

Table S1. List of differentially expressed genes in circulating leukocytes of 11 monozygotic twin pairs with discordant sleep durations. Up-regulated genes in shorter sleep duration are highlighted in magenta, and down-regulated genes in short sleep twin pair is highlighted in cyan. A combined criteria of an FDR < 0.01 and $|\log_2[\text{expression ratio}]| \geq 0.322$ (± 1.25 -fold) was used to define statistically significant differential expression between short vs. long sleep duration groups.

Gene Symbol	Entrez ID	Log ₂ [Short/Long]	P-Value	FDR
LOC651436	651436	1.282	1.18E-05	1.62E-03
RPL9	6133	1.275	1.84E-05	1.79E-03
LOC389404	389404	1.271	3.53E-06	1.27E-03
RPS3A	6189	1.150	1.13E-06	1.07E-03
RPS3A	6189	1.116	3.23E-06	1.22E-03
RPS3A	6189	1.110	1.84E-05	1.79E-03
RPL17	6139	1.053	1.84E-05	1.79E-03
LOC100132742	100132742	1.024	2.53E-05	2.10E-03
RPL17	6139	1.018	9.29E-06	1.57E-03
LOC643863	643863	0.989	2.58E-05	2.10E-03
LOC646819	646819	0.985	5.44E-04	7.90E-03
LOC645296	645296	0.975	1.95E-05	1.86E-03
LOC727865	727865	0.966	9.55E-06	1.57E-03
CLC	1178	0.958	5.03E-04	7.67E-03
LOC642250	642250	0.950	3.27E-05	2.30E-03
LOC100133931	100133931	0.945	2.88E-05	2.18E-03
RSL24D1	51187	0.899	1.11E-05	1.57E-03
LOC391656	391656	0.883	8.23E-04	9.69E-03
LOC100131387	100131387	0.879	1.69E-04	4.50E-03
LOC644315	644315	0.878	1.47E-06	1.07E-03
LOC100129742	100129742	0.867	5.56E-06	1.42E-03
RPL31	6160	0.843	3.17E-04	6.02E-03
LOC100132742	100132742	0.840	5.75E-05	2.74E-03
LOC729301	729301	0.818	1.60E-04	4.47E-03
LOC389787	389787	0.811	1.64E-05	1.79E-03
RPL27	6155	0.801	3.28E-04	6.06E-03
RPL9	6133	0.798	1.32E-04	4.09E-03
HINT1	3094	0.795	1.21E-04	3.84E-03
COMMD6	170622	0.783	4.89E-04	7.54E-03
LOC727865	727865	0.773	3.44E-05	2.32E-03
LOC285741	285741	0.768	3.20E-05	2.27E-03
RGS18	64407	0.765	2.30E-04	5.12E-03
LOC100129379	100129379	0.749	5.45E-04	7.90E-03
ARGLU1	55082	0.744	6.91E-05	3.04E-03
ZRANB2	9406	0.743	1.19E-04	3.81E-03
CD52	1043	0.742	5.68E-04	8.07E-03
NDUFA4	4697	0.735	7.66E-04	9.26E-03

RPL39	6170	0.728	4.04E-04	6.78E-03
LOC650276	650276	0.720	4.84E-05	2.54E-03
RPL23	9349	0.708	2.09E-04	4.86E-03
MBNL1	4154	0.704	1.73E-04	4.50E-03
FOXN2	3344	0.701	6.57E-04	8.66E-03
LOC643284	643284	0.693	1.77E-04	4.50E-03
LOC646785	646785	0.688	4.89E-05	2.54E-03
LOC402057	402057	0.681	4.28E-04	7.02E-03
TMEM123	114908	0.680	3.40E-04	6.12E-03
LOC728973	728973	0.679	4.20E-05	2.42E-03
LOC653226	653226	0.666	2.56E-04	5.38E-03
SRP9	6726	0.662	4.10E-05	2.41E-03
EEF1AL7	441032	0.658	1.32E-05	1.64E-03
TRAM1	23471	0.656	7.17E-04	8.94E-03
TPT1	7178	0.654	7.91E-04	9.42E-03
AP1S2	8905	0.645	3.24E-04	6.05E-03
PCNP	57092	0.644	3.32E-04	6.09E-03
CAPZA2	830	0.640	4.42E-04	7.12E-03
LEPROTL1	23484	0.633	4.30E-05	2.44E-03
LOC730187	730187	0.631	2.58E-04	5.42E-03
RPS18	6222	0.628	9.02E-05	3.44E-03
C17ORF45	125144	0.623	4.43E-06	1.27E-03
GZMK	3003	0.612	8.94E-05	3.44E-03
EEF1B2	1933	0.610	3.38E-07	6.58E-04
LOC648000	648000	0.609	8.15E-04	9.63E-03
LOC728672	728672	0.606	4.00E-05	2.40E-03
LOC647361	647361	0.605	8.48E-04	9.83E-03
TMX1	81542	0.600	3.38E-04	6.10E-03
LOC391833	391833	0.598	1.71E-04	4.50E-03
EFR3A	23167	0.597	4.70E-04	7.33E-03
LOC441073	441073	0.594	3.90E-05	2.40E-03
LOC100131261	100131261	0.593	3.95E-05	2.40E-03
RPS6P1	440086	0.588	2.12E-07	6.58E-04
LOC653232	653232	0.582	2.25E-04	5.04E-03
LOC645715	645715	0.578	9.01E-05	3.44E-03
PSMA6	5687	0.578	1.10E-04	3.63E-03
CLK1	1195	0.577	3.97E-05	2.40E-03
LOC730255	730255	0.577	8.44E-04	9.81E-03
RPLP0	6175	0.575	5.14E-06	1.39E-03
CD48	962	0.573	2.53E-04	5.35E-03
MATR3	9782	0.570	9.20E-05	3.44E-03
LOC441506	441506	0.569	1.75E-04	4.50E-03
LOC158345	158345	0.567	3.15E-07	6.58E-04
RPL15	6138	0.567	5.92E-05	2.77E-03

