00E-07	-3.03	3.12E-08
Tnfrsf12a	-0.80	6.85E-03	-1.01	3.28E-03	-1.19	3.96E-04
Tnfrsf19	-4.23	2.67E-04	-3.96	1.06E-03	-5.54	2.51E-05
Tnfrsf1b	-2.02	1.03E-08	-2.75	5.23E-09	-2.26	2.02E-09
Tnfrsf9	-1.18	2.16E-02	-1.97	1.83E-03	-2.79	4.38E-05
Tnfsf11	-3.14	7.14E-04	-4.88	5.50E-05	-6.11	2.44E-06
Tnfsf4	-2.09	1.86E-04	-2.68	6.16E-05	-3.83	8.70E-07
Tnfsf8	3.15	2.83E-09	3.11	7.55E-09	1.85	3.68E-08
Tnip1	-1.57	1.06E-08	-1.69	1.74E-08	-1.60	3.97E-09
Tnip2	-1.08	1.03E-07	-1.26	9.05E-08	-1.32	1.29E-08
Tnk2	-2.04	2.56E-07	-2.48	1.59E-07	-2.04	1.74E-07
Tnn	-1.21	3.89E-03	-1.27	6.01E-03	-1.57	5.75E-04
Tnni1	-1.62	1.50E-02	-1.59	2.94E-02	-1.36	3.36E-02
Tnnt1	-1.64	1.41E-03	-1.33	1.15E-02	-1.78	6.94E-04
Tnnt3	1.09	2.90E-04	1.21	3.20E-04	1.46	2.28E-05
Tob1	-1.58	6.12E-07	-1.77	6.67E-07	-1.22	4.16E-06
Tob2	-2.16	1.92E-07	-2.78	8.25E-08	-3.01	9.61E-09
Tollip	-1.34	1.52E-07	-1.35	3.65E-07	-1.43	5.66E-08

Top1	-1.46	2.05E-07	-1.73	1.56E-07	-1.80	2.52E-08
Top2a	-1.81	6.12E-08	-1.94	9.55E-08	-2.76	1.62E-09
Topors	-1.03	4.21E-06	-1.15	4.50E-06	-1.17	1.09E-06
Tor4a	1.19	1.30E-08	1.21	2.86E-08	1.46	1.39E-09
Tox	-1.25	5.88E-08	-1.40	7.33E-08	-1.27	2.94E-08
Tox2	-2.23	6.27E-04	-2.22	1.50E-03	-1.26	2.25E-02
Tox4	-1.07	1.44E-07	-1.18	1.79E-07	-1.05	1.06E-07
Tpd52l2	-1.06	2.39E-08	-1.17	3.03E-08	-1.18	5.08E-09
Tpgs1	1.11	2.34E-05	0.99	1.48E-04	1.17	1.20E-05
Tpm4	-1.00	4.22E-07	-1.39	1.01E-07	-2.04	1.39E-09
Tpp2	-1.04	1.13E-07	-0.99	3.97E-07	-1.12	3.66E-08
Tppp	-2.02	1.68E-04	-2.48	8.03E-05	-1.97	1.77E-04
Traf3ip3	1.05	6.88E-08	1.14	9.97E-08	1.51	2.80E-09
Traip	-2.21	4.15E-06	-2.75	1.82E-06	-2.65	6.69E-07
Trav8-2	-0.97	2.31E-03	-1.82	4.46E-05	-1.04	1.26E-03
Trex1_1	-2.01	2.55E-03	-1.38	4.17E-02	-1.69	7.35E-03
Trib1	-2.04	4.46E-06	-2.31	4.25E-06	-3.34	5.20E-08
Trib3	1.84	4.51E-08	2.04	5.76E-08	1.80	2.84E-08
Trim13	-2.64	2.27E-04	-3.63	4.49E-05	-4.28	3.29E-06
Trim14	1.40	9.12E-08	1.32	3.55E-07	1.71	1.20E-08
Trim3	1.20	2.19E-06	1.24	4.64E-06	1.05	5.78E-06
Trim34a	1.78	2.63E-09	2.04	3.54E-09	2.81	5.00E-11
Trim36	-2.00	1.23E-05	-2.74	2.45E-06	-3.61	6.35E-08
Trim45	1.16	1.03E-02	1.44	5.42E-03	1.16	9.13E-03
Trim46	2.58	1.26E-05	2.50	4.39E-05	2.72	6.60E-06
Trim47	1.57	1.28E-03	1.39	6.20E-03	1.94	2.34E-04
Trim5	1.63	4.92E-06	1.97	2.77E-06	2.63	6.46E-08
Trim56	1.03	1.70E-08	1.20	1.65E-08	2.06	8.35E-11
Trim68	1.47	2.06E-07	1.48	5.17E-07	1.93	1.55E-08
Triobp	0.87	7.10E-06	1.05	3.99E-06	1.46	6.68E-08
Trip10	1.71	1.75E-07	2.10	1.05E-07	1.09	5.85E-06
Trmt61b	-1.02	4.75E-04	-1.09	6.56E-04	-1.50	1.68E-05
Trnt1	-1.50	1.94E-07	-1.79	1.36E-07	-1.62	6.62E-08
Trp53inp2	-2.65	2.65E-05	-3.71	4.31E-06	-3.96	6.72E-07
Trpm4	1.38	8.46E-08	1.27	4.20E-07	1.49	2.74E-08
Tsc22d2	-1.00	5.99E-08	-1.14	6.80E-08	-1.07	2.13E-08
Tshz1	-1.89	1.97E-08	-2.20	1.88E-08	-2.48	1.36E-09
Tspan17	1.02	2.74E-02	2.04	7.13E-04	1.36	4.86E-03

