

1 **Figure Legends**

2 **Figure E1:** Schematic of the timeline of the experimental approach, and the use of different PA
3 cohorts.

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5 **Figure E2.** Gating strategy and kinetics of CD3+CD4+ T cell CD154+ responses to peanut
6 stimulation. A. Representative FACS plot for gating on lymphocyte scatter, singlet, live,
7 CD3+CD4+ T cells and assessing CD154 expression after 6hrs of 100ug/mL CPE stimulation.
8 CD154+ gating was based on unstimulated cells. B. Kinetics of CD154+ T cell (left panel) or
9 cytokine+CD154+ T cell (right panel) response over time (0-18 hours) in peanut allergic subjects
10 (n=4).

11

12 **Figure E3.** Frequency of peanut-responsive CD154+IL4+ and CD154+IL13+ cells by age in the PA
13 group (MSSM cohort). The spearman correlation of age vs Th2 frequency was 0.093, p = 0.46
14 (IL-13) and 0.089, p = 0.48 (IL-4).

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16 **Figure E4.** CRTH2 expression. (A): Titration curve (0 – 5 ul of antibody per test) showing staining
17 of CD123+ basophils (top row) and CD3+CD4+ T cells (bottom row) for CRTH2. Representative
18 staining showing CRTH2 versus CD154 staining (B) or versus IL-4 or IL-5 (C) after stimulation
19 with peanut or PMA/ionomycin for 6h.

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21 **Figure E5.** Identification of CD154+ Tregs. A. Representative FACS gating for identification of
22 CD154+FoxP3+CD25+CD127^{low} Tregs after 100ug/mL CPE stimulation (Peanut, bottom row) for
23 18 hours. Sample is from a peanut allergic subject. Numbers are indicated percent frequencies
24 of parent gate. B. Kinetic analysis of %CD154 expression on FoxP3+CD25+CD127⁻ Tregs in
25 response to stimulation with 100ug/mL peanut (n=7) or anti-CD3/CD28 (n=6) stimulation over
26 time (0 to 18 hours) in PA subjects. C. Impact of CD25 depletion prior to stimulation on
27 detectable CD154+Foxp3+CD25+CD127^{low} T cells after stimulation with peanut.

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29 **Figure E6:** Expression of memory and differentiation markers on CD154+ Tregs after stimulation
30 with crude peanut extract (CPE) or anti-CD3/CD28.

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32 **Figure E7:** A. Identification of differentially expressed genes when comparing CD154-captured T
33 cells after anti-CD3/CD28 stimulation and freshly sorted CD4+CD25+CD127+ Tregs from healthy
34 controls. Differentially expressed genes, indicated in blue, were used as guide genes to
35 construct the minimum spanning tree. B. Representation of cells in each state by subject ID.
36 Samples 1434, 1435, 1436, 1508, HD51, HD53, HD54, HD64 were freshly sorted Tregs, the
37 remainder were CD154-selected T cells from peanut allergic subjects after stimulation with
38 peanut or anti-CD3/CD28.

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40 **Figure E8:** Expression of IL2, IL5, and IL9 overlaid on the state map. Expression level in each cell
41 is indicated by intensity of color.

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43 **Figure E9:** Computational assignment of cell cycle stage of single cells, color coded by state.

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45 **Figure E10:** The length distribution of the reconstructed TCR sequence (alpha and beta) is
46 shown to be tightly peaked around 340 bp, strongly suggesting that full TCR sequences are
47 being captured and assembled.

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49 **Figure 11:** A: Sequence of the TCR CDR region of the 4 clones identified in Subject 1401. B:
50 Placement of clones on the minimum spanning tree, with shaded areas identifying the three
51 states. C: Differentially expressed genes comparing the 8 clonal cells to the 32 remaining non-
52 clonal cells in Subject 1401.

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57 **Table E1: Peanut-responsive Th2 Detection panel (Figure 1,2)**

Marker	Clone	Fluorophore	Company
Live/Dead Aqua	N/A	AmCyan	Thermo Fisher Scientific
CD3	SK7	APC-Cy7	eBioscience
CD4	OKT4	Brilliant Violet 605	BioLegend
CD25	BC96	Brilliant Violet 650	BioLegend
CD127	A019D5	Brilliant Violet 785	BioLegend
CXCR5	RF8B2	Alexa Fluor 488	BD Biosciences
CCR4	1G1	PerCP-Cy5.5	BD Biosciences
CCR6	11A9	PE-Cy7	BD Biosciences
CD154	24-31	PE	eBioscience
IFN γ	B27	Alexa Fluor 700	BD Biosciences
IL-4	MP4-25D2	Alexa Fluor 647	BioLegend
IL-10	JES3-19F1	PE-CF594	BD Biosciences
IL-13	JES10-5A2	BD Horizon V450	BD Biosciences

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60 **TABLE E2: Peanut-responsive effector T cell phenotyping staining panel (Figure 3)**

Marker	Clone	Fluorophore	Company
Live/Dead Blue	N/A	DAPI	Thermo Fisher Scientific
CD3	SK7	APC-Cy7	eBioscience
CD4	RPA-T4	PE-CF594	BD Biosciences
CD27	M-T271	PerCP-Cy5.5	BioLegend
CD45RO	UCHL1	Brilliant Violet 785	BioLegend
CRTH2	BM16	PE-Cy7	BioLegend
CCR7	G043H7	Brilliant Violet 510	BioLegend
CD161	HP-3G10	eFluor 450	eBioscience
CD154	24-31	PE	eBioscience
IL-4	MP4-25D2	Alexa Fluor 488	BioLegend
IL-5	TRFK5	Brilliant Violet 421	BioLegend
IL-9	MH9A4	Alexa Fluor 647	BioLegend

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63 **TABLE E3: Peanut-responsive Treg detection panel (Figure 4)**

Marker	Clone	Fluorophore	Company
Live/Dead Aqua	N/A	AmCyan	Thermo Fisher Scientific
CD3	SK7	APC-Cy7	eBioscience
CD4	OKT4	Briliant Violet 605	BioLegend
CD25	BC96	Briliant Violet 650	BioLegend
CD127	A019D5	Briliant Violet 785	BioLegend
CCR4	1G1	PerCP-Cy5.5	BD Biosciences
CCR6	11A9	PE-Cy7	BD Biosciences
CD154	24-31	PE	eBioscience
IFN γ	B27	Alexa Fluor 700	BD Biosciences
IL-10	JES3-19F1	PE-CF594	BD Biosciences
FoxP3	206D	Alexa Fluor 647	BioLegend

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66 **TABLE E4: Peanut-responsive Treg phenotyping panel (Figure 4)**

Marker	Clone	Fluorophore	Company
Live/Dead Blue	N/A	DAPI	Thermo Fisher Scientific
CD3	SK7	APC-Cy7	eBioscience
CD4	RPA-T4	PE-CF594	BD Biosciences
CD25	BC96	Alexa Fluor 700	BioLegend
CD127	A019D5	Briliant Violet 785	BioLegend
CD27	M-T271	PerCP-Cy5.5	BioLegend
CD45RO	UCHL1	Pacific Blue	BioLegend
CRTH2	BM16	PE-Cy7	BioLegend
CCR7	G043H7	Brilliant Violet 510	BioLegend
CD154	24-31	PE	eBioscience
FoxP3	206D	Alexa Fluor 647	BioLegend

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70 **Table E5: Sensitivity, ProcartaPlex Human Cytokine Panel 1B**

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Cytokine	Sensitivity (pg/ml)
GM-CSF	1.2
IFN-alpha	0.2
IFN-gamma	0.2
IL-1RA	17.8
IL-1 alpha	0.1
IL-1 beta	0.2
IL-2	0.8
IL-4	1.5
IL-5	0.3
IL-6	0.4
IL-7	0.2
IL-9	0.5
IL-10	0.1
IL-12p70	0.04
IL-13	0.1
IL-15	1.1
IL-17A	0.1
IL-18	0.4
IL-21	0.6
IL-22	8.2
IL-23	0.9
IL-27	5.1
IL-31	3.3
TNF alpha	0.4
TNF beta	1.6

72 **Table E6: Sensitivity, LEGENDplex™ Human Th Cytokine Panel**

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Cytokine	Sensitivity (pg/ml)
IL-5	1.1
IL-13	0.8
IL-2	1.0
IL-6	1.1
IL-9	1.0
IL-10	1.1
IFN-gamma	1.0
TNF-alpha	1.0
IL-17A	1.5
IL-17F	1.1
IL-4	0.7
IL-21	1.4
IL-22	2.0

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75 **Table E7: Single Cell Sequencing Information**

	Peanut CD154+	CD3/CD28 CD154+	Treg (HC)	Treg (PA)	total
total cells (# total genes)	238 (23740)	127 (23740)	53 (23740)	57 (23740)	475 (23740)
#cells >5e5 reads (#expressed gene)	212 (11889)	122 (11356)	51 (7571)	46 (8490)	431 (14055)

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77 **Table E8: Gene ontology biological processes annotations for state 3**

Accession	Term	N	DE	P.DE
GO:0002637	regulation of immunoglobulin production	41	6	5.01E-06
GO:0046427	positive regulation of JAK-STAT cascade	64	7	5.94E-06
GO:0002639	positive regulation of immunoglobulin production	29	5	1.39E-05
GO:0046548	retinal rod cell development	9	3	0.000101263
GO:0032601	connective tissue growth factor production	2	2	0.000117556
GO:1903659	regulation of complement-dependent cytotoxicity	2	2	0.000117556
GO:1903660	negative regulation of complement-dependent cytotoxicity	2	2	0.000117556
GO:0014066	regulation of phosphatidylinositol 3-kinase signaling	72	6	0.000131717
GO:0046425	regulation of JAK-STAT cascade	106	7	0.00015865
GO:0042531	positive regulation of tyrosine phosphorylation of STAT protein	49	5	0.000186656
GO:0002377	immunoglobulin production	82	6	0.000269842
GO:0007259	JAK-STAT cascade	117	7	0.000292057
GO:0002700	regulation of production of molecular mediator of immune response	84	6	0.000307672
GO:0097278	complement-dependent cytotoxicity	3	2	0.000350138
GO:0042509	regulation of tyrosine phosphorylation of STAT protein	56	5	0.000351609
GO:0002702	positive regulation of production of molecular mediator of immune response	56	5	0.000351609
GO:0022408	negative regulation of cell-cell adhesion	121	7	0.000358523
GO:0007260	tyrosine phosphorylation of STAT protein	61	5	0.000524117
GO:0014065	phosphatidylinositol 3-kinase signaling	95	6	0.000596074
GO:0008152	metabolic process	11474	147	0.00060185

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81 **Table E9: Gene ontology biological processes annotations for state 2**

Accession	Term	N	DE	P.DE
GO:0000278	mitotic cell cycle	953	63	3.78E-10
GO:1903047	mitotic cell cycle process	820	54	8.68E-09
GO:0007049	cell cycle	1620	85	2.22E-08
GO:0006259	DNA metabolic process	892	55	5.89E-08
GO:0007067	mitotic nuclear division	387	32	7.48E-08
GO:0022402	cell cycle process	1208	67	1.13E-07
GO:0000819	sister chromatid segregation	113	16	1.29E-07
GO:0000070	mitotic sister chromatid segregation	105	15	2.82E-07
GO:0000280	nuclear division	507	35	1.39E-06
GO:0048285	organelle fission	540	36	2.21E-06
GO:0090304	nucleic acid metabolic process	4775	179	1.43E-05
GO:0031577	spindle checkpoint	53	9	1.66E-05
GO:0007059	chromosome segregation	238	20	1.67E-05
GO:0044260	cellular macromolecule metabolic process	7696	266	1.81E-05
GO:0002562	somatic diversification of immune receptors via germline recombination within a single locus	54	9	1.95E-05
GO:0016444	somatic cell DNA recombination	54	9	1.95E-05
GO:0051276	chromosome organization	977	51	2.19E-05
GO:0044237	cellular metabolic process	9685	322	2.40E-05
GO:0051301	cell division	617	36	4.05E-05
GO:0002200	somatic diversification of immune receptors	60	9	4.65E-05

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84 **Table E10: Gene ontology biological processes annotations for state 1**

Accession	Term	N	DE	P.DE
GO:0007005	mitochondrion organization	654	58	1.10E-09
GO:0008152	metabolic process	11474	495	1.05E-07
GO:0006271	DNA strand elongation involved in DNA replication	32	10	1.58E-07
GO:0044237	cellular metabolic process	9685	428	2.97E-07
GO:0022616	DNA strand elongation	35	10	4.05E-07
GO:0044238	primary metabolic process	9586	423	5.10E-07
GO:0034660	ncRNA metabolic process	407	37	6.76E-07
GO:0006996	organelle organization	3322	175	6.99E-07
GO:0032201	telomere maintenance via semi-conservative replication	25	8	2.31E-06
GO:0010833	telomere maintenance via telomere lengthening	42	10	2.56E-06
GO:0032543	mitochondrial translation	112	16	4.29E-06
GO:0044260	cellular macromolecule metabolic process	7696	346	4.74E-06
GO:0071704	organic substance metabolic process	9941	430	5.13E-06
GO:0006261	DNA-dependent DNA replication	116	16	6.82E-06
GO:0034470	ncRNA processing	266	26	8.56E-06
GO:0006364	rRNA processing	140	17	1.99E-05
GO:1902589	single-organism organelle organization	2311	123	3.14E-05
GO:0016072	rRNA metabolic process	145	17	3.15E-05
GO:0042254	ribosome biogenesis	190	20	3.21E-05
GO:0006259	DNA metabolic process	892	58	3.22E-05

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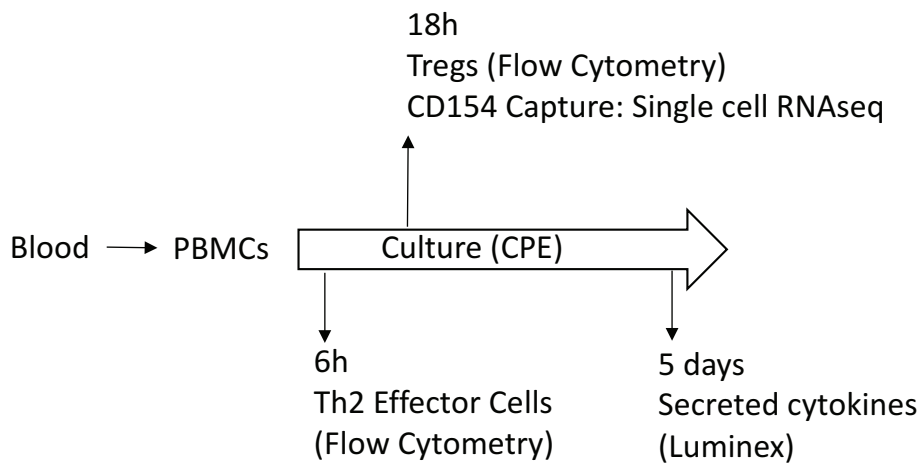
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87 **Table E11: TCR Sequencing Overview**

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Cell Types	TCRA reconstruction (%)	TCRB reconstruction (%)	Paired productive chains (%)
Tregs (HC)	35.7	53.6	26.8
Tregs (PA)	53.8	71.2	36.5
CD3/CD28 CD154+	89.3	90.1	83.5
Peanut CD154+	78.3	82.1	68.9

89



CoFAR PA/HT Cohort

- Th2 & Treg frequency
- Chemokine Receptor Expression
- Secreted cytokines

MSSM PA Cohort

- Th2 Heterogeneity, Phenotyping
- Single cell RNAseq
- Treg suppression of cytokines
- IL-2 dependence of Treg response

Figure E1

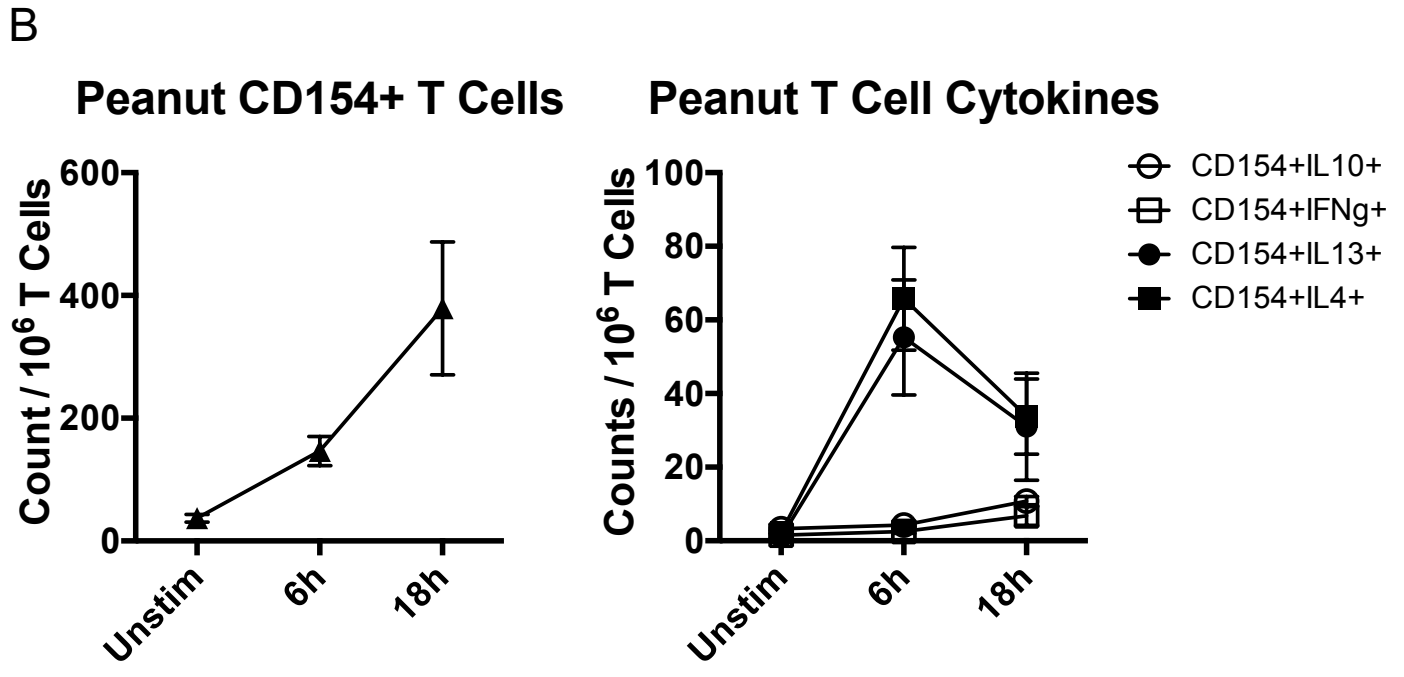
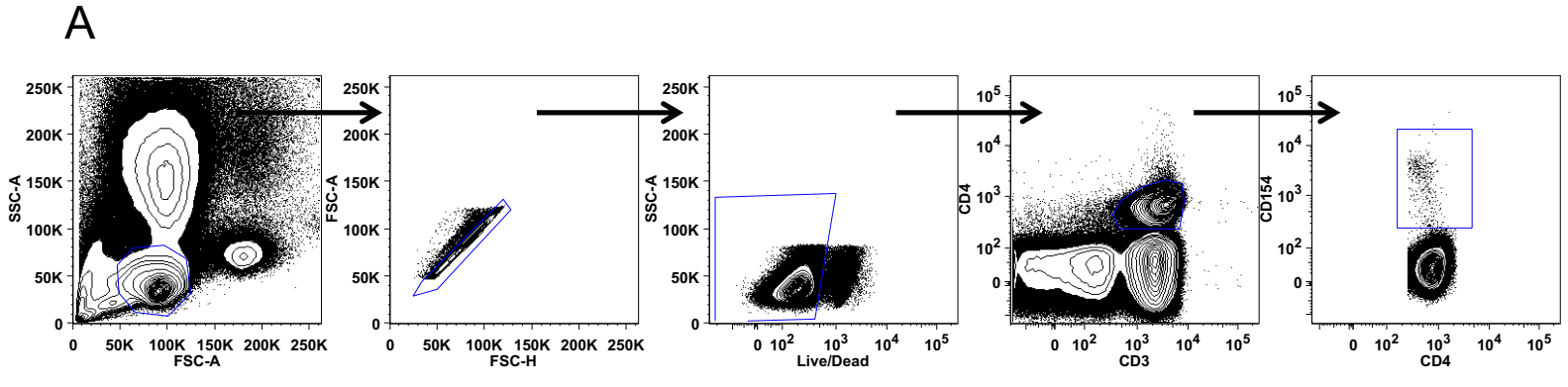


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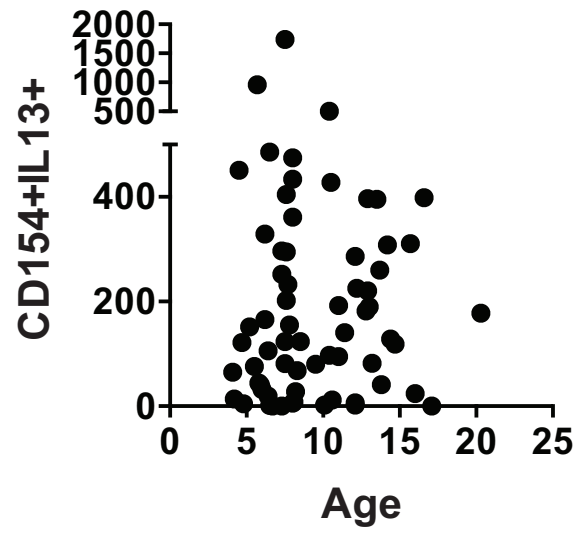
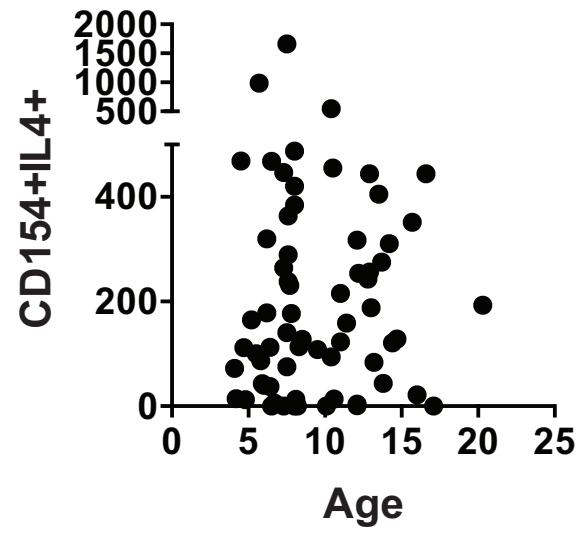


