#GENE1	GENE2	ww	ws	wb	sw	ss	sb	bw
FERMT1	ROS1	54	0	82	0	4	0	113
CRISP2	C1orf168	341	1	40	0	4	1	12
ROBO3	TAF1L	192	23	42	0	3	1	111
KNSTRN	SLITRK1	229	19	0	0	3	0	153
MOV10L1	USP25	155	0	3	0	3	0	231
CHRM2	SLC6A15	267	0	114	6	5	4	7
TMTC2	CFAP70	329	0	47	4	4	0	14
SORCS1	MYH4	102	1	234	18	2	9	12
KLB	CFAP70	91	1	17	0	3	0	256
KLB	NR4A1	104	1	4	0	3	0	279
ALDH1L1	SCNN1D	147	0	42	0	3	1	143
PCDH10	PPARGC1A	160	0	212	9	6	14	1
MAGEB2	WASF3	222	1	10	1	4	0	161
ACSM1	COL2A1	264	1	100	4	0	0	20
KIAA0226L	DCAKD	195	0	8	0	2	2	188
HERC2	RBMXL2	191	0	73	12	5	10	88
DOCK2	PCDH10	333	17	4	19	12	0	20
HACL1	DGCR8	347	1	26	0	3	0	26
LRRC7	ZNF804B	160	3	180	19	9	13	6
CTNND2	CCDC63	352	0	24	14	5	1	9
CTSG	SLITRK1	347	15	1	1	6	0	34
ARHGAP4	CCER1	332	7	18	2	5	1	36
PDHA2	SLC26A3	328	2	48	5	5	1	12
DCTN1	PPP6R3	352	2	16	0	3	1	26
TAF1L	ADAMTS2	89	4	210	11	7	8	18
MAGEB2	NLRP2	76	0	157	0	3	2	46
DCAF8L1	PRDM5	360	0	25	9	4	0	6
DYNC2H1	SRCAP	123	0	26	3	4	0	198
ROCK1	THBS2	350	12	15	3	6	0	17
ACSM5	FLG2	65	9	79	5	4	0	106
PTPRU	ANKHD1	235	5	12	1	3	2	141
R3HDM1	DGKB	224	5	6	1	5	0	149
KRT31	UBR5	315	8	7	1	5	0	63
RPGR	CRISP2	285	2	11	3	3	3	94
SPATA31D	ZNF536	234	29	43	4	11	2	62
ATP12A	RASGRP3	304	0	31	0	2	2	62
RELN	KIRREL	232	0	7	22	6	1	130
VPS13A	PCDHGA10	114	3	206	6	3	0	25
TAOK2	GNB3	310	0	26	2	3	0	58
CSRNP3	CLEC17A	310	2	52	0	3	0	34
LRRTM4	CUL4A	245	0	137	20	2	0	1
SSFA2	ACTR3B	283	0	15	2	3	0	99
CLEC9A	ACTR3B	365	0	17	2	3	0	17
MYLK3	ATP2B3	124	9	2	0	2	0	261
ITGBL1	SPATA31A1	338	0	25	4	1	0	31
RFX6	GRIK4	353	5	23	4	5	0	15
PCDHB5	ZNF804B	138	8	153	1	5	5	46
RFX6	NLRP10	353	5	23	4	5	0	14
MNDA	PCDHGA8	172	2	186	2	4	1	18