PNRC2	55629	0.565	8.15E-05	3.33E-03
LOC441246	441246	0.563	4.39E-04	7.08E-03
LOC388339	388339	0.561	7.97E-05	3.31E-03
LOC100131205	100131205	0.559	8.50E-05	3.39E-03
CGGBP1	8545	0.557	2.09E-04	4.86E-03
LOC728126	728126	0.557	1.76E-04	4.50E-03
UQCRQ	27089	0.556	4.53E-04	7.19E-03
TMEM126B	55863	0.556	1.25E-05	1.64E-03
RPL30	6156	0.554	5.43E-04	7.90E-03
BIRC3	330	0.551	2.83E-05	2.18E-03
LOC402251	402251	0.551	6.25E-05	2.86E-03
LOC646942	646942	0.548	7.39E-04	9.11E-03
LOC646766	646766	0.547	5.11E-04	7.73E-03
RPL5	6125	0.546	1.74E-05	1.79E-03
LOC649049	649049	0.544	7.34E-05	3.16E-03
LOC402694	402694	0.543	3.19E-04	6.02E-03
EEF1A1	1915	0.543	1.03E-05	1.57E-03
EVI2A	2123	0.541	7.56E-04	9.21E-03
PRNP	5621	0.540	1.80E-04	4.55E-03
LOC730754	730754	0.540	5.01E-05	2.56E-03
LOC388654	388654	0.539	1.71E-05	1.79E-03
LOC728590	728590	0.537	3.81E-06	1.27E-03
LOC728576	728576	0.537	3.28E-04	6.06E-03
CD47	961	0.533	5.18E-04	7.76E-03
LOC391126	391126	0.531	3.49E-05	2.32E-03
LEMD3	23592	0.528	2.09E-04	4.86E-03
AZIN1	51582	0.528	2.11E-04	4.87E-03
LOC401537	401537	0.528	2.49E-04	5.31E-03
LOC644464	644464	0.527	1.35E-04	4.14E-03
IL7R	3575	0.527	8.64E-06	1.57E-03
REEP5	7905	0.525	1.67E-04	4.50E-03
LOC649150	649150	0.523	1.81E-05	1.79E-03
LOC388532	388532	0.519	6.35E-04	8.58E-03
LOC647856	647856	0.517	5.62E-05	2.72E-03
EIF4A2	1974	0.517	3.34E-04	6.09E-03
GZMA	3001	0.515	5.34E-05	2.66E-03
EEF1B2	1933	0.514	7.41E-06	1.52E-03
RPL7	6129	0.513	4.16E-05	2.41E-03
CRBN	51185	0.513	1.04E-04	3.63E-03
ZBED5	58486	0.513	5.86E-04	8.21E-03
LOC650369	650369	0.511	1.08E-05	1.57E-03
LOC731640	731640	0.511	4.44E-04	7.12E-03
DEK	7913	0.509	3.33E-04	6.09E-03
HOPX	84525	0.508	2.56E-06	1.22E-03

