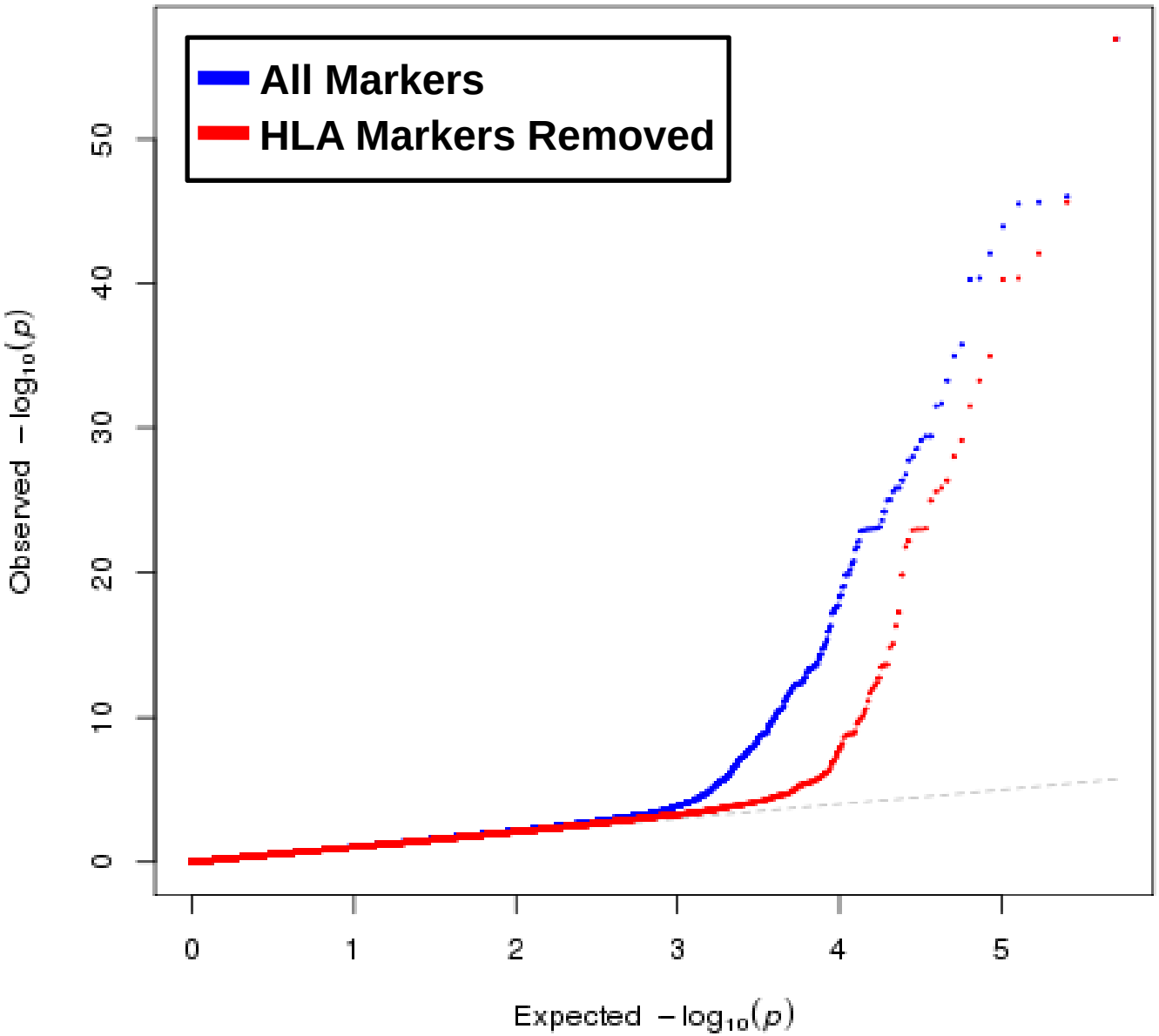
Supplemental Figure A



Supplemental Table A: Genes selected for analysis in the replication set

Gene Symbol	Chromosome	No of Tested SNPs
ADAMTS9	3p14	3
BAT2	6p21.3	4
BCL2L15	1p13.2	4
BTNL2	6p21.3	14
CFB	6p21.3	2
DDR1	6p21.3	8
GPR103	4q27	3
HCP5	6p21.3	14
HSPA1L	6p21.3	2
IER3	6p21.3	7
LTA	6p21.3	4
MAGI3	1p12-11.2	7
MICA	6p21.33	12
NCR3	6p21.3	2
NFKBIL1	6p21.3	3
NOTCH4	6p21.3	14
PHTF1	1p13	2
PSMB8	6p21.3	4
PSORS1C1	6p21.3	5
PTPN22	1p13.2	3
SC65	17q21.2	2
TAP2	6p21.3	13
TNXB	6p21.3	6
TRIM31	6p21.3	6

Supplemental Table B: Analysis of 143 SNPs conditioned and not conditioned on PCA

CHR	SNP	BP	A1	TEST	NMISS	P_PCA	P_no_PCA
1	rs10858000	113877319	1	ADD	1115	2.05E-05	6.171E-07
1	rs2153977	113881594	1	ADD	1115	0.000319	0.00004177
1	rs10858002	113884455	2	ADD	1115	0.000229	0.00004403
1	rs12074958	113896862	2	ADD	1115	3.46E-05	0.00000319
1	rs12035317	113897620	2	ADD	1115	3.46E-05	0.00000274
1	rs1230661	113987113	1	ADD	1115	2.54E-07	1.329E-08
1	rs4839335	114035394	2	ADD	1114	9.23E-07	1.651E-07
1	rs1111695	114045422	2	ADD	1115	2.26E-06	4.082E-08
1	rs1230647	114055162	2	ADD	1115	1.12E-06	2.682E-07
1	rs2476601	114179091	1	ADD	1115	5.29E-11	8.429E-11
1	rs1217407	114195271	1	ADD	1115	5.46E-07	1.909E-07
1	rs1217418	114202754	1	ADD	1113	1.52E-06	1.101E-07
1	rs6665194	114219366	1	ADD	1114	1.30E-07	1.741E-08
1	rs12566340	114221851	1	ADD	1115	2.5E-07	2.882E-08
1	rs7529353	114221985	1	ADD	1115	1.27E-07	8.137E-09
1	rs2358994	114230984	1	ADD	1115	1.21E-07	2.693E-09
3	rs6782866	64583706	2	ADD	1115	1.73E-05	0.000001035
3	rs11708072	64596599	2	ADD	1115	1.35E-05	4.348E-07
4	rs10518389	122531523	2	ADD	1115	1.05E-05	0.00003035
4	rs7679475	122533490	1	ADD	1114	7.04E-08	0.000001355
4	rs1513695	122534235	1	ADD	1115	1.65E-06	0.00003995
6	rs7753935	30168762	1	ADD	1115	1.05E-09	0.000000336
6	rs7765810	30171475	1	ADD	1114	4.35E-09	5.182E-07
6	rs2844795	30181826	2	ADD	1115	7.95E-07	0.000001187
6	rs2523989	30186254	1	ADD	1113	0.000301	0.00006649
6	rs2523987	30187972	2	ADD	1115	9.26E-05	0.000006788
6	rs2517598	30188253	1	ADD	1115	0.000167	0.00001458
6	rs3095340	30834918	2	ADD	1115	0.000183	0.000003086
6	rs12210947	30843084	2	ADD	1112	3.10E-06	0.000009933
6	rs13201769	30864045	1	ADD	1115	4.67E-06	0.000004346
6	rs4713366	30864340	1	ADD	1107	2.89E-06	0.000002863
6	rs3131063	30871735	1	ADD	1115	1.01E-06	3.357E-07
6	rs12190167	30874173	1	ADD	1115	1.61E-07	5.007E-07
6	rs886424	30889981	1	ADD	1114	8.82E-07	2.86E-08
6	rs12192704	30900249	1	ADD	1115	4.22E-07	2.568E-07
6	rs915664	30902596	2	ADD	1115	0.000318	0.00001175
6	rs1264350	30904524	2	ADD	1115	2.00E-05	0.000000712
6	rs12198723	30904713	2	ADD	1093	2.71E-08	6.606E-08
6	rs3095352	30913900	2	ADD	1109	0.000148	0.0005073
6	rs3130653	30930750	2	ADD	1114	0.000225	0.0008318
6	rs2844659	30932511	1	ADD	1108	4.34E-05	0.00006793
6	rs2844657	30937501	2	ADD	1105	3.55E-05	0.00006303
6	rs2844670	31113705	2	ADD	1115	2.97E-05	0.00004112
6	rs3823418	31208921	1	ADD	1115	0.000199	0.00003083
6	rs3130564	31209653	1	ADD	1113	4.42E-05	0.000004907

CHR	SNP	BP	A1	TEST	NMISS	P_PCA	P_no_PCA
6	rs1265099	31213392	2	ADD	1114	1.82E-09	6.58E-10
6	rs1265098	31214156	2	ADD	1115	3.62E-07	7.215E-08
6	rs2844533	31458781	2	ADD	1115	3.59E-07	5.888E-08
6	rs2442749	31460019	2	ADD	1115	1.43E-07	1.269E-09
6	rs2844529	31461572	1	ADD	1115	4.65E-05	0.0004418
6	rs2428486	31462083	2	ADD	1113	4.45E-05	0.0004602
6	rs2596560	31463297	2	ADD	1111	1.34E-11	3.456E-13
6	rs2523467	31470909	1	ADD	1113	8.32E-05	0.0002887
6	rs2251396	31472686	1	ADD	1115	2.20E-10	1.477E-09
6	rs2596542	31474574	1	ADD	1113	6.27E-05	0.0001906
6	rs2523454	31475844	1	ADD	1115	8.93E-10	8.094E-11
6	rs2256175	31488428	1	ADD	1113	8.07E-06	0.00000709
6	rs2844513	31496193	1	ADD	1113	6.35E-05	0.00009313
6	rs2524279	31500885	2	ADD	1114	8.52E-07	0.00002276
6	rs2596464	31520940	1	ADD	1108	0.000273	0.00006533
6	rs3128982	31525170	2	ADD	1114	0.000234	0.00006582
6	rs2596472	31536946	2	ADD	1092	3.48E-09	1.923E-10
6	rs2244839	31546347	1	ADD	1112	3.77E-05	0.00001234
6	rs2844505	31547042	2	ADD	1112	0.000136	0.0000102
6	rs1055569	31548061	1	ADD	1115	0.000107	0.0001379
6	rs2516440	31548476	1	ADD	1115	7.10E-05	0.00007992
6	rs2395488	31553888	2	ADD	1112	3.69E-13	6.648E-13
6	rs2248372	31554445	1	ADD	1112	1.02E-05	0.00002335
6	rs2516513	31555567	1	ADD	1115	0.000317	0.0003767
6	rs2516424	31556294	2	ADD	1104	3.36E-13	4.583E-13
6	rs2248617	31556512	1	ADD	1115	4.15E-13	5.505E-13
6	rs3099844	31556955	1	ADD	1113	2.36E-09	1.785E-11
6	rs2905722	31557306	1	ADD	1115	3.02E-07	4.445E-08
6	rs2071591	31623778	1	ADD	1096	2.98E-06	0.000003926
6	rs2516390	31637862	2	ADD	1115	9.58E-11	1.27E-10
6	rs928815	31639194	1	ADD	1115	9.58E-11	1.448E-10
6	rs2857708	31641585	1	ADD	1097	2.80E-05	0.000157
6	rs2844484	31644203	1	ADD	1113	8.98E-11	1.177E-10
6	rs2844482	31647746	1	ADD	1111	0.000312	0.004137
6	rs1041981	31648763	1	ADD	1115	6.72E-06	0.000003859
6	rs2857596	31675401	2	ADD	1077	6.91E-09	8.712E-09
6	rs2857595	31676448	1	ADD	1115	1.43E-06	5.078E-08
6	rs2242660	31705732	1	ADD	1088	5.08E-11	1.251E-14
6	rs3115663	31709822	2	ADD	1115	1.64E-10	1.201E-12
6	rs1046089	31710946	1	ADD	1115	2.39E-13	3.425E-16
6	rs3132453	31712023	1	ADD	1112	9.34E-05	0.00001137
6	rs2075800	31885925	1	ADD	1109	0.000164	0.001685
6	rs2227956	31886251	2	ADD	1115	1.20E-15	7.449E-17
6	rs1270942	32026839	2	ADD	1114	7.53E-11	1.39E-12
6	rs4151672	32027809	1	ADD	1112	5.97E-05	0.003324
6	rs12198173	32134786	1	ADD	1115	2.74E-08	5.215E-09