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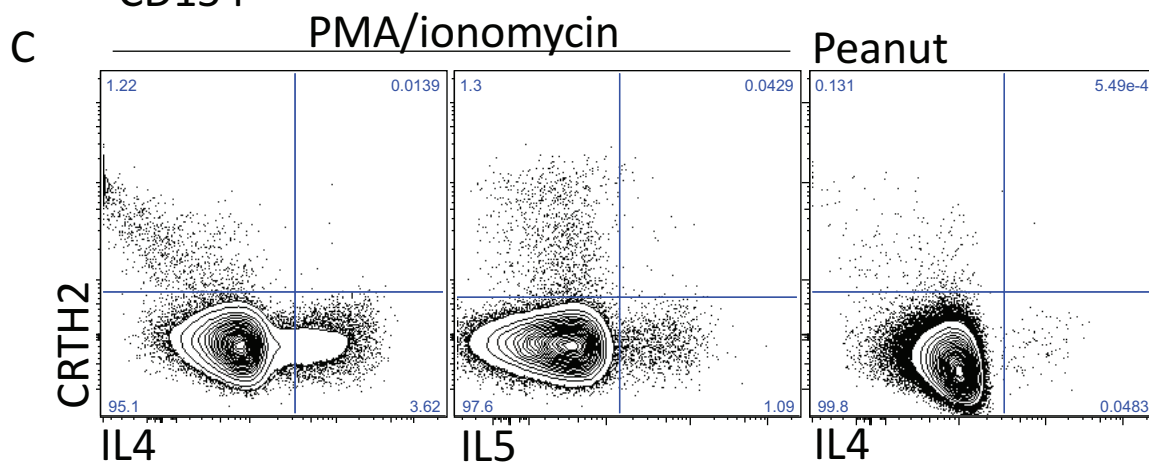
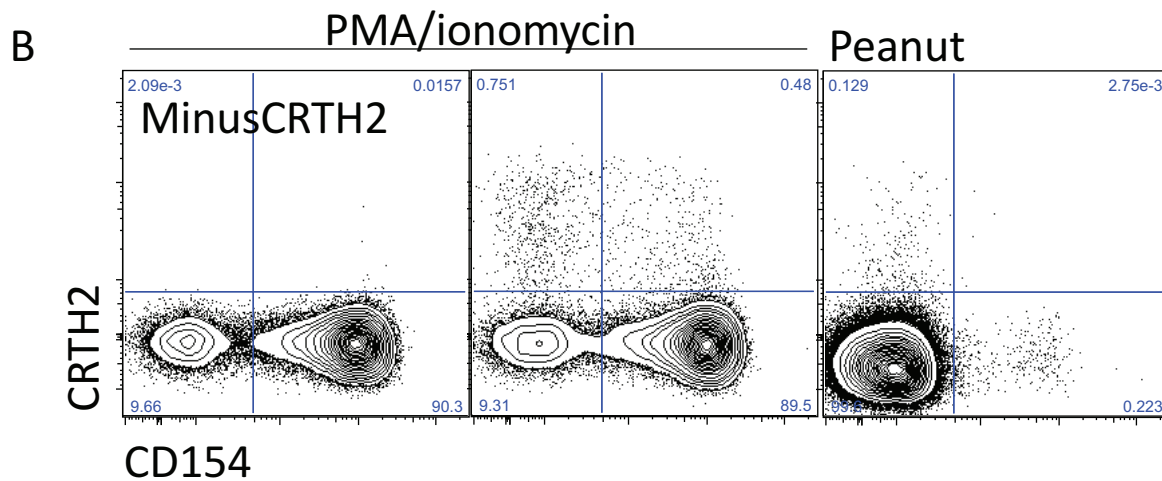
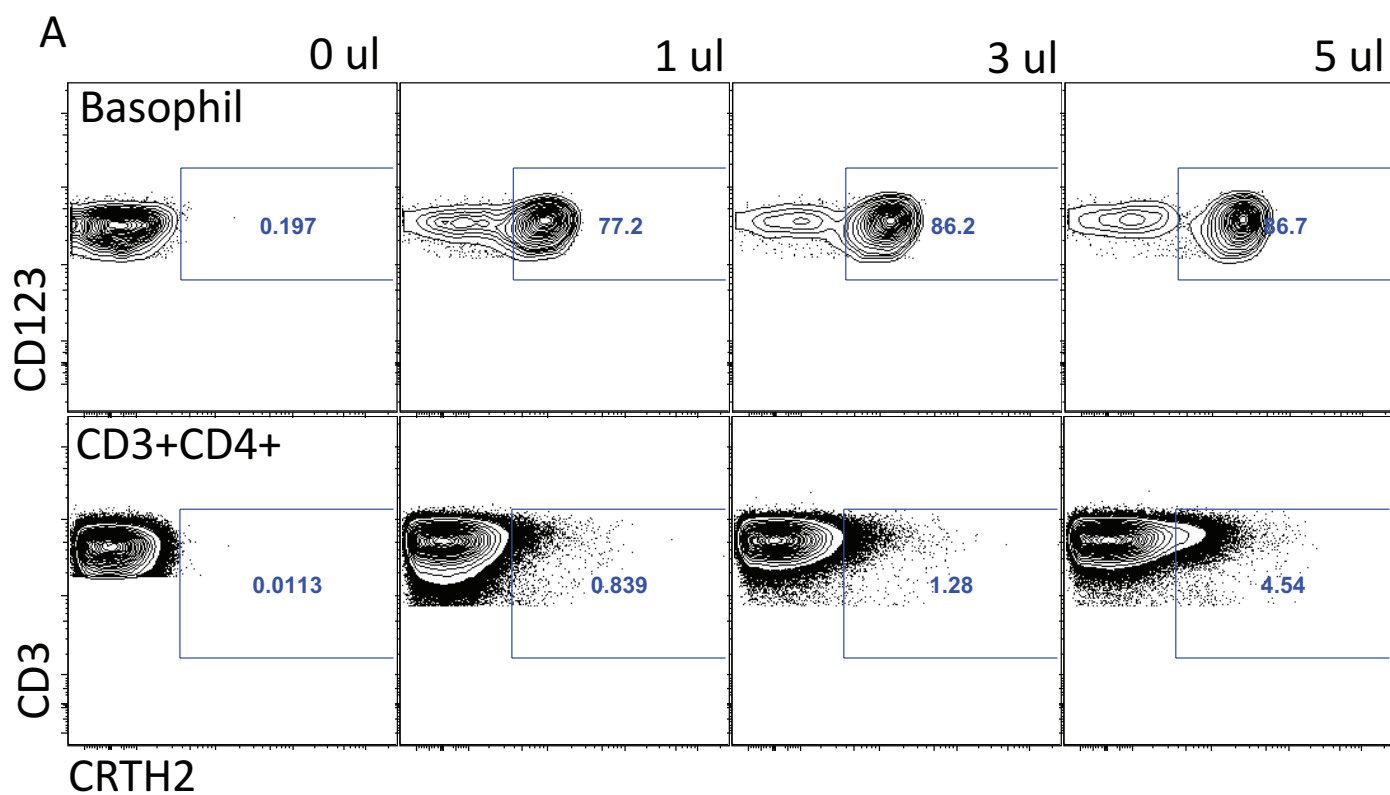


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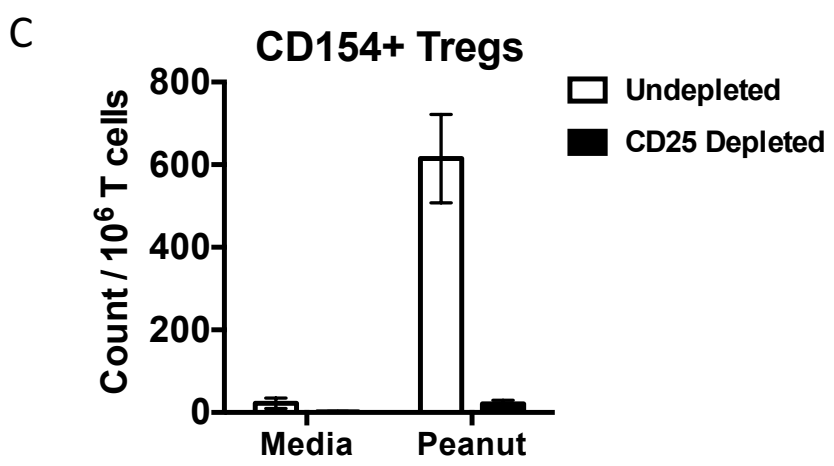
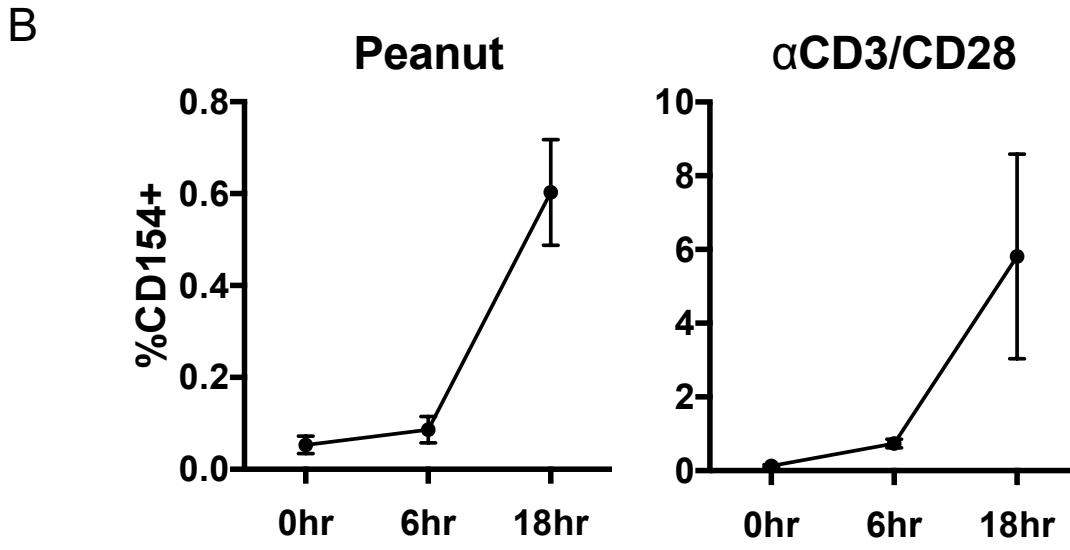
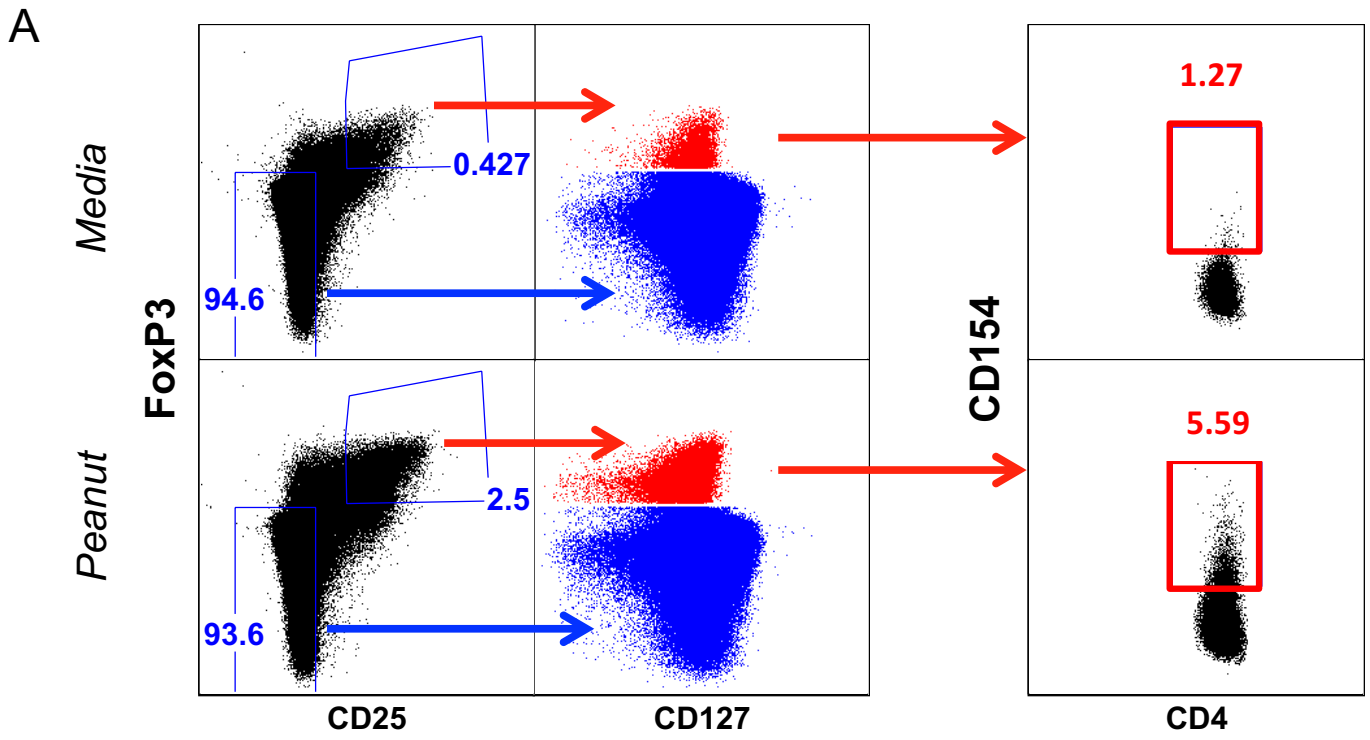


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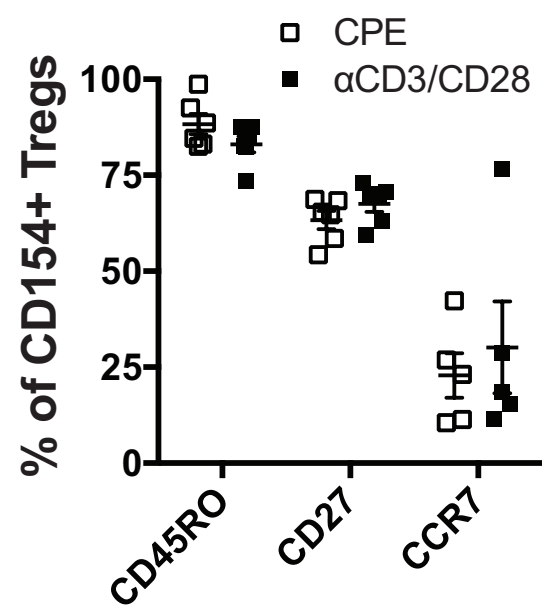
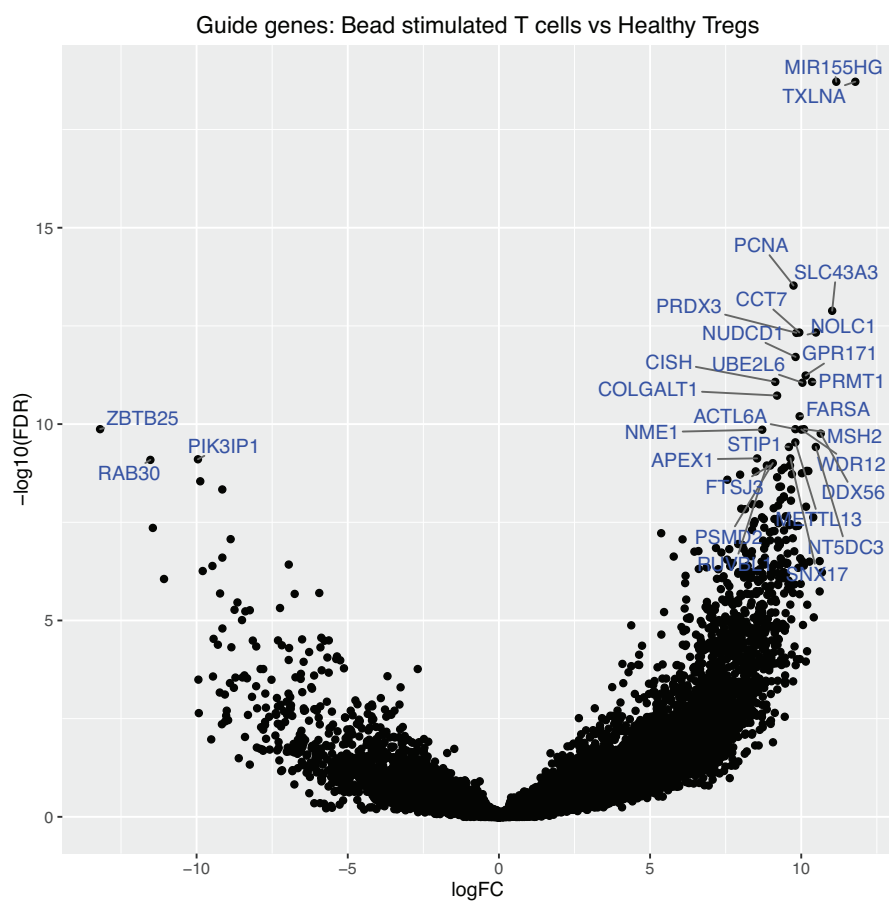


Figure E6

A



B

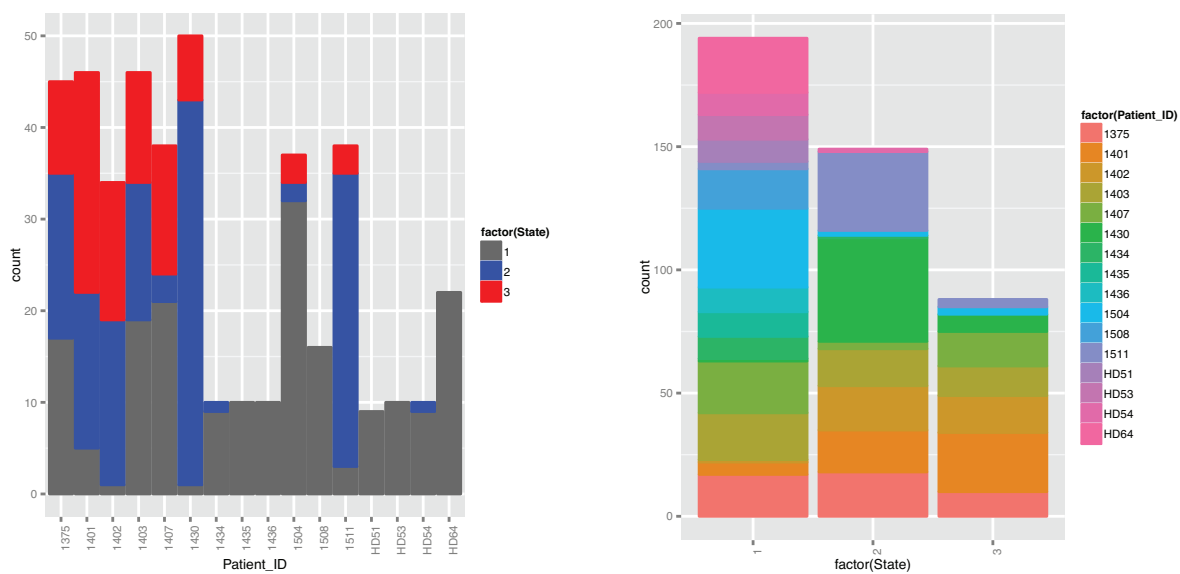


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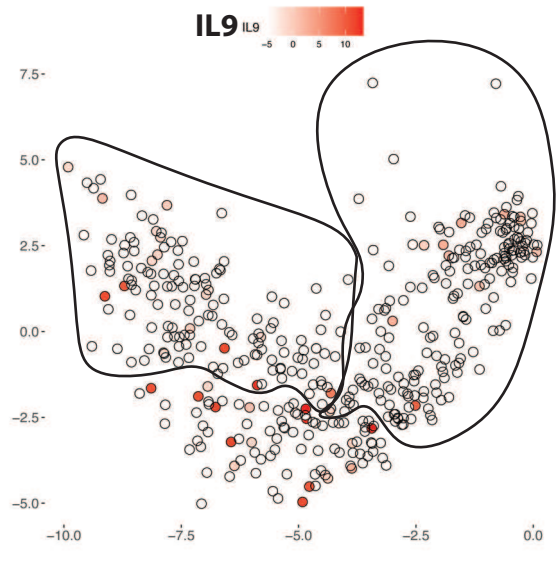
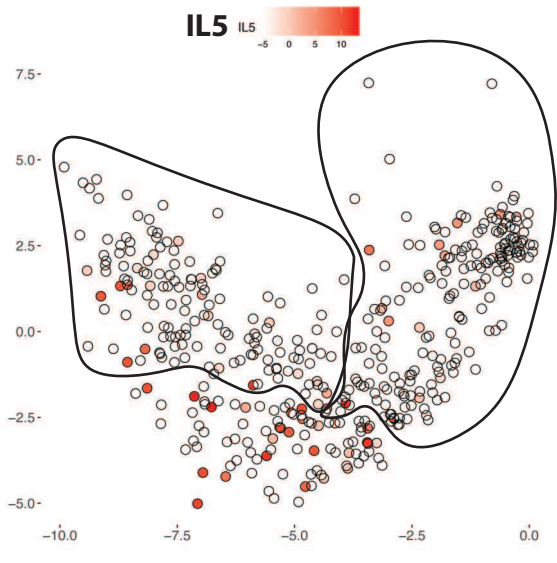
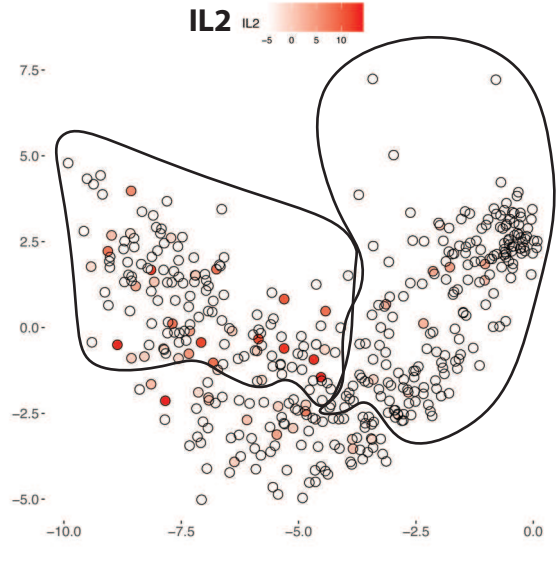
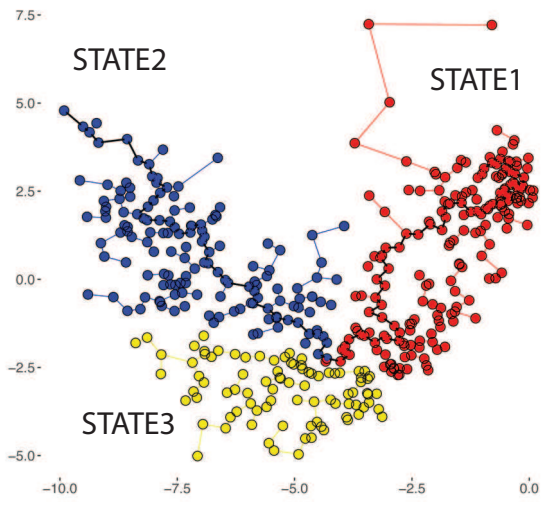