LOC100127993	100127993	0.506	4.35E-04	7.06E-03
PCMTD1	115294	0.503	6.43E-04	8.58E-03
LOC645387	645387	0.501	1.11E-05	1.57E-03
ZNHIT3	9326	0.501	2.68E-04	5.50E-03
LOC387867	387867	0.501	5.10E-05	2.58E-03
LOC730029	730029	0.497	1.82E-04	4.58E-03
LOC100134504	100134504	0.497	1.11E-04	3.63E-03
C19ORF2	8725	0.496	1.48E-05	1.73E-03
CLNS1A	1207	0.495	1.56E-05	1.75E-03
TOMM7	54543	0.494	4.05E-04	6.78E-03
TMEM14C	51522	0.492	1.49E-04	4.31E-03
LOC388621	388621	0.490	8.26E-04	9.71E-03
SFRS2IP	9169	0.488	5.15E-04	7.76E-03
LOC440737	440737	0.487	7.57E-04	9.21E-03
MRFAP1L1	114932	0.486	2.07E-05	1.88E-03
LOC653226	653226	0.485	2.61E-06	1.22E-03
LOC285900	285900	0.484	1.10E-05	1.57E-03
FAU	2197	0.482	3.67E-04	6.45E-03
TOMM7	54543	0.480	2.19E-04	4.97E-03
PPP1CC	5501	0.480	5.94E-04	8.28E-03
LOC648249	648249	0.479	1.38E-04	4.15E-03
TMEM50B	757	0.477	5.88E-06	1.43E-03
ID2	3398	0.475	6.55E-05	2.96E-03
C12ORF57	113246	0.472	1.47E-05	1.73E-03
UBE2Q2	92912	0.472	2.92E-04	5.75E-03
RPL4	6124	0.472	3.19E-05	2.27E-03
LOC100132673	100132673	0.470	1.02E-05	1.57E-03
BTAF1	9044	0.470	9.17E-05	3.44E-03
LOC100128060	100128060	0.469	4.41E-05	2.45E-03
ATM	472	0.467	5.61E-05	2.72E-03
LOC651149	651149	0.466	2.43E-06	1.22E-03
HMG4	10473	0.465	5.65E-05	2.72E-03
EIF3E	3646	0.465	1.43E-06	1.07E-03
FAM96A	84191	0.464	2.62E-04	5.46E-03
EBI2	1880	0.463	7.59E-06	1.52E-03
SERP1	27230	0.463	1.82E-05	1.79E-03
RFX7	64864	0.463	1.53E-04	4.36E-03
AKAP11	11215	0.462	7.05E-04	8.84E-03
YWHAQ	10971	0.462	8.55E-06	1.57E-03
LOC728782	728782	0.461	2.67E-04	5.50E-03
MGC87895	644068	0.461	4.52E-06	1.27E-03
LOC644511	644511	0.460	1.19E-04	3.81E-03
MBNL1	4154	0.459	7.69E-04	9.26E-03
RPL35A	6165	0.458	8.50E-04	9.85E-03

GIMAP2	26157	0.456	4.35E-04	7.06E-03
LOC650518	650518	0.454	5.17E-04	7.76E-03
LOC440595	440595	0.454	6.91E-04	8.76E-03
PRKRIR	5612	0.453	7.70E-05	3.24E-03
RPSA	3921	0.453	4.18E-04	6.90E-03
C6ORF190	387357	0.450	2.89E-05	2.18E-03
LOC642989	642989	0.450	2.35E-05	2.05E-03
CCDC109B	55013	0.450	9.04E-05	3.44E-03
CLINT1	9685	0.450	1.10E-04	3.63E-03
LOC645157	645157	0.448	7.36E-04	9.09E-03
PAIP2	51247	0.444	7.70E-04	9.26E-03
C20ORF30	29058	0.444	2.62E-05	2.10E-03
ARL5A	26225	0.443	6.86E-04	8.76E-03
RPL26	6154	0.441	1.11E-04	3.63E-03
THUMPD1	55623	0.439	7.93E-04	9.42E-03
LOC388707	388707	0.439	2.61E-04	5.46E-03
LOC641814	641814	0.438	1.02E-04	3.60E-03
CHURC1	91612	0.438	2.42E-04	5.24E-03
VPS36	51028	0.437	6.56E-04	8.66E-03
EEF1A1	1915	0.436	3.31E-05	2.31E-03
EBI2	1880	0.435	1.26E-05	1.64E-03
KLRB1	3820	0.435	5.21E-04	7.76E-03
HMG1	3150	0.434	8.76E-07	9.46E-04
SLC4A7	9497	0.432	4.33E-05	2.44E-03
LOC653737	653737	0.431	3.98E-04	6.74E-03
HIST1H4C	8364	0.431	4.35E-05	2.44E-03
LOC646483	646483	0.431	4.11E-05	2.41E-03
OSTC	58505	0.430	1.07E-04	3.63E-03
LOC100129141	100129141	0.429	5.49E-04	7.90E-03
COMMD3	23412	0.428	1.03E-04	3.63E-03
ACADM	34	0.428	1.91E-04	4.63E-03
TMEM14B	81853	0.428	3.76E-05	2.36E-03
BMI1	648	0.426	2.96E-04	5.81E-03
LOC728576	728576	0.426	1.53E-04	4.36E-03
NDUFB5	4711	0.425	1.29E-05	1.64E-03
LOC644907	644907	0.425	3.81E-04	6.56E-03
PPP1R2	5504	0.425	3.21E-04	6.02E-03
RPL17	6139	0.423	4.31E-06	1.27E-03
CD3D	915	0.422	5.49E-04	7.90E-03
VBP1	7411	0.422	1.71E-04	4.50E-03
SNRPD2	6633	0.422	3.44E-04	6.12E-03
LOC729236	729236	0.422	3.91E-05	2.40E-03
PDCD10	11235	0.421	3.26E-04	6.06E-03
TAX1BP1	8887	0.421	1.70E-04	4.50E-03