CRISP2	ZNF521	351	21	10	0	5	0	16
LCLAT1	TCEAL5	294	3	24	0	3	0	76
PCDHA12	AMTN	233	0	125	0	2	6	23
ITPR2	UMOD	314	2	11	9	5	1	55
KCNH8	SORCS1	264	16	35	9	9	0	64
PSD2	SUGP1	300	1	80	1	3	4	13
SACS	AGMO	162	12	11	1	1	2	197
SPATA17	POLR3A	337	2	17	0	3	0	44
ADAM23	CRISP2	364	1	18	5	4	0	13
TCF20	XYLT1	213	5	12	0	3	3	142
ASAP2	SUPT16H	176	0	14	1	3	0	198
KLHDC4	APPBP2	150	0	6	0	2	1	236
BACH2	MTUS2	176	1	195	4	4	2	13
CSRNP3	CEP170B	327	3	34	0	3	0	32
POP1	TEX13A	291	1	8	4	4	0	90
ESPN	HACL1	357	0	28	0	2	0	17
TRANK1	CLEC16A	285	1	24	5	4	1	80
GABRA6	RBM15	287	1	48	4	3	6	46
PCDHB13	RPS6KC1	162	0	13	3	3	0	210
TRRAP	TRPM8	298	2	77	12	5	1	7
UBR1	ACAD9	304	0	15	3	3	1	72
HIPK1	FAM63B	341	0	25	3	3	0	32
ANKRD17	DOCK2	340	24	20	3	7	0	11
SLC9A9	KCNB2	363	12	3	1	5	0	20
SARDH	ADAMTS12	67	14	92	2	3	0	75
LRRK1	KIAA1549L	209	7	20	2	5	0	144
LRIT2	ZNF804B	66	5	61	1	4	0	118
EYS	SPATA31A5	134	3	40	0	2	6	127
FEZ1	RALGAPB	285	0	15	0	1	0	95
LRRCC1	SH3RF3	266	0	13	3	3	0	115
SLC38A8	PXDN	346	6	24	1	4	0	23
TMTC2	KLB	102	0	274	3	3	2	4
PGR	PLEKHG3	228	0	64	3	3	0	75
ARHGAP22	KMT2B	111	0	247	1	2	0	8
HEPH	AFF2	343	9	4	11	7	1	27
SERPINB2	FGB	154	0	84	2	3	0	116
WASF3	NLRP2	117	0	267	1	3	2	4
PSKH2	FAM171B	108	4	75	3	3	0	116
GPC4	SEMA5A	217	6	13	0	3	1	157
LAMB4	OTC	181	0	92	7	3	0	76
TRIM58	BNC1	162	7	3	2	0	4	221
NLRP4	SCN2A	101	9	17	2	3	0	232
UBR5	GDA	356	0	23	11	4	1	7
KCNA4	MAP3K19	269	3	113	8	5	1	5
DHRS2	KLHL1	339	12	9	1	0	1	31
RPL3L	CCNB3	321	3	5	1	2	1	60
COL19A1	RIMS2	256	15	22	15	11	1	73
RAB40A	HEPH	233	17	17	0	2	0	123
SLC4A1	FAHD2B	277	0	42	4	3	0	73
SPAG17	TRPC4	81	5	6	1	4	0	281

TCF20	GRM7	104	6	120	3	3	0	83

bs	bb	chi2	x*	epistatic-p	sa-pvalue
0	152	44.901	154.638	0	0.769998138803298
0	6	39.292	2.075	1,14E+05	1
0	33	36.898	28.571	3,05E+05	0.592411280798094
0	1	36.821	0.402	3,05E+05	1
0	13	35.409	9.711	8,38E+05	0.751780604695618
0	2	35.251	2.677	1,18E+06	0.0419034632175585
0	7	34.974	2.856	1,30E+06	0.110160689433267
5	22	34.118	23.524	1,64E+06	1
0	37	33.528	39.456	2,09E+06	0.0937678906626665
0	14	33.528	13.152	2,09E+06	0.79110846697134
0	69	33.473	58.683	2,25E+06	0.66717395893238
0	3	33.008	2.287	2,74E+06	1
1	5	32.401	6.256	3,92E+06	1
7	9	31.951	8.043	5,26E+06	0.829801735357627
0	10	31.898	8.888	5,52E+06	1
0	26	31.545	29.857	6,40E+06	0.516835276075565
0	0	31.434	0.224	6,70E+06	1
1	1	31.408	1.822	6,70E+06	1
1	14	31.462	10.778	6,70E+06	1
0	0	31.394	0.561	7,12E+05	1
1	0	31.168	0.089	7,96E+06	1
0	4	30.735	2.256	9,98E+06	0.812168316570261
0	4	30.631	2.122	1,03E+07	0.879142019749466
0	5	30.358	1.632	1,18E+07	0.402066494978815
2	56	30.275	52.772	1,22E+07	0.609538212422432
0	121	30.13	116.065	1,29E+06	1
0	1	30.074	0.464	1,34E+07	0.673394345245855
11	40	29.732	40.589	1,57E+07	0.874199790581977
0	2	29.738	0.841	1,57E+07	1
3	134	29.618	133.125	1,66E+07	0.329984590560946
0	6	29.638	6.716	1,66E+07	1
8	7	29.612	5.254	1,66E+07	1
3	3	29.407	1.701	1,87E+07	1
0	4	29.452	3.731	1,87E+07	1
9	11	29.308	11.263	1,97E+07	0.170202068495288
0	4	29.34	5.761	1,97E+07	1
1	6	29.334	4.715	1,97E+07	1
0	48	29.26	47.181	2,03E+07	1
0	6	29.012	5.12	2,25E+07	0.331213869309187
0	4	29.077	5.32	2,25E+07	1
0	0	28.98	0.358	2,40E+07	1
0	3	28.863	4.59	2,58E+07	0.845057641200218
0	1	28.863	0.81	2,58E+07	0.965483041707982
1	6	28.787	5.435	2,72E+06	1
5	1	28.688	2.106	2,89E+07	0.73431895617597
0	0	28.626	0.882	2,89E+07	0.919416193573395
0	49	28.628	49.715	2,89E+07	1
0	1	28.648	0.921	2,89E+07	1
0	20	28.557	19.768	3,01E+06	1