Figure E8

Cell cycle allocation

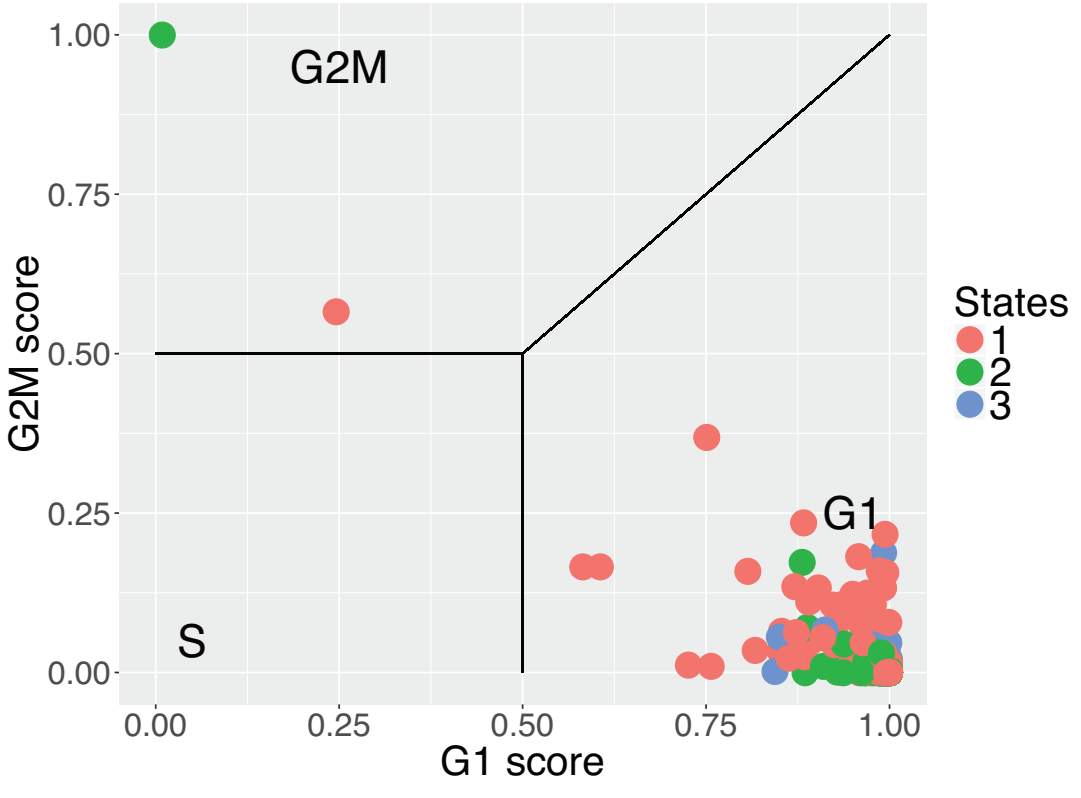


Figure E9

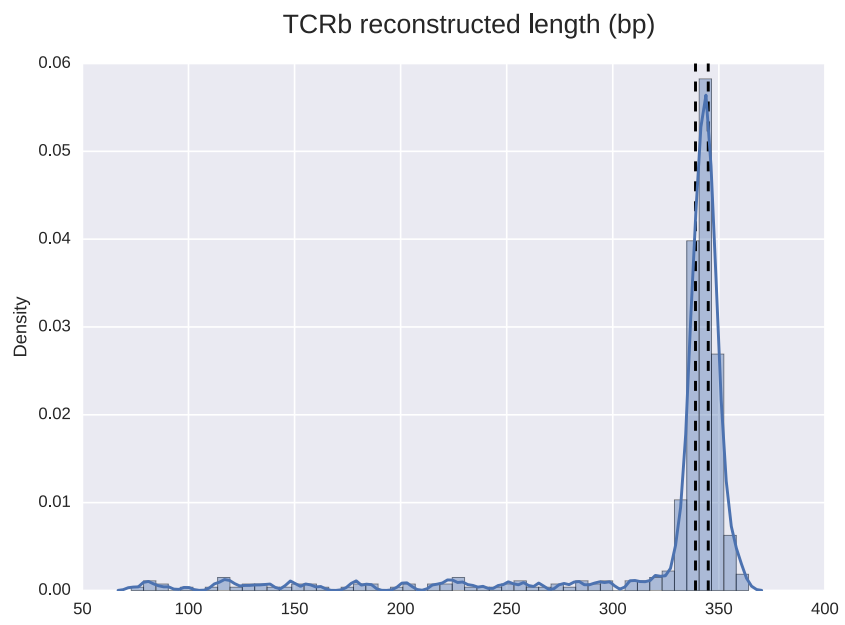
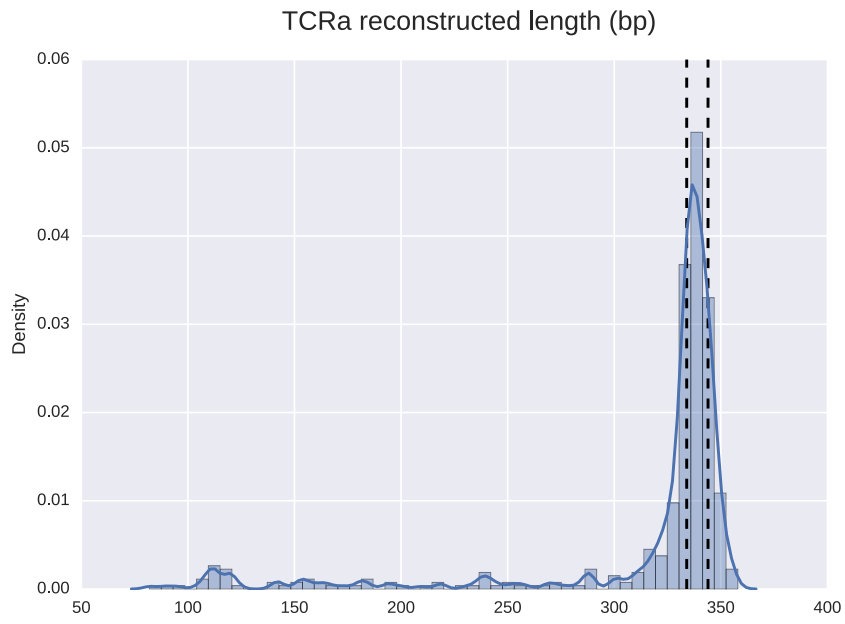
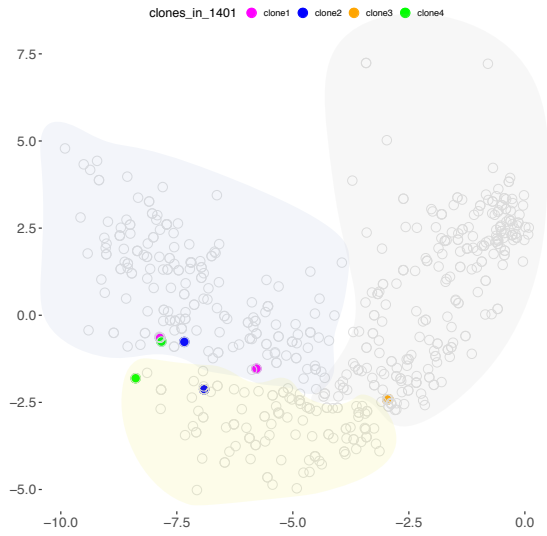


Figure E10

A

Clone 1	TRAV21_CTGTGCTACACTAT_TRAJ7
	TRBV6-2_GCAGTGCAGACCCAGGG(G)AGCAG_TRBJ2-7
Clone 2	TRAV21_TGTGACCCATTCA_TRAJ29
	TRBV6-1_AGCAGGACTTACACT_TRBJ1-1
Clone 3	TRAV8-4_CTGAGGGTACTCA_TRAJ57
	TRBV23-1_GTCAACATCCGAAGTCTCCT_TRBJ2-7
Clone 4	TRAV8-4_GTGCTGTGTCAGGGGTGGGA_TRAJ7
	TRBV6-1_CAGTGGGCAGCAGGGGATGAAC_TRBJ1-1

B



C

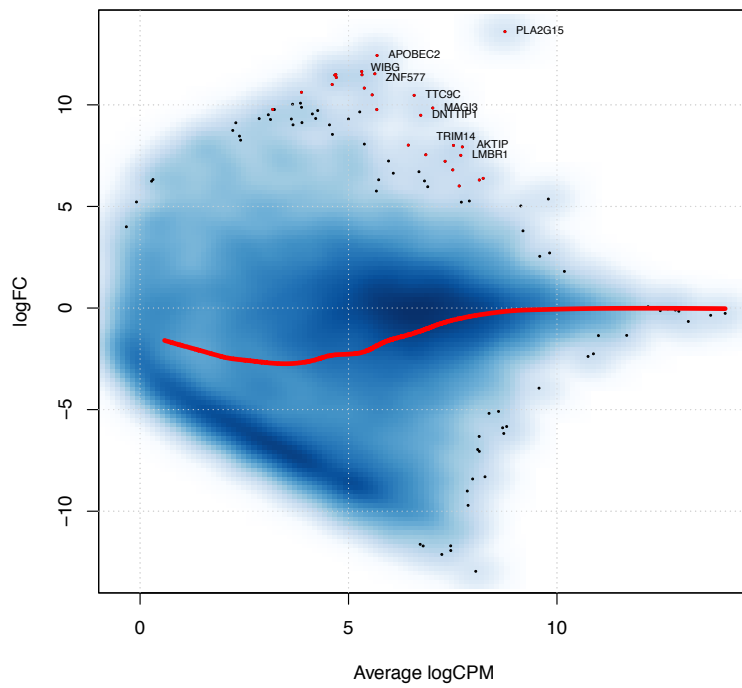


Figure E11

State1			State2			State3		
Geneid	logFC	FDR	Geneid	logFC	FDR	Geneid	logFC	FDR
ZNF211	9.595	4.42E-13	PTK2	7.749	4.39E-11	IL5	10.556	3.34E-08
IL2	-10.526	6.74E-12	GEMIN4	8.060	2.57E-10	IL9	11.093	2.53E-07
C11orf65	6.180	5.09E-07	SLC37A4	6.510	8.08E-07	UBASH3B	-7.271	6.24E-05
FEN1	-8.767	7.27E-07	IL2	11.043	3.22E-06	CD200	-9.310	6.24E-05
PTK2	-7.314	1.30E-06	CCL22	7.399	4.69E-06	UBE2H	-7.641	0.00011241
MS4A1	3.491	4.31E-06	NEK3	9.452	1.73E-05	IL4	5.869	0.00011241
QDPR	-8.457	4.71E-06	CTTN	9.736	1.73E-05	TP53TG1	-6.151	0.00046779
CSTF1	-9.557	1.08E-05	ZNF211	-6.497	3.26E-05	SLC35D2	8.139	0.00054562
PGAP2	-9.048	1.10E-05	POU2AF1	7.807	4.08E-05	CHN1	-6.760	0.00071494
RTCB	-5.889	1.26E-05	AFF3	7.068	5.79E-05	ACTR5	6.480	0.00132353
MAD2L2	-8.136	1.27E-05	TRPV2	-7.630	6.58E-05	IL17RB	6.447	0.00155603
COMMD4	-8.734	1.30E-05	HLA-DRB5	-6.214	6.58E-05	TMEM219	4.365	0.00161112
ATP5SL	-9.104	1.49E-05	GRPEL2	5.684	6.58E-05	FAM13A	-5.776	0.00162168
C2CD5	-9.736	1.54E-05	PLA2G15	-4.457	0.0001077	ZNF605	7.486	0.00180866
TRPV2	6.168	2.14E-05	DPH6	6.938	0.00012508	IL3	5.387	0.00180866
IL22	-6.445	2.37E-05	ACAD8	-6.595	0.00015684	GEMIN4	-4.642	0.00227589
IFT57	-9.120	2.81E-05	IL5	-7.374	0.00015684	HERC5	3.917	0.00242129
CCR4	-7.011	2.81E-05	SMIM3	9.021	0.00022885	AKAP7	6.153	0.00256786
COX15	-8.065	2.81E-05	PYCR1	7.442	0.00028722	DNAH17	-5.853	0.00256786
DHPS	-6.691	2.98E-05	C11orf65	-4.526	0.00033061	PTK2	-6.143	0.00256786
FAM210A	-8.189	3.09E-05	ZNRF3	7.280	0.00033061	ZNF30	8.446	0.00256786
MKRN2	-9.991	5.04E-05	MED18	8.997	0.00033061	PRKAB1	7.307	0.00256786
CCL22	-5.355	5.04E-05	PRNP	-6.325	0.00034427	SLFN12	6.061	0.00269399
WDR45	-6.384	5.42E-05	ZWINT	8.618	0.00034427	GMPR2	5.289	0.00271631
APOBEC2	5.464	6.78E-05	MS4A1	-1.894	0.00038388	PGAP2	7.128	0.00350167
FAM13A	7.295	0.00010005	TM9SF4	8.155	0.00038388	MCC	6.098	0.00352265
GEMIN4	-6.275	0.00010433	ZNF266	6.292	0.00040568	TTI2	-7.076	0.00352265
SLC5A6	-9.024	0.00011875	IL17F	3.173	0.00042693	VAT1	-7.149	0.00352265
FDPS	-6.884	0.00014025	C16orf70	8.041	0.00042693	PLCG1-AS1	6.674	0.00352265
RRM1	-7.612	0.00015455	YAE1D1	7.319	0.00043859	IL4I1	6.137	0.0037042
ATPAF2	-8.365	0.00022994	CSTF1	8.978	0.00047649	RP9P	5.401	0.00403708
ATG4A	-7.696	0.00025348	GZMA	-8.611	0.00047649	IL13	6.455	0.00403708
METAP1	-5.946	0.0003175	DES12	4.499	0.00047649	POMGNT2	5.478	0.00403708
ACO2	-8.510	0.00032965	CARD6	-8.987	0.0005127	IL18RAP	8.561	0.00441691
LIF	-9.192	0.00033193	KPNA2	3.883	0.00062241	NEK3	-6.894	0.00459859
MED7	-7.938	0.00033193	CDC20	8.421	0.00066184	AP4M1	5.572	0.00504648
COG7	-7.555	0.00033193	CDR2L	7.026	0.00069299	UBA7	4.389	0.00504648
C12orf10	-8.331	0.00033193	FABP5	3.724	0.00084884	FLVCR1-AS1	7.912	0.00504648
CHCHD3	-7.387	0.0003462	DIEXF	6.302	0.00085321	SCML1	-7.694	0.0050844
FAM216A	-7.337	0.00034693	COMMD4	7.755	0.00085862	NTRK1	6.261	0.00511696
C12orf29	-6.842	0.00036502	IL17RB	-7.025	0.00085862	DCUN1D3	6.475	0.00521199
IL31	-6.439	0.00037647	DNAJC11	8.283	0.00085862	C14orf93	-4.920	0.00527402
PPIL1	-8.986	0.00037647	SRXN1	7.673	0.00087886	HPX	7.260	0.00567107
CBX5	-5.944	0.0003924	SLC35D2	-6.780	0.00087886	EXO5	5.683	0.00720174
TEX2	-8.694	0.00039818	ZNF33B	-6.087	0.00095066	PLA2G16	6.603	0.00720174
USP45	-7.921	0.00046918	TOP2A	8.020	0.00105968	DUSP22	6.690	0.00733844
TERF2	-7.685	0.00047675	PDE4B	-5.058	0.00110135	C10orf128	4.753	0.00788299
VKORC1L1	-7.529	0.00052407	FKBP7	7.939	0.00110135	NPR2	-6.805	0.00825896
HMBS	-9.035	0.00052679	TIMP1	-5.249	0.00111006	HPGDS	6.826	0.00825896
ACSL1	-8.020	0.0005914	PQLC3	-7.234	0.00116143	ZHX1-C8orf76	4.652	0.00876244
FBXL4	-6.739	0.00060006	HMGB3	5.770	0.00116143	PARP15	7.039	0.00906829
MRS2	-8.954	0.00061888	CD200	7.240	0.00131387	PLAUR	6.887	0.00913322

ALDH16A1	-7.696	0.00065288	OC10050571!	-5.859	0.00166445	WHSC1	5.999	0.00914651
MRPS9	-5.872	0.00068123	LINC00674	-5.186	0.00169578	CCDC66	-5.676	0.00934173
GSS	-9.396	0.00073712	C5orf30	6.569	0.00169578	MFSD5	6.669	0.00934173
ZNF605	-7.385	0.00073712	ZNF671	-7.944	0.00181505	PLAG1	-2.585	0.00940219
NPR2	8.708	0.00073712	ZNF30	-6.285	0.0018359	SLC37A4	-4.141	0.00940219
PRMT3	-8.404	0.00073712	CASC5	7.230	0.0018359	ZNF211	-3.106	0.00940219
AKAP7	-6.104	0.00077632	VIPAS39	7.582	0.00191003	PRMT6	-6.652	0.01090781
EIF2S1	-4.008	0.00077932	PLAUR	-6.892	0.00199608	OC10192777!	6.192	0.01206211
OC10050571!	7.444	0.0007932	GATB	7.356	0.00199608	ATG2B	-6.061	0.01206211
PLD6	-8.247	0.00080953	CD274	-6.563	0.00199848	LINC00880	5.848	0.01206211
SFXN4	-4.733	0.00081605	ATG2B	6.545	0.002135	NAPB	8.398	0.01326128
RCC2	-6.315	0.00081833	BEND3	7.624	0.002135	HGSNAT	6.521	0.01382406
TANGO6	-7.208	0.00087699	CYB5D2	7.611	0.00214471	ZNF649	-7.048	0.01382406
GRPEL2	-6.604	0.00087699	DIS3L	4.823	0.00214471	SMIM3	-5.475	0.01419903
AVL9	-8.379	0.00087953	SPRY1	7.213	0.00214471	MAGEE1	7.054	0.01434537
NUP93	-6.522	0.00089582	C18orf54	7.475	0.00217688	CCDC141	6.391	0.0146985
KPNA2	-4.059	0.00091588	SAMD3	-6.773	0.00230177	TAF2	3.295	0.0146985
C10orf35	-4.810	0.00096363	FAM69B	6.119	0.00232475	SHISA2	-2.043	0.0146985
TMPRSS3	-7.176	0.00096363	SETD1A	5.817	0.00254341	PEX1	5.693	0.01471658
FAF2	-6.807	0.00099602	PP7080	6.828	0.00255956	TEF	5.707	0.01494407
METTL17	-6.949	0.00099602	KFZP5861142	-3.306	0.00255956	TRPS1	-6.510	0.01536597
PRPSAP1	-8.518	0.0010058	WDR7	3.808	0.00255956	LPCAT4	5.197	0.01536597
TFB2M	-8.694	0.0010058	EIF2B4	5.629	0.00255956	PQLC3	5.728	0.01643165
DCTN5	-7.237	0.001018	ERCC6-PGBD3	8.447	0.00255956	PECAM1	-2.403	0.01643165
C5orf51	-6.540	0.001018	IL23R	-5.558	0.00262707	VPS33B	5.760	0.01658009
FAM83D	6.074	0.00103752	RRP9	7.376	0.00298852	GEN1	-5.197	0.01748316
APH1B	6.891	0.00104474	OASL	-7.737	0.00299554	CYB561D1	7.330	0.01748316
KBTBD4	-6.873	0.00105612	UBASH3B	4.883	0.00299554	CSF2	3.320	0.01841714
SLC25A44	-5.928	0.00106952	BCL7A	5.325	0.0030349	RSBN1	4.921	0.01914205
ZWILCH	-8.544	0.00113032	FANCB	7.637	0.0030349	POU2AF1	-4.914	0.01914205
PECAM1	2.461	0.00113032	AK9	-7.551	0.0030349	OC10013398!	4.173	0.01914205
FAHD2A	-6.032	0.00119386	CD40	3.901	0.0030349	FAM186B	4.595	0.01914205
ZSWIM6	7.502	0.00132771	PDXDC2P	-4.336	0.0030349	SNORD14A	5.884	0.01914205
ZFYVE16	-6.701	0.00133795	CCNB1	8.463	0.0030349	BBS4	-7.108	0.01914205
GPN3	-7.325	0.00133795	MPP7	5.694	0.0030349	ZNF700	-6.008	0.01914205
ZNF200	6.964	0.00134468	HGH1	8.889	0.0030349	NTRK2	7.666	0.01952315
CTTN	-6.584	0.00136545	KCTD21	6.861	0.00342047	SERPINE2	-5.669	0.02030913
GNL2	-5.542	0.00136545	BZRAP1-AS1	-6.580	0.00342294	ALPK1	-4.262	0.02030913
FABP5	-4.058	0.00136545	CENPN	8.210	0.00342294	CHST11	5.097	0.02083486
C12orf45	-7.577	0.00142074	HDDC3	7.864	0.00351835	MAP4K2	5.168	0.02113038
DHX33	-7.554	0.00158465	SMC2	4.276	0.00364881	LIN54	-5.717	0.02117527
PRMT5	-6.686	0.00165434	AKAP1	6.205	0.00364881	PHLDB2	-4.262	0.02183582
SCML2	-7.220	0.00165434	LAYN	7.178	0.0036602	SMAGP	-3.817	0.0223068
IPO5	-4.249	0.00171191	RNF125	-5.421	0.0036602	KLHDC2	4.294	0.0223068
CCDC51	-7.418	0.00172546	BCAT1	8.726	0.0036602	TNFRSF11A	6.675	0.0223068
NDUFAF5	-7.033	0.00186341	AGPAT5	5.383	0.0036602	DIS3L	-3.500	0.0223068
DARS2	-5.682	0.0018976	KBTBD7	2.647	0.0036602	TUFT1	5.253	0.0223068
ALG6	-7.937	0.0018976	ZNF709	5.986	0.0036602	PPP1R16B	4.322	0.02283594
CARD6	7.541	0.0018976	POFUT2	8.279	0.0036602	CASC5	-2.975	0.02283594
KCNN4	-8.020	0.00193927	NDC80	7.443	0.0036602	C11orf63	-4.862	0.02354061
CCDC50	6.176	0.00199458	03-Mar	6.178	0.0036602	ZNF91	4.005	0.02354061
UBA7	-4.797	0.00199458	LPIN1	-5.397	0.0036602	CCDC85C	-5.076	0.02354061
SF3A3	-4.593	0.00199458	DLGAP1-AS1	-6.775	0.0036602	ENO1-AS1	4.793	0.02354061
DDX56	-5.702	0.0021201	FBXL4	6.513	0.0036602	SLC5A5	-4.154	0.02361103