ANGEL2	90806	0.420	1.81E-04	4.55E-03
KLHDC2	23588	0.419	4.20E-06	1.27E-03
RPS6	6194	0.419	1.54E-05	1.74E-03
ITM2A	9452	0.418	1.47E-05	1.73E-03
CD3D	915	0.418	1.49E-04	4.31E-03
OSTC	58505	0.418	2.95E-06	1.22E-03
SENP7	57337	0.416	4.22E-04	6.94E-03
ZNF302	55900	0.416	5.17E-04	7.76E-03
PRKAR1A	5573	0.416	6.41E-04	8.58E-03
LOC644464	644464	0.414	8.01E-04	9.51E-03
LOC100129657	100129657	0.412	1.74E-04	4.50E-03
PSMD10	5716	0.412	3.58E-05	2.32E-03
RSBN1	54665	0.412	7.56E-04	9.21E-03
PCMT1	5110	0.412	6.85E-05	3.03E-03
PTGER4	5734	0.412	1.04E-04	3.63E-03
RPL13A	23521	0.411	9.48E-05	3.49E-03
LOC100128936	100128936	0.410	5.63E-07	7.01E-04
PSIP1	11168	0.409	5.46E-04	7.90E-03
PIGY	84992	0.409	6.66E-04	8.68E-03
PLEKHA1	59338	0.408	3.39E-05	2.31E-03
KLF9	687	0.406	3.57E-05	2.32E-03
LOC646688	646688	0.406	1.05E-04	3.63E-03
P2RY5	10161	0.405	5.78E-04	8.13E-03
LOC387825	387825	0.404	6.85E-06	1.52E-03
ANXA1	301	0.404	2.83E-04	5.64E-03
GOLGA8B	440270	0.403	1.67E-05	1.79E-03
RASGRP1	10125	0.403	3.61E-05	2.32E-03
LOC648210	648210	0.403	7.40E-05	3.17E-03
SF3B1	23451	0.402	3.20E-04	6.02E-03
AKAP7	9465	0.402	7.51E-05	3.19E-03
RBX1	9978	0.402	7.71E-04	9.26E-03
LOC642975	642975	0.401	2.70E-04	5.53E-03
LOC100130892	100130892	0.401	7.21E-04	8.97E-03
RPL13	6137	0.400	4.54E-05	2.49E-03
LOC652624	652624	0.400	1.47E-04	4.29E-03
ASNSD1	54529	0.399	1.01E-04	3.60E-03
TMEM14D	645203	0.399	1.99E-04	4.76E-03
PPP3CB	5532	0.399	1.01E-04	3.60E-03
CLDND1	56650	0.398	3.14E-04	5.99E-03
C13ORF15	28984	0.397	8.22E-05	3.33E-03
MS4A7	58475	0.397	1.60E-04	4.47E-03
LOC100128410	100128410	0.396	2.11E-04	4.86E-03
ZNF800	168850	0.395	4.66E-05	2.50E-03
RPS9	6203	0.394	5.60E-04	8.00E-03

TM2D1	83941	0.394	1.94E-04	4.68E-03
ETS1	2113	0.394	6.95E-04	8.78E-03
EFHA1	221154	0.393	4.02E-04	6.78E-03
RPS14	6208	0.393	2.21E-05	1.97E-03
LOC653232	653232	0.393	3.06E-04	5.90E-03
LOC644604	644604	0.392	2.95E-04	5.80E-03
BUB3	9184	0.391	1.19E-04	3.81E-03
PPIL3	53938	0.391	9.68E-05	3.52E-03
TMED2	10959	0.391	8.53E-04	9.85E-03
LOC647030	647030	0.390	2.53E-04	5.35E-03
CRLS1	54675	0.390	1.70E-04	4.50E-03
PTMA	5757	0.389	6.44E-04	8.58E-03
LOC339970	339970	0.386	5.95E-04	8.28E-03
LSM1	27257	0.386	3.41E-04	6.12E-03
RPL13L	283345	0.386	9.37E-06	1.57E-03
PTPLB	201562	0.385	6.13E-04	8.42E-03
SNRPF	6636	0.384	2.58E-05	2.10E-03
C2ORF64	493753	0.384	2.45E-05	2.10E-03
BRP44L	51660	0.384	6.10E-04	8.40E-03
RAB11A	8766	0.382	4.49E-04	7.16E-03
RPL6	6128	0.381	2.54E-04	5.35E-03
DBI	1622	0.381	2.22E-04	5.02E-03
SET	6418	0.380	1.15E-04	3.71E-03
LOC729926	729926	0.379	4.41E-05	2.45E-03
ARL6IP1	23204	0.379	6.05E-04	8.36E-03
CROP	51747	0.378	7.90E-05	3.29E-03
ZNF22	7570	0.378	1.10E-04	3.63E-03
OGT	8473	0.377	4.93E-05	2.54E-03
FAM60A	58516	0.376	3.46E-04	6.14E-03
SNHG6	641638	0.375	4.37E-04	7.06E-03
ETS1	2113	0.375	5.33E-04	7.87E-03
DDX3X	1654	0.374	8.60E-04	9.92E-03
CMPK1	51727	0.374	9.11E-05	3.44E-03
KLF12	11278	0.373	1.06E-04	3.63E-03
C18ORF25	147339	0.372	7.82E-04	9.35E-03
LOC100130553	100130553	0.372	3.06E-04	5.90E-03
TROVE2	6738	0.372	1.65E-04	4.47E-03
GNA13	10672	0.371	5.69E-04	8.07E-03
ZBTB33	10009	0.371	3.97E-04	6.74E-03
CLDND1	56650	0.371	5.48E-04	7.90E-03
LOC646688	646688	0.370	4.65E-04	7.29E-03
PQLC3	130814	0.370	8.80E-05	3.44E-03
NKTR	4820	0.369	3.17E-04	6.02E-03
WWP1	11059	0.369	4.63E-05	2.50E-03