Tspan32	1.49	1.67E-09	1.61	2.53E-09	2.09	5.00E-11
Tspan32os	1.48	1.54E-02	1.97	5.49E-03	1.66	7.21E-03
Tspan9	-1.44	4.03E-06	-1.60	4.77E-06	-1.90	3.01E-07
Tspyl1	-1.10	2.54E-07	-1.21	3.34E-07	-1.23	7.12E-08
Tsr2	-1.39	1.61E-06	-1.54	1.89E-06	-1.58	4.16E-07
Tssk1	-1.11	3.19E-03	-0.96	1.53E-02	-1.87	5.21E-05
Tssk4	1.51	1.80E-04	1.68	1.89E-04	2.13	8.33E-06
Ttc30a1	1.48	1.68E-05	0.97	1.22E-03	1.08	2.01E-04
Ttc32	1.14	1.23E-05	1.03	7.73E-05	1.35	2.42E-06
Ttf1	0.86	1.52E-06	1.01	1.12E-06	1.10	1.43E-07
Ttyh2	1.03	2.65E-05	0.75	7.85E-04	1.42	1.33E-06
Ttyh3	1.14	4.70E-09	0.96	2.83E-08	1.42	3.97E-10
Tubb2a	-1.63	2.93E-06	-2.08	1.04E-06	-1.43	7.09E-06
Tulp3	1.67	2.89E-08	1.73	5.62E-08	1.39	6.04E-08
Twistnb	-1.31	4.78E-07	-1.34	1.08E-06	-1.49	1.14E-07
Twsg1	-1.51	6.09E-08	-1.65	8.40E-08	-1.79	9.74E-09
Txndc12	0.99	9.59E-07	1.13	9.62E-07	1.11	2.73E-07
Uba6	-0.99	9.24E-06	-1.03	1.83E-05	-1.21	1.26E-06
Ubald2	-1.22	7.31E-07	-1.51	3.67E-07	-1.39	1.77E-07
Ubb	-1.18	2.43E-08	-1.22	4.77E-08	-1.14	1.51E-08
Ubc	-1.63	9.51E-08	-1.83	1.05E-07	-1.77	2.90E-08
Ube2b	-1.45	2.57E-07	-1.48	5.89E-07	-1.62	7.11E-08
Ube2e3	-1.32	2.04E-07	-1.43	2.96E-07	-1.68	1.94E-08
Ube2j1	-1.16	1.21E-07	-1.31	1.28E-07	-1.33	2.52E-08
Ube2s	-1.95	4.66E-06	-2.17	5.13E-06	-2.41	5.78E-07
Ublcp1	-1.00	2.48E-05	-1.32	6.79E-06	-1.14	6.68E-06
Ubn1	-1.37	1.71E-08	-1.52	2.19E-08	-1.45	5.22E-09
Ubtd1	0.90	2.33E-05	1.13	9.61E-06	1.15	2.35E-06
Ubxn2a	-1.00	8.55E-08	-1.06	1.46E-07	-1.07	2.91E-08
Ubxn2b	1.42	6.30E-07	1.53	9.41E-07	1.69	1.01E-07
Ubxn8	-1.14	2.56E-06	-1.14	7.20E-06	-1.07	3.72E-06
Uckl1	1.28	1.05E-07	1.34	1.88E-07	1.46	2.26E-08
Ufsp2	1.24	1.59E-08	1.32	2.71E-08	1.36	3.73E-09
Ulk1	-1.79	2.55E-08	-2.09	2.38E-08	-2.12	3.73E-09
Unc45a	-0.94	2.93E-08	-1.10	2.58E-08	-1.21	2.33E-09
Unc5b	-1.42	4.75E-02	-2.29	7.24E-03	-1.86	1.15E-02
Urb2	-1.17	1.57E-04	-1.52	4.75E-05	-1.76	4.10E-06
Uros	1.16	7.32E-07	1.12	2.71E-06	1.49	6.71E-08

Usp10	-1.04	6.17E-07	-0.94	3.79E-06	-1.06	3.93E-07
Usp12	-1.70	8.52E-08	-1.94	8.77E-08	-1.97	1.61E-08
Usp16	-1.23	6.18E-08	-1.40	6.52E-08	-1.37	1.51E-08
Usp18	1.00	6.38E-05	1.20	3.87E-05	2.56	1.91E-08
Usp2	-2.13	3.71E-05	-2.77	1.08E-05	-3.26	7.60E-07
Usp21	0.98	1.36E-07	1.00	2.97E-07	1.05	4.77E-08
Usp22	-1.12	9.56E-08	-1.29	9.18E-08	-1.65	3.23E-09
Usp28	1.48	7.90E-10	1.41	2.30E-09	1.75	6.41E-11
Usp35	1.14	1.44E-06	1.17	3.11E-06	1.44	1.45E-07
Usp36	-1.12	1.03E-08	-1.30	1.05E-08	-1.58	4.66E-10
Usp38	-1.64	1.96E-07	-1.85	2.01E-07	-1.37	5.94E-07
Usp54	-1.81	6.61E-08	-1.82	1.65E-07	-2.20	9.08E-09
Usp6nl	-1.07	1.30E-07	-1.16	1.80E-07	-1.31	1.61E-08
Usp9x	-0.99	7.99E-08	-1.00	1.80E-07	-1.03	3.34E-08
Utp14b	-3.28	9.32E-05	-3.19	2.97E-04	-3.33	7.20E-05
Vamp5	1.09	6.67E-06	0.93	6.84E-05	1.13	3.89E-06
Vat1	1.76	2.33E-08	1.87	3.90E-08	1.47	4.37E-08
Vcl	-2.23	5.14E-07	-2.95	1.61E-07	-3.52	9.63E-09
Vdr	-2.49	2.60E-05	-3.07	1.23E-05	-4.12	2.80E-07
Vegfa	-2.46	3.60E-07	-3.36	9.52E-08	-3.73	9.35E-09
Vegfb	1.70	1.74E-06	2.06	9.96E-07	1.52	3.61E-06
Vgll4	-1.94	5.57E-08	-2.39	3.80E-08	-2.12	1.63E-08
Vmac	1.12	3.45E-07	1.42	1.56E-07	1.23	1.11E-07
Vmn2r96	1.17	2.22E-06	1.57	5.54E-07	1.86	3.45E-08
Vmn2r97	3.17	1.64E-05	2.87	9.98E-05	4.32	9.32E-07
Vopp1	-1.13	4.13E-07	-1.14	1.05E-06	-1.04	5.72E-07
Vpreb1	2.59	5.13E-04	2.47	1.69E-03	3.21	8.07E-05
Vps18	-0.84	2.06E-06	-1.08	7.35E-07	-1.03	2.87E-07
Vps37b	-2.45	3.60E-07	-3.02	1.88E-07	-3.62	1.11E-08
Vwa5a	1.36	5.53E-06	1.34	1.68E-05	1.59	1.09E-06
Wac	-1.22	1.56E-06	-1.37	1.66E-06	-1.30	7.09E-07
Wars	0.85	1.41E-06	1.13	3.94E-07	4.27	1.24E-11
Wbp5	-1.35	1.88E-07	-1.53	1.96E-07	-1.91	8.73E-09
Wbscr16	-1.08	6.18E-08	-1.17	9.19E-08	-1.09	3.48E-08
Wbscr27	2.50	1.40E-08	2.33	5.03E-08	2.45	7.01E-09
Wdhd1	-0.89	1.84E-06	-1.06	1.18E-06	-1.19	1.21E-07
Wdr38	1.43	2.23E-03	1.10	2.11E-02	1.20	6.21E-03
Wdr45b	-1.25	3.01E-08	-1.38	4.04E-08	-1.38	7.34E-09