MEGF9	-7.336	0.0021201	FAM111B	7.879	0.00369874	ZNF565	3.559	0.024161
LINC00926	6.445	0.0021201	DENND3	-6.851	0.00370911	IL31	6.375	0.024161
MS4A6A	2.465	0.00223559	CLCF1	6.935	0.00370911	GSTA4	4.843	0.024161
HGH1	-6.231	0.00226615	IQCK	6.036	0.00376999	IL17RE	5.355	0.024161
TPD52	-7.261	0.00231823	NOL6	7.072	0.00381489	ZNF266	-4.620	0.02441245
GGPS1	-7.096	0.00241345	CENPF	7.455	0.00395534	ATP5SL	5.324	0.02445737
APOOL	-6.728	0.00241345	RAD51AP1	5.666	0.00395534	N6AMT1	-3.925	0.02453418
ATG13	-7.499	0.00241345	ZNF827	8.691	0.00403904	C18orf54	-3.593	0.02470517
TIMM17A	-4.598	0.00247363	ZBED5-AS1	-5.918	0.0041091	CERKL	5.194	0.02470517
DPH6	-6.030	0.00247596	USP3-AS1	8.316	0.0041091	ACAD10	5.868	0.02482912
AP5M1	-7.181	0.00248587	GPR34	-4.023	0.0041091	AFF3	-4.388	0.02551852
ERP27	5.453	0.002597	ZNF184	5.492	0.00428295	CLIC5	5.889	0.02586629
MRRF	-8.286	0.002597	PEX1	-5.600	0.00434597	CAPN2	4.799	0.02632037
B4GALT3	-5.031	0.002597	RNF19B	-6.705	0.00444779	PACSIN2	5.271	0.02708032
EIF4EBP1	-6.170	0.002597	TPST1	6.788	0.00453173	BBS10	4.883	0.02731782
RRN3P1	-6.089	0.002597	ORC1	6.125	0.00463159	EAF2	6.656	0.02761007
DCLRE1A	-7.746	0.00261119	AHNAK	-6.181	0.00463159	TMEM55A	6.035	0.02765808
BCAT1	-8.072	0.00261119	TNFRSF9	3.572	0.00472483	FAM184A	-4.377	0.02805926
ALS2CR12	7.320	0.00262608	MORN2	5.886	0.00473553	CENPW	-4.570	0.02805926
STX11	-7.186	0.00263784	SLC2A8	6.038	0.00473935	ZNF140	-5.436	0.02805926
PNMA1	-7.610	0.00267591	ZNF670	7.095	0.00473935	CAMK2N1	6.420	0.02807093
CTCF	-4.544	0.00267591	AKR1B1	3.714	0.00473935	CCDC87	3.182	0.02807093
N6AMT2	-7.373	0.00267876	ZNF431	-6.576	0.0050239	PLRG1	-3.894	0.02822873
LETMD1	-6.754	0.00270124	MKRN2	8.471	0.0050239	PYCR1	-6.567	0.02822873
AGAP6	-6.855	0.00271845	MBTPS2	7.494	0.00525391	MMP25	6.895	0.02822873
ARL1	-5.271	0.00271845	SAMD9L	-5.532	0.0052653	PRPSAP1	6.584	0.02822873
MAD2L1	-8.320	0.00271845	TMEM53	5.273	0.00531481	ZSCAN18	-4.963	0.02822873
GMPR2	-5.393	0.00273438	IFT74	6.905	0.00535313	DIEXF	-5.670	0.02828307
CENPN	-7.469	0.00280236	ARMC6	7.070	0.00558784	ABCA3	5.339	0.02828307
OSBPL7	-7.074	0.00298319	PCBD2	-7.052	0.00558784	UBXN11	5.690	0.02992267
GPAA1	-5.740	0.00304108	FGFRL1	6.384	0.00558784	SERPINI1	6.508	0.03037656
POLD2	-4.925	0.00305568	LTN1	4.834	0.00558784	APOBEC2	-3.575	0.03044075
APEX2	-6.198	0.00305568	SNORA23	4.926	0.00558784	SRXN1	-5.871	0.03044267
PELI2	2.349	0.00305568	CSRP2BP	6.555	0.00567816	OC10192725	-2.553	0.03082953
LOC284023	-6.023	0.00319355	LMCD1	6.757	0.00605796	ZC3H12C	4.620	0.03162172
BIVM	-5.946	0.00322782	YJEFN3	5.252	0.00657006	SNORA31	3.551	0.03162172
SNORD12C	-7.337	0.00342209	MCM2	6.807	0.00657006	GDAP1	-4.288	0.03162172
CWC27	-6.262	0.00356301	L2HGDH	5.351	0.00657006	TEX2	6.915	0.03162172
HSD17B12	-6.611	0.00356301	SLC19A2	5.257	0.0067675	METTL18	-7.186	0.03295596
CLCC1	6.754	0.00368018	PRKAB2	-4.497	0.00680667	FKBP7	-4.588	0.03295596
SLC29A1	-4.901	0.00368018	ZNF14	-4.279	0.00685994	SNX10	4.584	0.03295596
GIMAP2	6.419	0.00380878	SNORA2B	5.186	0.00707456	SH3TC1	4.657	0.03295596
CCNB1	-7.189	0.00396489	IL3	-5.873	0.00724929	LIMS2	-6.078	0.03405512
YARS2	-7.212	0.00396489	ATPAF2	6.804	0.00740617	ZKSCAN5	5.456	0.03405512
ZNF791	-7.172	0.00410129	TRAM2-AS1	6.310	0.00742182	RFX5	3.825	0.03405512
CHAC2	-7.734	0.00410129	MOB1B	8.632	0.00785847	GCC1	5.437	0.03453761
GBP5	3.435	0.00410129	TMEM121	3.732	0.00785847	CSRNP2	-5.577	0.03453761
GTF3C3	-5.800	0.00410129	IPP	6.415	0.00785847	GRAP	5.322	0.03476837
BACE1	-7.227	0.00410129	FAM216A	7.666	0.008149	IL10	5.904	0.03505052
VPRBP	-7.336	0.00410849	ETV7	-5.424	0.00841139	ZNRF3	-5.409	0.03505052
QRSL1	-6.885	0.00410849	FAM175A	-3.698	0.00884184	OC10050613	4.029	0.0354768
HMGB3	-4.410	0.00413624	WASL	-6.394	0.00906845	VTRNA2-1	3.054	0.03563804
LXN	-6.858	0.00417968	CD96	-3.464	0.00918626	FBXW8	-6.265	0.03601153
PPIE	-5.495	0.00421368	MELK	6.774	0.0092593	FAM83D	-3.509	0.03609048

CYBB	5.202	0.00439794	TMEM185A	5.416	0.00945613	KIAA1429	2.975	0.03690551
ZNF253	7.258	0.00439794	HERC5	-1.869	0.00994285	FDXR	3.488	0.03704351
SMC2	-5.230	0.00440533	MMAB	4.224	0.00994285	TBC1D13	-3.387	0.03764644
EXT2	-4.622	0.00440533	CCNG2	-5.049	0.0100083	PPP4R1L	4.853	0.03764644
GAS7	2.712	0.00440533	CERKL	-4.519	0.0100083	ERCC6-PGBD3	-2.293	0.03764644
DUOX1	4.819	0.00440533	ZNF582-AS1	7.413	0.01017447	ZNF696	4.045	0.03764644
NUPL2	-7.168	0.00440533	GCSAM	-5.539	0.01017447	LIMD1	5.024	0.0376499
AP4M1	-4.362	0.00443755	TTI2	4.199	0.01029249	FLT1	-3.430	0.0376499
NOP56	-3.469	0.00452407	ZKSCAN2	3.217	0.01029249	BCL7A	-3.210	0.03833424
ACAD8	4.764	0.0046631	SAMD9	-4.995	0.01029249	KHK	3.820	0.03891444
WDR7	-4.160	0.00470716	GIMAP2	-5.503	0.01031915	BAP1	-5.591	0.03991049
WRB	-6.035	0.0048174	CORO2A	-5.617	0.01042864	NREP	-2.494	0.04014076
ZBTB34	-6.050	0.00493831	TUFT1	-3.576	0.01058134	MKRN2OS	-3.459	0.04039858
TBCE	-6.389	0.00493831	ERLIN1	7.603	0.01111746	PACS2	5.396	0.04039858
POMGNT1	-7.266	0.00497178	MANEA	6.674	0.01111746	RLN1	3.417	0.04039858
ZWINT	-7.442	0.00505925	PRMT3	5.631	0.01121616	SNORA2B	-4.091	0.04039858
TP53INP1	6.860	0.00506847	NKX3-1	6.918	0.0112612	MAP1A	-1.832	0.04049121
SNHG4	-6.870	0.0051617	ZNF468	6.744	0.01126474	ZFYVE28	5.214	0.04061656
TOP3B	-6.754	0.0051617	RNF26	6.626	0.01126474	CDR2L	-3.848	0.0406588
ASPH	-8.075	0.0051617	SYNE1	-4.139	0.01126474	RFFL	6.621	0.0411493
MTAP	-7.622	0.00526234	SFXN4	4.769	0.01126474	GPKOW	-4.283	0.0411493
TNFRSF9	-3.184	0.00533494	IL18RAP	-6.184	0.01126474	MBOAT2	4.678	0.0411493
PROZ	4.402	0.0055699	ZNF649	7.648	0.01126474	HS1BP3	6.283	0.0411493
ATG10	-5.911	0.0056101	CBX5	3.980	0.01132763	C11orf65	-3.007	0.0411493
TMEM44-AS1	-7.185	0.00573321	PBX3	5.297	0.01132763	UBR2	-3.539	0.0411493
PHLPP2	-6.699	0.00583985	SPDL1	8.005	0.01138417	TTC39B	-4.610	0.0411493
SNORA28	6.418	0.00583985	CCR5	-6.312	0.01138417	KLF4	4.076	0.04115343
TTC39B	5.561	0.00583985	UBXN11	-5.353	0.01138417	03-Mar	-2.715	0.04154229
BPGM	-8.028	0.00583985	CCNB2	4.959	0.01138417	CPM	-2.424	0.04154229
ZBED2	-7.024	0.0058901	APOBEC2	-3.017	0.01138417	NLRX1	-3.363	0.04154788
ZNF26	-7.301	0.00598973	C2CD5	7.605	0.01142976	ZNF32	5.248	0.04225779
ABCB1	6.562	0.00601514	CEP97	7.296	0.01142976	C4orf26	5.515	0.04225779
CNP	-4.343	0.00601514	TMEM44-AS1	7.223	0.01142976	L3HYPDH	-3.815	0.04245403
TGFBRAP1	-6.907	0.00602947	CYBRD1	7.404	0.01142976	ING2	-4.434	0.04411471
KIAA1429	-4.152	0.00624776	PTGFRN	8.279	0.011541	LINC00641	-4.910	0.04411471
HSD17B11	-7.042	0.00626866	ERCC6	-3.750	0.0117138	MED18	-4.752	0.04411471
C4orf33	-7.337	0.00633249	NCR3LG1	4.373	0.01183837	NT5DC3	-5.851	0.04472977
ZNF354A	-7.010	0.00633249	SERPINB6	5.708	0.01183837	C6orf229	5.442	0.04472977
IDH3A	-4.279	0.00635377	UNC119	-6.433	0.0119313	FBXO6	4.970	0.04472977
DERA	-6.625	0.00635916	SCARNA12	4.803	0.01200764	LRRC32	5.925	0.04501015
OC10050699I	6.038	0.00641303	SNORD14A	-5.506	0.01200764	DTD2	5.408	0.04501015
OSBPL8	2.890	0.00644968	KIAA2013	6.326	0.01203668	ZNF646	-3.727	0.04501015
RHBDD1	-8.664	0.00651395	GINS2	6.931	0.012138	LCORL	-3.336	0.04511137
AGPAT5	-5.501	0.00662422	MAN1A2	-5.395	0.012138	FAM219B	-4.468	0.04511137
LOC389765	4.799	0.00675224	ARG2	7.385	0.0125568	SLC11A2	-3.150	0.04511137
WHSC1	-5.605	0.00675238	TMED6	4.264	0.0125568	PIGF	5.327	0.04533323
ZNF880	6.176	0.00682452	CKB	6.303	0.01261043	HAPLN3	6.537	0.04578077
PLA2G15	2.273	0.00689082	GNG4	4.899	0.01265703	C1RL	5.225	0.04578077
SNUPN	-5.859	0.00695646	HMGXB3	5.173	0.01265703	ADAM12	5.885	0.04578077
PACSIN2	-5.629	0.00697889	CENPO	6.586	0.01265703	ZBTB6	-2.610	0.04588374
LMBR1	6.923	0.00697889	SNORD45B	6.590	0.01265703	HARS2	-4.622	0.04732389
ELP6	-8.780	0.00697889	FARP2	4.642	0.01274987	KSR2	-2.994	0.04767363
CHAF1A	-6.992	0.00699774	SNORA26	4.324	0.01274987	TGFBR1	3.649	0.04767363
MAP2K3	-5.328	0.00702857	IRF8	6.546	0.01274987	YJEFN3	-3.706	0.04767363

TRUB2	-6.683	0.0070899	ZFAND2A	5.582	0.01281077	ZNF354A	4.488	0.04767363
RFC4	-5.314	0.00713881	TRIM14	-5.555	0.01282039	ZNF397	-4.236	0.04767363
IL4	-4.148	0.00738801	SLC4A5	7.595	0.01282039	ALDOC	5.031	0.04767363
GOLGA7	-4.970	0.00744381	TRIP13	3.982	0.01282039	PHC1	5.101	0.04767363
PINX1	-7.239	0.00752646	EIF3B	3.508	0.01282039	ZNF433	-5.216	0.04767363
WDFY4	2.862	0.00752646	TMEM161A	6.803	0.01282039	NELFB	-5.047	0.04767363
FAM53C	-6.251	0.00752646	ZNF204P	2.355	0.01282039	YOD1	-4.145	0.04767363
SAMD9	4.795	0.00752646	FAM86FP	4.429	0.01282039	ARG2	-5.693	0.04802835
FHOD1	-7.932	0.00752646	SLC29A1	4.088	0.01282039	LSMEM1	4.684	0.04802835
HNRNPF	-3.341	0.00772359	SNORA51	4.363	0.01289035	CCDC22	3.828	0.04802835
DCTPP1	-4.864	0.00772359	PLEKHN1	4.558	0.01293812			
BAG2	-6.853	0.00772359	SHISA2	3.826	0.01298356			
C2orf76	-5.572	0.00774319	TANGO6	5.145	0.01312562			
CSE1L	-4.924	0.00776438	POLA2	8.842	0.01315028			
FBXO8	-4.795	0.00776438	SNX24	-3.670	0.01321607			
RTTN	-7.063	0.00776438	SLC5A5	5.896	0.01327246			
PSMB5	-3.080	0.00776438	ERP27	-5.349	0.01340788			
EAF2	-7.048	0.00776438	NGFRAP1	6.432	0.01340788			
MCOLN2	-6.162	0.00776438	ZNF831	-3.608	0.01350477			
PREPL	-6.024	0.00776438	ZDHHC4	8.787	0.01350477			
MARCKSL1	-5.838	0.00776438	SNORA80E	3.944	0.01350477			
GIN52	-7.411	0.00789393	FCGBP	-3.639	0.01350477			
PSTK	-6.040	0.00799654	IVD	3.682	0.01350477			
C1orf198	-2.860	0.00823893	FUT4	4.411	0.01382044			
PRMT7	-7.479	0.00823893	CENPL	8.269	0.01386583			
DHRS7B	-7.180	0.00825519	NAT1	6.286	0.01390375			
PTPN12	4.978	0.00828475	CUL4B	-5.059	0.01433081			
PRPF4	-5.530	0.0086227	ZKSCAN5	-3.984	0.01433081			
ATP10D	4.599	0.00879062	PLOD3	-6.864	0.01433081			
KAT5	-6.759	0.00894324	SLC43A1	4.695	0.01449365			
AAED1	4.835	0.00894324	SOS1	-3.747	0.01449365			
PEX13	-6.541	0.00894324	NUDT14	-6.215	0.01460896			
SF3B3	-3.776	0.00899039	FBXO41	6.957	0.01460896			
CPOX	-8.286	0.00899039	ZNF696	-3.420	0.01460896			
ANGEL1	5.790	0.00903891	MOSPD2	7.853	0.01461388			
MARS2	-4.589	0.00906061	KCTD6	4.549	0.01495787			
TRAP1	-4.800	0.00914548	HINFP	7.233	0.01495787			
HPGDS	-4.511	0.00921218	ZNF93	-3.636	0.01504233			
PRIM2	-4.494	0.00937923	FBXL6	3.506	0.01504233			
TMEM216	-7.136	0.00937923	TREML2	-4.358	0.01504233			
ZDHHC4	-7.591	0.00937923	OC10027221	5.078	0.01504233			
DNAJC17	-7.024	0.00937923	FAM210B	-3.836	0.01504233			
IL10	-6.846	0.00951719	POC1A	5.068	0.01504233			
MOSPD2	-6.637	0.0097086	TTN	-3.730	0.01522077			
DND1	-6.032	0.00984019	PSMD6-AS2	5.070	0.01522077			
ATG9B	5.572	0.00984019	PLA2G16	-5.324	0.01529268			
AK1	3.555	0.00984019	CENPP	5.316	0.01530619			
MORN2	-5.748	0.0098756	FAM188B	5.013	0.01533534			
SRP14-AS1	-6.664	0.0098756	GRK5	4.055	0.0153882			
RFC3	-7.406	0.00996689	TTK	6.595	0.0153882			
IPW	-5.724	0.01000242	ATF5	5.223	0.01547257			
IL1RAP	-5.502	0.01000242	LINC00926	-3.180	0.015569			
BICD2	-4.774	0.01000242	SLC38A6	7.550	0.015569			
SCARNA9L	4.051	0.01000242	MCC	-3.820	0.01596847			