TMEM181	57583	0.369	7.72E-05	3.24E-03
COX7A2L	9167	0.369	2.83E-04	5.64E-03
ITK	3702	0.368	4.20E-04	6.92E-03
ZMYND11	10771	0.367	8.58E-06	1.57E-03
SLC35A1	10559	0.366	6.66E-04	8.68E-03
CLN5	1203	0.366	3.76E-04	6.53E-03
RPS14	6208	0.365	2.64E-04	5.48E-03
C1ORF19	116461	0.365	3.52E-05	2.32E-03
MCEE	84693	0.365	4.65E-05	2.50E-03
CLK1	1195	0.364	5.06E-04	7.68E-03
TMEM41B	440026	0.364	5.96E-04	8.28E-03
ZNF22	7570	0.362	1.38E-04	4.15E-03
MRPL32	64983	0.362	1.74E-05	1.79E-03
SP4	6671	0.361	2.45E-05	2.10E-03
MORF4L1	10933	0.361	1.57E-04	4.43E-03
SS18L2	51188	0.360	2.00E-04	4.77E-03
C16ORF63	123811	0.360	2.82E-04	5.64E-03
LOC100129553	100129553	0.359	8.19E-05	3.33E-03
LOC728658	728658	0.359	1.36E-04	4.15E-03
PSMA6	5687	0.358	1.53E-05	1.74E-03
MKKS	8195	0.358	2.81E-04	5.64E-03
TINP1	10412	0.356	2.72E-05	2.15E-03
C19ORF12	83636	0.356	5.61E-04	8.00E-03
ATM	472	0.356	4.51E-04	7.16E-03
RPS5	6193	0.352	3.74E-04	6.52E-03
CROP	51747	0.352	5.51E-04	7.90E-03
LOC729208	729208	0.352	4.51E-04	7.16E-03
RPS8	6202	0.352	5.75E-04	8.11E-03
LOC100132715	100132715	0.351	1.30E-04	4.05E-03
C6ORF48	50854	0.350	3.87E-04	6.61E-03
SFRS10	6434	0.350	2.34E-04	5.14E-03
ELF1	1997	0.346	7.44E-04	9.14E-03
TIA1	7072	0.343	3.01E-04	5.85E-03
ATP5J	522	0.343	7.52E-04	9.21E-03
DIMT1L	27292	0.342	3.75E-04	6.52E-03
RWDD1	51389	0.342	4.63E-04	7.28E-03
CUL5	8065	0.342	2.34E-04	5.14E-03
CEPT1	10390	0.342	4.64E-04	7.28E-03
ARL5A	26225	0.342	5.01E-04	7.67E-03
LOC642828	642828	0.341	1.74E-04	4.50E-03
LOC644363	644363	0.341	5.95E-04	8.28E-03
CUL4A	8451	0.340	8.51E-05	3.39E-03
LOC645173	645173	0.339	5.06E-05	2.57E-03
KIAA1712	80817	0.336	6.87E-04	8.76E-03