Wdr89	1.23	1.17E-05	1.56	4.21E-06	1.36	3.91E-06
Wdsub1	1.44	6.77E-09	1.35	2.34E-08	1.15	1.27E-08
Wdyhv1	-1.18	5.76E-07	-1.35	5.32E-07	-1.31	1.63E-07
Whsc1l1	1.57	2.12E-09	1.71	3.50E-09	1.03	8.89E-09
Wnk3	1.61	2.62E-03	1.88	1.97E-03	1.39	6.36E-03
Wnt2b	1.01	3.33E-03	0.97	8.61E-03	1.46	1.97E-04
Wsb1	-1.14	1.99E-07	-1.28	2.09E-07	-1.27	5.19E-08
Wwp1	-1.23	1.92E-07	-1.05	1.77E-06	-1.30	8.05E-08
Xbp1	-1.64	5.30E-07	-1.97	3.36E-07	-2.86	4.84E-09
Xcr1	-1.86	9.41E-03	-2.17	7.51E-03	-1.47	3.11E-02
Xkr8	1.52	1.38E-07	1.37	8.45E-07	1.60	5.66E-08
Xrcc2	-1.47	2.88E-06	-1.94	8.23E-07	-1.91	2.37E-07
Xylt2	1.03	2.82E-08	1.10	4.43E-08	1.25	3.33E-09
Yap1	-3.10	1.36E-03	-2.77	6.12E-03	-3.14	1.11E-03
Yes1	-1.65	1.54E-06	-1.97	9.89E-07	-2.39	5.12E-08
Ypel2	-1.24	1.55E-07	-1.44	1.33E-07	-1.53	1.84E-08
Ypel4	-3.65	1.05E-04	-4.32	6.80E-05	-4.19	2.82E-05
Ythdc1	-1.13	4.80E-07	-1.13	1.26E-06	-1.10	4.31E-07
Ythdc2	-1.20	5.13E-07	-1.30	7.20E-07	-1.21	3.31E-07
Zbed3	-1.60	1.62E-03	-1.68	2.57E-03	-2.20	1.27E-04
Zbed5	-1.62	1.18E-04	-1.79	1.32E-04	-2.93	6.04E-07
Zbtb10	-2.40	4.33E-07	-3.04	1.84E-07	-3.15	3.20E-08
Zbtb11	-1.17	3.04E-07	-1.21	6.15E-07	-1.13	2.68E-07
Zbtb14	0.83	2.27E-08	1.15	8.39E-09	1.50	2.18E-10
Zbtb21	-1.79	4.87E-08	-2.18	3.44E-08	-1.91	1.63E-08
Zbtb37	1.48	1.02E-08	1.71	1.02E-08	1.84	9.34E-10
Zbtb38	-1.53	4.38E-07	-1.82	3.00E-07	-1.42	5.85E-07
Zbtb42	1.16	7.86E-07	1.19	1.78E-06	1.56	4.74E-08
Zbtb7b	2.15	8.05E-10	2.18	1.73E-09	2.36	9.44E-11
Zbtb8a	1.41	1.09E-06	1.64	8.72E-07	1.75	1.30E-07
Zc2hc1c	-1.61	4.14E-04	-1.81	3.98E-04	-2.36	1.49E-05
Zc3h12a	-1.86	6.55E-08	-2.24	4.80E-08	-2.37	6.44E-09
Zc3h13	-1.25	6.02E-08	-1.40	7.33E-08	-1.35	1.88E-08
Zc3hc1	-1.38	5.55E-09	-1.62	5.57E-09	-1.68	4.92E-10
Zcchc11	-1.36	2.27E-08	-1.37	5.03E-08	-1.06	7.45E-08
Zcchc12	-2.15	8.69E-04	-2.00	3.17E-03	-3.07	4.37E-05
Zdhhc12	0.82	1.32E-03	1.02	6.30E-04	1.16	7.93E-05
Zdhhc23	-1.34	4.62E-06	-1.18	3.78E-05	-2.29	3.95E-08