ANAPC10	-7.564	0.01001016	PSEN2	5.545	0.01600636
FAIM3	4.809	0.01014496	ZNF397	6.354	0.01618994
ERI1	-5.399	0.01037004	ASB13	4.831	0.01658769
LINC01128	-6.803	0.01039937	ORAI3	6.026	0.01658769
POLR3K	-4.139	0.01039937	HPGD	-6.572	0.01658769
FAM21A	-5.236	0.01039937	FIRRE	5.688	0.01658769
FAM122A	-5.902	0.01039937	ZNF880	-6.122	0.01666693
KDM3A	4.053	0.01039937	DHRS13	6.337	0.01666693
MRPL35	-7.464	0.01043382	ZNF226	6.704	0.01666693
KLHDC4	-5.709	0.01047149	USP2-AS1	4.417	0.01686156
VIPAS39	-5.761	0.01047149	IL16	-3.499	0.01688105
ZFP30	-5.041	0.01047149	TRIB1	5.570	0.01688105
IL5	-7.153	0.01047149	SALL2	-2.820	0.01705868
LINC00494	2.384	0.01050862	ZWILCH	7.660	0.0171313
SEC31B	4.025	0.01057007	ACTR5	-5.474	0.0171313
RFC2	-6.343	0.01066786	TTYH3	2.898	0.0171313
MIS12	-6.355	0.01067107	CDCA7	6.372	0.01747501
NOL10	-4.747	0.01067107	GRIP1	-4.287	0.01747501
KIAA0232	-8.437	0.01074015	KCNQ1OT1	-4.386	0.01761623
KIAA0753	-4.369	0.01076164	CATSPER2P1	4.488	0.01780461
FTCDNL1	4.495	0.01083284	ZNF557	4.604	0.01808737
RRAS	3.237	0.010991	FAXDC2	-5.774	0.01820891
MRPL30	-5.585	0.01099284	PCBP4	-5.903	0.01820891
UTP6	-3.651	0.01099284	TERT	4.972	0.01835827
IL9	-2.580	0.01126897	MBP	-4.409	0.01836044
TMEM219	-3.877	0.01140446	RNF219	5.842	0.01875366
MRPS2	-6.872	0.01170631	SRP14-AS1	6.004	0.01875366
KLF12	4.595	0.01173649	ZDHHC6	4.724	0.01878746
TMEM2	3.859	0.01189282	ASB7	5.745	0.0191157
CCDC86	-6.627	0.01195009	CCDC71	5.873	0.0191157
NCLN	-6.843	0.01197398	PNPO	4.368	0.0191157
PGM2L1	-6.973	0.01197398	SCCPDH	6.974	0.01946124
PYGO2	7.130	0.0120074	NEFH	6.222	0.01946124
ETS1	3.064	0.0120074	VPRBP	6.113	0.01946124
MAGEE1	-5.654	0.01210737	GPR160	5.680	0.01946124
RNF24	4.993	0.01215627	LINC00944	-7.816	0.01946124
PSMD6-AS2	-4.288	0.01220366	METAP1	2.739	0.01946124
PACS2	-5.019	0.01220366	PINX1	7.378	0.01946124
POU2AF1	-5.479	0.01220366	NAA30	4.314	0.01959893
ADPRHL2	-6.311	0.01220366	CLUHP3	4.440	0.0199269
AFF3	-5.516	0.01220366	STX3	6.773	0.02012636
MEST	-5.285	0.01231744	RHOC	-6.541	0.02033751
ACAD9	-5.600	0.01231744	C15orf53	-3.698	0.02033751
EGR2	-4.868	0.01232636	LAMB1	5.614	0.02040626
LRR1	-7.389	0.01241077	ORC6	6.269	0.02048999
NUBP1	-5.986	0.01241077	IL24	2.502	0.02052912
CD40	-2.867	0.01241077	NRIP1	5.597	0.02097535
CDYL	-6.617	0.01249381	FGF18	5.292	0.02099369
RSPRY1	4.149	0.01249381	CENPW	5.737	0.02099369
PIK3CG	-6.452	0.01249381	LDLRAP1	4.902	0.02123458
UNK	-7.650	0.01249381	ATG9B	-4.140	0.02128453
ABLIM1	4.022	0.01257415	HHLA3	2.297	0.02140124
JOSD2	-4.434	0.01264234	C5orf51	4.375	0.02149076
ZNF7	-3.877	0.01264234	GTF3C3	3.777	0.02149076

SMC1B	-6.278	0.0126903	RSC1A1	-6.646	0.02149076
OC10050614:	1.896	0.01272936	P4HA2	-2.834	0.02186998
SEC23IP	-5.227	0.01275965	OSTM1	-4.901	0.02186998
TTLL12	-5.379	0.01275965	AQR	3.308	0.02186998
KLHL3	-4.105	0.01293871	TMCO6	3.199	0.02246564
UHRF1	-6.642	0.01304523	TEKT4P2	3.467	0.02259612
PIGP	-7.075	0.01304523	PHF7	5.187	0.02259612
MKS1	-5.110	0.01304523	CLN6	4.513	0.02269015
ANO6	-5.837	0.01304523	LIG4	5.264	0.02297388
CCNH	-5.701	0.01304523	ZNF391	2.510	0.02315263
MFHAS1	-5.071	0.01306429	DEPDC1B	4.839	0.02315263
PPCDC	-6.750	0.01314124	SNHG10	5.818	0.02315263
IL21	-6.070	0.01318128	GBP5	-4.122	0.0231837
SLC37A4	-4.437	0.01318814	GALNT10	-5.626	0.0231837
RHOA	-4.290	0.01331912	PEX13	7.649	0.02345702
HDAC6	-6.539	0.01338181	MINPP1	6.062	0.0234575
PYCR1	-6.154	0.01341814	BRI3BP	4.190	0.0234575
TIMMDC1	-4.796	0.01344372	RARRES3	-3.881	0.0234575
UBE2H	4.147	0.01348333	C16orf71	4.938	0.02367622
POMGNT2	-3.720	0.01369735	CRIP2	-1.787	0.02367622
DCUN1D3	-5.317	0.01369735	CAPN2	-4.009	0.02367622
SDHAF4	-5.354	0.01371544	MAP1B	8.355	0.02367622
HIBCH	-5.357	0.01377924	RNF8	5.903	0.02367622
MPG	-6.387	0.01383165	DERA	7.174	0.02367622
ANKRD20A5P	-3.434	0.01401637	ATP2A1-AS1	3.470	0.02367622
NOL6	-6.387	0.0141921	SNUPN	6.132	0.02367622
IPO13	-5.494	0.01426565	UTRN	-3.839	0.02367622
SLC43A3	-5.140	0.01441617	STAP2	3.941	0.02367622
ZNF331	-5.754	0.01452355	LOC284009	3.965	0.02367622
NCK1-AS1	-3.142	0.01458223	CAPG	-4.668	0.02377217
PDE6B	-7.743	0.01483813	MID2	-2.568	0.02422365
OXCT1	-4.961	0.01489447	INAFM1	3.563	0.02425423
DAAM1	-7.253	0.01509996	NAF1	6.052	0.02429731
EEF2KMT	-6.685	0.01517171	SNORD19	4.152	0.02437136
METTL1	-5.311	0.01517171	RAB34	5.758	0.02464833
ZCCHC17	-4.404	0.01517171	MAN1B1-AS1	3.650	0.02472924
SNX30	-5.114	0.01518961	BYSL	6.493	0.02480229
CCDC22	-4.154	0.01521675	GEN1	4.665	0.02497377
SQRDL	-4.191	0.01521675	UHRF1	7.284	0.02570672
IL7R	2.297	0.0152917	C15orf57	3.566	0.02642969
HTRA2	-6.472	0.01556929	ARL16	4.268	0.02650704
TMEM38B	-2.599	0.01556929	GNA15	-5.096	0.02650704
TMUB2	-3.090	0.01556929	HACD4	-5.154	0.02657377
PLAA	-5.619	0.01558523	ICA1	6.825	0.02679116
KBTD7	-1.209	0.01560027	HIP1R	4.633	0.02696305
GNPTAB	-5.705	0.01560027	NPAS2	4.315	0.02696305
ZNF14	4.493	0.01565982	TMEM200A	-4.587	0.02696305
NUP43	-5.627	0.01567385	HIST1H1B	-3.543	0.02698932
DKC1	-3.009	0.01576262	SLC3A2	4.181	0.02712763
CHPF	-4.387	0.01577215	LIMS2	7.308	0.02713036
DES12	-4.431	0.01618841	MAGI3	-5.091	0.02713036
AAR2	-5.558	0.01640711	TOLLIP	4.528	0.02713036
MIR4697HG	3.278	0.0168311	TCP11L2	-2.136	0.02713036
CRACR2A	5.921	0.01698793	SNTA1	-3.709	0.02713036

RPF2	-3.114	0.017209	PJA1	4.790	0.02735795
CDCA7	-6.172	0.01753332	PLCG1-AS1	-5.064	0.02737581
NTHL1	-5.453	0.01753332	MXI1	6.854	0.02739181
PAAF1	-4.989	0.01753332	GAS5-AS1	4.711	0.02743804
OLA1	-5.175	0.0175413	FAF2	4.523	0.02743804
APOO	-6.836	0.01785937	ZNF583	-3.980	0.02743804
CCNT1	3.772	0.01791678	ETAA1	5.735	0.02855254
LINC00847	-4.135	0.01791678	C14orf93	5.819	0.0287206
WDR3	-4.776	0.01791678	HPX	-2.669	0.0287206
IL13	-5.626	0.01791678	DNTTIP1	5.008	0.0288974
MED18	-4.975	0.01802945	POLR3H	6.305	0.0288974
ELF4	-5.678	0.01813067	TMEM2	-4.305	0.0288974
POLE4	-7.060	0.01825776	HSF2	8.516	0.0288974
ARV1	-7.202	0.01825776	MICAL1	-5.829	0.0288974
AFF1	-5.779	0.01827049	AURKA	4.905	0.0288974
NIF3L1	-5.190	0.01827049	SHCBP1	5.037	0.02896966
CPPED1	-6.164	0.01827049	HPDL	4.752	0.02903338
SRSF8	-5.575	0.01827049	TP53TG1	6.724	0.02933772
TAF1A	-6.264	0.01827049	CETN3	4.807	0.02946901
XYLT1	-5.628	0.01827049	FN1	6.268	0.02956658
PON2	-4.834	0.01835846	FAM185A	5.405	0.02971265
RNASEH1-AS1	-6.848	0.01836213	CALCOCO1	-1.710	0.0301438
ASUN	-5.174	0.01857962	FBXO15	4.339	0.03014971
HLA-DRB5	3.536	0.01865777	CDK1	2.815	0.03108584
UBN2	-6.489	0.01865986	MIR3607	2.808	0.03113326
POLR1C	-3.320	0.01893707	RRAGD	7.447	0.0312408
CEP131	4.019	0.01893707	ZKSCAN4	3.564	0.0312408
BEND3	-5.379	0.01894314	NR4A3	5.075	0.0312408
AGO1	-4.914	0.01894314	KCNAB1	6.013	0.0312408
DDR GK1	-6.519	0.01894314	NLE1	6.302	0.0312408
GZMB	-4.333	0.01940326	SERPINI1	-3.367	0.0312408
ANKZF1	4.775	0.01941286	TTC25	-3.842	0.0312408
ZC3H10	2.828	0.02000909	CCDC85C	5.839	0.0312408
AK3	-6.716	0.02000909	LNX2	6.074	0.03130441
MTPAP	-2.842	0.0200233	BCS1L	8.030	0.03133264
PTGFRN	-4.270	0.0200233	LEF1	3.478	0.03137308
CYBRD1	-3.085	0.02003783	C11orf84	4.878	0.03137308
C2orf15	3.661	0.02003783	LOC400863	5.898	0.03161136
MINPP1	-5.134	0.02003783	TPD52L2	3.622	0.03240999
PITRM1	-6.275	0.02003783	CPM	4.440	0.03254486
GATB	-6.857	0.02013351	ASB6	3.693	0.03277203
MTERF4	-6.901	0.02015325	ARMC2	-2.959	0.03294723
NOC3L	-4.128	0.02019074	MYB	7.117	0.03297918
MORC2	-5.810	0.02019074	DPP4	-4.172	0.03297918
MIPEP	-4.423	0.02046994	NOC3L	3.148	0.03297918
IPPK	-6.116	0.02049815	CDT1	5.907	0.03297918
RRAGA	-6.549	0.02060141	GNL3	2.419	0.03297918
MICAL2	-6.630	0.02060141	RHEBL1	-2.785	0.03299052
ZNF626	6.166	0.02060141	ZNF844	-3.256	0.03301982
HSDL1	-6.123	0.02060141	GRAMD4	5.278	0.03306556
ATP9B	-6.645	0.02115717	FAM105A	-4.556	0.03313102
CSF2	-3.677	0.02119572	SYNE2	-2.666	0.03317612
LAP3	-5.189	0.0212474	BLZF1	-4.815	0.03327497
TNFRSF10A	6.443	0.02125345	DPYD	-3.518	0.03337735

TSPYL4	5.293	0.02156959	DDX26B	5.986	0.03337735
ARMC6	-6.329	0.02197545	IL9	-3.000	0.03381481
NCALD	-5.118	0.02200125	PDZD4	-3.744	0.03409233
TREML2	3.983	0.02200125	GRAMD1B	7.000	0.03409233
SNORA40	-3.952	0.02200125	MARCKSL1	5.770	0.03409233
TSFM	-5.834	0.02200125	GAS2	-2.995	0.03425364
DNASE1L1	3.708	0.02200125	CAMK2N1	-6.141	0.03425364
SCCPDH	-4.061	0.02200125	ITGB2-AS1	-4.817	0.03425364
LCLAT1	-5.960	0.02202169	FLT1	3.891	0.03470512
MOSPD3	-5.404	0.02223719	CNKSR2	5.219	0.03495678
HDHD1	-6.549	0.02223719	ASB14	3.313	0.03495678
NSUN3	-6.294	0.02223719	ZNF646	4.738	0.03495678
TRIT1	-6.713	0.02223719	KNTC1	5.055	0.03495678
KLHL9	-5.142	0.02223719	C19orf40	4.725	0.03495678
LPIN1	3.483	0.02224626	C6orf52	3.121	0.03521607
POFUT2	-7.214	0.02238373	LIG1	2.564	0.03521607
TMCO6	-2.630	0.02261589	ZNF823	2.630	0.03580123
C6orf106	-3.572	0.02261589	RGS1	-2.854	0.03580123
NLE1	-5.412	0.02266578	PDE3B	-3.381	0.03580123
ZNF429	-5.593	0.02275288	PRKCZ	-3.820	0.0361575
HS1BP3	-6.644	0.02284832	EXO1	2.628	0.03631368
USP31	-7.772	0.02299807	CHKB	4.344	0.03658969
CMTR2	-5.943	0.02299807	ZNF331	7.257	0.03682337
VBP1	-4.071	0.02299807	PMS2P1	4.449	0.03682337
MRPL27	-4.391	0.02312905	GLIPR2	-3.869	0.03711966
CLSPN	-6.336	0.02312905	BIK	6.333	0.0373042
PDZD4	3.385	0.02312905	TAF2	-3.594	0.03737598
CCDC73	-6.039	0.02369238	ZNF280D	4.540	0.03737598
FCRL1	1.953	0.02414431	GPRASP1	3.837	0.03767346
USP10	-2.937	0.02432668	ARSK	6.261	0.03773415
CTBP2	-4.332	0.02453329	PPIP5K1	4.461	0.03773415
PSMD3	-5.023	0.02460031	SERPINE2	7.108	0.03773415
CDK4	-4.864	0.02475798	GALE	3.506	0.0377534
C7orf25	-3.866	0.02521655	RASGRF2	4.293	0.0381094
MCM4	-5.765	0.02527378	ZNF345	-3.637	0.0381094
FOSL1	-2.812	0.02527378	ATM	-3.263	0.03817721
JAGN1	-4.197	0.02527378	GINS1	7.553	0.03817721
STARD3NL	-4.166	0.02527378	TEX10	4.817	0.03817721
SLC38A6	-5.666	0.02527751	ZNF222	2.569	0.03817721
RB1	5.675	0.02527751	LAMP3	4.823	0.03817721
PDZRN3	3.329	0.02534317	TRIP4	-4.822	0.038261
KCTD6	-3.137	0.02534868	CTU2	5.578	0.038261
BCL2L1	-5.351	0.02534868	EIF4EBP1	4.462	0.038261
HACE1	-6.188	0.02542818	GPT2	2.521	0.038261
HGSNAT	-6.088	0.02546614	ASF1B	3.264	0.03862011
C4orf26	-3.015	0.02550629	PIM1	-3.749	0.03873393
C14orf159	6.470	0.02563869	UBXN6	6.092	0.03873393
HYAL2	-4.257	0.02570066	ESPL1	5.426	0.03875724
BTK	2.385	0.02570066	MRPS30	4.865	0.03875724
ASB1	-3.827	0.02579961	KDM3A	-4.123	0.03875724
GPR89A	-6.104	0.02612764	C4orf46	5.265	0.03875724
CRYBG3	-3.439	0.02612764	C12orf45	4.677	0.03875724
ABCA1	2.341	0.02618053	CCDC66	3.295	0.03875724
TPX2	-3.661	0.02661081	MEST	5.058	0.03880317

EZH1	-5.044	0.02661081	ARHGAP10	-4.447	0.03880317
GIMAP4	3.901	0.02661081	KATNB1	6.434	0.03882801
PEX3	-6.213	0.02667145	PRMT5	4.379	0.03903981
ZFAND2A	-5.327	0.02667145	SAPCD2	4.953	0.03905178
FANCB	-3.510	0.02667423	GZMB	4.590	0.03905178
POLA2	-8.306	0.02667423	TMEM131	4.721	0.03905178
VPS8	-5.264	0.02671494	TK1	3.703	0.03925026
RBBP4	-3.178	0.02673321	ZNF736	3.030	0.03929456
MCM2	-5.952	0.02673321	DLEU1	7.912	0.03948096
RGS2	-5.107	0.02719379	ZBTB21	5.539	0.03951238
TMEM234	-4.552	0.02722428	ZHX1-C8orf76	-3.340	0.0396772
COX11	-6.299	0.02722428	PREPL	4.177	0.0396772
NARF	-4.022	0.02738683	TYSND1	-3.808	0.03993244
MRPL17	-4.114	0.02738683	C6orf201	-3.795	0.04030684
GCNT1	-5.405	0.02738683	IQCE	4.916	0.04046263
DDIT4L	1.417	0.02748718	PGM1	7.794	0.04054811
ZNF570	-5.787	0.02776312	ZNF473	3.117	0.04054811
B3GAT3	-5.170	0.02783652	SAC3D1	3.996	0.04054811
EED	-2.947	0.02788779	SMAD3	-6.495	0.04054811
EFNA4	-3.875	0.02788779	RMI1	8.501	0.04054811
FNDC9	-3.967	0.02788779	SNORA28	-1.416	0.04054811
TMEM161A	-4.566	0.02788779	BCL11A	6.254	0.04054811
SPINT2	-4.352	0.02815712	CIAPIN1	2.984	0.04054811
N6AMT1	3.738	0.02815712	ZNF26	7.339	0.04054811
DAPK2	2.028	0.02819401	LINC00641	3.943	0.04054811
TOR2A	-5.025	0.02823195	MTFR1L	7.307	0.04101054
RNF26	-3.989	0.02831173	CYBB	-2.861	0.04129839
TRIM14	3.669	0.02834719	FBXL13	4.200	0.04129839
EFCAB11	-3.829	0.02835002	SNORD51	4.413	0.04129839
TRUB1	-7.416	0.02835002	ZNF239	7.277	0.04149562
DGCR2	-2.914	0.02837099	WDR47	-4.163	0.04170997
APPBP2	-7.535	0.0285178	CEP126	4.847	0.04177471
SLC25A33	-5.354	0.02880956	ZBED4	-5.298	0.04177471
GIMAP1	8.718	0.02881081	ZC4H2	2.108	0.04177471
PRKAB1	-4.093	0.02889942	TTLL4	5.117	0.04177471
GYS1	-6.327	0.02892757	RCSD1	-4.549	0.04240884
JAKMIP1	-5.603	0.02932795	NFIA	-3.781	0.04240884
SNORD14D	-5.405	0.02932795	NLRX1	3.734	0.04259111
LOC90784	-5.777	0.02932795	S100A4	-2.673	0.04290539
NFIL3	-4.032	0.02936849	APPBP2	5.866	0.042971
PIGU	-5.302	0.0294961	PAQR7	6.240	0.04314274
SH3BGRL	3.068	0.0298287	INSL3	4.480	0.04347507
CSNK1G1	4.351	0.02994467	PVRL1	-4.437	0.04347507
FGFR1	-3.156	0.02997708	CSRNP2	5.257	0.04347507
DENND4B	-6.829	0.02999388	EFCAB14-AS1	4.283	0.04347507
MRPL46	-5.031	0.03022852	LOC399715	-3.434	0.04347507
PPP4R1L	-3.249	0.03037536	RP9P	-2.796	0.04347507
COQ2	-4.708	0.03037536	LY75	-5.507	0.04355169
RAB11FIP5	-5.437	0.03037536	ZBTB39	6.973	0.04355169
NLRP3	-3.360	0.03058033	DIXDC1	5.635	0.04362418
PLA2G12A	-5.196	0.0307514	KNSTRN	4.264	0.04370569
SLC25A15	-6.068	0.03077246	LINC00672	-4.369	0.04370569
TMEM185A	-3.693	0.03095005	SEMA4B	2.620	0.04388616
ZNRF3	-5.028	0.03095005	TBXAS1	-3.034	0.04388616