SFRS2	6427	0.336	1.14E-04	3.71E-03
CNBP	7555	0.335	4.17E-05	2.41E-03
RPL10A	4736	0.335	1.76E-04	4.50E-03
COX6C	1345	0.335	5.76E-05	2.74E-03
PTPN22	26191	0.334	6.90E-04	8.76E-03
CHMP5	51510	0.334	7.66E-04	9.26E-03
LPIN1	23175	0.333	3.58E-05	2.32E-03
RPS13	6207	0.332	4.04E-04	6.78E-03
CNIH	10175	0.332	4.79E-04	7.46E-03
ACTR2	10097	0.331	3.66E-04	6.44E-03
CNOT7	29883	0.330	1.85E-04	4.58E-03
MKI67IP	84365	0.330	2.89E-05	2.18E-03
TMEM209	84928	0.329	6.41E-04	8.58E-03
KLRF1	51348	0.328	3.32E-04	6.09E-03
FNTA	2339	0.324	3.42E-04	6.12E-03
LOC389156	389156	0.323	3.53E-04	6.24E-03
DNAJB14	79982	0.322	2.10E-04	4.86E-03
C7ORF23	79161	0.321	7.00E-04	8.82E-03
LOC388076	388076	0.318	3.03E-04	5.87E-03
CEBPZ	10153	0.313	1.35E-04	4.14E-03
SNHG5	387066	0.302	6.49E-04	8.62E-03
MMP9	4318	-0.834	2.64E-08	2.57E-04
DYSF	8291	-0.797	2.68E-07	6.58E-04
ZYX	7791	-0.628	5.77E-07	7.01E-04
PGLYRP1	8993	-0.628	3.93E-05	2.40E-03
SPI1	6688	-0.623	2.74E-06	1.22E-03
BASP1	10409	-0.618	5.50E-06	1.42E-03
ALPL	249	-0.588	2.04E-04	4.81E-03
FAM129A	116496	-0.580	2.17E-04	4.96E-03
SEMA4A	64218	-0.574	3.28E-06	1.22E-03
RNF24	11237	-0.573	2.01E-04	4.77E-03
ANPEP	290	-0.549	4.81E-07	7.01E-04
LOC729021	729021	-0.549	9.75E-06	1.57E-03
CRISPLD2	83716	-0.548	2.04E-06	1.22E-03
LOC730286	730286	-0.541	6.80E-05	3.02E-03
CXCR1	3577	-0.538	1.62E-05	1.79E-03
C15ORF39	56905	-0.513	5.80E-05	2.75E-03
LOC643313	643313	-0.506	2.17E-05	1.95E-03
SPI1	6688	-0.504	4.66E-05	2.50E-03
MYO1F	4542	-0.497	1.33E-05	1.64E-03
SORL1	6653	-0.494	1.09E-04	3.63E-03
MED25	81857	-0.494	7.50E-05	3.19E-03
SEMA3E	9723	-0.492	3.39E-04	6.12E-03
FKBP14	55033	-0.491	6.90E-04	8.76E-03

IL8RB	3579	-0.489	1.10E-05	1.57E-03
LILRA6	79168	-0.487	2.23E-06	1.22E-03
TYMP	1890	-0.485	9.74E-05	3.53E-03
LOC730284	730284	-0.479	1.07E-04	3.63E-03
KIAA1324	57535	-0.478	1.00E-05	1.57E-03
FFAR2	2867	-0.476	6.75E-04	8.72E-03
SORL1	6653	-0.469	5.73E-06	1.43E-03
LPAR2	9170	-0.469	8.49E-05	3.39E-03
WAS	7454	-0.468	2.57E-05	2.10E-03
SERPINA1	5265	-0.465	1.20E-05	1.62E-03
ACTN1	87	-0.464	2.67E-06	1.22E-03
LOC100132112	100132112	-0.463	3.69E-05	2.34E-03
MMP25	64386	-0.456	4.36E-04	7.06E-03
LOC100134634	100134634	-0.456	5.95E-05	2.77E-03
PRAM1	84106	-0.455	2.80E-06	1.22E-03
CYP4F3	4051	-0.455	3.94E-06	1.27E-03
ARAP3	64411	-0.454	2.04E-05	1.88E-03
PDLIM7	9260	-0.451	3.40E-05	2.31E-03
STK40	83931	-0.450	8.36E-05	3.37E-03
ITGAX	3687	-0.445	4.94E-05	2.54E-03
C16ORF57	79650	-0.442	3.18E-05	2.27E-03
UBN1	29855	-0.440	2.97E-05	2.22E-03
LILRB3	11025	-0.439	1.48E-04	4.30E-03
BCL3	602	-0.437	1.51E-04	4.32E-03
CREB5	9586	-0.436	1.36E-04	4.15E-03
SERPINA1	5265	-0.436	7.56E-06	1.52E-03
NCF1C	654817	-0.435	2.59E-05	2.10E-03
ECGF1	1890	-0.434	5.12E-05	2.58E-03
COTL1	23406	-0.433	4.93E-04	7.58E-03
RHOG	391	-0.432	1.39E-06	1.07E-03
IGF2R	3482	-0.431	3.20E-06	1.22E-03
LBA1	9881	-0.431	1.64E-04	4.47E-03
SIGLEC5	8778	-0.429	9.38E-06	1.57E-03
LYN	4067	-0.428	2.46E-04	5.29E-03
LOC730278	730278	-0.423	2.66E-05	2.12E-03
ZYX	7791	-0.423	1.63E-04	4.47E-03
PAK2	5062	-0.422	2.59E-04	5.43E-03
HLX	3142	-0.422	4.57E-06	1.27E-03
LOC441124	441124	-0.421	1.85E-04	4.58E-03
LOC728417	728417	-0.419	1.43E-05	1.73E-03
FPR1	2357	-0.419	5.46E-05	2.69E-03
C10RF24	116496	-0.418	3.79E-05	2.36E-03
PLCB2	5330	-0.418	1.45E-04	4.28E-03
LOC100130914	100130914	-0.416	1.81E-04	4.55E-03