Zdhhc5	-1.03	7.99E-08	-1.09	1.33E-07	-1.20	1.44E-08
Zfand2a	-2.45	2.98E-06	-3.09	1.21E-06	-3.61	8.40E-08
Zfp109	1.35	1.58E-05	1.46	2.13E-05	1.61	2.72E-06
Zfp128	1.90	1.70E-06	2.00	3.10E-06	2.29	2.60E-07
Zfp14	1.36	3.04E-06	1.83	7.15E-07	2.03	7.84E-08
Zfp174	1.38	7.41E-07	1.41	1.69E-06	2.18	1.32E-08
Zfp2	1.17	1.13E-04	1.48	4.29E-05	1.53	1.02E-05
Zfp217	1.07	3.19E-08	1.15	4.72E-08	1.49	1.51E-09
Zfp219	1.19	9.96E-07	1.07	6.57E-06	1.09	1.60E-06
Zfp239	1.17	6.35E-04	1.32	6.18E-04	1.00	1.80E-03
Zfp28	1.54	3.66E-08	1.39	1.78E-07	1.52	2.04E-08
Zfp286	2.00	2.25E-06	1.66	3.04E-05	2.32	4.87E-07
Zfp287	1.43	2.30E-08	1.33	8.89E-08	1.92	1.39E-09
Zfp3	1.93	2.36E-08	1.61	1.89E-07	2.25	3.73E-09
Zfp316	1.64	4.39E-07	1.42	3.85E-06	1.60	3.87E-07
Zfp322a	1.07	1.90E-02	1.38	8.45E-03	1.07	1.77E-02
Zfp329	1.40	8.03E-09	1.64	8.66E-09	1.64	1.10E-09
Zfp358	1.26	2.46E-06	1.29	5.51E-06	1.19	3.11E-06
Zfp41	1.99	4.57E-08	1.87	1.76E-07	2.05	1.96E-08
Zfp410	-1.00	6.19E-08	-1.03	1.31E-07	-1.18	1.03E-08
Zfp420	1.40	7.94E-09	1.57	9.75E-09	1.45	2.37E-09
Zfp426	1.07	3.26E-04	1.36	1.19E-04	1.14	1.76E-04
Zfp444	1.63	8.84E-08	1.64	2.17E-07	1.74	3.20E-08
Zfp446	1.04	2.21E-05	1.33	7.27E-06	1.31	2.41E-06
Zfp449	-1.33	7.45E-03	-1.81	2.18E-03	-1.81	8.45E-04
Zfp455	0.76	2.27E-05	1.14	1.99E-06	1.04	1.15E-06
Zfp459	0.73	3.38E-04	1.18	1.78E-05	1.09	1.10E-05
Zfp467	1.49	2.90E-07	1.70	2.80E-07	1.60	1.06E-07
Zfp493	1.77	3.68E-08	1.76	9.31E-08	1.95	9.35E-09
Zfp52	-1.21	5.24E-07	-1.08	3.92E-06	-1.43	9.71E-08
Zfp560	0.94	3.03E-05	1.13	1.80E-05	1.61	2.46E-07
Zfp563	1.19	7.03E-06	1.19	1.80E-05	1.16	7.15E-06
Zfp579	1.36	3.11E-07	1.20	2.29E-06	1.28	3.56E-07
Zfp583	1.96	2.03E-03	3.30	9.24E-05	1.82	3.07E-03
Zfp606	1.27	8.43E-07	1.32	1.76E-06	1.48	1.70E-07
Zfp619	-0.86	8.86E-05	-1.03	5.33E-05	-1.00	2.09E-05
Zfp647	2.68	2.59E-06	1.80	1.91E-04	2.60	2.67E-06
Zfp655	-1.01	6.43E-07	-1.07	1.09E-06	-1.13	1.70E-07

Zfp661	1.18	1.48E-07	1.14	5.07E-07	1.26	5.60E-08
Zfp688	0.86	2.34E-04	1.03	1.41E-04	1.21	1.17E-05
Zfp7	1.85	7.87E-08	2.03	1.05E-07	1.61	1.46E-07
Zfp703	-1.02	9.23E-07	-1.10	1.41E-06	-1.27	1.12E-07
Zfp704	1.44	3.21E-03	1.27	1.39E-02	2.45	4.65E-05
Zfp72	2.24	1.93E-04	2.82	7.44E-05	2.75	3.01E-05
Zfp759	1.43	6.67E-06	1.63	5.85E-06	2.01	2.80E-07
Zfp760	1.91	1.22E-06	2.33	6.72E-07	1.91	9.45E-07
Zfp768	2.37	3.63E-05	1.24	9.97E-03	2.39	2.86E-05
Zfp773	1.23	5.21E-06	1.16	2.45E-05	1.55	5.74E-07
Zfp775	0.92	1.55E-06	1.05	1.40E-06	1.03	4.61E-07
Zfp78	1.53	3.07E-04	1.92	1.27E-04	1.75	9.23E-05
Zfp781	-1.29	2.87E-03	-1.33	5.06E-03	-1.20	4.25E-03
Zfp800	-1.36	3.07E-07	-1.55	2.97E-07	-1.51	8.68E-08
Zfp808	1.19	3.15E-06	1.37	2.60E-06	1.34	8.96E-07
Zfp82	1.67	3.53E-03	1.57	1.03E-02	2.19	4.49E-04
Zfp825	1.22	2.86E-06	1.26	5.81E-06	1.48	4.16E-07
Zfp839	1.04	7.53E-05	1.26	3.92E-05	1.50	2.74E-06
Zfp85os	1.04	5.21E-03	0.97	1.52E-02	1.27	1.19E-03
Zfp873	1.37	7.46E-07	1.52	8.83E-07	1.44	3.42E-07
Zfp882	1.80	7.18E-04	1.37	9.60E-03	1.96	3.25E-04
Zfp93	1.24	7.13E-03	1.41	6.59E-03	1.52	1.72E-03
Zfp935	1.03	3.17E-07	0.94	1.92E-06	1.28	3.92E-08
Zfp94	1.57	5.59E-05	1.73	6.57E-05	1.92	8.50E-06
Zfpm1	-1.71	4.22E-07	-2.16	1.86E-07	-2.45	1.59E-08
Zfyve21	1.10	6.56E-05	1.17	9.95E-05	1.16	3.41E-05
Zfyve28	-2.23	6.19E-04	-3.05	1.33E-04	-2.59	1.70E-04
Zgrf1	-1.58	1.45E-05	-1.96	6.35E-06	-1.74	5.15E-06
Zhx1	-1.44	3.00E-04	-1.31	1.44E-03	-1.90	2.57E-05
Zkscan3	1.60	1.54E-08	1.82	1.74E-08	1.76	3.48E-09
Zkscan7	1.45	9.71E-03	2.10	1.88E-03	1.97	1.21E-03
Zkscan8	2.06	7.74E-08	2.13	1.53E-07	2.48	1.10E-08
Zmiz1	-1.58	2.72E-08	-1.81	2.90E-08	-2.08	1.96E-09
Zmym1	-1.57	1.14E-06	-1.69	1.78E-06	-1.78	2.99E-07
Zmynd10	1.59	1.47E-04	1.79	1.41E-04	1.38	3.83E-04
Znrd1as	1.71	6.06E-04	1.90	6.44E-04	2.50	2.33E-05
Zpr1	-0.90	4.75E-09	-1.02	5.90E-09	-1.18	2.93E-10
Zranb1	-2.02	1.15E-04	-2.04	2.66E-04	-2.35	2.70E-05

Zscan12	1.38	1.68E-06	1.69	8.69E-07	1.16	6.16E-06
Zscan22	1.00	1.96E-07	1.02	4.50E-07	1.32	1.48E-08
Zswim4	-1.27	6.21E-08	-1.58	3.92E-08	-1.46	1.26E-08
Zswim6	-1.88	1.99E-08	-1.93	4.19E-08	-2.05	5.02E-09
Zwilch	-1.60	1.01E-06	-1.78	1.17E-06	-1.19	9.73E-06

Lists of DEGs, their $\log_2$(FC) and adjusted *p* values generated for each condition were compared using Venn diagrams to obtain the list of overlapping genes between IL-7 and IFN-γ overnight stimulation in both WT and STAT1 Tg CD4 T cells. ✚ Fold changes (FC) were calculated relative to unstimulated condition for each sample.