BCS1L	-6.017	0.03130381	TMEM68	5.976	0.04392132
HYAL3	-5.079	0.03144591	GABPB2	2.958	0.04392132
KCNAB1	-4.757	0.03151481	FRMD6	2.989	0.04392132
ADAT1	3.839	0.03159422	GPATCH1	6.207	0.04392132
ZNF575	-3.946	0.03160547	NAA50	2.892	0.04420086
ZNF567	-3.303	0.03160547	ERRFI1	3.113	0.04420086
POLR3G	-6.060	0.03160547	ALKBH4	2.509	0.04420086
CIAPIN1	-3.514	0.03171811	SLFN12	-4.035	0.04420086
NUP133	-6.742	0.03178463	ACCS	-3.224	0.04420086
DNAJC11	-5.673	0.03178463	DARS2	5.189	0.04420086
PXYLP1	-3.902	0.03189023	GABPA	5.366	0.04420086
LIG3	-6.732	0.03194932	LINC00426	-3.543	0.04420086
ZNF546	-2.833	0.03211105	VMAC	3.112	0.04436174
LDHA	-1.998	0.03245118	ZNF689	4.728	0.04450782
C11orf84	-4.310	0.03246046	PRMT6	6.146	0.04466575
NUDT16L1	-6.097	0.03258594	ZNF548	-4.524	0.04480486
KIF3C	-4.018	0.03267418	DHX8	-3.998	0.04481458
COG1	-6.575	0.0327835	TST	-1.708	0.04484948
DTNBP1	5.168	0.03278594	DUS2	6.044	0.04484948
TMCC1	6.514	0.03278594	THBS1	-4.915	0.04484948
AUP1	-4.108	0.03278594	ANGPT2	6.268	0.04484948
AP4S1	-5.712	0.03282893	C20orf196	4.171	0.0448979
TRIB2	4.034	0.03287701	SNORA5C	3.558	0.0450202
BYSL	-6.150	0.03310639	LDHA	1.820	0.04511254
ASH1L	3.602	0.03352636	TNFSF13B	-3.874	0.04518782
ERI3	-5.141	0.03369366	GNL2	3.323	0.04518782
MOB1B	-8.093	0.03410435	PCYT2	-2.435	0.04518782
GATC	-5.204	0.03486999	KIF15	2.769	0.04518782
HSD17B7	-7.386	0.03487966	COPS7B	3.512	0.04518782
SLC25A20	-5.013	0.03505365	SLC2A1	4.778	0.04521696
CRELD1	-4.095	0.03505894	PKIA	4.516	0.04533767
FLVCR2	2.639	0.03513237	MICALL1	-4.704	0.04533767
SLC37A3	3.536	0.03526287	TRIM32	3.024	0.04544601
ZNF333	-4.049	0.03528067	ZNF367	3.326	0.04547679
ZNF844	2.562	0.03528067	FLVCR1-AS1	-2.522	0.04573909
PAQR7	-6.396	0.03528067	ZNF561-AS1	-2.687	0.04576556
ADO	-6.243	0.03528067	WDFY4	-1.711	0.04666554
ORC1	-4.313	0.03528067	CHAF1A	7.061	0.04682748
ZNF275	7.045	0.03528067	CLIC5	-5.038	0.0469533
GALK2	-6.219	0.03537389	FANCF	7.042	0.0469533
PTPRN2	2.902	0.03542726	STK26	4.656	0.0470404
C16orf70	-5.870	0.03542726	AAMP	3.865	0.04708136
DPY19L1P1	-3.381	0.03562297	OC100506990	-4.682	0.04708136
MBOAT2	-3.645	0.03609529	IQSEC1	-4.566	0.04721607
CTSW	-2.804	0.03633277	ZNF283	-2.867	0.04721607
LOC729732	4.439	0.03635174	NPL	6.042	0.04721607
ZHX3	-5.872	0.03635174	ODC1	3.386	0.04721607
NSDHL	-6.075	0.03637877	DIP2C	-2.920	0.04721607
GGCT	-5.315	0.03645418	HECTD3	5.911	0.04721607
FAM73B	-3.473	0.03650012	MCM4	5.772	0.04848863
FBXO6	-5.457	0.03660777	NCOA2	-6.398	0.04848863
NCOA2	3.897	0.03661247	JAM3	5.196	0.04860211
ACER3	3.846	0.03661247	BACH1-IT2	2.869	0.04863986
FAIM	-6.485	0.03661247	WRN	5.753	0.04865069

NFIA	4.875	0.03661247	METAP2	2.387	0.0486961
OC10063091:	2.224	0.03661247	CDC25A	6.865	0.04880585
ASAP1-IT2	-2.580	0.03661247	C10orf128	-6.534	0.04880585
KIAA1467	-5.137	0.03661247	ZNF182	7.974	0.04892503
SORD	-5.596	0.03691646	PDE9A	5.983	0.04892503
GRSF1	-4.068	0.03713519	RARB	3.129	0.04928526
PFKFB2	-2.398	0.03717389	MRS2	5.577	0.04928526
HAUS5	-6.147	0.03732723	ATG101	5.501	0.04932769
SLC25A17	-6.528	0.03739034	SLC25A33	5.580	0.04940845
C5orf30	-3.734	0.03739034	CRISPLD2	4.639	0.0494785
KLF5	4.022	0.03739034	RPL36A	5.144	0.04956089
SYNE2	2.274	0.03739034	DESI1	4.500	0.04956089
OC10050698:	-5.578	0.03739034	TMEM156	-5.262	0.04964201
ACAT1	-3.300	0.03739034	WASF1	4.043	0.04973363
SAPCD2	-4.214	0.03739034	NTRK1	-3.053	0.04980726
SNORA62	-3.738	0.03739034	OXCT1	3.578	0.04980726
RNU5A-1	-5.594	0.03739034	ZNF461	-1.868	0.04980726
TAGLN	4.448	0.03739034			
SLC2A8	-4.810	0.03739034			
NDST2	5.762	0.03739034			
SLC35E3	-4.908	0.03755497			
MOB1A	-4.208	0.03762217			
KRBOX4	-5.813	0.03767657			
TAF9B	-3.612	0.03767657			
PHKG2	-8.071	0.03794133			
KDELC2	-5.479	0.03797766			
TSR2	-3.987	0.0382846			
PHLDB2	3.841	0.03847493			
DYNLL2	-5.699	0.03851488			
HADH	2.910	0.03851488			
MIS18A	-5.203	0.03851488			
NEFH	-4.351	0.03851488			
PJA1	-3.579	0.03851488			
ABCF2	-3.278	0.03851488			
ZBTB16	-3.167	0.03851488			
CECR1	2.084	0.03853105			
CDR2L	-3.807	0.03867211			
C11orf57	-5.896	0.03881591			
IMMP2L	-4.730	0.03902809			
ZNF268	-5.890	0.03911234			
ZNF32	-6.869	0.03932437			
CXCR5	-3.618	0.03932437			
GGCX	-6.265	0.03932437			
VPS37B	4.986	0.0396556			
CNNM4	-3.351	0.039665			
PSMD4	-2.881	0.0397306			
NCOA4	-3.176	0.04008165			
PES1	-4.753	0.04022236			
ZNF280D	-4.886	0.04026591			
PAWR	2.122	0.04042659			
ARL15	-3.407	0.04066013			
SPESP1	-3.229	0.04068074			
C10orf128	-3.842	0.04075742			
NT5DC2	-6.748	0.04085008			

C2orf47	-6.174	0.04089878
MBTPS2	-5.746	0.04092846
KSR2	2.486	0.04101674
ZFYVE28	-5.788	0.04137138
NPRL3	-7.388	0.04146848
C1orf216	-4.520	0.04172923
ZNF654	6.655	0.04195242
IPO4	-6.954	0.04205506
MRPL13	-3.376	0.04214316
TCEAL3	4.486	0.04214316
POLH	-6.463	0.04214316
RUFY1	-5.962	0.04214316
LONP1	-5.576	0.04236047
RNF214	-4.638	0.04239888
MTERF3	-6.036	0.04239888
PKIG	2.038	0.04247856
KIAA1217	3.895	0.04247856
SMCO4	-6.081	0.04247856
TNFRSF11A	-1.524	0.04258275
TLL4	-4.789	0.04258275
ZUFSP	-7.195	0.04270792
CHCHD4	-8.119	0.04270792
CEP97	-6.173	0.04279257
METTL3	-7.333	0.04279257
ZCCHC8	3.302	0.04279257
ZNF91	-3.154	0.04279257
MFN1	-5.794	0.04282924
ZNF213-AS1	-2.100	0.04282924
SLC39A1	-6.227	0.04282924
SPATA20	-4.371	0.04287145
XKR8	-3.556	0.04287145
RRP9	-5.316	0.04292925
POC1A	-2.970	0.04315077
SNORD30	2.126	0.0435113
SIL1	-5.826	0.04352478
ZEB2	-5.836	0.04352478
KCTD3	1.688	0.04352478
SNORD45B	-4.341	0.04352478
RFX5	-3.655	0.04372249
MRPL15	-5.670	0.04372249
VPREB3	2.041	0.04372249
MGAT4B	-4.245	0.04387606
CASP6	-5.879	0.04391634
WASL	4.726	0.04391634
STIM1	-5.237	0.04413546
NCR3LG1	-1.477	0.04424673
PSTPIP2	-3.138	0.0445669
NANS	-4.408	0.04457293
WDR53	-5.215	0.04457293
ZNF131	-4.331	0.04478808
RP9P	-3.345	0.04485765
TMEM116	2.538	0.04498702
ZBED5-AS1	4.687	0.04498702
EXO5	-4.390	0.04498702

TXNRD2	-3.907	0.04499883
SEH1L	-3.891	0.04499883
RAD51	-3.123	0.04549929
ZNF304	2.511	0.04577932
ENGASE	1.633	0.04628872
DDX50	2.696	0.04628872
SNORD70	-3.520	0.04628872
HRSP12	-4.308	0.04628872
GNL3	-2.511	0.04636569
ORAI3	-2.669	0.04667789
GIT1	-5.830	0.0468962
FBXL6	-2.302	0.04689852
UBA5	-5.644	0.04689852
FAM86FP	-3.430	0.04689852
CREBL2	3.325	0.04703236
TWF1	-6.876	0.04721999
USF1	-3.658	0.04728248
RAB27B	-2.590	0.04728386
RWDD2B	-5.643	0.04728386
TMEM39B	-5.749	0.04728386
ANKEF1	1.775	0.04728386
BCKDHB	5.231	0.04728386
LINC01281	-6.785	0.04728386
CMTM8	3.494	0.04729898
SRP54	-3.093	0.0473392
NCS1	-3.546	0.04745119
NAA50	-3.670	0.04746709
TMEM138	-4.521	0.04761273
RNU5B-1	-4.387	0.04761273
THUMPD3	-4.714	0.04761273
ACP1	-2.797	0.04786615
TBL3	-5.392	0.04786615
SLC25A32	-3.925	0.04786615
ANKS6	-2.951	0.04787461
BLMH	-4.520	0.04787461
TMX4	3.660	0.04801846
ZBTB42	3.378	0.04801846
KIAA1804	-5.677	0.04801846
SNORA23	-3.406	0.04809907
AHCY	-3.082	0.04809907
FAM153A	2.498	0.04812568
ATF5	-4.869	0.04812568
USB1	-5.331	0.04812568
MRPS17	-4.289	0.04812568
SAMM50	-6.229	0.04812568
FAM186B	-2.460	0.04846748
AP3S2	-2.630	0.04892887
IQCK	-5.011	0.04892887
PPT1	-3.355	0.04901946
IKZF4	-6.060	0.04914162
GBP1	2.756	0.04941697
CCDC91	-4.293	0.04951071
RPL7L1	-3.633	0.0497343
OPA3	-6.325	0.04973941

SRGAP3

2.304

0.04986235

Geneid	logFC	PValue	FDR
LINC00861	10.6874596	1.22E-09	3.15E-06
GPR65	10.5992148	4.15E-09	7.67E-06
SNTB2	10.4366993	7.38E-08	7.96E-05
GAB3	10.3640035	2.13E-07	0.00017268
CD84	10.1083224	7.86E-11	2.55E-07
TMEM63A	10.0314103	0.00020687	0.01300258
ANXA5	9.65695069	3.60E-06	0.00119502
GBP3	9.58178255	0.00061752	0.02536119
LINC00649	9.32874175	1.42E-05	0.00280604
NUDT22	9.13626196	0.00037791	0.01911393
PIK3C3	9.1182173	0.00011218	0.00945404
CDADC1	9.10160938	1.19E-05	0.00244065
TIGIT	9.05126612	6.76E-08	7.96E-05
PBXIP1	8.88325719	4.51E-05	0.00556405
FAIM3	8.84237029	6.58E-06	0.00177387
BDH2	8.82542907	1.10E-05	0.00241812
ABCA5	8.81044863	3.78E-06	0.00119502
TNFRSF10A	8.79663001	0.00099347	0.03332503
SNX30	8.79194632	0.00104277	0.03444332
MAP3K5	8.77570736	0.00161001	0.04464081
DUSP16	8.74685379	0.00118229	0.03724632
FLJ21408	8.73517813	5.25E-05	0.00596635
WWC3	8.73008626	0.00036891	0.0189144
CARD14	8.71941979	1.51E-05	0.0028343
VIPR1	8.62040815	9.70E-07	0.00052357
TRIB2	8.60411598	7.14E-05	0.00708686
HIVEP2	8.58499945	1.95E-07	0.0001686
ZFYVE16	8.5738918	1.05E-07	0.00010427
ACAD8	8.48328071	3.08E-05	0.00463008
MIAT	8.45735698	0.00012831	0.01012995
AK3	8.27613341	0.00010302	0.00905441
PTK2	8.27578674	2.61E-07	0.00019146
SAMD9	8.25498307	8.16E-06	0.00197037
DEF6	8.12613306	0.00177069	0.04746768
LOC10013047	8.08956405	0.00042284	0.02081709
CYTH4	8.08190286	1.97E-05	0.00344168
CTNNA1	7.93545294	1.23E-05	0.00248546
HSD17B7P2	7.88731773	0.00074002	0.0281522
ZFP36	7.85446034	4.07E-06	0.00122629
CAPRIN2	7.81657961	5.44E-05	0.00612722
RGS2	7.81244102	0.00148137	0.04296998
KBTBD2	7.7744778	8.01E-06	0.00197037
KLF3	7.75239898	0.00014853	0.01115813
PRKD3	7.74620344	0.00044882	0.02152327
MICAL1	7.66468286	0.00014299	0.01095516

BCL6	7.62801642	0.00054104	0.02358735
MORC3	7.51999113	3.52E-06	0.00119502
TNFSF13B	7.47954479	0.00014041	0.01085328
ZNF484	7.33480028	0.00026436	0.01540558
LDLRAP1	7.31776903	0.00061163	0.02530156
CEP70	7.30673125	0.00030827	0.01691325
RASAL3	7.28581416	0.00094033	0.03246759
TAPT1	7.21244912	0.00076966	0.02855366
CCR6	7.20989887	4.31E-05	0.00543218
BEX2	7.19802413	0.00016056	0.01132216
CCPG1	7.1445233	0.00127243	0.039415
SLC2A3	7.06899629	1.75E-05	0.00314013
CD58	7.05691566	3.44E-05	0.00489048
ZNF665	7.01437748	4.61E-05	0.00563464
FZD3	6.98651051	0.00065548	0.02608202
PARP8	6.97309832	8.82E-06	0.0020382
A2M	6.96922357	0.0003106	0.01696897
LAX1	6.90280294	0.00027558	0.01558164
PTGER2	6.89300514	2.08E-05	0.0035913
ZNF200	6.86743929	0.00011682	0.00969588
CAMK2N1	6.86412251	0.00161475	0.04467461
MYBL1	6.85284713	0.00178567	0.04750648
EGR3	6.84885795	0.00039336	0.01981781
MAL	6.83181351	0.00098785	0.03330958
TRPV2	6.82473972	0.0008261	0.02954802
PIK3R1	6.78194531	5.32E-06	0.00149782
PMS1	6.76920731	0.00061674	0.02536119
ZNF815P	6.60650313	0.00153504	0.04377902
PCED1B	6.58126308	0.00187567	0.0490629
PTPN12	6.56114873	0.00025444	0.01490725
LGALS3	6.56077823	1.46E-05	0.00280604
RASGRF2	6.54273094	0.00049296	0.02252589
KLHDC2	6.53152916	0.00084052	0.02989863
NIN	6.50179968	0.0002114	0.01306368
TCP11L2	6.44280683	0.00091598	0.03188214
SAMD9L	6.41708573	0.00023778	0.01418809
EPB41L5	6.37794031	3.72E-05	0.00501325
RARS2	6.30219001	8.37E-05	0.00791052
CAPN2	6.2949013	1.86E-06	0.0007771
ALKBH4	6.21458392	0.00045235	0.02156324
CEP85L	6.19502912	0.00053029	0.02341778
RCBTB2	6.19494759	0.00043426	0.02105938
RNF125	6.07619575	0.00045656	0.02165384
SELM	6.07244785	0.00138765	0.04102114
PAX8-AS1	6.04644552	0.00129176	0.03972852
PPP3CA	5.95546773	0.0017042	0.04616309

LIMA1	5.90548843	5.94E-05	0.00646252
ERP27	5.84857254	0.00049544	0.02252589
GLIPR2	5.82155341	0.00029845	0.01644384
IFT80	5.78930179	4.60E-06	0.0013272
GOLGA8A	5.78600524	4.68E-05	0.00566601
IL10RA	5.75631696	0.00128939	0.03972852
LOC10192911	5.73752709	0.00109068	0.03531919
EPG5	5.70861477	0.00074359	0.0281522
PCED1B-AS1	5.68007918	3.48E-07	0.00021461
PIK3IP1	5.65398844	0.0001609	0.01132216
FAM153B	5.55398511	0.00133492	0.0404789
GOLGA8B	5.53435435	7.59E-05	0.00739278
RABGAP1L	5.52889668	2.79E-05	0.00435723
FBXO3	5.51802465	0.00015225	0.0113043
SYNE2	5.44940411	1.05E-06	0.00054254
ATM	5.4281526	0.00055985	0.02417257
SLC48A1	5.42025034	0.00079522	0.02896637
LY96	5.35368511	0.00169613	0.04608744
TNKS2	5.34713175	0.00044044	0.02119993
ADD3	5.30072007	0.00033594	0.01776201
ERAP2	5.28641152	4.08E-05	0.00527745
ZNF169	5.2862523	0.00162222	0.0447424
ATP2B4	5.27513068	0.00131859	0.04017191
DSTYK	5.23690828	0.00130496	0.03985746
UTRN	5.22493316	0.00070727	0.02741832
SLFN5	5.1907267	0.00087251	0.03056644
RUFY3	5.11080358	0.00073858	0.0281522
PARP4	5.07908461	0.00098992	0.03330958
VCPIP1	5.07267803	0.00145694	0.04267989
EPHA4	5.05763933	0.00156306	0.04411177
LOC284581	5.01354166	0.00134217	0.04057686
NFATC1	5.00018759	0.00053555	0.02342688
STK38	5.00002352	0.00095947	0.03304048
CORO2A	4.94542024	6.13E-05	0.00656364
ZNF652	4.92947845	0.00017003	0.01146624
ATXN7L1	4.92397805	0.0008451	0.0299792
NEAT1	4.90722136	1.64E-05	0.00299979
WDR27	4.87735645	0.00049257	0.02252589
MLKL	4.875153	0.00171096	0.04622079
KIAA1551	4.77883741	0.00166177	0.04548952
EPM2AIP1	4.71636939	0.00113764	0.03646081
ZFP36L2	4.65409864	0.00081153	0.02918819
MAP2K5	4.62114564	0.00188439	0.04917628
CCDC69	4.61351159	0.00099044	0.03330958
DSCR3	4.58186671	0.00193739	0.04957568
SIRT3	4.48225293	0.00080371	0.02906833

SLAMF6	4.47405259	0.00010765	0.00929196
ZNF292	4.45413604	0.00011084	0.00944179
NR4A2	4.42408359	0.00178858	0.04750648
CXCR4	4.4091714	0.00059525	0.02504958
TRANK1	4.40356501	0.00051806	0.02321067
MAF	4.32285205	0.00053173	0.02341778
IL16	4.27680261	0.0010124	0.03361172
PNRC1	4.24576885	0.00060947	0.02530156
FOS	4.12149208	0.00075295	0.02820651
KLF3-AS1	4.11393696	0.000986	0.03330958
CLK1	4.02460152	0.0006629	0.02624856
ZNF204P	4.02027847	0.00011244	0.00945404
CARD8	4.01978037	0.0002979	0.01644384
USP47	3.97193335	0.00093062	0.03221827
DGKA	3.9667477	0.00140612	0.04147266
FYN	3.92967966	0.00080906	0.02918014
ZFP90	3.77019103	0.0010519	0.03456852
JMJD1C	3.7446628	0.00149965	0.04334263
PRMT2	3.7199548	0.00098833	0.03330958
EML4	3.67513618	0.00022205	0.0134351
ATF7IP	3.65238082	0.00169785	0.04608744
TNFAIP3	3.56266185	0.00057168	0.02434758
FRYL	3.49544251	0.00130519	0.03985746
NR4A1	3.47185195	4.79E-05	0.00567934
ZC3H13	3.41490663	0.00136898	0.04097989
06-Sep	3.28044793	0.00069144	0.02699654
N4BP2L2	3.26815081	0.00047309	0.02201373
IL10	3.24227711	7.17E-05	0.00708686
PAICS	-3.0430302	0.00179048	0.04750648
TXLNA	-3.2065679	0.00189876	0.04919415
PSMD14	-3.2462751	0.00098524	0.03330958
ABCE1	-3.2488837	0.00112835	0.03625268
GNL3	-3.3889489	0.00142334	0.04188496
PSME2	-3.4027081	0.00077927	0.0286386
TRAP1	-3.5777089	0.00167006	0.04562007
IL22	-3.5822574	0.00071967	0.02780719
SNHG3	-3.6133408	0.00063154	0.02571441
STIP1	-3.6434604	0.0007216	0.02780719
ADSL	-3.6581479	0.00078077	0.0286386
TCP1	-3.7886368	0.00027864	0.01565333
MIR155HG	-3.8988371	0.00019205	0.01243347
UBE2L6	-3.9108545	0.00052867	0.02341778
CSF2	-3.9783398	0.00037241	0.01892024
C2orf44	-4.0308038	0.00026965	0.01547473
VDAC1	-4.0452833	0.00032308	0.01742994
IRF4	-4.0528099	0.00059974	0.02504958