CHR	SNP	BP	A1	TEST	NMISS	P_PCA	P_no_PCA
6	rs1150754	32158736	1	ADD	1112	3.21E-15	4.103E-15
6	rs1150752	32172704	2	ADD	1103	1.51E-13	1.057E-15
6	rs13199524	32174743	1	ADD	1115	3.97E-08	8.099E-09
6	rs3134954	32179871	2	ADD	1115	1.11E-12	1.791E-13
6	rs12153855	32182782	2	ADD	1115	3.71E-09	7.668E-10
6	rs3131296	32280971	1	ADD	1104	2.22E-08	4.1E-09
6	rs3134798	32292683	2	ADD	1112	0.000114	0.0003933
6	rs8192585	32296801	1	ADD	1114	2.75E-05	0.001086
6	rs3132946	32298006	1	ADD	1115	2.36E-11	3.416E-12
6	rs434841	32299019	1	ADD	1106	7.19E-15	1.806E-13
6	rs3830041	32299317	1	ADD	1114	3.19E-09	5.293E-09
6	rs2267644	32300538	1	ADD	1113	1.29E-05	0.0001385
6	rs377763	32307122	1	ADD	1115	1.02E-06	5.421E-09
6	rs3130299	32311515	2	ADD	1115	9.47E-07	1.672E-08
6	rs405875	32323166	2	ADD	1115	8.05E-07	5.689E-08
6	rs3115573	32326821	2	ADD	1115	1.43E-06	4.729E-07
6	rs9267992	32328375	2	ADD	1115	1.84E-13	2.412E-14
6	rs3130315	32328663	1	ADD	1115	1.43E-06	6.011E-07
6	rs9268005	32332366	2	ADD	1098	1.04E-18	4.226E-21
6	rs4424066	32462406	2	ADD	1115	1.60E-06	0.000001383
6	rs3117098	32466491	2	ADD	1115	1.67E-14	3.209E-14
6	rs3817973	32469089	1	ADD	1114	1.60E-06	0.000001782
6	rs1980493	32471193	2	ADD	1111	6.99E-11	4.609E-11
6	rs4248166	32474399	2	ADD	1112	4.5E-06	3.267E-07
6	rs2294884	32475237	2	ADD	1115	2.28E-06	1.327E-07
6	rs3817963	32476065	2	ADD	1115	8.48E-17	4.301E-19
6	rs3806156	32481676	1	ADD	1115	1.01E-11	8.418E-13
6	rs3763309	32483951	1	ADD	1115	9.88E-29	3.908E-31
6	rs3763312	32484326	1	ADD	1110	5.83E-29	2.093E-31
6	rs3129963	32488186	2	ADD	1113	7.21E-08	1.137E-07
6	rs9268528	32491086	2	ADD	1113	1.37E-19	3.429E-22
6	rs9268542	32492699	2	ADD	1115	4.19E-19	7.251E-22
6	rs2395163	32495787	2	ADD	1115	8.60E-31	2.114E-32
6	rs2857106	32895548	2	ADD	1114	2.35E-09	1.474E-09
6	rs9784758	32896489	2	ADD	1115	2.05E-09	4.916E-08
6	rs10484565	32903010	1	ADD	1113	2.68E-06	0.000005242
6	rs241453	32904204	1	ADD	1114	6.50E-15	3.895E-15
6	rs241447	32904729	2	ADD	1101	2.58E-15	1.064E-15
6	rs241440	32905339	1	ADD	1115	3.71E-15	2.249E-15
6	rs241437	32905662	2	ADD	1114	0.000376	0.0009035
6	rs241436	32905854	2	ADD	1105	1.54E-05	0.00005102
6	rs1015166	32906709	1	ADD	1115	1.23E-11	7.265E-11
6	rs2228397	32908202	1	ADD	1083	2.03E-06	0.000004935
6	rs3819715	32912197	1	ADD	1115	1.07E-06	0.00009658
6	rs241427	32912392	1	ADD	1115	2.24E-08	7.469E-08
6	rs241425	32912887	1	ADD	1115	1.04E-14	8.014E-17

CHR	SNP	BP	A1	TEST	NMISS	P_PCA	P_no_PCA
6	rs3763349	32916210	1	ADD	1115	1.58E-07	2.316E-07
6	rs9357155	32917826	1	ADD	1107	8.34E-08	1.193E-07
6	rs6924102	32919361	2	ADD	1115	3.43E-07	1.191E-07
6	rs2071543	32919607	1	ADD	1115	1.19E-06	0.000001408
17	rs2304493	37219694	2	ADD	1107	2.14E-06	0.000001048
17	rs13412	37220968	2	ADD	1115	1.33E-06	0.000001804

Supplemental Table C1: Logistic regression analysis of 23 SNPs in the MHC region

SNP	CHR	Gene	p-value: independent SNP effect	p-value: marginal omnibus LR test
rs2523989	6	TRIM31	NA	--
rs886424	6	IER3	NA	--
rs2844657	6	DDR1	NA	--
rs3130564	6	PSORS1C1	NA	--
rs2074488	6	HLA-C	NA	--
rs3134792	6	HLA-B	NA	--
rs2156875	6	HLA-B	0.524	2.45×10^{-50}
rs2251396	6	MICA	NA	--
rs3099844	6	HCP5	NA	--
rs2071591	6	NFKBIL1	NA	--
rs1041981	6	LTA	NA	--
rs2857595	6	NCR3	NA	--
rs3115663	6	BAT2	NA	--
rs2227956	6	HSPA1L	0.00227	1.72×10^{-42}
rs1270942	6	CFB	NA	--
rs1150752	6	TNXB	NA	--
rs3131296	6	NOTCH4	NA	--
rs1980493	6	BTNL2	NA	--
rs660895	6	HLA-DRB1	NA	--
rs2187668	6	HLA-DQA1	NA	--
rs1063355	6	HLA-DQB1	0.129	8.11×10^{-38}
rs9275184	6	HLA-DQB1	NA	--
rs1015166	6	TAP2	0.289	4.28×10^{-45}

Column D: shows the results of the Conditional Likelihood Ratio (LR) tests that test for an independent effect of each SNP (independent of the haplotypic effects formed by the remaining SNPs)

Column E: shows the results of the marginal omnibus significant association controlling for each SNP (i.e. it tests if for SNPS that had independent effects, the remaining SNPs in the haplotype jointly contribute with association information beyond the tested SNP alone)

This analysis was performed using PLINK v1.07

NA-independent effect cannot be determined

Supplemental Table C2: Logistic regression analysis of 4 SNPs in the 1p locus

SNP	CHR	Gene	p-value:	
			independent SNP effect	marginal omnibus LR test controlling for SNP
rs2153977	1	MAGI3	0.56	3.15×10^{-6}
rs1111695	1	PHTF1	0.29	0.00025
rs2476601	1	**PTPN22**	**0.008**	0.43
rs2358994	1	BCL2L15	0.95	0.0039

Supplemental Table C3: Logistic regression analysis of the GPR103 locus on chromosome 4q (in the discovery set)

Analysis Model	SNP	BP	Alleles (minor/major)	p-value	OR (95% confidence interval)
Allelic	rs1051838	122531523	G/A	2.24×10^{-5}	0.6688 (0.5552 - 0.8055)
	rs7679475	122533490	T/G	1.28×10^{-7}	1.651 (1.371 – 1.989)
	rs1513695	122534235	A/G	2.40×10^{-6}	1.567 (1.3 – 1.888)
Dominant	rs1051838	122531523	G/A	5.08×10^{-5}	0.5567 (0.4194 – 0.7391)
	rs7679475	122533490	T/G	7.80×10^{-5}	1.763 (1.331 – 2.336)
	rs1513695	122534235	A/G	2.67×10^{-3}	1.546 (1.163 – 2.054)
Recessive	rs1051838	122531523	G/A	4.45×10^{-3}	0.6292 (0.4572 – 0.8658)
	rs7679475	122533490	T/G	1.50×10^{-6}	2.216 (1.603 – 3.065)
	rs1513695	122534235	A/G	1.16×10^{-6}	2.194 (1.599 – 3.012)

Supplemental Table D1: SNPs showing suggestive evidence of association (p ≤ 10e-5)