GRN	2896	-0.414	1.38E-04	4.15E-03
IL17RA	23765	-0.412	8.53E-04	9.85E-03
GRN	2896	-0.411	3.36E-04	6.10E-03
LRP10	26020	-0.411	8.98E-06	1.57E-03
TLN1	7094	-0.410	3.33E-05	2.31E-03
MBD6	114785	-0.410	2.82E-05	2.18E-03
CD97	976	-0.410	1.65E-04	4.47E-03
NBEAL2	23218	-0.409	4.55E-06	1.27E-03
TYMP	1890	-0.405	1.26E-04	3.97E-03
NCF4	4689	-0.404	7.41E-06	1.52E-03
CSF3R	1441	-0.403	6.64E-04	8.68E-03
TNIP1	10318	-0.402	6.00E-05	2.78E-03
LOC641710	641710	-0.402	1.92E-05	1.85E-03
UBA1	7317	-0.401	1.80E-05	1.79E-03
LOC284757	284757	-0.401	2.03E-05	1.88E-03
CD14	929	-0.401	6.72E-06	1.52E-03
SHKBP1	92799	-0.399	1.33E-05	1.64E-03
C5AR1	728	-0.399	1.97E-05	1.86E-03
LOC653158	653158	-0.399	1.62E-04	4.47E-03
LOC441268	441268	-0.397	2.33E-05	2.05E-03
LOC100134530	100134530	-0.397	6.07E-04	8.37E-03
C9ORF164	349236	-0.397	7.23E-05	3.14E-03
MVP	9961	-0.397	7.64E-06	1.52E-03
ABTB1	80325	-0.396	1.63E-04	4.47E-03
LOC728417	728417	-0.396	6.81E-05	3.02E-03
WBP2	23558	-0.396	3.35E-04	6.10E-03
MX2	4600	-0.396	3.37E-04	6.10E-03
ZNFX1	57169	-0.396	2.86E-04	5.69E-03
KIAA1751	85452	-0.394	5.47E-04	7.90E-03
HSPA1A	3303	-0.393	6.72E-05	3.02E-03
MAPK3	5595	-0.393	8.19E-05	3.33E-03
TGM3	7053	-0.392	4.81E-05	2.54E-03
STXBP2	6813	-0.390	2.31E-04	5.12E-03
CDA	978	-0.389	2.54E-05	2.10E-03
TKT	7086	-0.388	1.31E-05	1.64E-03
APBB1IP	54518	-0.388	4.03E-04	6.78E-03
LITAF	9516	-0.385	6.03E-05	2.78E-03
LMOD3	56203	-0.382	1.55E-04	4.38E-03
LOC100170939	100170939	-0.382	4.20E-04	6.92E-03
C21ORF24	400866	-0.381	2.87E-04	5.69E-03
MME	4311	-0.380	5.51E-05	2.70E-03
ARID3A	1820	-0.380	5.34E-05	2.66E-03
ANXA11	311	-0.379	7.69E-04	9.26E-03
EHBP1L1	254102	-0.379	1.02E-04	3.60E-03