FABP5	-4.1278375	0.00016382	0.01138557
PTCD3	-4.2888895	0.00015806	0.01130711
MYC	-4.2894624	0.00014909	0.01115813
FKRP	-4.3070428	0.00089264	0.03115323
DDB1	-4.3922217	0.00077057	0.02855366
NDUFS2	-4.4069214	0.00076669	0.02855366
DCLRE1B	-4.454423	0.0019079	0.04927315
SS18	-4.4854282	0.00192124	0.04927315
TSN	-4.511505	0.00035627	0.01869065
EMG1	-4.5449078	0.0017222	0.04635987
DDX1	-4.555247	6.99E-05	0.00708686
CKAP5	-4.5866748	0.00023284	0.01395715
WARS	-4.6075182	2.04E-06	0.00082631
MRPL39	-4.6593805	0.0010917	0.03531919
PHGDH	-4.6739255	0.00189968	0.04919415
CYB5B	-4.7444228	0.00047495	0.02201373
ALKBH3	-4.747688	0.00137164	0.04097989
MRPL49	-4.7857963	0.00148276	0.04296998
C15orf41	-4.8074904	0.00115757	0.03680377
ATP5SL	-4.8135845	0.00150337	0.04335317
ZNF195	-4.8832121	0.0004195	0.02073159
TUBG1	-4.9176042	0.00156697	0.04411177
CSNK2A1	-4.9318079	0.00064353	0.02581136
TBCK	-4.9645261	0.00178301	0.04750648
GGCT	-4.9970076	0.00192176	0.04927315
PSMD13	-5.1152991	0.00014082	0.01085328
TTK	-5.1285379	0.00124914	0.03887932
FAM206A	-5.1309392	0.00041636	0.02065535
FANCA	-5.1594042	0.00157396	0.04411177
GRPEL1	-5.1987188	0.00047605	0.02201373
WDR75	-5.2037455	7.72E-05	0.0074565
ZNF25	-5.2068196	0.00068538	0.02697344
EMC4	-5.2134559	0.00075043	0.02820651
CDK10	-5.229499	0.00164086	0.04510793
COPG1	-5.2305776	0.0018914	0.04917628
GMFB	-5.2399564	0.00134441	0.04057686
RPAIN	-5.2426763	0.00152964	0.04373416
MCM3	-5.2489633	6.83E-06	0.00180457
TIMELESS	-5.2625585	0.00020271	0.0128664
MEAF6	-5.2659448	5.78E-05	0.00634103
CRKL	-5.3272466	0.00010419	0.00905441
FAM136A	-5.3445855	0.00049756	0.02252589
CDK6	-5.3547298	5.25E-05	0.00596635
ERCC8	-5.4479278	0.00027183	0.01547473
PAK1IP1	-5.4658913	8.61E-05	0.0079667
MRPL42	-5.4672575	0.00164505	0.04512731

WDR3	-5.4728319	0.00150793	0.04338806
TIMM23	-5.5181894	3.13E-05	0.00466242
MED7	-5.5207877	0.00162411	0.0447424
MTCH2	-5.5768509	7.26E-05	0.00712415
NOP2	-5.5772446	0.00021389	0.01306368
EXOC2	-5.588926	0.00148344	0.04296998
BAG4	-5.5999141	3.56E-05	0.00496061
METTL5	-5.6177555	4.87E-05	0.00567934
LZTR1	-5.6232377	0.00036243	0.01889091
NUP205	-5.6352899	0.0001176	0.00969887
IDH3A	-5.6632642	2.24E-06	0.00088054
ASNS	-5.6884638	8.95E-05	0.00815959
NAT10	-5.7142966	0.00015777	0.01130711
GFM1	-5.7385507	0.00056308	0.02422183
POLR2D	-5.7437869	0.00107447	0.03522074
SLC5A6	-5.7528734	0.00020503	0.0129501
COMMD9	-5.7537947	0.00171347	0.04622079
GOLT1B	-5.7542811	1.63E-05	0.00299979
NDUFA9	-5.7667873	0.00039873	0.02001074
KRR1	-5.767012	0.00069222	0.02699654
PNP	-5.7819119	0.00077405	0.02855366
LTA4H	-5.8034188	0.00012052	0.00987683
EIF4A3	-5.8192162	0.00188952	0.04917628
RNF6	-5.8371431	0.0010934	0.03531919
PRMT1	-5.8422149	3.94E-05	0.00520551
ZNF146	-5.8522406	0.00036958	0.0189144
UBE2E3	-5.8651613	3.94E-05	0.00520551
PALB2	-5.8678052	0.00057353	0.02434758
MMGT1	-5.8788724	0.00154073	0.04384488
SLC43A3	-5.8854552	3.35E-05	0.00487078
RAD54L	-5.885853	0.00156769	0.04411177
KRBOX4	-5.8962095	0.001778	0.04750648
PRDX3	-5.9176293	2.44E-06	0.00090347
FANCG	-5.9286526	0.00153009	0.04373416
ELAC1	-5.9449974	0.00070142	0.02727304
CARKD	-5.9472598	0.00158243	0.04415801
MSH2	-5.9552453	2.98E-05	0.00454658
PRPS1	-5.9594098	0.00062709	0.02561373
AP1M1	-5.9618123	0.00104985	0.03456852
VWA9	-5.9720309	0.00134865	0.04060996
UQC3	-5.9957624	0.00155436	0.04411177
CHEK1	-6.0030796	0.00146128	0.04271039
POP4	-6.0079763	0.00036797	0.0189144
PHF14	-6.0317664	0.00040431	0.02021242
SNX27	-6.0595737	3.31E-05	0.00487078
IPO4	-6.060653	0.00109406	0.03531919

MCM7	-6.0624917	7.16E-05	0.00708686
ZGRF1	-6.0673118	0.00075096	0.02820651
PPP2R1B	-6.0818198	0.0017413	0.04677663
CPPED1	-6.0942388	0.00096923	0.03328808
DDX56	-6.1165996	0.00019322	0.01244698
BLMH	-6.1558471	0.00092269	0.03202954
ECHDC1	-6.1639245	0.00025229	0.01490725
SIRT7	-6.1664945	0.00191257	0.04927315
YIPF2	-6.1781952	0.00184289	0.04841719
ZNF766	-6.1790873	6.63E-05	0.00686441
PTGER4	-6.1909301	0.00075374	0.02820651
MFSD2A	-6.2312278	0.00157338	0.04411177
TXNL1	-6.2442243	1.83E-05	0.00325269
NUP85	-6.2680386	6.60E-05	0.00686441
TMEM41A	-6.2763563	0.00138363	0.04102114
POLDIP3	-6.2817716	0.00103023	0.0341163
HACD3	-6.288543	0.00124574	0.03886721
VAMP5	-6.3182594	0.00080221	0.02906833
RBM18	-6.3224708	0.00123127	0.03856018
CRYZ	-6.3370167	0.00125911	0.03909587
HAUS7	-6.3534708	0.00016049	0.01132216
MCM5	-6.3583985	4.61E-06	0.0013272
TMEM97	-6.3593253	0.00161008	0.04464081
MRPL46	-6.3645488	0.00079642	0.02896637
USP38	-6.3719755	0.00129491	0.0397309
NLRC5	-6.3795651	0.00015492	0.0113043
ATG4B	-6.3874989	0.00115209	0.03680377
SLC50A1	-6.4146976	1.47E-05	0.00280604
FBXO6	-6.4276053	0.00136233	0.04092685
RNASEH1	-6.4503175	0.00087346	0.03056644
CENPW	-6.4559628	0.00100949	0.03360134
RIC3	-6.4598795	0.00041565	0.02065535
MLEC	-6.4619051	0.00022721	0.01368307
FAM168A	-6.4981825	0.00100317	0.03347682
TRIM5	-6.5006404	0.00108262	0.03531919
IFT57	-6.5327379	0.00056627	0.0242783
URGCP	-6.536633	0.00087225	0.03056644
BRCA1	-6.5375365	0.00097284	0.03330958
RNF114	-6.5448015	0.00138298	0.04102114
DPM2	-6.5448774	9.98E-05	0.00885287
DPH2	-6.6053323	9.58E-05	0.00855819
POFUT1	-6.6102901	0.00033609	0.01776201
THOC6	-6.6103853	0.00021336	0.01306368
E2F4	-6.6150591	0.00065668	0.02608202
PNPO	-6.6302904	1.17E-05	0.00244065
TIPIN	-6.6448662	0.00012782	0.01012995

FAM213A	-6.6449725	0.00123293	0.03856018
MLH1	-6.6640362	0.00026873	0.01547473
KNTC1	-6.6662121	7.20E-06	0.00186496
AGPAT5	-6.667877	0.00132276	0.04020449
GUCD1	-6.6798077	6.78E-05	0.00696878
UBE2O	-6.6880654	0.00157865	0.04414774
PPME1	-6.6883756	0.00013532	0.01061912
EIF2B3	-6.6957372	0.0002473	0.01468801
UBE2C	-6.7123452	0.0006881	0.02699654
C5orf22	-6.7178277	0.00027249	0.01547473
EIF4E2	-6.7207135	2.69E-05	0.00425462
UBLCP1	-6.7398297	0.00033062	0.01768941
UTP20	-6.7574759	6.52E-05	0.00686408
RNF8	-6.775428	0.0012133	0.03813073
NSMCE2	-6.7809823	0.0018298	0.04825309
NUP155	-6.7885006	0.00151509	0.04349748
PNO1	-6.8099301	0.00018523	0.01215711
POLDIP2	-6.8170202	0.00043246	0.0210506
FTSJ2	-6.8217999	0.0010889	0.03531919
CHAC2	-6.8292492	0.00036329	0.01889091
USP32	-6.8725301	4.03E-05	0.00527366
APIP	-6.8787203	0.00179827	0.04761554
PSMD9	-6.8956548	0.00042818	0.02094706
MSH6	-6.9083733	7.09E-07	0.00039906
IDH3G	-6.912305	0.00015504	0.0113043
RNGTT	-6.9163154	0.0001978	0.01261631
CD2BP2	-6.9166718	0.00086631	0.03056395
SNORA70	-6.9400629	0.00045298	0.02156324
CHMP5	-6.9675344	4.32E-05	0.00543218
SIRT2	-6.9804322	7.99E-05	0.00760878
DHFR	-6.9900443	0.00052739	0.02341778
NMD3	-6.9904258	2.18E-05	0.00366737
MRPS33	-6.9964458	1.50E-06	0.0006914
FAM86C1	-7.0027711	0.00187227	0.0490629
LAP3	-7.0054476	0.00016573	0.01138557
ALKBH1	-7.0210255	0.00021157	0.01306368
HSD17B4	-7.0289637	0.00011043	0.00944179
GLE1	-7.0345562	0.00145279	0.04265469
TSEN15	-7.0365294	0.00026533	0.01540558
CDC20	-7.0474292	0.00055585	0.02415148
PPP5C	-7.0679398	0.00029581	0.0164383
CYB5R4	-7.0857672	0.00180338	0.04765344
RPL26L1	-7.086988	0.00016916	0.01146624
BLM	-7.0880985	0.0007343	0.02812942
EARS2	-7.1086433	0.00031699	0.01723318
C2orf47	-7.1387198	0.00063809	0.02581136

MREG	-7.1460383	0.00128975	0.03972852
NAB2	-7.1664196	0.00083636	0.02983229
TMEM179B	-7.1892937	0.00037262	0.01892024
RPA1	-7.2022287	0.00015543	0.0113043
GIN53	-7.2216268	0.00036788	0.0189144
UHRF1	-7.2273569	0.00042871	0.02094706
ATAD5	-7.2373119	9.41E-05	0.00845916
KIF3B	-7.2496446	0.00059832	0.02504958
APTX	-7.2509988	7.93E-05	0.00760735
STAG3L4	-7.2521414	0.00138486	0.04102114
DHX30	-7.2611572	0.00064465	0.02581136
RINT1	-7.3504583	0.00012284	0.01000358
SLC31A1	-7.3591864	0.00011598	0.00968869
FEM1A	-7.3624767	1.03E-05	0.00230604
ETAA1	-7.3637171	0.0018435	0.04841719
COMMD1	-7.364427	0.00064588	0.02581136
DDX19A	-7.3766525	0.0001671	0.01138726
CYB561D2	-7.3871657	3.39E-05	0.00487078
C5orf28	-7.390573	0.00158784	0.04421354
TRMT1	-7.3947814	0.00014631	0.01107841
DGCR14	-7.4044129	0.00192007	0.04927315
MCM10	-7.4161455	2.52E-05	0.00408192
PRPF3	-7.4185396	0.00077234	0.02855366
HSPA13	-7.4285544	2.59E-05	0.00414185
ZWINT	-7.4318649	0.00100194	0.03347682
VRK1	-7.4324938	3.69E-05	0.00501325
CSTF2	-7.4374468	0.00115544	0.03680377
IFRD2	-7.4529941	0.00156877	0.04411177
TIMM9	-7.4672219	0.00046679	0.02189871
EDC3	-7.4676218	0.00146696	0.04277974
DDHD1	-7.4706964	0.00012621	0.01008722
SLC39A14	-7.4711753	0.00057305	0.02434758
WRAP53	-7.4716575	0.00056007	0.02417257
DNAJC9	-7.4791847	8.49E-06	0.00199944
PPP1R8	-7.4936567	0.00115971	0.03680377
CEP89	-7.4952952	0.00043629	0.02107874
HN1L	-7.5043636	3.65E-05	0.00501325
DUS1L	-7.5195772	0.00014411	0.01097573
SCFD2	-7.5285424	8.51E-05	0.00794155
CD83	-7.5288063	0.00027927	0.01565333
TTC26	-7.5471622	0.00098953	0.03330958
COPS2	-7.5575981	6.44E-05	0.00683353
CKS1B	-7.5854414	0.00059604	0.02504958
PIGN	-7.5967474	0.0016937	0.04608744
RAB30-AS1	-7.5997658	0.00033277	0.01773145
NR6A1	-7.6175877	0.00035655	0.01869065

MCEE	-7.6251449	0.00018591	0.01215711
POLB	-7.6255234	8.53E-05	0.00794155
WDR55	-7.633499	0.00012506	0.0100574
CDCA7	-7.6422049	0.00021002	0.01306368
UCK2	-7.6454517	0.00064093	0.02581136
GPS1	-7.6473682	0.00019532	0.01251986
KIAA0753	-7.6482242	0.00047892	0.0220678
PGP	-7.657819	0.00072677	0.02792349
FOXRED2	-7.6760928	0.00078335	0.02865193
POLR1B	-7.6809692	7.69E-06	0.00195194
PSMD2	-7.6837984	9.16E-06	0.0020805
TRAPPC11	-7.7053447	0.00074156	0.0281522
DBR1	-7.7139147	0.00064558	0.02581136
PIK3R4	-7.7161851	2.66E-07	0.00019146
ALKBH8	-7.7216374	0.0005264	0.02341778
BPGM	-7.7665819	8.78E-05	0.00806044
IFI35	-7.7991637	7.10E-05	0.00708686
GTF2H3	-7.8020512	0.00053396	0.02342688
NSDHL	-7.8088949	0.00021384	0.01306368
PRKAB2	-7.8115749	0.00017924	0.01190129
ADAL	-7.8188841	0.00049643	0.02252589
NCOA5	-7.8320561	2.52E-05	0.00408192
PLGRKT	-7.8383403	0.00013974	0.01085328
CNDP2	-7.8438201	0.00047082	0.02200766
MMS22L	-7.8552652	0.00027118	0.01547473
PTGFRN	-7.8658425	0.00058955	0.02494617
AAAS	-7.8708484	0.00061001	0.02530156
SHMT2	-7.8774944	1.25E-07	0.000116
AHR	-7.8992708	4.12E-08	5.93E-05
TAF1A	-7.9085982	5.54E-05	0.00618434
BOP1	-7.9158606	0.00081582	0.02926099
PLEKHJ1	-7.9243789	9.31E-05	0.00842924
CXorf40B	-7.9323427	0.00017741	0.01184079
WDR4	-8.0036337	0.00016449	0.01138557
NARS2	-8.0073931	0.00116529	0.0368175
MRPS15	-8.0293961	0.0001039	0.00905441
NSUN5	-8.0338492	0.00012492	0.0100574
OXSM	-8.0397685	0.00109656	0.03531919
R3HCC1	-8.0553488	0.0003181	0.01723318
MAPKAPK5	-8.0590201	4.83E-05	0.00567934
MPV17	-8.0754733	0.00046297	0.02185799
NUDT2	-8.1030503	0.00137359	0.04097989
ATP6V0A2	-8.1129642	3.73E-06	0.00119502
GINS2	-8.1135552	0.00061895	0.02536119
CHCHD1	-8.124805	0.00016619	0.01138557
BECN1	-8.1322352	1.82E-06	0.0007771

DCTN4	-8.158318	0.00018947	0.01232808
RTTN	-8.162248	0.00015628	0.0113043
SLC29A1	-8.1823046	1.18E-05	0.00244065
CHID1	-8.2103545	5.65E-05	0.00625139
C11orf49	-8.2124277	0.00116583	0.0368175
CA5BP1	-8.2244404	0.00046424	0.02185799
AZI2	-8.2305007	0.00016473	0.01138557
RPARP-AS1	-8.25623	0.00086601	0.03056395
RNASEH2A	-8.2577732	0.0003292	0.01768673
DRG2	-8.2641701	5.05E-05	0.00583329
RBBP8	-8.2778401	5.88E-08	7.61E-05
LCMT1	-8.3126051	4.06E-06	0.00122629
PIGH	-8.3293931	0.00021992	0.01336885
SMARCA4	-8.3296138	2.26E-05	0.00374736
DNAJC11	-8.352736	3.52E-05	0.00495885
PYCR1	-8.3763591	2.16E-05	0.00366737
MEST	-8.4080036	0.00017307	0.01161117
FAM114A2	-8.4381502	0.00051341	0.02316224
CDC6	-8.4481964	2.67E-06	0.00096098
CNTROB	-8.4571561	6.12E-05	0.00656364
TIMM50	-8.4603646	4.86E-05	0.00567934
TMEM186	-8.4787032	8.22E-06	0.00197037
MRFAP1	-8.4937292	1.30E-06	0.00062137
COPS3	-8.5002297	3.45E-08	5.59E-05
CAD	-8.5295791	1.70E-06	0.00076019
DNAJC14	-8.5711138	0.00029545	0.0164383
TRMT10A	-8.5769077	0.00018553	0.01215711
ATG4C	-8.6264607	4.47E-05	0.00556405
RUVBL1	-8.6534035	4.29E-07	0.00025264
RFC5	-8.6616918	1.16E-05	0.00244065
SLC25A19	-8.6975422	4.27E-05	0.00543218
APOO	-8.7409537	2.39E-06	0.00090347
MCM2	-8.7917614	6.40E-06	0.0017622
EFTUD1	-8.8248143	1.27E-06	0.00062137
P2RX5	-8.8746445	0.00025443	0.01490725
GLA	-8.9220305	1.44E-05	0.00280604
UBA6-AS1	-8.9379266	0.00067677	0.02671572
METTL13	-8.9507032	2.09E-09	4.51E-06
COQ5	-8.9676925	0.00015442	0.0113043
TMEM184C	-8.9767563	3.31E-07	0.00021441
C12orf66	-8.9839131	0.00051759	0.02321067
MAD2L1	-9.0540069	2.88E-06	0.0010092
RABEPK	-9.0761303	2.81E-07	0.00019146
TRMU	-9.2108054	2.91E-05	0.0044794
PCNA	-9.5559325	7.71E-11	2.55E-07
NUDCD1	-9.8370268	3.86E-12	2.50E-08

PSAT1	-10.286767	3.05E-13	3.94E-09
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GeneID	logFC	logCPM	PValue	FDR
C4orf29	9.63464179	6.28118147	5.45E-06	0.00203308
PURA	9.54661386	6.49134931	8.64E-06	0.00247523
BHLHE40	9.44714673	6.45217126	7.07E-10	2.04E-06
GIMAP4	9.37788544	7.46186631	2.96E-07	0.00026289
MON1B	9.09647784	5.80503201	8.63E-05	0.01049777
FAAH2	9.07073584	5.80275057	0.00067954	0.03408827
ZFP90	9.04101886	7.21382207	0.00077942	0.03643521
CUEDC2	9.03023099	6.38325046	1.14E-06	0.00062595
GAB3	8.99195978	7.7764498	0.00130541	0.04789411
CISH	8.96513146	6.97087401	1.01E-10	1.17E-06
ZSCAN29	8.94898836	4.86656069	4.29E-05	0.00660569
DUSP7	8.94297698	6.73662205	1.46E-07	0.00018741
MUM1	8.93625018	6.36165329	0.00015487	0.01491488
URB1	8.9116657	5.77545284	1.26E-05	0.00322381
GOSR2	8.84599594	5.21458777	1.11E-05	0.00292855
C6orf106	8.8175748	7.3398782	5.34E-05	0.0077082
HEATR5A	8.80215046	6.37915195	3.80E-06	0.00162598
MMAB	8.78850742	5.59972129	2.42E-05	0.00474846
PARP11	8.73014397	5.85132762	0.00012676	0.0136816
AKAP1	8.71252331	5.25879166	0.00012457	0.01358193
MAPK1	8.70267806	7.30077299	3.70E-05	0.00601662
ZNF616	8.66016566	5.33532281	0.0005493	0.03071315
GPR171	8.64342829	6.89812911	2.02E-10	1.17E-06
NELL2	8.59851058	6.00488358	5.58E-05	0.00774311
MAGED2	8.55835632	7.07307006	8.86E-07	0.00051188
DCUN1D4	8.43297358	6.46499478	0.00027651	0.0214557
DYNLL1	8.42714251	7.68649862	1.35E-09	3.13E-06
TNFRSF4	8.42183101	4.99681915	8.05E-07	0.00049429
ECHS1	8.38834911	7.0905359	0.00100501	0.04239024
RINL	8.32651929	4.29938443	0.0002823	0.02160622
TNFSF13B	8.30269873	5.79890827	6.49E-08	0.00010707
STAT6	8.28764013	6.42217335	3.19E-05	0.00542463
RUFY3	8.27413864	6.41822121	4.85E-06	0.00196743
ITGA4	8.2523139	8.13848581	3.20E-06	0.00142296
TALDO1	8.25167992	6.66205006	5.37E-06	0.00203308
ZNF518A	8.20887303	6.64519293	0.00074219	0.03573932
SNX17	8.13518647	5.95453074	6.90E-06	0.00234477
ACAD8	8.12525268	7.06849395	0.00035815	0.02465156
ILVBL	8.10040841	3.06435624	3.53E-05	0.00582296
STK3	8.07100869	3.99088517	4.04E-05	0.00639144
DENND2D	8.06492896	7.5666623	0.00123308	0.04668928
VEGFB	8.03169176	4.67926533	2.63E-05	0.00489929
SUV420H1	8.01426397	6.96404984	0.00081161	0.03736972
SELM	8.00291181	5.02281268	0.0002099	0.01823913
GYS1	8.00034881	2.61987935	6.43E-06	0.00225161