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs1015166	6	32906709	+	C/T	1	ADD	1115	1.939	6.777	1.31E-09	32897587	32914525	6891	TAP2
rs1033500	6	32415360	-	C/T	1	ADD	1099	2.044	7.194	2.59E-13	32368452	32447634	10665	C6orf10
rs1046089	6	31710946	+	A/G	1	ADD	1115	2.067	7.325	4.97E-11	31696428	31713533	7916	BAT2
rs10484565	6	32903010	+	A/G	1	ADD	1113	2.048	4.694	7.61E-06	32897587	32914525	6891	TAP2
rs10484566	6	32943236	+	G/T	2	ADD	1115	2.268	4.638	8.86E-06	32929915	32935606	5698	PSMB9
rs10493321	1	62545856	+	A/G	2	ADD	1089	1.874	5.827	2.34E-08	62474424	62557671	163782	KANK4
rs1053924	6	32228693	-	A/G	1	ADD	1115	0.5619	-5.29	1.14E-07	32229278	32239430	9374	PPT2
rs1063355	6	32735692	-	A/C	1	ADD	1115	0.2295	-11.48	2.62E-29	32735634	32742444	3119	HLA-DQB1
rs10807113	6	32830164	+	A/C	1	ADD	1115	0.5507	-6.212	3.82E-08	32817140	32823199	3118	HLA-DQA2
rs1111695	1	114045422	-	G/T	2	ADD	1115	1.548	4.729	4.21E-06	114041346	114103300	10745	PHTF1
rs11244	6	32888702	-	C/T	1	ADD	1112	1.996	7.109	1.68E-11	32888517	32892803	3112	HLA-DOB
rs1150752	6	32172704	-	A/G	2	ADD	1103	2.801	7.386	3.50E-11	32116910	32185129	7148	TNXB
rs1150754	6	32158736	-	A/G	1	ADD	1112	2.56	7.883	8.93E-13	32116910	32185129	7148	TNXB
rs12153855	6	32182782	+	C/T	2	ADD	1115	0.238	-5.897	8.59E-09	32116910	32185129	7148	TNXB
rs1217407	1	114195271	+	A/G	1	ADD	1115	1.651	5.01	1.87E-06	114157960	114215857	26191	PTPN22
rs1217418	1	114202754	+	A/G	1	ADD	1113	1.556	4.809	5.05E-06	114157960	114215857	26191	PTPN22
rs12177980	6	32794062	+	A/G	1	ADD	1114	0.6056	-4.988	5.30E-06	32817140	32823199	3118	HLA-DQA2
rs12190167	6	30874173	+	A/G	1	ADD	1115	1.942	5.24	1.22E-06	30818954	30820306	8870	IER3
rs12192704	6	30900249	+	A/G	1	ADD	1115	1.876	5.059	3.33E-06	30959839	30975912	780	DDR1
rs12197154	6	30874223	+	C/T	2	ADD	1113	1.9	5.138	2.20E-06	30818954	30820306	8870	IER3
rs12198173	6	32134786	+	A/G	1	ADD	1115	0.2312	-5.558	4.35E-08	32116910	32185129	7148	TNXB
rs12198723	6	30904713	+	G/T	2	ADD	1093	2.074	5.559	2.73E-07	30959839	30975912	780	DDR1
rs12210947	6	30843084	+	A/G	2	ADD	1112	1.737	4.664	6.47E-06	30818954	30820306	8870	IER3
rs1230647	1	114055162	-	A/G	2	ADD	1115	1.63	4.869	3.81E-06	114041346	114103300	10745	PHTF1
rs1230661	1	113987113	-	C/T	1	ADD	1115	1.697	5.154	8.49E-07	113734997	114030068	260425	MAGI3
rs12529049	6	32465693	+	C/T	1	ADD	1115	0.4507	-4.797	7.80E-07	32470490	32482878	56244	BTNL2
rs12566340	1	114221851	+	C/T	1	ADD	1115	1.686	5.158	1.14E-06	114220958	114231692	440603	BCL2L15
rs1265099	6	31213392	-	C/T	2	ADD	1114	1.747	6.013	1.48E-09	31190601	31215816	170679	PSORS1C1
rs1265110	6	31227401	-	A/G	1	ADD	1115	1.994	5.122	1.08E-05	31218194	31233994	54535	CCHCR1
rs1265758	6	32431507	-	C/T	1	ADD	1109	0.3577	-9.195	2.94E-18	32368452	32447634	10665	C6orf10
rs1265759	6	32430371	-	A/G	2	ADD	1115	0.335	-9.728	1.42E-20	32368452	32447634	10665	C6orf10
rs12663103	6	32269302	+	C/T	2	ADD	1113	0.1999	-4.513	1.17E-05	32266520	32271278	63940	GPSM3

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs1270942	6	32026839	-	C/T	2	ADD	1114	2.372	6.51	1.24E-08	32021699	32027840	629	CFB
rs13199524	6	32174743	+	C/T	1	ADD	1115	0.2351	-5.492	7.02E-08	32116910	32185129	7148	TNXB
rs13199787	6	32813254	+	C/T	1	ADD	1115	0.5785	-5.403	7.48E-07	32817140	32823199	3118	HLA-DQA2
rs13403098	2	82943089	+	A/G	1	ADD	1108	1.91	5.119	5.12E-06	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs13437000	6	33213042	+	C/T	2	ADD	1105	0.5215	-4.722	2.18E-06	33238446	33268223	1302	COL11A2
rs1383261	6	32873429	-	A/G	1	ADD	1113	1.724	5.808	1.51E-08	32888517	32892803	3112	HLA-DOB
rs1390266	4	20987259	-	G/T	2	ADD	1111	2.02	5.399	3.27E-07	20339336	21559472	80333	KCNIP4
rs1480380	6	33021224	+	C/T	1	ADD	1114	2.366	5.978	5.31E-08	33024372	33028831	3108	HLA-DMA
rs1521	6	31458683	+	C/T	2	ADD	1064	0.5628	-4.811	1.16E-07	31479349	31491069	4276	MICA
rs154978	6	33007274	-	A/G	2	ADD	1115	0.4847	-7.261	4.87E-12	33010392	33016795	3109	HLA-DMB
rs154981	6	32988971	-	A/G	2	ADD	1109	0.4651	-7.619	4.84E-13	33010392	33016795	3109	HLA-DMB
rs1573649	6	32839236	-	C/T	1	ADD	1110	0.5781	-5.778	2.27E-07	32817140	32823199	3118	HLA-DQA2
rs16898264	6	32785130	+	A/G	1	ADD	1110	0.4075	-8.023	3.09E-14	32817140	32823199	3118	HLA-DQA2
rs16908361	12	12754119	+	C/T	1	ADD	1100	1738	7.375	6.38E-13	12761575	12766570	1027	CDKN1B
rs17087141	18	69036707	+	C/T	2	ADD	1114	6.388	4.816	1.54E-06	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs17100060	12	62739380	+	A/G	2	ADD	1110	3.472	11.44	9.01E-29	62524807	62823829	57522	SRGAP1
rs17231696	8	25731198	+	C/T	1	ADD	1101	1.969	4.744	8.44E-06	25757489	25958309	64641	EBF2
rs17475879	6	30472487	+	C/T	1	ADD	1115	0.3233	-4.659	1.48E-06	30565249	30569072	3133	HLA-E
rs17500468	6	32819156	+	A/G	2	ADD	1110	0.4275	-4.751	3.06E-06	32817140	32823199	3118	HLA-DQA2
rs17533090	6	32698700	+	G/T	1	ADD	1115	0.3505	-6.277	1.06E-09	32713160	32719407	3117	HLA-DQA1
rs17641748	5	147380348	+	A/G	1	ADD	1102	3.68	10.93	1.36E-26	147423727	147497118	11005	SPINK5
rs17679624	6	123688113	+	A/C	1	ADD	1088	0.1675	-4.823	2.39E-06	123579181	123999641	10345	TRDN
rs1794282	6	32774504	-	A/G	1	ADD	1115	2.792	7.538	3.39E-11	32735634	32742444	3119	HLA-DQB1
rs1894406	6	32895034	-	A/G	1	ADD	1112	0.4237	-7.349	1.99E-12	32888517	32892803	3112	HLA-DOB
rs1927906	9	119519936	-	A/G	2	ADD	1104	2.018	5.238	3.59E-06	119506430	119519587	7099	TLR4
rs1980493	6	32471193	-	A/G	2	ADD	1111	2.242	6.521	1.30E-08	32470490	32482878	56244	BTNL2
rs1991914	4	4260014	-	G/T	2	ADD	1099	0.4398	-7.185	6.27E-12	4241430	4279522	133060	OTOP1
rs2051549	6	32838064	-	C/T	2	ADD	1096	1.955	7.056	1.37E-10	32817140	32823199	3118	HLA-DQA2
rs2066363	1	82010165	-	A/G	2	ADD	1106	0.2471	-10.51	6.17E-23	82038669	82230695	23266	LPHN2
rs2071469	6	32892761	-	A/G	1	ADD	1114	0.4823	-6.672	1.59E-10	32888517	32892803	3112	HLA-DOB
rs2071472	6	32892598	-	A/G	1	ADD	1115	0.434	-6.86	2.67E-11	32888517	32892803	3112	HLA-DOB
rs2071474	6	32890560	-	A/G	1	ADD	1115	0.434	-6.86	2.67E-11	32888517	32892803	3112	HLA-DOB
rs2071538	6	32926656	-	C/T	1	ADD	1115	0.5063	-5.195	2.37E-07	32920963	32929726	6890	TAP1
rs2071540	6	32920894	-	A/G	1	ADD	1115	0.5077	-6.508	9.81E-11	32920963	32929726	6890	TAP1

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs2071543	6	32919607	-	A/C	1	ADD	1115	1.853	4.857	7.11E-06	32916471	32920690	5696	PSMB8
rs2071550	6	32838918	-	G/T	1	ADD	1115	0.4398	-7.015	2.64E-11	32817140	32823199	3118	HLA-DQA2
rs2071554	6	32892654	-	A/G	1	ADD	1115	3.414	6.556	1.53E-09	32888517	32892803	3112	HLA-DOB
rs2074488	6	31348410	-	A/C	1	ADD	1115	2.348	6.431	5.91E-08	31344507	31347834	3107	HLA-C
rs2156875	6	31425326	-	A/G	2	ADD	1115	0.5783	-5.667	2.00E-08	31429627	31432968	3106	HLA-B
rs2187668	6	32713862	-	A/G	1	ADD	1112	3.031	8.801	5.74E-16	32713160	32719407	3117	HLA-DQA1
rs2219893	6	32877641	-	A/G	2	ADD	1098	0.4491	-6.833	2.34E-11	32888517	32892803	3112	HLA-DOB
rs2227956	6	31886251	-	C/T	2	ADD	1115	0.1981	-8.004	7.18E-17	31885374	31890814	3305	HSPA1L
rs2228397	6	32908202	-	G/T	1	ADD	1083	0.5467	-4.75	5.65E-06	32897587	32914525	6891	TAP2
rs2239800	6	32821245	-	C/T	2	ADD	1115	0.3669	-4.736	1.31E-05	32817140	32823199	3118	HLA-DQA2
rs2239804	6	32519501	-	A/G	1	ADD	1114	0.4909	-6.978	6.42E-14	32515624	32520802	3122	HLA-DRA
rs2242660	6	31705732	-	C/T	1	ADD	1088	1.89	6.569	1.03E-09	31696428	31713533	7916	BAT2
rs2246618	6	31586965	+	C/T	1	ADD	1071	1.964	7.179	8.38E-13	31573833	31586880	4277	MICB
rs2248617	6	31556512	-	A/G	1	ADD	1115	1.959	7.25	4.14E-13	31538937	31541461	10866	HCP5
rs2251396	6	31472686	-	C/T	1	ADD	1115	1.882	6.347	5.76E-08	31479349	31491069	4276	MICA
rs2253907	6	31444849	-	A/G	2	ADD	1108	0.585	-5.741	7.42E-08	31429627	31432968	3106	HLA-B
rs2254556	6	31450610	-	A/G	1	ADD	1115	0.4783	-4.857	1.23E-07	31429627	31432968	3106	HLA-B
rs2256965	6	31663109	-	A/C/T	1	ADD	1114	0.576	-5.46	1.26E-06	31661949	31664665	7940	LST1
rs2269127	21	42950306	+	A/G	1	ADD	1087	4.771	12.91	1.01E-35	42946930	43068687	5152	PDE9A
rs2294884	6	32475237	-	A/C	2	ADD	1115	0.4954	-4.727	1.03E-06	32470490	32482878	56244	BTNL2
rs2301271	6	32833171	-	C/T	1	ADD	1115	1.976	7.125	8.09E-11	32817140	32823199	3118	HLA-DQA2
rs2358994	1	114230984	+	A/G	1	ADD	1115	1.823	5.292	1.70E-06	114220958	114231692	440603	BCL2L15
rs2395150	6	32434023	+	A/G	2	ADD	1115	0.3501	-9.394	5.32E-19	32368452	32447634	10665	C6orf10
rs2395157	6	32456123	+	A/G	2	ADD	1111	2.457	8.616	7.31E-16	32368452	32447634	10665	C6orf10
rs2395162	6	32495758	+	G/T	1	ADD	1111	2.103	6.023	3.66E-07	32470490	32482878	56244	BTNL2
rs2395163	6	32495787	+	C/T	2	ADD	1115	4.019	11.54	1.72E-28	32470490	32482878	56244	BTNL2
rs2395173	6	32512837	+	A/G	1	ADD	1115	0.1979	-10.95	1.66E-27	32515624	32520802	3122	HLA-DRA
rs2395175	6	32513004	+	A/G	1	ADD	1115	5.007	12.38	3.91E-30	32515624	32520802	3122	HLA-DRA
rs2395182	6	32521295	+	G/T	2	ADD	1111	0.1799	-8.773	1.96E-18	32515624	32520802	3122	HLA-DRA
rs2395185	6	32541145	+	G/T	1	ADD	1113	2.565	8.907	5.35E-18	32515624	32520802	3122	HLA-DRA
rs2395488	6	31553888	+	A/G	2	ADD	1112	1.961	7.266	3.69E-13	31538937	31541461	10866	HCP5
rs241404	6	32973975	-	A/G	2	ADD	1115	1.608	5.041	1.83E-06	33010392	33016795	3109	HLA-DMB
rs241407	6	32970718	-	A/G	1	ADD	1115	2.245	5.969	5.64E-09	32929915	32935606	5698	PSMB9
rs241409	6	32969898	-	C/T	2	ADD	1115	2.186	5.784	1.06E-08	32929915	32935606	5698	PSMB9