TIMP2	7077	-0.377	7.92E-04	9.42E-03
MAP1S	55201	-0.376	5.56E-04	7.97E-03
LRAP	64167	-0.376	8.66E-04	9.94E-03
MYADM	91663	-0.375	9.28E-05	3.45E-03
MAST3	23031	-0.375	4.94E-05	2.54E-03
VASP	7408	-0.374	5.86E-05	2.76E-03
ANKRD13D	338692	-0.374	5.24E-04	7.78E-03
FLOT2	2319	-0.373	9.18E-05	3.44E-03
SYK	6850	-0.371	4.46E-04	7.13E-03
PANX2	56666	-0.369	3.09E-05	2.26E-03
RBCK1	10616	-0.369	9.90E-06	1.57E-03
YPEL3	83719	-0.369	5.05E-04	7.68E-03
PAK1	5058	-0.368	1.54E-06	1.07E-03
GMIP	51291	-0.368	1.01E-04	3.60E-03
MTMR3	8897	-0.368	3.15E-05	2.27E-03
MBOAT7	79143	-0.366	1.74E-04	4.50E-03
ACTN4	81	-0.366	1.71E-04	4.50E-03
EMR3	84658	-0.364	6.55E-05	2.96E-03
RNF19B	127544	-0.364	6.26E-04	8.52E-03
SLC15A3	51296	-0.364	6.82E-05	3.02E-03
S100A11	6282	-0.363	1.42E-04	4.23E-03
BCL6	604	-0.362	5.92E-04	8.28E-03
PRKD2	25865	-0.361	7.15E-04	8.94E-03
POLR2A	5430	-0.361	3.89E-04	6.61E-03
PTK2B	2185	-0.361	2.66E-04	5.49E-03
LOC728728	728728	-0.361	6.76E-04	8.72E-03
HIPK2	28996	-0.359	4.27E-05	2.44E-03
LOC399744	399744	-0.358	8.29E-06	1.57E-03
SLC11A1	6556	-0.357	7.27E-04	9.01E-03
VAV1	7409	-0.356	3.09E-05	2.26E-03
NCF4	4689	-0.354	5.01E-04	7.67E-03
B4GALT5	9334	-0.353	6.18E-04	8.45E-03
GPSM3	63940	-0.352	2.14E-04	4.90E-03
LOC100132491	100132491	-0.352	1.36E-04	4.15E-03
CCNJL	79616	-0.352	2.64E-04	5.48E-03
SOLH	6650	-0.352	2.01E-04	4.77E-03
XPO6	23214	-0.352	7.18E-04	8.95E-03
GRB2	2885	-0.351	3.77E-05	2.36E-03
PXN	5829	-0.351	1.04E-05	1.57E-03
CREBBP	1387	-0.350	2.71E-04	5.53E-03
SLC16A3	9123	-0.349	8.20E-05	3.33E-03
LOC642678	642678	-0.349	1.65E-04	4.47E-03
MICAL1	64780	-0.348	1.03E-04	3.63E-03
SEMA4B	10509	-0.347	8.87E-05	3.44E-03

CECR1	51816	-0.347	1.65E-04	4.47E-03
MAP1LC3A	84557	-0.347	3.85E-04	6.61E-03
FAM119A	151194	-0.347	6.70E-04	8.71E-03
IP6K1	9807	-0.346	9.54E-05	3.50E-03
TACC3	10460	-0.345	7.57E-06	1.52E-03
MBP	4155	-0.343	6.51E-04	8.64E-03
LOC641996	641996	-0.343	1.06E-04	3.63E-03
EPN1	29924	-0.343	1.37E-04	4.15E-03
UNC93B1	81622	-0.343	6.43E-04	8.58E-03
NLRP12	91662	-0.341	1.64E-04	4.47E-03
TIMP1	7076	-0.340	4.09E-05	2.41E-03
ATP6V0D1	9114	-0.340	2.25E-04	5.04E-03
GAB2	9846	-0.340	1.29E-04	4.04E-03
ITPRIP	85450	-0.340	2.81E-05	2.18E-03
REPS2	9185	-0.340	1.21E-04	3.84E-03
NADK	65220	-0.340	1.05E-04	3.63E-03
CFP	5199	-0.339	3.37E-05	2.31E-03
ARAP3	64411	-0.339	4.47E-05	2.47E-03
WARS	7453	-0.338	5.65E-05	2.72E-03
MYO9B	4650	-0.337	5.62E-04	8.01E-03
ZNF577	84765	-0.337	4.42E-04	7.12E-03
LOC100134734	100134734	-0.337	1.77E-04	4.50E-03
TRIOBP	11078	-0.333	4.04E-05	2.41E-03
CD14	929	-0.332	1.89E-04	4.63E-03
N4BP1	9683	-0.332	7.02E-05	3.07E-03
TUBA1A	7846	-0.331	3.69E-04	6.47E-03
FAM63A	55793	-0.329	8.78E-05	3.44E-03
FERMT3	83706	-0.328	1.67E-04	4.50E-03
MLL4	9757	-0.328	1.93E-04	4.66E-03
CREB1	1385	-0.328	6.42E-04	8.58E-03
VPS37B	79720	-0.327	3.32E-04	6.09E-03
MKNK2	2872	-0.327	1.49E-04	4.31E-03
MGC26356	642280	-0.326	7.22E-05	3.14E-03
SBNO2	22904	-0.326	1.46E-04	4.29E-03
TALDO1	6888	-0.325	9.48E-05	3.49E-03
RENBP	5973	-0.324	1.61E-04	4.47E-03
ITGAM	3684	-0.322	3.92E-04	6.66E-03
CSK	1445	-0.322	8.58E-05	3.40E-03
SH2D3C	10044	-0.322	3.08E-04	5.92E-03
CREBBP	1387	-0.322	1.88E-04	4.60E-03
CHST15	51363	-0.320	2.05E-04	4.81E-03
HCLS1	3059	-0.316	3.69E-05	2.34E-03
PLEKHO2	80301	-0.315	1.78E-04	4.53E-03
SF3B4	10262	-0.310	6.59E-04	8.67E-03

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-0.309

1.10E-04

3.63E-03