SRM	7.99495634	5.19771125	3.40E-07	0.00028067
UTP14A	7.99386288	4.85133908	0.00132572	0.0482034
ACVR2A	7.97566102	5.61331047	0.00074203	0.03573932
LINC00324	7.95711561	4.67486868	0.00040223	0.02540987
LMAN2L	7.8828259	4.87444525	7.51E-06	0.00238633
C1GALT1C1	7.86218046	6.24423713	0.00014913	0.01460562
HSD17B7P2	7.85459367	5.12679076	0.00103493	0.04287001
SKIL	7.84780598	8.58632641	0.00014102	0.01410803
ST6GAL1	7.8415068	8.10977376	7.29E-06	0.00238633
AK3	7.82564135	5.33347857	0.00042512	0.02613346
MPP1	7.82372623	3.16101138	0.00013363	0.01391266
ADIPOR2	7.80720894	6.58673221	0.00042046	0.02598534
ST7L	7.72926683	3.51075465	0.00023511	0.01968957
GALE	7.72100159	5.84336994	1.93E-07	0.00022349
TRAF3IP2-AS1	7.71795764	5.36411817	2.81E-05	0.00507139
DDX58	7.71435636	6.84156021	2.11E-05	0.00450671
PPRC1	7.70218274	6.66899495	9.77E-06	0.00268918
VDR	7.70040487	4.09917862	2.96E-05	0.00525799
VCL	7.69273391	5.95653934	0.00082501	0.03740487
PARP8	7.68220058	7.70785763	2.62E-05	0.00489929
HMGCR	7.67781527	6.17133037	0.0002537	0.02064778
KDSR	7.6774182	6.85738392	5.66E-07	0.00038509
UQCRC1	7.67701125	7.2585047	0.00022672	0.01926601
MGST2	7.66211585	3.48869294	0.00119816	0.04600384
STOM	7.65573973	6.74556681	0.00019653	0.01756502
ABAT	7.65568147	3.9374976	0.00013897	0.01410803
SEC24C	7.65249115	6.37555516	0.00114717	0.04543745
ROCK2	7.6418056	6.39384359	0.00094948	0.0403423
GF11	7.63470143	4.91203771	0.0011686	0.04581554
PSMC3	7.63444205	6.96654523	7.27E-05	0.00955323
ZNF721	7.62567228	5.98157713	0.00092081	0.03966953
ZNF512	7.62066088	5.92159953	0.00030451	0.02228611
CCL20	7.58413215	7.16813086	2.35E-09	4.52E-06
SQLE	7.55940126	5.76732024	1.32E-05	0.0032355
EEF2K	7.55304279	4.80620899	0.00075286	0.03595365
CYB5A	7.52376417	3.67310788	3.06E-05	0.00530419
VAV1	7.51595981	6.08839291	5.26E-05	0.0077082
ACADM	7.50971918	5.6171815	0.00020197	0.01781769
PHTF1	7.50669011	5.07624197	4.74E-05	0.00711929
PARP9	7.47999346	8.0106636	0.00062188	0.03249195
S100PBP	7.44072742	6.42820595	0.00078186	0.03643521
USE1	7.41894398	4.92843837	0.00094765	0.0403423
ANKRD17	7.41367199	7.74600011	0.00013522	0.01395318
MICU1	7.37859318	5.50566176	0.00040945	0.02555919
GIMAP2	7.37697054	6.0163211	8.78E-06	0.00247523
NOLC1	7.35507666	7.22202441	7.74E-08	0.00011188

HSD17B7	7.33418493	4.81176012	8.20E-05	0.01019001
CTSB	7.31280651	8.05531276	3.88E-05	0.00623288
C9orf142	7.284659	5.49425612	0.00076846	0.03610213
POLR3D	7.24601759	3.82773232	0.00011733	0.01303837
TWF2	7.23308146	2.70492324	0.00062258	0.03249195
EXOC3	7.22094995	4.6032321	0.00030401	0.02228611
ACAT2	7.21834758	6.28197015	4.13E-05	0.00645547
ASB6	7.21077463	5.63624465	0.00134231	0.0482034
ETNK1	7.18214135	8.7629237	0.00025742	0.02071523
C16orf91	7.14047046	4.75448625	0.00143051	0.04964693
VAT1	7.12539263	3.92439107	0.0001158	0.01302893
RASSF2	7.09434274	6.44933729	4.66E-05	0.00709183
WDR12	7.06492168	5.60499788	9.22E-05	0.01098839
ATP2B4	7.05673463	7.48389126	2.20E-06	0.00109366
TMCO1	7.05047438	7.28388906	0.00027525	0.0214557
TBC1D31	7.05047103	4.4367143	0.00125913	0.04679881
STX4	7.0458526	4.84880928	0.00086666	0.03812104
CALHM2	7.04013229	5.21165151	2.32E-05	0.00469404
PTK2	7.03894419	6.50587213	0.00033876	0.02387214
SH2D2A	7.03103406	4.74566367	0.00017835	0.01662237
PIK3R2	7.02852109	3.53388043	0.00104874	0.04328682
CPSF1	7.02295229	4.67404019	0.00059681	0.03193226
ILK	7.00656365	6.60036193	0.00051995	0.02989568
FAM219B	7.00537927	5.66325167	0.00036888	0.0247585
LIMA1	6.99570819	5.48051423	0.00028422	0.02161037
AP3M2	6.98877392	7.46287515	0.00015482	0.01491488
ZMYM6NB	6.9728444	6.09774653	0.00044435	0.02683764
TLE3	6.95463042	7.06837563	0.00040152	0.02540987
GLRX3	6.94569695	6.70049445	0.00024829	0.02049613
AMICA1	6.92295987	8.64105855	2.31E-07	0.00024261
TRMT6	6.91559323	5.76830169	0.00064388	0.03307242
DROSHA	6.89523975	6.43608722	0.00053785	0.03062045
MICALL1	6.88378593	4.79498457	7.75E-05	0.0098978
RBM28	6.87903782	5.29721727	0.00049245	0.0290191
MYBL1	6.84613781	5.82019146	2.22E-05	0.00463885
AAED1	6.82545492	6.70408047	0.00025973	0.02071523
LRRC42	6.80244562	5.29553936	2.70E-05	0.00495002
ATIC	6.78234236	7.89929618	0.00055011	0.03071315
RBBP5	6.7808561	7.21502375	0.00057223	0.0314152
TPRKB	6.77578885	5.13587424	0.00083563	0.03748528
SEH1L	6.77257562	5.6968755	0.00144563	0.04987215
AP2M1	6.76810053	7.15837257	0.00053473	0.03059337
CREBZF	6.75126827	4.84561612	0.00101704	0.04243298
TST	6.73384431	3.71787408	7.64E-06	0.00238633
C4orf27	6.72665951	4.63837104	0.00124247	0.04668928
AP1G2	6.7027721	7.79776636	4.03E-07	0.00029248

VIPR1	6.69264297	5.69486852	0.00117524	0.04581554
GBP1	6.6794812	8.11829442	0.00030661	0.02228611
MAP3K13	6.62022787	4.76208756	0.00107787	0.04382663
ZBTB43	6.5821911	6.92368238	0.00121114	0.04619535
AUTS2	6.58185041	3.87935326	0.00038931	0.02540987
OSBP	6.55042369	6.93951498	0.00070255	0.03469822
FYCO1	6.53071713	6.83315521	8.18E-06	0.00247523
RAB10	6.52904505	6.11166915	0.00060832	0.03224912
SNORD63	6.52709193	3.39216405	0.00044215	0.02683764
PREB	6.51328771	6.48175566	5.63E-05	0.00774311
EIF3I	6.50527641	8.99658608	0.00044586	0.02683764
COA4	6.50419117	5.90236957	0.00087014	0.03812104
ZNF200	6.50354945	4.75101565	7.94E-05	0.00997452
LYPLA2	6.49159987	6.82501623	0.00016322	0.01546151
HDHD1	6.48335461	6.56124486	0.00036032	0.02465156
ZNF143	6.45431556	5.24465794	0.00082048	0.03740487
KLHDC1	6.44248351	2.24974316	0.00046116	0.02761486
TRAPPC3	6.40387289	4.64343697	0.00046961	0.02793966
LARP1B	6.40219482	5.84260892	0.00082556	0.03740487
CDK2AP2	6.39834256	6.22968104	1.40E-05	0.00329053
MSANTD3	6.38528405	4.04806801	0.00069558	0.03465
RNASEH2C	6.37167005	5.76055294	1.64E-05	0.00365448
TIPARP	6.34227138	7.14901918	0.00022423	0.01919586
SLC41A1	6.32948254	4.31710341	0.00127307	0.04710973
RARB	6.30300623	2.1454417	0.00031683	0.02274267
SYPL1	6.27884326	7.22115246	0.0011804	0.04581554
VPS53	6.27174126	4.78805374	0.00086477	0.03812104
MLKL	6.2607403	5.9015358	0.00056672	0.0314152
MAPKAP1	6.22697964	5.72663161	9.92E-05	0.01170016
C3orf58	6.18618687	5.88428743	0.0001426	0.01410803
SDHD	6.16605282	7.58425198	0.00068135	0.03408827
CD82	6.16297424	7.19871658	0.00036051	0.02465156
TFCP2	6.10993465	6.40176416	8.13E-07	0.00049429
GHITM	6.09828624	7.97645766	0.00024275	0.02018295
EIF6	6.09823715	8.24741896	0.00029253	0.0218115
ZNF544	6.09246148	2.77687978	0.00075714	0.03600949
C9orf69	6.05398854	3.04408619	0.00013181	0.01384842
METTL2B	6.04809405	4.88890357	0.00040863	0.02555919
ALDH18A1	6.04635344	2.61861687	0.00056878	0.0314152
CUL4A	6.03286626	7.02556612	0.00012819	0.0136816
ZNF232	6.00820835	6.30374032	0.00122987	0.04668928
ARPC5	6.00036208	7.39307506	3.44E-05	0.00576927
ABHD15	5.9979624	3.93914842	0.00139926	0.04930252
TMEM9	5.99431031	2.17933815	0.00043674	0.02670611
TRPV2	5.99360062	7.19408938	0.00011851	0.0130444
CD63	5.98680667	7.80657946	1.02E-05	0.00273019

LPIN2	5.97759239	7.27579357	0.00014283	0.01410803
DCTD	5.96980927	5.79559354	0.0006324	0.03277443
MED11	5.96549115	5.24821123	0.00064062	0.03305177
ZNF8	5.93020351	7.68954299	0.00025304	0.02064778
SOS1	5.90469936	7.59909646	5.87E-05	0.00797055
SUMF2	5.89426761	7.30963547	0.00080056	0.03700844
BRK1	5.8712662	6.65905694	0.0010126	0.04243298
AKR1A1	5.84078637	6.18193594	0.00057359	0.0314152
TTLL12	5.83680573	5.46242304	8.89E-05	0.01069657
MAP1LC3B	5.82519805	7.44785179	0.0005088	0.02940105
CWC22	5.81918493	7.37696367	0.00138007	0.04892458
RHBDF2	5.80592726	3.77985046	0.00018593	0.01705385
CARD6	5.77829847	4.7729826	0.00018744	0.01705692
CLOCK	5.7622314	6.56574659	0.00041135	0.02555919
SGPL1	5.71746865	7.59853263	0.00039763	0.02540987
CAT	5.71604846	6.29066918	0.00028631	0.02162642
TRAF7	5.69954335	2.03493985	0.00022906	0.01932262
DIS3L	5.68375267	7.66945647	0.00010776	0.01233102
ECSIT	5.68374482	3.91321033	0.00050833	0.02940105
KLF10	5.63130645	5.62311977	0.00040235	0.02540987
ARL3	5.62614888	4.98276931	8.46E-05	0.01040229
B3GALNT2	5.55605597	6.16142437	0.00036262	0.02465156
PCYT2	5.54517439	1.74260177	0.00090385	0.03926985
CD40LG	5.5317536	7.04094733	1.42E-05	0.00329053
MOB3A	5.47991122	6.76143748	0.0009447	0.0403423
PDCD7	5.4746116	6.99771284	0.0002599	0.02071523
RIC8B	5.43055696	2.56051259	0.00107667	0.04382663
NETO2	5.40525032	4.2244922	2.25E-05	0.00463885
ENOX2	5.31582645	5.24783907	0.00140445	0.0493351
C17orf62	5.31524197	5.46097889	0.00142795	0.04964693
TMEM150A	5.29151341	1.00429746	0.00039287	0.02540987
CCDC107	5.24678368	2.17929109	0.00134474	0.0482034
STAT1	5.21734934	7.8062343	5.42E-05	0.00773629
CCT3	5.19292465	8.27599188	0.00133961	0.0482034
TRMT1L	5.1290898	2.21915382	0.00109042	0.04406304
PPA2	5.11329556	7.16081493	0.00084951	0.03790636
TEX261	5.08136953	4.74033808	0.00134721	0.0482034
WDR60	5.07705085	5.64081373	0.0013338	0.0482034
SLC25A29	5.06868438	1.13986806	0.00075076	0.03595365
RRAS	5.02297446	4.38814763	0.00038334	0.02517199
ENTPD1	4.95584407	6.4746755	0.00110063	0.04432047
RGS9	4.89993952	2.22517088	0.00035182	0.0244936
SENP6	4.85867469	6.9328289	0.00139413	0.0492721
HMGCS1	4.84089855	7.27670063	0.00074137	0.03573932
PTPN12	4.83622372	7.13150115	0.00019125	0.01726741
ELMO1	4.78242449	7.02312929	0.00050811	0.02940105

MFHAS1	4.71822209	6.08979598	0.00116738	0.04581554
PDHB	4.63186742	7.59211113	0.00082856	0.03740487
ENO1	4.59757935	10.7712917	0.00019758	0.01756502
RUNX2	4.47912887	6.1803506	0.00118929	0.04581554
NOL8	4.44758761	8.66184693	0.00073205	0.03573932
LARS	4.44498609	7.92338387	0.00078724	0.03653889
RASA4B	4.41253734	1.0491613	0.00118808	0.04581554
PGK1	4.41043419	8.70912563	0.00059962	0.03193461
C11orf24	4.35030789	3.63162555	0.00037305	0.02477809
CMTM8	4.28550364	3.67279979	0.00091842	0.03966953
RRP15	4.27236896	7.71364778	0.00099193	0.04199174
BTN3A2	4.25346351	7.60800189	0.00067668	0.03408827
PARD6A	4.19948315	0.64404246	0.00082464	0.03740487
C3orf14	3.95380813	2.60646707	0.00108078	0.04382663
PVRL3	3.94377317	2.29820692	0.00124429	0.04668928
IL5	3.92005589	4.70370343	0.00114803	0.04543745
LOC10192694	3.89538987	1.59774562	0.00076293	0.03610213
BBS7	3.87474725	4.17284062	0.00134698	0.0482034
PA2G4	3.82820952	8.581664	0.00125936	0.04679881
MSRB2	3.4540417	2.90545385	0.00107141	0.04382663
LYSMD1	3.44895163	4.59525842	0.00143965	0.04981436
ZBTB45	3.29383507	0.40447711	0.00131463	0.04807972
PLXNA3	3.19532072	3.10801533	0.00072843	0.03573932
ARF6	3.1166154	9.68382583	0.00073628	0.03573932
TPTE2P5	-1.7496117	7.3158981	0.00121	0.04619535
TGFB3	-2.565088	7.3498374	0.00037062	0.0247585
SLC46A3	-3.6424903	6.55300514	0.00101426	0.04243298
SGCB	-4.4624568	8.22353393	0.00031407	0.0226857
EIF1B	-4.5245626	8.92156378	0.0012378	0.04668928
KDM5D	-4.6069805	5.9959679	0.00027662	0.0214557
ZNF184	-4.668325	5.71340697	0.00107217	0.04382663
IGHMBP2	-4.7918513	6.66086908	0.00092335	0.03966953
LCMT1	-4.8604724	6.73528854	0.00087244	0.03812104
PLEKHM1P	-5.0646813	5.19591878	0.00111167	0.04460966
MEAF6	-5.1433191	7.42117596	0.00083683	0.03748528
PTBP2	-5.1815366	8.40543774	0.00066467	0.03383961
LOC10192723	-5.4679352	5.12554765	0.00118751	0.04581554
ZC3H7A	-5.4742351	7.47678577	0.00059483	0.03193226
HEATR1	-5.5772668	8.11620897	0.00054839	0.03071315
LRRC8C	-5.7229883	7.01586858	0.00103364	0.04287001
ZNF550	-5.7925238	8.96446931	0.00065035	0.0332571
ZBTB21	-5.8201955	5.68579365	0.00124894	0.04671189
GORAB	-5.8579261	6.11120293	0.00127588	0.04710973
MAP1B	-5.861683	5.88103303	0.00058837	0.03177464
ZNF586	-5.9792542	7.10433355	0.00047142	0.02793966
ACOT9	-5.9900033	5.58429797	0.00039896	0.02540987

MXD1	-6.1429764	5.22570917	0.00036785	0.0247585
GORASP1	-6.1780438	6.8678218	1.57E-05	0.0035678
PPM1A	-6.2829852	6.88925223	0.00112201	0.04471386
SNRNP27	-6.4694434	8.02722382	2.53E-05	0.00487505
KIAA0196	-6.5252936	7.50731869	0.00034498	0.02416321
COMMD9	-6.5477511	7.67882966	0.00027905	0.02149955
ZNF335	-6.6685008	7.05335725	0.00049466	0.0290191
DUSP10	-6.6872906	7.89179867	5.63E-05	0.00774311
SYNJ1	-6.7376598	6.39363678	0.00141883	0.04953915
LRRC37B	-6.8549507	7.6222467	0.00070021	0.03469822
FLJ10038	-6.8773765	6.05763206	0.00033489	0.02374405
BRWD1	-7.0277893	8.92892884	3.08E-05	0.00530419
ASB8	-7.0491453	7.74029356	0.00118573	0.04581554
NLRC5	-7.0767718	7.49587407	0.00061222	0.03230796
MR1	-7.0837256	8.12675688	0.00027266	0.0214557
OSER1	-7.0996972	8.24647251	0.00087411	0.03812104
MLH1	-7.2406165	6.44896763	0.00012904	0.0136816
CCDC28A	-7.251837	6.66554177	0.000207	0.01812361
CLPX	-7.2579465	5.67598363	0.00037742	0.02492472
PDCL	-7.2580142	7.79754596	0.00140918	0.04935105
SUPV3L1	-7.4396752	6.00832267	0.00062414	0.03249195
IL24	-7.4649043	5.70398808	0.00022006	0.01897968
MASP2	-7.4801524	6.31643447	0.00137943	0.04892458
HLA-DQA1	-7.4858958	6.24926548	0.00128733	0.04738096
SNORA27	-7.6343202	7.71155072	0.00057784	0.0314152
LOC146880	-7.691636	6.71821548	0.00111708	0.04467174
MPPE1	-7.7696867	5.54013932	0.00010664	0.01233102
KLHL24	-7.886491	8.53157343	2.27E-06	0.00109366
STK38L	-7.9258592	4.9157942	0.00011612	0.01302893
BTBD9	-7.9697514	5.63344467	0.00054192	0.03070064
TTY15	-8.0390544	6.87054594	7.27E-05	0.00955323
NEDD4L	-8.0481002	7.71528851	4.94E-06	0.00196743
SNORD102	-8.1489892	6.51306708	0.00086441	0.03812104
PYHIN1	-8.1577961	8.55091807	5.93E-05	0.00797055
RHBDD2	-8.1851967	7.65316374	0.00010693	0.01233102
GXYLT1	-8.1992613	5.33658311	0.00076655	0.03610213
ZC3H12D	-8.2048878	6.13458685	0.0001589	0.0151772
HDAC4	-8.2668549	5.87776962	7.57E-05	0.0098264
FAM84B	-8.3358554	4.58114683	0.00057899	0.0314152
RBM33	-8.336935	7.51984071	0.0013727	0.04892458
COQ10B	-8.4884899	6.17236752	0.00017979	0.01662301
LOC10012856	-8.4924103	4.5025327	0.00030621	0.02228611
ICA1L	-8.5264788	7.32712864	1.39E-05	0.00329053
TATDN3	-8.5339479	6.99697818	0.00029065	0.0218115
RNF111	-8.9421034	6.46546938	8.55E-06	0.00247523
PER1	-8.9707919	5.19415728	0.00016883	0.01586334

INTS12	-9.0412499	6.39886387	7.79E-05	0.0098978
ZBTB25	-9.0604464	9.89771676	3.14E-06	0.00142296
RAB30	-9.0955685	7.79663142	2.42E-05	0.00474846
PTTG1	-9.0988446	6.21344848	0.00067192	0.03405858
SNX11	-9.1968296	6.179153	0.00032895	0.02346723
YAF2	-9.2427673	6.7527737	1.30E-05	0.0032355
FAM160B1	-9.392502	6.67444329	5.71E-06	0.00206256
CCDC186	-9.4204637	7.14654356	0.00014132	0.01410803
NSUN3	-9.4540092	6.35943492	1.72E-05	0.00375113
DDX3Y	-9.5274759	9.17710606	5.06E-10	1.95E-06
METTL4	-9.6394485	7.6456865	4.05E-07	0.00029248
MIR4435-1HC	-9.6404646	5.91889937	5.33E-05	0.0077082
PPM1B	-9.7943409	7.34038332	2.71E-07	0.00026082
SEPSECS	-10.369025	6.88112711	1.24E-06	0.00065201