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs241424	6	32912912	-	C/T	1	ADD	1115	1.631	5.196	1.83E-07	32897587	32914525	6891	TAP2
rs241425	6	32912887	-	C/T	1	ADD	1115	0.4414	-7.734	4.34E-15	32897587	32914525	6891	TAP2
rs241427	6	32912392	-	C/T	1	ADD	1115	0.5359	-5.593	5.13E-09	32897587	32914525	6891	TAP2
rs241440	6	32905339	-	A/G	1	ADD	1115	0.3378	-7.864	4.84E-14	32897587	32914525	6891	TAP2
rs241447	6	32904729	-	A/G	2	ADD	1101	0.3386	-7.91	3.60E-14	32897587	32914525	6891	TAP2
rs241448	6	32904663	-	C/T	2	ADD	1104	0.3625	-7.498	7.19E-13	32897587	32914525	6891	TAP2
rs241452	6	32904324	-	A/G	2	ADD	1109	0.3528	-7.623	2.99E-13	32897587	32914525	6891	TAP2
rs241453	6	32904204	-	C/T	1	ADD	1114	0.3431	-7.794	7.63E-14	32897587	32914525	6891	TAP2
rs2442749	6	31460019	-	A/G	2	ADD	1115	1.667	5.262	5.76E-08	31479349	31491069	4276	MICA
rs2462957	17	36095487	+	A/G	2	ADD	1107	1.609	5.167	2.82E-06	36107768	36113528	192666	KRT24
rs2476601	1	114179091	+	A/G	1	ADD	1115	2.338	6.563	1.37E-09	114157960	114215857	26191	PTPN22
rs2516049	6	32678378	-	A/G	2	ADD	1115	2.262	7.924	4.16E-14	32654524	32665540	3123	HLA-DRB1
rs2516390	6	31637862	-	A/G	2	ADD	1115	0.5066	-6.473	1.33E-09	31623350	31634585	4795	NFKBIL1
rs2516398	6	31589505	-	A/C	2	ADD	1102	0.4679	-6.566	1.67E-12	31573833	31586880	4277	MICB
rs2516400	6	31589084	-	C/T	1	ADD	1108	1.903	6.835	4.98E-12	31573833	31586880	4277	MICB
rs2516415	6	31567721	-	C/T	1	ADD	1106	1.869	6.686	5.31E-11	31573833	31586880	4277	MICB
rs2516424	6	31556294	-	C/T	2	ADD	1104	1.962	7.279	3.54E-13	31538937	31541461	10866	HCP5
rs2523454	6	31475844	-	C/T	1	ADD	1115	1.835	6.127	2.27E-07	31479349	31491069	4276	MICA
rs2523898	6	31101512	-	C/T	1	ADD	1104	0.6055	-5.228	4.48E-06	31059463	31065654	394263	C6orf205
rs2524279	6	31500885	-	C/T	2	ADD	1114	2.347	4.923	1.09E-05	31479349	31491069	4276	MICA
rs2596472	6	31536946	+	A/G	2	ADD	1092	0.4907	-5.907	3.04E-08	31538937	31541461	10866	HCP5
rs2596560	6	31463297	-	A/G	2	ADD	1111	2.016	6.765	3.21E-10	31479349	31491069	4276	MICA
rs2621373	6	32873108	-	A/G	2	ADD	1115	0.4602	-6.622	8.54E-11	32888517	32892803	3112	HLA-DOB
rs2647050	6	32777745	+	C/T	2	ADD	1115	0.4053	-8.085	1.85E-14	32735634	32742444	3119	HLA-DQB1
rs2717453	12	81349323	-	A/C	2	ADD	1079	0.173	-4.446	1.20E-05	81276454	81397076	84190	C12orf26
rs2734583	6	31613459	-	C/T	2	ADD	1115	2.067	5.738	2.31E-07	31605974	31618204	7919	BAT1
rs2765283	1	118337941	+	C/T	1	ADD	1100	5.842	14.02	8.31E-43	118297810	118529357	200162	SPAG17
rs2797409	1	114131725	+	C/T	2	ADD	1115	1.666	5.107	1.20E-06	114105976	114156593	54665	RSBN1
rs2844484	6	31644203	-	C/T	1	ADD	1113	0.506	-6.483	1.25E-09	31648071	31650077	4049	LTA
rs2844494	6	31591394	-	G/T	2	ADD	1108	0.4561	-6.768	1.78E-13	31573833	31586880	4277	MICB
rs2844533	6	31458781	-	C/T	2	ADD	1115	0.5426	-5.089	3.06E-08	31479349	31491069	4276	MICA
rs2844697	6	31040288	-	A/G	1	ADD	1115	1.675	5.6	6.42E-08	31027537	31029977	135656	DPCR1
rs285019	16	75656951	+	A/G	2	ADD	1098	1.771	5.893	4.18E-08	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs2855812	6	31580699	+	G/T	1	ADD	1115	2.187	7.743	4.61E-12	31573833	31586880	4277	MICB

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs2856705	6	32778934	-	A/G	1	ADD	1114	0.3939	-4.632	2.00E-06	32735634	32742444	3119	HLA-DQB1
rs2856718	6	32778233	-	A/G	1	ADD	1113	0.4065	-8.064	2.24E-14	32735634	32742444	3119	HLA-DQB1
rs2857106	6	32895548	-	A/G	2	ADD	1114	0.4021	-5.972	1.09E-08	32897587	32914525	6891	TAP2
rs2857596	6	31675401	-	A/C	2	ADD	1077	0.4608	-5.793	2.68E-10	31664650	31668741	259197	NCR3
rs2858308	6	32777978	-	A/C	1	ADD	1114	0.3935	-4.637	2.00E-06	32735634	32742444	3119	HLA-DQB1
rs2858331	6	32789255	-	C/T	2	ADD	1115	0.3076	-10.21	2.27E-22	32817140	32823199	3118	HLA-DQA2
rs2858870	6	32680229	-	A/G	2	ADD	1112	0.3045	-5.93	1.30E-09	32654524	32665540	3123	HLA-DRB1
rs2905722	6	31557306	-	C/T	1	ADD	1115	0.4111	-5.122	1.73E-08	31538937	31541461	10866	HCP5
rs3093993	6	31598704	-	G/T	2	ADD	1115	0.5705	-4.487	2.45E-06	31604717	31605987	401250	MCCD1
rs3095227	6	31598979	-	C/T	1	ADD	1111	0.5761	-4.411	3.28E-06	31604717	31605987	401250	MCCD1
rs3099844	6	31556955	+	A/C	1	ADD	1113	2.146	5.971	5.29E-08	31538937	31541461	10866	HCP5
rs3101942	6	32978035	-	C/T	2	ADD	1109	0.4813	-6.871	1.54E-11	33010392	33016795	3109	HLA-DMB
rs3104404	6	32790152	+	A/C	1	ADD	1114	0.3496	-6.913	2.54E-10	32817140	32823199	3118	HLA-DQA2
rs3104405	6	32790286	+	A/C	2	ADD	1114	0.5209	-5.739	1.13E-08	32817140	32823199	3118	HLA-DQA2
rs3115573	6	32326821	-	C/T	2	ADD	1115	1.604	4.821	6.73E-08	32270597	32299822	4855	NOTCH4
rs3115663	6	31709822	-	A/G	2	ADD	1115	2.054	6.392	1.19E-08	31696428	31713533	7916	BAT2
rs3117098	6	32466491	-	C/T	2	ADD	1115	0.3942	-7.674	1.94E-12	32470490	32482878	56244	BTNL2
rs3117583	6	31727555	-	C/T	2	ADD	1114	2.063	6.423	9.74E-09	31714783	31728456	7917	BAT3
rs3129860	6	32509057	+	A/G	1	ADD	1115	0.03742	-6.463	4.20E-11	32515624	32520802	3122	HLA-DRA
rs3129871	6	32514320	+	A/C	1	ADD	1115	0.1948	-11.4	3.76E-30	32515624	32520802	3122	HLA-DRA
rs3129882	6	32517508	+	A/G	2	ADD	1115	0.3295	-9.813	8.78E-20	32515624	32520802	3122	HLA-DRA
rs3129934	6	32444165	+	C/T	1	ADD	1114	0.159	-8.173	3.40E-16	32368452	32447634	10665	C6orf10
rs3129941	6	32445664	+	A/G	1	ADD	1113	0.2021	-9.279	1.41E-20	32368452	32447634	10665	C6orf10
rs3129962	6	32487361	+	A/C/G	1	ADD	1092	2.755	7.276	1.13E-10	32470490	32482878	56244	BTNL2
rs3129963	6	32488186	+	A/G	2	ADD	1113	1.913	5.386	8.06E-06	32470490	32482878	56244	BTNL2
rs3130050	6	31726740	+	A/G	2	ADD	1115	0.2833	-6.299	2.95E-11	31714783	31728456	7917	BAT3
rs3130055	6	31605378	+	C/T	2	ADD	1115	0.5175	-5.402	5.47E-08	31604717	31605987	401250	MCCD1
rs3130315	6	32328663	+	A/G	1	ADD	1115	1.604	4.821	6.73E-08	32270597	32299822	4855	NOTCH4
rs3130544	6	31166319	+	A/C	1	ADD	1115	1.963	5.287	5.96E-06	31186978	31188311	29113	C6orf15
rs3130617	6	31735502	+	C/T	2	ADD	1112	0.3655	-7.277	1.81E-15	31734053	31736528	57827	C6orf47
rs3130618	6	31740113	+	A/C	1	ADD	1115	2.037	6.341	1.71E-08	31737840	31741142	7918	BAT4
rs3130637	6	31596124	-	C/T	1	ADD	1115	0.5705	-4.487	2.45E-06	31604717	31605987	401250	MCCD1
rs3130931	6	31242867	-	A/G	1	ADD	1115	0.6078	-4.514	8.10E-08	31240092	31246430	5460	POU5F1
rs3131063	6	30871735	+	A/G	1	ADD	1115	1.573	4.89	2.31E-06	30818954	30820306	8870	IER3