Table S8. Categories of diseases and biological functions predicted to be affected by IPA within DEGs in WT and STAT1 Tg CD4 Naive T cells stimulated with IL-7

Categories	Diseases or functions annotation	p-value★	Predicted activation state	Activation z-score€	# Mol⌘
WT cells stimulated with IL-7 (90')					
Cellular Growth and Proliferation	generation of cells	1.26E-12	Increased	3.472	134
Cellular Growth and Proliferation	proliferation of cells	3.16E-16	Increased	3.22	221
Hematological System Development and Function	development of blood cells	6.08E-20	Increased	3.115	79
Cellular Growth and Proliferation	proliferation of epithelial cells	3.22E-10	Increased	3.046	46
Cell Death and Survival	cell survival	5.35E-10	Increased	3.022	95
Hematological System Development and Function	development of leukocytes	3.85E-22	Increased	2.993	77
Cellular Growth and Proliferation	proliferation of blood cells	1.15E-20	Increased	2.952	89
Cell-To-Cell Signaling and Interaction	activation of T lymphocytes	1.08E-10	Increased	2.912	38
Gene Expression	transactivation of RNA	1.20E-09	Increased	2.759	48
Cellular Growth and Proliferation	proliferation of lymphocytes	4.87E-21	Increased	2.72	82
Hematological System Development and Function	development of lymphocytes	1.02E-22	Increased	2.696	74
Organismal Injury and Abnormalities	malignant solid tumor	5.68E-14	Increased	2.62	488
Cellular Growth and Proliferation	proliferation of mononuclear leukocytes	3.06E-21	Increased	2.617	83
Cellular Growth and Proliferation	proliferation of immune cells	8.76E-20	Increased	2.61	84
Cell Death and Survival	cell viability	3.55E-09	Increased	2.551	88
Hematological System Development and Function	quantity of thymus gland	1.74E-13	Increased	2.548	33
Cellular Function and Maintenance	homeostasis of leukocytes	1.49E-21	Increased	2.496	72
Cellular Function and Maintenance	Lymphocyte homeostasis	2.27E-21	Increased	2.489	71
Cell-To-Cell Signaling and Interaction	activation of cells	3.07E-17	Increased	2.486	90
Cell Death and Survival	cell viability of leukocytes	2.25E-13	Increased	2.478	35
Cell-To-Cell Signaling and Interaction	activation of lymphocytes	2.24E-15	Increased	2.471	53
Gene Expression	transactivation	3.70E-09	Increased	2.465	49
Cellular Growth and Proliferation	cell proliferation of T lymphocytes	6.18E-19	Increased	2.447	69
Organismal Injury and Abnormalities	lymphatic node tumor	8.60E-09	Increased	2.424	49
Organismal Injury and Abnormalities	neoplasia of tumor cell lines	4.82E-06	Increased	2.424	27
Cell Death and Survival	cell viability of lymphocytes	1.28E-11	Increased	2.388	27
Cellular Growth and Proliferation	proliferation of B lymphocytes	9.47E-11	Increased	2.383	34
Cellular Growth and Proliferation	cell proliferation of leukocyte cell lines	2.76E-12	Increased	2.376	29
Cell Death and Survival	cell death of cervical cancer cell lines	5.59E-08	Increased	2.37	33
Organismal Injury and Abnormalities	progression of tumor	4.40E-08	Increased	2.36	20
Cellular Growth and Proliferation	proliferation of B-lymphocyte derived cell lines	2.61E-07	Increased	2.352	16
Cellular Growth and Proliferation	proliferation of hematopoietic cells	4.97E-08	Increased	2.316	27
Hematological System Development and Function	T cell development	2.66E-21	Increased	2.316	68
Hematological System Development and Function	T cell homeostasis	2.24E-21	Increased	2.304	69
Hematological System Development and Function	quantity of thymocytes	3.77E-12	Increased	2.275	31
Hematological System Development and Function	quantity of bone marrow cells	5.93E-07	Increased	2.272	19
Organismal Injury and Abnormalities	non-Hodgkin's disease	1.09E-08	Increased	2.242	47