2	0	28.413	0.424	3,15E+07	0.659444818392288
0	5	28.447	5.887	3,15E+07	0.775104608352953
0	16	28.496	13.851	3,15E+07	0.780352173687399
4	4	28.441	2.305	3,15E+07	1
4	4	28.408	7.226	3,15E+07	1
0	3	28.27	3.354	3,52E+07	0.00571959603978347
0	19	28.118	16.658	3,67E+07	0.213155498576394
1	1	28.105	2.03	3,67E+07	1
0	0	28.087	0.592	3,86E+07	1
6	21	27.934	13.863	4,00E+07	0.547041091472506
1	12	27.838	13.65	4,25E+06	0.524970453687075
0	10	27.803	9.791	4,25E+06	0.80268341255467
1	9	27.763	11.42	4,46E+07	1
0	6	27.69	3.81	4,71E+07	0.644379303553653
3	4	27.621	2.87	4,71E+07	0.664013117702668
1	0	27.685	1.184	4,71E+07	1
0	5	27.517	6.256	4,97E+07	0.387060004037031
0	10	27.553	8.307	4,97E+07	1
0	14	27.51	15.158	4,97E+07	1
1	2	27.51	1.852	4,97E+07	1
0	7	27.453	4.367	5,20E+07	0.0297695777273267
0	1	27.494	2.15	5,20E+07	0.285280758545949
0	0	27.46	0.593	5,20E+07	0.66338717654442
1	0	27.428	0.155	5,20E+07	1
3	149	27.391	140.95	5,49E+07	0.0763617429896676
3	15	27.395	14.343	5,49E+07	0.161475224876347
4	146	27.372	139.765	5,49E+07	0.226161353311142
0	93	27.327	74.264	5,49E+07	1
7	2	27.335	4.154	5,49E+07	1
0	5	27.368	5.414	5,49E+07	1
0	1	27.346	1.523	5,49E+07	1
0	17	27.225	15.393	5,87E+07	0.419814273003453
2	30	27.298	24.861	5,87E+07	0.661575426188027
2	34	27.229	29.505	5,87E+07	0.808659044194341
3	0	27.125	0.289	6,21E+07	0.271912391336521
2	44	27.147	51.457	6,21E+07	1
0	11	27.104	10.451	6,21E+07	1
0	96	27.086	91.777	6,63E+07	0.685940445548031
1	7	27.076	8.325	6,63E+07	1
1	45	27.001	42.074	6,63E+07	1
3	3	26.989	3.455	6,99E+06	0.201788376569388
2	39	26.973	39.013	6,99E+06	0.301742975852474
0	3	26.954	0.668	6,99E+06	0.460383530674828
0	1	26.982	1.763	6,99E+06	0.791984255623579
11	1	26.955	0.842	6,99E+06	1
7	5	26.989	1.662	6,99E+06	1
4	8	26.838	6.769	7,32E+07	0.59010923760057
0	13	26.822	10.57	7,32E+07	1
0	6	26.871	9.528	7,32E+07	1
5	22	26.899	21.754	7,32E+07	1

0	86	26.834	88.585	7,32E+07	1