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs3131296	6	32280971	-	A/G	1	ADD	1104	2.01	5.594	1.00E-06	32270597	32299822	4855	NOTCH4
rs3131379	6	31829012	-	C/T	1	ADD	1113	2.418	6.626	5.59E-09	31815752	31838431	4439	MSH5
rs3132131	6	33007463	+	A/G	1	ADD	1115	0.5537	-5.347	2.72E-07	33010392	33016795	3109	HLA-DMB
rs3132486	6	31351149	-	C/T	2	ADD	1064	0.533	-6.516	1.85E-09	31344507	31347834	3107	HLA-C
rs3132946	6	32298006	+	A/G	1	ADD	1115	0.2013	-6.682	2.62E-12	32270597	32299822	4855	NOTCH4
rs3134603	6	32233980	-	C/T	1	ADD	1108	0.2143	-6.669	1.32E-11	32229278	32239430	9374	PPT2
rs3134792	6	31420305	-	A/C	2	ADD	1083	2.416	6.406	2.52E-09	31429627	31432968	3106	HLA-B
rs3134942	6	32276749	-	A/C	1	ADD	1092	1.966	5.408	2.27E-06	32270597	32299822	4855	NOTCH4
rs3134943	6	32255739	-	A/G	1	ADD	1112	0.2067	-6.844	1.04E-12	32254139	32256548	6048	RNF5
rs3134954	6	32179871	-	A/G	2	ADD	1115	0.1743	-7.117	1.50E-13	32116910	32185129	7148	TNXB
rs3135338	6	32509195	-	A/G	2	ADD	1088	0.2077	-10.61	8.90E-26	32515624	32520802	3122	HLA-DRA
rs3135353	6	32500855	-	A/G	1	ADD	1115	2.446	7.046	5.49E-10	32515624	32520802	3122	HLA-DRA
rs329312	5	133928397	+	A/G	2	ADD	1085	2.297	8.051	2.33E-14	133889696	133946817	23338	PHF15
rs3738894	2	46267673	-	C/T	1	ADD	1078	16.39	5.166	5.91E-07	45732546	46268633	5581	PRKCE
rs3763309	6	32483951	+	A/C	1	ADD	1115	3.672	11.12	2.47E-26	32470490	32482878	56244	BTNL2
rs3763312	6	32484326	+	A/G	1	ADD	1110	3.695	11.17	1.44E-26	32470490	32482878	56244	BTNL2
rs3763313	6	32484449	+	A/C	2	ADD	1115	0.4729	-5.274	4.63E-07	32470490	32482878	56244	BTNL2
rs3763349	6	32916210	-	C/T	1	ADD	1115	0.5982	-5.242	6.43E-08	32916471	32920690	5696	PSMB8
rs377763	6	32307122	-	G/T	1	ADD	1115	1.689	4.888	6.61E-06	32270597	32299822	4855	NOTCH4
rs3779312	7	77549692	-	A/G	1	ADD	1108	1.885	6.168	1.37E-09	77484309	78920826	9863	MAGI2
rs3806156	6	32481676	+	G/T	1	ADD	1115	1.938	6.805	3.55E-10	32470490	32482878	56244	BTNL2
rs3817963	6	32476065	-	A/G	2	ADD	1115	2.355	8.324	5.40E-15	32470490	32482878	56244	BTNL2
rs3819715	6	32912197	+	G/T	1	ADD	1115	0.5925	-4.878	4.31E-06	32897587	32914525	6891	TAP2
rs3830041	6	32299317	-	A/G	1	ADD	1114	0.2093	-5.921	1.56E-08	32270597	32299822	4855	NOTCH4
rs3892710	6	32790840	+	C/T	1	ADD	1115	2.795	8.813	6.53E-18	32817140	32823199	3118	HLA-DQA2
rs389884	6	32048876	-	C/T	2	ADD	1115	2.364	6.509	1.27E-08	32045566	32048011	1797	DOM3Z
rs3916765	6	32793528	+	A/G	1	ADD	1115	4.911	12.1	2.22E-32	32817140	32823199	3118	HLA-DQA2
rs3957148	6	32790115	+	A/G	2	ADD	1114	7.888	14.55	3.10E-46	32817140	32823199	3118	HLA-DQA2
rs405875	6	32323166	-	A/G	2	ADD	1115	1.621	4.934	2.66E-08	32270597	32299822	4855	NOTCH4
rs434841	6	32299019	+	A/G	1	ADD	1106	2.093	7.781	3.75E-14	32270597	32299822	4855	NOTCH4
rs4713391	6	30900214	+	C/T	2	ADD	1115	1.876	5.059	3.33E-06	30959839	30975912	780	DDR1
rs4758868	12	59232968	+	A/G	1	ADD	1095	0.6194	-5.03	4.58E-07	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs477515	6	32677669	-	C/T	1	ADD	1112	2.267	7.945	3.98E-14	32654524	32665540	3123	HLA-DRB1
rs4814335	20	15001067	+	A/G	1	ADD	1096	3.29	12.02	7.39E-30	13924145	15981841	140733	MACROD2

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs4839335	1	114035394	+	A/G	2	ADD	1114	1.636	4.907	3.50E-06	113734997	114030068	260425	MAGI3
rs485774	6	32398932	-	C/T	2	ADD	1107	2.014	6.992	1.44E-12	32368452	32447634	10665	C6orf10
rs4862110	4	183988023	+	C/T	2	ADD	1101	4.018	12.22	3.32E-32	183482130	183961171	55714	ODZ3
rs4891291	18	71374601	+	A/G	1	ADD	1105	0.5332	-6.186	2.26E-09	71250814	71268577	284274	C18orf62
rs4943552	13	37402142	+	C/T	2	ADD	1102	2.726	9.895	1.52E-22	37108794	37341935	7223	TRPC4
rs4957798	5	108472453	+	C/T	1	ADD	1103	3.284	10.9	9.73E-26	108111421	108551272	2241	FER
rs5000634	6	32771542	-	C/T	2	ADD	1113	2.093	7.294	8.75E-15	32735634	32742444	3119	HLA-DQB1
rs532098	6	32686030	-	C/T	1	ADD	1114	1.827	6.192	6.85E-09	32654524	32665540	3123	HLA-DRB1
rs547077	6	32397296	+	C/T	2	ADD	1115	2.087	7.356	6.84E-14	32368452	32447634	10665	C6orf10
rs547261	6	32390011	-	C/T	1	ADD	1110	2.03	7.126	5.05E-13	32368452	32447634	10665	C6orf10
rs558702	6	31978305	-	C/T	1	ADD	1115	2.424	6.647	4.33E-09	31975372	31977748	221527	ZBTB12
rs6457617	6	32771829	+	C/T	2	ADD	1110	0.6341	-4.606	1.08E-07	32735634	32742444	3119	HLA-DQB1
rs660895	6	32685358	+	A/G	2	ADD	1115	5.295	13.02	1.56E-36	32654524	32665540	3123	HLA-DRB1
rs6665194	1	114219366	+	A/G	1	ADD	1114	1.638	5.279	7.13E-07	114220958	114231692	440603	BCL2L15
rs666619	6	138038815	+	A/G	2	ADD	1078	1.562	4.484	4.89E-06	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs6901084	6	32844914	+	C/T	1	ADD	1115	0.5817	-5.531	1.99E-06	32817140	32823199	3118	HLA-DQA2
rs6903130	6	32840188	+	A/G	1	ADD	1113	0.5793	-5.744	2.39E-07	32817140	32823199	3118	HLA-DQA2
rs6903608	6	32536263	+	C/T	2	ADD	1113	0.2956	-9.248	2.40E-18	32515624	32520802	3122	HLA-DRA
rs6906662	6	32374484	+	A/G	1	ADD	1115	0.1635	-4.829	6.31E-07	32368452	32447634	10665	C6orf10
rs6910071	6	32390832	+	A/G	2	ADD	1115	3.334	10.3	1.27E-20	32368452	32447634	10665	C6orf10
rs6910985	6	52606650	+	A/C	1	ADD	1114	1.612	4.839	5.29E-06	52643842	52659344	28978	TMEM14A
rs6912002	6	32873246	+	C/T	2	ADD	1092	1.737	5.901	6.43E-09	32888517	32892803	3112	HLA-DOB
rs6924102	6	32919361	+	A/G	2	ADD	1115	1.632	5.098	6.70E-07	32916471	32920690	5696	PSMB8
rs707928	6	31850569	-	C/T	2	ADD	1114	1.754	5.665	1.08E-07	31841349	31853087	80737	C6orf27
rs7100025	10	37632544	+	A/G	2	ADD	1082	3.263	11.01	4.57E-27	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs719654	6	32860117	-	C/T	1	ADD	1115	0.5179	-5.069	1.28E-06	32888517	32892803	3112	HLA-DOB
rs721394	6	33225796	-	A/G	1	ADD	1115	0.5367	-4.492	7.54E-06	33238446	33268223	1302	COL11A2
rs7267722	20	22735622	+	C/T	2	ADD	1111	46.88	16.78	1.25E-57	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs7383287	6	32891064	+	A/G	2	ADD	1115	1.694	5.056	3.65E-06	32888517	32892803	3112	HLA-DOB
rs7453920	6	32837990	+	A/G	1	ADD	1113	1.962	7.064	1.17E-10	32817140	32823199	3118	HLA-DQA2
rs7503953	17	6082401	+	A/C	1	ADD	1094	6.483	14.81	2.41E-46	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs7529353	1	114221985	+	A/G	1	ADD	1115	1.706	5.283	6.33E-07	114220958	114231692	440603	BCL2L15
rs7630157	3	169797194	+	A/C	2	ADD	1107	6.125	8.52	4.51E-17	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs7636581	3	191263889	+	A/G	1	ADD	1103	2.215	6.322	8.47E-10	191157315	191321412	55214	LEPREL1