Post-Translational Modification	phosphorylation of protein	2.06E-09	Increased	2.229	57
Cell Death and Survival	apoptosis of cervical cancer cell lines	1.42E-06	Increased	2.227	26
Cell Cycle	S phase	1.97E-07	Increased	2.218	26
Cell Death and Survival	cell viability of T lymphocytes	6.79E-13	Increased	2.207	22
Organismal Injury and Abnormalities	advanced neoplasia	3.61E-12	Increased	2.205	74
Organismal Injury and Abnormalities	advanced malignant tumor	9.42E-12	Increased	2.205	73
Organismal Injury and Abnormalities	metastasis	3.00E-11	Increased	2.205	67
Organismal Injury and Abnormalities	fibrosarcoma	4.75E-06	Increased	2.194	9
Organismal Injury and Abnormalities	cancer	1.40E-13	Increased	2.193	491
Organismal Injury and Abnormalities	neoplasia of lymphoid organ	1.79E-08	Increased	2.176	50
Cellular Growth and Proliferation	cell proliferation of tumor cell lines	2.11E-11	Increased	2.144	107
Gene Expression	activation of DNA endogenous promoter	8.56E-07	Increased	2.134	75
Hematological System Development and Function	quantity of regulatory T lymphocytes	5.61E-07	Increased	2.104	15
Cancer	cell transformation	2.20E-07	Increased	2.033	38
Cell Death and Survival	cell death	2.61E-16	Increased	2.016	205
Cell-To-Cell Signaling and Interaction	binding of cells	9.52E-11	Increased	2.005	46
Hematological System Development and Function	quantity of neutrophils	8.69E-06	Decreased	-2.188	21
Hematological System Development and Function	quantity of granulocytes	3.14E-07	Decreased	-2.259	29
Infectious Diseases	infection of mammalia	1.10E-12	Decreased	-2.429	40
Infectious Diseases	Bacterial Infections	6.36E-08	Decreased	-2.54	36
Organismal Survival	organismal death	4.57E-09	Decreased	-2.878	139
Organismal Survival	morbidity or mortality	2.47E-10	Decreased	-2.94	145
STAT1 Tg cells stimulated with IL-7 (90')					
Cellular Growth and Proliferation	generation of cells	1.77E-12	Increased	3.176	133
Cellular Growth and Proliferation	formation of osteoclasts	2.14E-06	Increased	2.707	15
Cell Death and Survival	cell viability of mononuclear leukocytes	6.46E-12	Increased	2.66	28
Hematological System Development and Function	development of blood cells	2.24E-18	Increased	2.64	76
Gene Expression	transactivation of RNA	8.51E-09	Increased	2.6	46
Cell Death and Survival	cell survival	1.86E-09	Increased	2.542	93
Hematological System Development and Function	development of leukocytes	4.83E-21	Increased	2.523	75
Cell Death and Survival	cell viability of lymphocytes	1.12E-11	Increased	2.497	27
Cell-To-Cell Signaling and Interaction	activation of cells	1.83E-15	Increased	2.433	86
Organismal Injury and Abnormalities	lymphatic node tumor	1.96E-08	Increased	2.424	48
Cell-To-Cell Signaling and Interaction	activation of mononuclear leukocytes	1.58E-14	Increased	2.381	53
Cell Death and Survival	cell viability of blood cells	1.33E-12	Increased	2.326	36
Hematological System Development and Function	development of mononuclear leukocytes	5.97E-22	Increased	2.261	73
Hematological System Development and Function	development of antigen presenting cells	4.62E-06	Increased	2.243	13
Organismal Injury and Abnormalities	non-Hodgkin's disease	6.92E-08	Increased	2.242	45
Cell Death and Survival	cell viability of leukocytes	1.91E-13	Increased	2.209	35
Cell Death and Survival	cell viability	2.68E-09	Increased	2.205	88
Cell-To-Cell Signaling and Interaction	activation of lymphocytes	2.88E-14	Increased	2.164	51
Organismal Injury and Abnormalities	malignant solid tumor	8.70E-14	Increased	2.15	485
Cell-To-Cell Signaling and Interaction	activation of T lymphocytes	1.27E-09	Increased	2.127	36
Post-Translational Modification	phosphorylation of protein	6.19E-10	Increased	2.101	58
Hematological System Development and Function	development of lymphocytes	1.44E-21	Increased	2.079	72
Cell Death and Survival	cell viability of T lymphocytes	4.24E-11	Increased	2.07	20
Hematological System Development and	quantity of bone marrow cells	4.78E-09	Increased	2.052	22

Function					
Hematological System Development and Function	development of bone marrow	1.09E-06	Increased	2.05	18
Cellular Function and Maintenance	homeostasis of leukocytes	1.07E-21	Increased	2.041	72
Cellular Function and Maintenance	Lymphocyte homeostasis	3.12E-20	Increased	2.033	69
Hematological System Development and Function	development of phagocytes	1.61E-06	Increased	2.033	15
Cellular Growth and Proliferation	proliferation of blood cells	1.54E-22	Increased	2.015	92
Cellular Function and Maintenance	cellular homeostasis	2.82E-14	Increased	2.011	114
Cellular Growth and Proliferation	proliferation of epithelial cells	2.33E-08	Increased	2.008	42
Cellular Function and Maintenance	function of phagocytes	3.50E-11	Increased	2	35
Infectious Diseases	infection of mammalia	4.63E-14	Decreased	-2.393	42
Infectious Diseases	Bacterial Infections	4.81E-10	Decreased	-2.857	40
Organismal Survival	organismal death	1.15E-07	Decreased	-3.005	133
Organismal Survival	morbidity or mortality	2.57E-08	Decreased	-3.14	137
WT cells stimulated with IL-7 (Overnight)					
Organismal Survival	organismal death	1.30E-14	Increased	8.235	495
Organismal Survival	morbidity or mortality	1.17E-14	Increased	7.756	501
Inflammatory Response	inflammation of body cavity	4.66E-08	Increased	3.03	169
Cell Death and Survival	apoptosis	1.63E-19	Increased	2.758	563
Inflammatory Response	inflammation of organ	1.80E-10	Increased	2.741	268
Inflammatory Response	inflammation of secretory structure	3.41E-06	Increased	2.521	41
Inflammatory Response	inflammation of body region	6.44E-13	Increased	2.399	243
Hematological System Development and Function	quantity of memory T lymphocytes	1.64E-08	Increased	2.329	25
Infectious Diseases	Viral Infection	3.41E-08	Decreased	-2.023	320
Cellular Growth and Proliferation	proliferation of mononuclear leukocytes	1.82E-21	Decreased	-2.025	209
Cellular Growth and Proliferation	growth of neurites	3.87E-06	Decreased	-2.034	100
Gene Expression	activation of DNA endogenous promoter	2.85E-14	Decreased	-2.061	274
Cellular Assembly and Organization	organization of cytoplasm	4.89E-07	Decreased	-2.086	302
Cellular Assembly and Organization	organization of cytoskeleton	3.85E-06	Decreased	-2.086	272
Hematological System Development and Function	differentiation of helper T lymphocytes	2.01E-09	Decreased	-2.1	55
Hematological System Development and Function	differentiation of blood cells	1.91E-20	Decreased	-2.11	227
Inflammatory Response	immune response of cells	5.14E-08	Decreased	-2.119	129
Gene Expression	transcription	1.62E-17	Decreased	-2.121	447
Cellular Movement	cell movement of leukocytes	9.34E-10	Decreased	-2.123	175
Hematological System Development and Function	differentiation of leukocytes	9.39E-17	Decreased	-2.259	180
Cellular Movement	recruitment of leukocytes	2.35E-08	Decreased	-2.271	81
Hematological System Development and Function	differentiation of T lymphocytes	3.60E-13	Decreased	-2.287	106
Hematological System Development and Function	T cell development	4.64E-18	Decreased	-2.296	153
Cellular Growth and Proliferation	proliferation of neuronal cells	4.44E-06	Decreased	-2.307	121
Cellular Growth and Proliferation	cytostasis	2.14E-07	Decreased	-2.307	69
Hematological System Development and Function	T cell homeostasis	5.72E-19	Decreased	-2.309	158
Cellular Movement	recruitment of phagocytes	1.26E-05	Decreased	-2.323	57
Hematological System Development and Function	differentiation of lymphocytes	2.18E-16	Decreased	-2.383	141
Lymphoid Tissue Structure and Development	formation of lymphatic system component	1.74E-07	Decreased	-2.492	73
Cellular Movement	recruitment of cells	3.66E-09	Decreased	-2.516	90
Cellular Movement	leukocyte migration	1.93E-12	Decreased	-2.544	206