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs7679475	4	122533490	+	A/G	1	ADD	1114	1.664	5.39	1.46E-05	122469246	122521631	84109	GPR103
rs7726659	5	74513834	+	A/G	2	ADD	1109	3.242	5.235	1.81E-07	Intergenic SNP	Intergenic SNP	Intergenic SNP	Intergenic SNP
rs7745656	6	32788948	+	G/T	1	ADD	1114	0.3354	-8.392	1.77E-15	32817140	32823199	3118	HLA-DQA2
rs7750641	6	31237289	+	C/T	1	ADD	1111	2.054	5.592	1.16E-06	31234281	31239971	6941	TCF19
rs7753935	6	30168762	+	A/C	1	ADD	1115	0.385	-6.101	7.40E-09	30178652	30188846	11074	TRIM31
rs7755596	6	32814456	+	C/T	2	ADD	1102	1.986	6.435	1.89E-09	32817140	32823199	3118	HLA-DQA2
rs7756516	6	32831895	+	C/T	1	ADD	1115	0.5507	-6.212	3.82E-08	32817140	32823199	3118	HLA-DQA2
rs7762279	6	32863268	+	C/T	2	ADD	1115	2.402	6.329	2.07E-08	32888517	32892803	3112	HLA-DOB
rs7765810	6	30171475	+	A/C	1	ADD	1114	0.4436	-5.87	2.47E-08	30178652	30188846	11074	TRIM31
rs7767167	6	32873160	+	A/G	2	ADD	1115	0.2891	-5.795	2.09E-09	32888517	32892803	3112	HLA-DOB
rs7773694	6	32814312	+	A/G	1	ADD	1115	2.05	6.685	3.33E-10	32817140	32823199	3118	HLA-DQA2
rs7774434	6	32765556	+	C/T	2	ADD	1108	1.785	5.875	6.71E-09	32735634	32742444	3119	HLA-DQB1
rs7775397	6	32369230	+	G/T	2	ADD	1111	2.564	7	1.10E-09	32368452	32447634	10665	C6orf10
rs7897675	10	38448572	+	A/C	2	ADD	1083	0.06245	-4.713	3.81E-06	38423280	38452284	7587	ZNF37A
rs7943716	11	76515147	+	A/G	1	ADD	1097	0.44	-7.555	1.82E-12	76455639	76514846	726	CAPN5
rs7970177	12	13630255	+	C/T	1	ADD	1106	2.309	6.467	1.61E-10	13605676	14024289	2904	GRIN2B
rs805294	6	31796196	-	C/T	2	ADD	1115	1.639	5.063	2.52E-06	31794403	31797489	80740	LY6G6C
rs805303	6	31724345	-	C/T	1	ADD	1114	1.876	6.466	1.72E-09	31714783	31728456	7917	BAT3
rs887464	6	31253899	-	A/G	1	ADD	1115	1.817	6.449	1.55E-08	31240092	31246430	5460	POU5F1
rs910049	6	32423705	-	A/G	1	ADD	1113	0.2194	-9.117	1.09E-19	32368452	32447634	10665	C6orf10
rs9257802	6	29451334	+	C/T	1	ADD	1110	1.667	4.604	1.20E-05	29449178	29451047	81797	OR12D3
rs926070	6	32365544	-	C/T	2	ADD	1115	0.311	-9.106	3.72E-19	32368452	32447634	10665	C6orf10
rs9267649	6	31932807	+	A/G	1	ADD	1115	0.1998	-7.954	1.18E-16	31934807	31938688	4758	NEU1
rs9267658	6	31953964	+	C/T	1	ADD	1115	0.2312	-6.57	3.01E-12	31938948	31954802	80736	SLC44A4
rs9267992	6	32328375	+	A/G	2	ADD	1115	0.1167	-7.36	3.02E-14	32270597	32299822	4855	NOTCH4
rs9268005	6	32332366	+	A/C	2	ADD	1098	0.3246	-8.831	5.50E-18	32270597	32299822	4855	NOTCH4
rs9268132	6	32362632	+	A/G	2	ADD	1110	2.041	7.159	4.10E-13	32368452	32447634	10665	C6orf10
rs9268368	6	32441933	+	C/T	2	ADD	1115	2.035	7.139	4.51E-13	32368452	32447634	10665	C6orf10
rs9268384	6	32444564	+	A/G	2	ADD	1111	2.032	7.121	4.92E-13	32368452	32447634	10665	C6orf10
rs9268528	6	32491086	+	A/G	2	ADD	1113	2.625	9.055	2.76E-21	32470490	32482878	56244	BTNL2
rs9268530	6	32491201	+	C/T	2	ADD	1112	2.114	6.069	2.77E-07	32470490	32482878	56244	BTNL2
rs9268542	6	32492699	+	A/G	2	ADD	1115	2.584	8.932	6.51E-21	32470490	32482878	56244	BTNL2
rs9268615	6	32510867	+	A/G	1	ADD	1115	2.648	9.134	1.60E-21	32515624	32520802	3122	HLA-DRA
rs9271366	6	32694832	+	A/G	2	ADD	1115	0.02764	-6.138	2.78E-10	32713160	32719407	3117	HLA-DQA1

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs9275141	6	32759095	+	G/T	1	ADD	1109	0.65	-4.481	1.04E-06	32735634	32742444	3119	HLA-DQB1
rs9275184	6	32762692	+	C/T	2	ADD	1102	7.025	14.76	8.67E-47	32735634	32742444	3119	HLA-DQB1
rs9275224	6	32767856	+	A/G	1	ADD	1115	0.6293	-4.678	7.29E-08	32735634	32742444	3119	HLA-DQB1
rs9275312	6	32773706	+	A/G	2	ADD	1115	6.177	13.69	5.43E-41	32735634	32742444	3119	HLA-DQB1
rs9275328	6	32774800	+	C/T	1	ADD	1110	6.24	13.7	4.43E-41	32735634	32742444	3119	HLA-DQB1
rs9275374	6	32776504	+	C/T	1	ADD	1115	3.028	10.09	9.44E-24	32735634	32742444	3119	HLA-DQB1
rs9275383	6	32776824	+	G/T	1	ADD	1097	7.896	14.32	1.20E-44	32735634	32742444	3119	HLA-DQB1
rs9275390	6	32777134	+	C/T	2	ADD	1112	3.043	10.1	8.41E-24	32735634	32742444	3119	HLA-DQB1
rs9275393	6	32777417	+	A/G	1	ADD	1115	3.028	10.09	9.44E-24	32735634	32742444	3119	HLA-DQB1
rs9275406	6	32777933	+	G/T	1	ADD	1113	3.034	10.1	8.11E-24	32735634	32742444	3119	HLA-DQB1
rs9275407	6	32778015	+	G/T	1	ADD	1113	3.018	10.06	1.24E-23	32735634	32742444	3119	HLA-DQB1
rs9275418	6	32778222	+	A/G	2	ADD	1115	3.028	10.09	9.44E-24	32735634	32742444	3119	HLA-DQB1
rs9275424	6	32778554	+	A/G	2	ADD	1113	3.104	10.23	2.25E-24	32735634	32742444	3119	HLA-DQB1
rs9275425	6	32778852	+	A/C	1	ADD	1114	3.029	10.09	8.47E-24	32735634	32742444	3119	HLA-DQB1
rs9275427	6	32778893	+	C/T	1	ADD	1114	3.023	10.07	1.11E-23	32735634	32742444	3119	HLA-DQB1
rs9275428	6	32778956	+	A/G	2	ADD	1114	3.023	10.07	1.11E-23	32735634	32742444	3119	HLA-DQB1
rs9275439	6	32779499	+	C/T	2	ADD	1112	3.048	10.12	6.18E-24	32735634	32742444	3119	HLA-DQB1
rs9275595	6	32789333	+	C/T	2	ADD	1114	3.303	10.38	5.64E-25	32817140	32823199	3118	HLA-DQA2
rs9275602	6	32790790	+	A/C	1	ADD	1107	2.181	6.569	1.57E-08	32817140	32823199	3118	HLA-DQA2
rs9276162	6	32806435	+	A/G	2	ADD	1113	2.038	6.629	2.51E-10	32817140	32823199	3118	HLA-DQA2
rs9276726	6	32871866	+	C/T	2	ADD	1115	1.784	6.135	1.88E-09	32888517	32892803	3112	HLA-DOB
rs9276734	6	32874832	+	A/G	1	ADD	1109	1.726	5.825	1.19E-08	32888517	32892803	3112	HLA-DOB
rs9276831	6	32940011	+	A/G	2	ADD	1109	0.4133	-5.299	2.85E-06	32929915	32935606	5698	PSMB9
rs928815	6	31639194	-	A/C	1	ADD	1115	0.5066	-6.473	1.33E-09	31623350	31634585	4795	NFKBIL1
rs9296685	6	52587141	+	C/T	2	ADD	1115	1.671	5.137	2.77E-06	52470158	52549821	9697	TRAM2
rs9357152	6	32772938	+	A/G	2	ADD	1112	0.4767	-5.962	8.70E-08	32735634	32742444	3119	HLA-DQB1
rs9357155	6	32917826	+	A/G	1	ADD	1107	2.015	5.36	4.86E-07	32916471	32920690	5696	PSMB8
rs9368713	6	32405315	+	C/T	2	ADD	1114	2.034	7.137	4.50E-13	32368452	32447634	10665	C6orf10
rs9368741	6	32845485	+	A/G	1	ADD	1115	0.4398	-7.015	2.64E-11	32817140	32823199	3118	HLA-DQA2
rs9379858	6	26475668	+	C/T	2	ADD	1107	2.601	8.549	1.47E-15	26473376	26486527	11118	BTN3A2
rs9391858	6	32449376	+	A/G	2	ADD	1115	0.4355	-5.025	2.76E-07	32368452	32447634	10665	C6orf10
rs9405090	6	32406350	+	A/G	2	ADD	1115	2.035	7.139	4.51E-13	32368452	32447634	10665	C6orf10
rs9461799	6	32797507	+	C/T	2	ADD	1115	0.6051	-4.995	5.08E-06	32817140	32823199	3118	HLA-DQA2
rs9501239	6	33003558	+	A/G	2	ADD	1109	2.985	5.957	2.35E-08	33010392	33016795	3109	HLA-DMB

SNP	CHR	BP	strand	observer	A1	TEST	NMISS	OR	STAT	Pvalue	txStart	txEnd	GeneID	Gene Symb
rs9784758	6	32896489	+	C/T	2	ADD	1115	2.646	5.994	6.39E-08	32897587	32914525	6891	TAP2
rs9837352	3	37957465	+	C/T	2	ADD	1087	5.76	12.75	5.98E-34	37878672	38000964	10217	CTDSPL
rs991760	6	32931545	-	C/T	1	ADD	1115	2.347	5.01	1.93E-06	32929915	32935606	5698	PSMB9

Supplemental Table D2: Genotype counts for SNPs showing evicence for association

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs1015166	6	1	2	82/153/111	58/328/341
rs1033500	6	1	2	93/201/52	117/339/255
rs1046089	6	1	2	74/182/90	65/321/341
rs10484565	6	1	2	5/81/260	6/86/633
rs10484566	6	2	1	2/66/278	3/67/657
rs10493321	1	2	1	34/138/148	32/232/463
rs1053924	6	1	2	17/109/220	76/299/352
rs1063355	6	1	2	5/86/255	122/339/266
rs10807113	6	1	2	46/159/141	195/361/171
rs1111695	1	2	1	90/154/102	97/339/291
rs11244	6	1	2	72/156/118	56/296/372
rs1150752	6	2	1	10/122/214	1/128/586
rs1150754	6	1	2	24/143/179	13/159/552
rs12153855	6	2	1	0/20/326	10/142/575
rs1217407	1	1	2	52/133/161	36/270/421
rs1217418	1	1	2	112/153/81	129/355/241
rs12177980	6	1	2	31/148/167	120/368/238
rs12190167	6	1	2	12/113/221	12/129/586
rs12192704	6	1	2	12/119/215	13/143/571
rs12197154	6	2	1	12/113/220	15/125/587
rs12198173	6	1	2	0/17/329	5/129/593
rs12198723	6	2	1	12/105/226	12/106/592
rs12210947	6	2	1	14/133/199	17/172/535
rs1230647	1	2	1	51/134/161	36/273/418
rs1230661	1	1	2	46/130/170	29/253/445
rs12529049	6	1	2	2/45/299	14/172/541
rs12566340	1	1	2	51/130/165	33/264/430
rs1265099	6	2	1	105/158/83	114/340/272
rs1265110	6	1	2	8/104/234	10/120/597
rs1265758	6	1	2	10/128/202	132/351/244
rs1265759	6	2	1	10/129/207	136/358/233
rs12663103	6	2	1	0/9/337	0/84/641
rs1270942	6	2	1	10/122/213	8/131/588
rs13199524	6	1	2	0/17/329	5/127/595
rs13199787	6	1	2	30/147/169	122/373/232
rs13403098	2	1	2	19/98/223	6/161/559
rs13437000	6	2	1	5/66/275	29/220/468
rs1383261	6	1	2	83/160/103	88/327/312
rs1390266	4	2	1	21/88/233	2/144/581
rs1480380	6	1	2	7/99/240	7/98/621
rs1521	6	2	1	8/90/248	54/226/396
rs154978	6	2	1	33/145/168	159/365/203

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs154981	6	2	1	34/149/162	169/368/185
rs1573649	6	1	2	50/167/129	205/354/163
rs16898264	6	1	2	20/96/229	108/349/266
rs16908361	12	1	2	74/175/84	0/1/724
rs17087141	18	2	1	19/8/318	0/6/721
rs17100060	12	2	1	87/75/179	9/137/581
rs17231696	8	1	2	8/88/250	7/104/602
rs17475879	6	1	2	0/21/325	4/119/604
rs17500468	6	2	1	3/36/307	11/163/548
rs17533090	6	1	2	2/41/303	28/191/508
rs17641748	5	1	2	60/96/178	7/113/606
rs17679624	6	1	2	1/6/317	5/95/622
rs1794282	6	1	2	7/132/207	8/120/599
rs1894406	6	1	2	13/101/232	77/336/311
rs1927906	9	2	1	16/80/239	10/108/609
rs1980493	6	2	1	9/152/185	14/168/542
rs1991914	4	2	1	22/78/230	85/333/309
rs2051549	6	2	1	113/172/61	116/328/264
rs2066363	1	2	1	17/47/274	101/333/292
rs2071469	6	1	2	18/117/211	93/341/292
rs2071472	6	1	2	9/91/246	59/310/358
rs2071474	6	1	2	9/91/246	59/310/358
rs2071538	6	1	2	7/76/263	33/257/437
rs2071540	6	1	2	25/137/184	118/363/246
rs2071543	6	1	2	10/123/213	11/156/560
rs2071550	6	1	2	11/102/233	72/328/327
rs2071554	6	1	2	3/72/271	0/56/671
rs2074488	6	1	2	14/105/227	9/112/606
rs2156875	6	2	1	35/184/127	185/355/187
rs2187668	6	1	2	15/155/174	13/142/571
rs2219893	6	2	1	9/106/228	71/317/325
rs2227956	6	2	1	0/30/316	16/220/491
rs2228397	6	1	2	5/93/248	37/262/396
rs2239800	6	2	1	0/29/317	5/140/582
rs2239804	6	1	2	29/194/123	184/371/171
rs2242660	6	1	2	80/186/80	85/316/299
rs2246618	6	1	2	82/156/108	69/258/356
rs2248617	6	1	2	97/158/91	89/305/333
rs2251396	6	1	2	54/178/114	55/283/389
rs2253907	6	2	1	51/160/135	203/342/175
rs2254556	6	1	2	2/56/288	21/191/515
rs2256965	6	1	2	31/153/162	127/368/231
rs2269127	21	1	2	60/159/100	16/168/542
rs2294884	6	2	1	2/62/282	18/205/504

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs2301271	6	1	2	113/173/60	116/347/264
rs2358994	1	1	2	30/120/196	13/206/508
rs2395150	6	2	1	10/128/208	132/351/244
rs2395157	6	2	1	56/210/78	60/285/380
rs2395162	6	1	2	9/156/180	12/192/520
rs2395163	6	2	1	44/222/80	27/239/461
rs2395173	6	1	2	0/65/281	80/325/322
rs2395175	6	1	2	30/208/108	9/187/531
rs2395182	6	2	1	0/32/312	30/238/457
rs2395185	6	1	2	67/226/53	77/314/334
rs2395488	6	2	1	97/158/91	89/302/333
rs241404	6	2	1	105/170/71	131/367/229
rs241407	6	1	2	11/111/224	3/136/588
rs241409	6	2	1	11/110/225	3/137/587
rs241424	6	1	2	110/181/55	156/348/223
rs241425	6	1	2	15/136/195	132/341/254
rs241427	6	1	2	12/118/216	76/321/330
rs241440	6	1	2	4/73/269	40/308/379
rs241447	6	2	1	4/75/267	42/305/366
rs241448	6	2	1	4/77/265	42/298/376
rs241452	6	2	1	4/75/264	41/305/378
rs241453	6	1	2	4/74/267	41/308/378
rs2442749	6	2	1	60/152/134	52/291/384
rs2462957	17	2	1	112/138/88	127/359/241
rs2476601	1	1	2	23/97/226	2/136/589
rs2516049	6	2	1	57/226/63	78/303/346
rs2516390	6	2	1	18/147/181	115/356/256
rs2516398	6	2	1	10/108/228	68/318/328
rs2516400	6	1	2	82/157/107	71/296/353
rs2516415	6	1	2	83/160/103	78/294/346
rs2516424	6	2	1	97/158/91	89/295/332
rs2523454	6	1	2	54/177/115	57/282/388
rs2523898	6	1	2	56/157/130	179/375/165
rs2524279	6	2	1	4/66/276	3/60/663
rs2596472	6	2	1	11/84/251	56/269/379
rs2596560	6	2	1	44/156/145	33/237/454
rs2621373	6	2	1	10/104/232	66/323/338
rs2647050	6	2	1	20/97/229	109/353/265
rs2717453	12	2	1	1/5/304	5/81/641
rs2734583	6	2	1	14/115/217	11/134/582
rs2765283	1	1	2	77/131/124	9/106/611
rs2797409	1	2	1	53/133/160	36/271/420
rs2844484	6	1	2	18/147/181	115/355/255
rs2844494	6	2	1	10/109/227	68/330/322

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs2844533	6	2	1	8/90/248	53/259/415
rs2844697	6	1	2	87/164/95	100/311/316
rs285019	16	2	1	100/166/67	123/358/242
rs2855812	6	1	2	58/152/136	36/243/448
rs2856705	6	1	2	0/31/315	14/137/575
rs2856718	6	1	2	20/97/229	109/351/265
rs2857106	6	2	1	2/59/285	19/239/468
rs2857596	6	2	1	5/71/246	45/246/423
rs2858308	6	1	2	0/31/315	14/137/575
rs2858331	6	2	1	11/106/229	134/358/235
rs2858870	6	2	1	0/31/315	18/163/543
rs2905722	6	1	2	1/42/303	12/171/544
rs3093993	6	2	1	7/93/246	28/279/420
rs3095227	6	1	2	7/93/246	28/276/420
rs3099844	6	1	2	12/122/212	10/137/578
rs3101942	6	2	1	16/133/197	110/338/274
rs3104404	6	1	2	2/57/286	31/258/438
rs3104405	6	2	1	11/106/228	71/292/364
rs3115573	6	2	1	86/204/56	142/367/218
rs3115663	6	2	1	24/153/169	22/204/501
rs3117098	6	2	1	8/90/248	75/313/339
rs3117583	6	2	1	24/153/168	22/204/501
rs3129860	6	1	2	0/4/342	17/161/549
rs3129871	6	1	2	0/71/275	93/337/297
rs3129882	6	2	1	13/120/213	136/370/221
rs3129934	6	1	2	1/21/324	22/206/498
rs3129941	6	1	2	1/41/304	44/263/418
rs3129962	6	1	2	7/122/208	8/110/595
rs3129963	6	2	1	10/156/180	15/204/506
rs3130050	6	2	1	1/29/316	11/173/543
rs3130055	6	2	1	9/88/249	44/271/412
rs3130315	6	1	2	86/204/56	142/367/218
rs3130544	6	1	2	12/117/217	10/145/572
rs3130617	6	2	1	3/69/274	46/267/411
rs3130618	6	1	2	24/153/169	23/203/501
rs3130637	6	1	2	7/93/246	28/279/420
rs3130931	6	1	2	15/107/224	65/290/372
rs3131063	6	1	2	102/174/70	135/346/246
rs3131296	6	1	2	10/133/203	14/155/547
rs3131379	6	1	2	10/123/213	7/131/587
rs3132131	6	1	2	13/113/220	73/297/357
rs3132486	6	2	1	49/153/144	188/332/156
rs3132946	6	1	2	0/20/326	16/154/557
rs3134603	6	1	2	0/22/324	16/159/545

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs3134792	6	2	1	11/113/211	1/134/571
rs3134942	6	1	2	10/127/203	16/145/549
rs3134943	6	1	2	0/22/324	17/164/543
rs3134954	6	2	1	0/19/327	18/168/541
rs3135338	6	2	1	0/64/281	80/299/322
rs3135353	6	1	2	8/152/186	11/160/556
rs329312	5	2	1	63/133/120	37/263/427
rs3738894	2	1	2	0/27/305	0/4/723
rs3763309	6	1	2	46/217/83	30/242/455
rs3763312	6	1	2	46/217/83	30/237/455
rs3763313	6	2	1	4/62/280	28/217/482
rs3763349	6	1	2	39/158/149	148/369/210
rs377763	6	1	2	23/166/157	37/241/449
rs3779312	7	1	2	56/104/179	24/228/475
rs3806156	6	1	2	80/197/69	99/330/298
rs3817963	6	2	1	58/210/78	65/291/371
rs3819715	6	1	2	20/132/194	83/356/288
rs3830041	6	1	2	0/17/329	3/141/582
rs3892710	6	1	2	27/175/144	17/200/510
rs389884	6	2	1	10/122/214	9/128/590
rs3916765	6	1	2	23/187/136	7/139/581
rs3957148	6	2	1	24/211/110	3/132/592
rs405875	6	2	1	89/201/56	143/367/217
rs434841	6	1	2	86/152/108	66/285/367
rs4713391	6	2	1	12/119/215	13/143/571
rs4758868	12	1	2	66/130/130	195/371/161
rs477515	6	1	2	57/226/63	78/302/346
rs4814335	20	1	2	116/86/139	22/198/494
rs4839335	1	2	1	51/135/159	37/273/417
rs485774	6	2	1	90/199/52	117/353/254
rs4862110	4	2	1	72/167/94	24/224/478
rs4891291	18	1	2	32/121/183	130/356/241
rs4943552	13	2	1	147/152/39	120/361/242
rs4957798	5	1	2	69/169/96	31/239/457
rs5000634	6	2	1	90/208/48	113/355/257
rs532098	6	1	2	101/200/45	143/353/230
rs547077	6	2	1	95/201/50	118/355/254
rs547261	6	1	2	93/201/52	119/348/255
rs558702	6	1	2	10/123/213	7/131/589
rs6457617	6	2	1	29/205/112	169/361/192
rs660895	6	2	1	53/224/69	21/229/477
rs6665194	1	1	2	107/155/84	114/361/251
rs666619	6	2	1	86/186/73	100/371/220
rs6901084	6	1	2	38/152/156	152/369/206