Cellular Function and Maintenance	homeostasis of leukocytes	2.96E-19	Decreased	-2.564	167
Cellular Function and Maintenance	Lymphocyte homeostasis	2.54E-19	Decreased	-2.572	165
Cellular Movement	recruitment of blood cells	2.32E-09	Decreased	-2.594	85
Cellular Function and Maintenance	homeostasis of blood cells	8.74E-20	Decreased	-2.633	169
Cellular Movement	recruitment of granulocytes	6.94E-06	Decreased	-2.649	51
Hematological System Development and Function	differentiation of mononuclear leukocytes	1.95E-16	Decreased	-2.676	151
Cellular Movement	recruitment of myeloid cells	2.24E-06	Decreased	-2.683	55
Hematological System Development and Function	development of leukocytes	1.01E-18	Decreased	-2.76	178
Hematological System Development and Function	development of blood cells	1.42E-19	Decreased	-2.765	198
Cellular Growth and Proliferation	cytostasis of tumor cell lines	1.17E-05	Decreased	-2.791	39
Hematological System Development and Function	development of mononuclear leukocytes	2.62E-19	Decreased	-2.8	169
Cellular Movement	migration of cells	9.64E-14	Decreased	-2.804	405
Hematological System Development and Function	development of lymphocytes	5.10E-19	Decreased	-2.81	167
Cellular Growth and Proliferation	generation of cells	5.63E-17	Decreased	-2.817	442
Cell Death and Survival	cell viability of tumor cell lines	9.45E-10	Decreased	-2.83	177
Lipid Metabolism	synthesis of lipid	2.45E-06	Decreased	-2.831	148
Cell Death and Survival	cell viability of leukocytes	1.22E-09	Decreased	-2.948	70
Inflammatory Response	immune response of leukocytes	4.66E-07	Decreased	-3	73
Cellular Movement	cell movement	7.97E-15	Decreased	-3.058	451
Cell Death and Survival	cell viability of blood cells	7.94E-09	Decreased	-3.148	74
Organismal Survival	survival of organism	8.98E-12	Decreased	-3.156	169
Inflammatory Response	antibody response	3.66E-07	Decreased	-3.195	44
Cellular Growth and Proliferation	proliferation of cells	6.90E-33	Decreased	-3.443	809
Cellular Function and Maintenance	cellular homeostasis	6.62E-17	Decreased	-3.941	352
Cell Death and Survival	cell viability	1.69E-14	Decreased	-4.434	296
Cell Death and Survival	cell survival	2.27E-16	Decreased	-4.875	321
STAT1 Tg cells stimulated with IL-7 (Overnight)					
Organismal Survival	organismal death	4.70E-16	Increased	9.282	550
Organismal Survival	morbidity or mortality	5.64E-16	Increased	8.765	556
Inflammatory Response	inflammation of body cavity	3.28E-08	Increased	3.094	185
Hematological System Development and Function	quantity of memory T lymphocytes	3.08E-08	Increased	2.845	26
Cell Death and Survival	apoptosis	2.39E-20	Increased	2.507	620
Inflammatory Disease	chronic inflammatory disorder	2.79E-07	Increased	2.475	220
Inflammatory Response	inflammation of organ	2.95E-13	Increased	2.389	306
Organismal Injury and Abnormalities	lymphocytic cancer	4.34E-09	Increased	2.092	176
Inflammatory Response	inflammation of secretory structure	5.74E-07	Increased	2.059	46
Organismal Injury and Abnormalities	lymphoreticular neoplasm	3.49E-09	Increased	2.047	177
Inflammatory Response	inflammation of body region	5.34E-15	Increased	2.043	273
Organismal Injury and Abnormalities	hyperplasia of lymphocytes	8.51E-07	Increased	2.01	17
Inflammatory Response	antibody response	8.08E-09	Decreased	-2.006	51
Cell Death and Survival	cell viability of mononuclear leukocytes	1.41E-08	Decreased	-2.008	58
DNA Replication, Recombination, and Repair	repair of DNA	9.89E-08	Decreased	-2.012	77
Gene Expression	expression of RNA	1.86E-19	Decreased	-2.017	527
Hematological System Development and Function	quantity of phagocytes	2.93E-13	Decreased	-2.03	124
Cell Death and Survival	cell viability of lymphocytes	1.41E-08	Decreased	-2.035	56
Cell Cycle	G1 phase	1.02E-07	Decreased	-2.06	99
Gene Expression	transactivation	8.14E-14	Decreased	-2.068	162

Humoral Immune Response	class switching	9.82E-10	Decreased	-2.069	34
Cell Death and Survival	cell viability of T lymphocytes	5.26E-09	Decreased	-2.116	39
Cellular Growth and Proliferation	colony formation	8.33E-08	Decreased	-2.121	132
Cancer	cell transformation	1.88E-11	Decreased	-2.126	127
Cellular Movement	cell movement of leukocytes	4.18E-11	Decreased	-2.14	196
Hematological System Development and Function	differentiation of B lymphocytes	1.12E-07	Decreased	-2.142	61
Cellular Movement	leukocyte migration	3.12E-13	Decreased	-2.186	227
Cell Death and Survival	cell viability of phagocytes	3.21E-07	Decreased	-2.214	34
Gene Expression	transcription of RNA	1.02E-20	Decreased	-2.262	461
Hematological System Development and Function	development of hematopoietic system	1.42E-09	Decreased	-2.285	83
Cellular Growth and Proliferation	cell proliferation of tumor cell lines	2.92E-14	Decreased	-2.397	373
Cellular Growth and Proliferation	colony formation of cells	2.85E-07	Decreased	-2.411	120
Cellular Growth and Proliferation	cytostasis of tumor cell lines	1.90E-06	Decreased	-2.414	44
Hematological System Development and Function	differentiation of leukocytes	2.75E-16	Decreased	-2.43	193
Hematological System Development and Function	differentiation of helper T lymphocytes	4.85E-09	Decreased	-2.44	58
Hematological System Development and Function	development of hematopoietic cells	2.93E-06	Decreased	-2.527	58
Hematological System Development and Function	differentiation of blood cells	5.12E-20	Decreased	-2.568	244
Cellular Growth and Proliferation	cell proliferation of breast cell lines	5.64E-12	Decreased	-2.571	48
Lipid Metabolism	synthesis of fatty acid	2.67E-06	Decreased	-2.58	77
Hematological System Development and Function	development of follicular T helper cells	8.36E-07	Decreased	-2.6	9
Organismal Injury and Abnormalities	growth of tumor	1.68E-08	Decreased	-2.612	190
Hematological System Development and Function	differentiation of T lymphocytes	2.61E-14	Decreased	-2.641	117
Inflammatory Response	immune response of cells	5.21E-10	Decreased	-2.667	148
Gene Expression	transcription	2.10E-19	Decreased	-2.731	497
Hematological System Development and Function	differentiation of lymphocytes	1.38E-17	Decreased	-2.747	155
Cell Death and Survival	self-renewal of cells	1.94E-06	Decreased	-2.764	36
Hematological System Development and Function	T cell development	2.68E-21	Decreased	-2.784	173
Hematological System Development and Function	T cell homeostasis	4.11E-22	Decreased	-2.793	178
Cellular Growth and Proliferation	growth of neurites	1.79E-08	Decreased	-2.804	118
Infectious Diseases	Viral Infection	3.51E-10	Decreased	-2.853	363
Lymphoid Tissue Structure and Development	formation of lymphatic system component	2.74E-10	Decreased	-2.963	87
Cell-To-Cell Signaling and Interaction	immune response of leukocytes	1.11E-08	Decreased	-2.968	84
Cellular Function and Maintenance	homeostasis of leukocytes	2.10E-22	Decreased	-3.059	188
Cellular Function and Maintenance	Lymphocyte homeostasis	1.40E-22	Decreased	-3.066	186
Hematological System Development and Function	differentiation of mononuclear leukocytes	1.30E-17	Decreased	-3.069	166
Cell Death and Survival	cell viability of leukocytes	6.04E-10	Decreased	-3.072	76
Cellular Growth and Proliferation	proliferation of neuronal cells	6.31E-10	Decreased	-3.079	148
Hematological System Development and Function	development of leukocytes	2.03E-22	Decreased	-3.091	202
Cellular Assembly and Organization	outgrowth of neurites	2.85E-07	Decreased	-3.096	101
Hematological System Development and Function	development of mononuclear leukocytes	9.10E-23	Decreased	-3.135	191
Hematological System Development and Function	development of lymphocytes	1.59E-22	Decreased	-3.145	189
Cellular Function and Maintenance	homeostasis of blood cells	6.34E-23	Decreased	-3.186	190
Hematological System Development and Function	development of blood cells	7.28E-23	Decreased	-3.229	223
Cellular Movement	invasion of cells	6.03E-07	Decreased	-3.266	198

Cellular Growth and Proliferation	outgrowth of cells	5.78E-07	Decreased	-3.352	106
Cellular Growth and Proliferation	generation of cells	1.38E-19	Decreased	-3.544	495
Cell Death and Survival	cell viability of blood cells	5.09E-10	Decreased	-3.558	83
Cellular Growth and Proliferation	proliferation of cells	1.92E-34	Decreased	-3.745	891
Cellular Function and Maintenance	cellular homeostasis	2.09E-15	Decreased	-3.795	377
Cellular Movement	migration of cells	9.15E-17	Decreased	-3.893	458
Organismal Survival	survival of organism	1.12E-11	Decreased	-3.958	183
Cell Death and Survival	cell viability of tumor cell lines	4.68E-12	Decreased	-4.01	202
Cellular Movement	cell movement	4.24E-17	Decreased	-4.252	505
Cell Death and Survival	cell viability	5.00E-16	Decreased	-5.606	329
Cell Death and Survival	cell survival	3.54E-18	Decreased	-6.272	357

Lists of DEGs. their $\log_2$(FC) and adjusted *p* values were generated for WT and STAT1 Tg CD4 T cells stimulated for 90 minutes or overnight with rmIL-7 and used as input in IPA software. ⋆The *p*-value was calculated with the Fischer's exact test and reflects the likelyhood that the association between a set of genes in dataset and a related biological function is significant. °A positive or negative z-score value indicates that a function is predicted to be increased or decreased in T cells stimulated with IL-7. ⌘Number of RNAs differentially expressed in the disease and functions category.

Table S9. Primer sequences

Genes	**Forward**	**Reverse**
Bcl2	CCTGGCTGTCTCTGAAGACC	CTCACTTGTGGCCCAGGTAT
Cish	CCATGCA GCCCTTACCCAC	GTACCACCCAGATTCCCGAAG
Cxcl10	TGCGAGCCTATCCTGCCCACGTG	CCGGGGTGTGTGCGTGGCTTCA
Ifit1	ACCATGGGAGAGAATGCTGAT	GCCAGGAGGTTGTGC
Socs1	TTCTTGGTGCGCGACAGTC	AAGCCATCTTCACGCTGAGC
Bik	GTCGGAGG CGAGACTTATGG	GTTTCTGCCTTCCACGCACT
Ifi27	TAGCTGC TGTACCACCTGCG	CAGCTCCAGCAGACTGCAGAA
Socs2	CTGCGGATTGAGTACCAAGAT	CCTTGCACATCTGGACATAGT
Hprt	GCGATGATGAACCAGGTTATGA	ACAATGTGATGGCCTCCCAT