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs6903130	6	1	2	50/167/129	203/359/163
rs6903608	6	2	1	5/78/263	74/326/325
rs6906662	6	1	2	0/8/338	0/89/638
rs6910071	6	2	1	36/198/112	20/220/487
rs6910985	6	1	2	68/187/91	83/352/291
rs6912002	6	2	1	83/160/103	88/306/311
rs6924102	6	2	1	107/179/60	142/377/208
rs707928	6	2	1	61/193/92	71/337/318
rs7100025	10	2	1	123/153/39	90/337/298
rs719654	6	1	2	4/83/259	36/251/440
rs721394	6	1	2	5/66/275	26/222/479
rs7267722	20	2	1	291/42/9	16/186/525
rs7383287	6	2	1	32/151/163	37/236/454
rs7453920	6	1	2	113/172/61	116/345/264
rs7503953	17	1	2	95/149/81	12/182/533
rs7529353	1	1	2	52/130/164	33/264/430
rs7630157	3	2	1	54/21/263	0/21/706
rs7636581	3	1	2	26/90/218	7/137/583
rs7679475	4	1	2	87/166/92	96/347/284
rs7726659	5	2	1	20/12/308	0/21/706
rs7745656	6	1	2	8/71/267	74/309/343
rs7750641	6	1	2	12/119/215	8/146/569
rs7753935	6	1	2	3/50/293	24/228/475
rs7755596	6	2	1	27/184/130	36/228/455
rs7756516	6	1	2	46/159/141	195/361/171
rs7762279	6	2	1	5/118/223	9/111/607
rs7765810	6	1	2	6/63/277	36/250/440
rs7767167	6	2	1	0/27/319	10/151/566
rs7773694	6	1	2	27/190/129	33/238/456
rs7774434	6	2	1	67/220/59	107/330/283
rs7775397	6	2	1	7/129/210	10/120/593
rs7897675	10	2	1	0/3/311	4/94/629
rs7943716	11	1	2	20/107/201	111/347/269
rs7970177	12	1	2	27/73/237	9/102/616
rs805294	6	2	1	64/195/87	86/342/299
rs805303	6	1	2	81/181/84	81/343/302
rs887464	6	1	2	104/166/76	115/331/281
rs910049	6	1	2	1/45/300	44/265/416
rs9257802	6	1	2	22/141/183	24/210/488
rs926070	6	2	1	3/89/254	79/313/335
rs9267649	6	1	2	0/30/316	15/219/493
rs9267658	6	1	2	0/24/322	12/163/552
rs9267992	6	2	1	0/13/333	16/166/545
rs9268005	6	2	1	4/88/254	78/299/333

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs9268132	6	2	1	93/201/52	117/351/254
rs9268368	6	2	1	93/201/52	118/354/255
rs9268384	6	2	1	93/200/52	118/352/254
rs9268528	6	2	1	95/214/35	108/355/264
rs9268530	6	2	1	9/157/180	12/192/520
rs9268542	6	2	1	95/217/34	111/356/260
rs9268615	6	1	2	101/212/33	110/363/254
rs9271366	6	2	1	0/3/343	16/164/547
rs9275141	6	1	2	39/195/112	179/345/197
rs9275184	6	2	1	67/170/109	10/113/591
rs9275224	6	1	2	28/205/113	169/363/195
rs9275312	6	2	1	38/208/100	10/161/556
rs9275328	6	1	2	38/206/99	10/159/556
rs9275374	6	1	2	55/215/76	40/269/418
rs9275383	6	1	2	21/203/108	3/132/589
rs9275390	6	2	1	55/213/75	40/269/418
rs9275393	6	1	2	55/215/76	40/269/418
rs9275406	6	1	2	55/215/76	40/267/418
rs9275407	6	1	2	55/215/76	40/269/416
rs9275418	6	2	1	55/215/76	40/269/418
rs9275424	6	2	1	55/216/73	40/269/418
rs9275425	6	1	2	55/215/76	40/268/418
rs9275427	6	1	2	55/215/76	40/269/417
rs9275428	6	2	1	55/215/76	40/269/417
rs9275439	6	2	1	55/215/75	40/269/418
rs9275595	6	2	1	42/219/85	27/251/448
rs9275602	6	1	2	13/156/177	20/174/525
rs9276162	6	2	1	28/190/127	33/244/449
rs9276726	6	2	1	81/162/103	83/321/323
rs9276734	6	1	2	83/160/103	88/321/312
rs9276831	6	2	1	3/42/300	20/188/514
rs928815	6	1	2	18/147/181	115/356/256
rs9296685	6	2	1	60/177/109	63/335/329
rs9357152	6	2	1	10/86/250	47/307/370
rs9357155	6	1	2	8/123/215	10/138/571
rs9368713	6	2	1	93/201/52	118/353/255
rs9368741	6	1	2	11/102/233	72/328/327
rs9379858	6	2	1	54/84/200	9/141/577
rs9391858	6	2	1	2/44/300	18/171/538
rs9405090	6	2	1	93/201/52	118/354/255
rs9461799	6	2	1	31/148/167	120/369/238
rs9501239	6	2	1	3/69/274	1/61/659
rs9784758	6	2	1	6/81/259	1/82/644
rs9837352	3	2	1	113/26/189	3/45/670

SNP	CHR	A1	A2	GENOTYPE COUNTS	
				Affected	Unaffected
rs991760	6	1	2	2/73/271	4/70/653

Supplemental Table E: SNPs showing nominal association (p<0.05) in the replication set

SNP	CHR	Gene	BP	A1	F_A	F_U	A2	CHISQ	P	OR
rs3115663	6	BAT2	31,601,843	G	0.3324	0.1711	A	35.39	2.69E-09	2.413
rs2242660	6	BAT2	31,597,753	T	0.5649	0.3968	C	27.27	1.77E-07	1.974
rs6665194	1	BCL2L115	114,417,843	A	0.5162	0.4088	G	11.18	0.0008262	1.543
rs2358994	1	BCL2L15	114,429,461	A	0.2486	0.1471	G	16.55	4.74E-05	1.919
rs7529353	1	BCL2L15	114,420,462	A	0.3297	0.2338	G	11.25	0.0007984	1.612
rs1980493	6	BTNL2	32,363,215	G	0.2838	0.1136	A	48.33	3.61E-12	3.093
rs2395163	6	BTNL2	32,387,809	C	0.3919	0.2044	T	42.68	6.43E-11	2.508
rs3763312	6	BTNL2	32,376,348	A	0.3784	0.2191	G	30.47	3.40E-08	2.169
rs3117098	6	BTNL2	32,358,513	C	0.1514	0.3059	T	30.4	3.51E-08	0.4047
rs3763309	6	BTNL2	32,375,973	A	0.3784	0.2206	C	29.84	4.68E-08	2.151
rs3817963	6	BTNL2	32,368,087	G	0.3995	0.2971	A	11.27	0.0007869	1.574
rs9268528	6	BTNL2	32,383,108	G	0.5081	0.425	A	6.676	0.009772	1.398
rs2294884	6	BTNL2	32,367,259	C	0.1027	0.1578	A	6.099	0.01352	0.6108
rs1270942	6	CFB	31,918,860	C	0.2541	0.06471	T	75.26	4.13E-18	4.923
rs2844657	6	DDR1	30,829,522	C	0.2865	0.1368	T	34.97	3.35E-09	2.534
rs2844659	6	DDR1	30,824,532	A	0.2784	0.1368	G	31.65	1.85E-08	2.435
rs1264350	6	DDR1	30,796,545	G	0.2081	0.09763	A	24.73	6.60E-07	2.429
rs3095352	6	DDR1	30,805,921	G	0.3351	0.4574	A	14.75	0.0001227	0.5981
rs3130653	6	DDR1	30,822,771	C	0.3142	0.4279	A	12.96	0.0003183	0.6125
rs12198723	6	DDR1	30,796,734	G	0.1649	0.1088	T	6.717	0.009551	1.617
rs12192704	6	DDR1	30,792,270	A	0.1757	0.1265	G	4.712	0.02996	1.472
rs7679475	4	GPR103	122,314,040	A	0.4649	0.3574	G	11.59	0.000664	1.562
rs10518389	4	GPR103	122,312,073	G	0.4266	0.5265	A	9.528	0.002023	0.669
rs1513695	4	GPR103	122,314,785	T	0.4783	0.3897	G	7.683	0.005575	1.436
rs3099844	6	HCP5	31,448,976	A	0.2432	0.08407	C	50.29	1.33E-12	3.502
rs3128982	6	HCP5	31,417,191	G	0.373	0.2103	A	32.35	1.29E-08	2.234
rs2395488	6	HCP5	31,445,909	G	0.5405	0.3603	A	31.88	1.64E-08	2.089
rs2248372	6	HCP5	31,446,466	A	0.1973	0.3618	G	30.64	3.10E-08	0.4336
rs2244839	6	HCP5	31,438,368	A	0.1973	0.3559	G	28.7	8.47E-08	0.4449
rs2516440	6	HCP5	31,440,497	T	0.2703	0.4381	C	28.64	8.73E-08	0.4751
rs1055569	6	HCP5	31,440,082	T	0.2676	0.4324	C	27.78	1.36E-07	0.4796
rs2516424	6	HCP5	31,448,315	C	0.5243	0.3647	T	25.05	5.60E-07	1.92
rs2248617	6	HCP5	31,448,533	A	0.5243	0.3647	G	25.05	5.60E-07	1.92
rs2596472	6	HCP5	31,428,967	G	0.1621	0.2688	A	15.08	0.0001033	0.5263
rs2596464	6	HCP5	31,412,961	A	0.4212	0.5223	G	9.731	0.001812	0.6657
rs2227956	6	HSPA1L	31,778,272	C	0.06216	0.1221	T	9.472	0.002087	0.4768
rs886424	6	IER3	30,782,002	A	0.2189	0.08529	G	37.25	1.04E-09	3.006
rs3095340	6	IER3	30,726,939	G	0.2405	0.1294	T	21.11	4.33E-06	2.131
rs4713366	6	IER3	30,756,361	T	0.2703	0.4029	C	18.39	1.80E-05	0.5488
rs13201769	6	IER3	30,756,066	A	0.2826	0.413	G	17.45	2.95E-05	0.56
rs3131063	6	IER3	30,763,756	A	0.5514	0.4426	G	11.34	0.0007576	1.547
rs12210947	6	IER3	30,735,105	G	0.2351	0.3015	A	5.252	0.02192	0.7123
rs12190167	6	IER3	30,766,194	A	0.1595	0.1106	G	5.12	0.02365	1.525
rs1041981	6	LTA	31,540,784	A	0.4481	0.2956	C	24.36	8.01E-07	1.935

SNP	CHR	Gene	BP	A1	F_A	F_U	A2	CHISQ	P	OR
rs2844484	6	LTA	31,536,224	T	0.2973	0.4469	C	22.44	2.17E-06	0.5236
rs2153977	1	MAGI3	114,080,071	T	0.4135	0.3044	C	12.66	0.0003737	1.611
rs10858002	1	MAGI3	114,082,932	G	0.4162	0.3074	A	12.55	0.0003953	1.607
rs1230661	1	MAGI3	114,185,590	T	0.3135	0.2153	C	12.3	0.0004519	1.664
rs12074958	1	MAGI3	114,095,339	G	0.3351	0.2441	A	9.93	0.001626	1.561
rs10858000	1	MAGI3	114,075,796	T	0.327	0.2382	C	9.595	0.001951	1.554
rs4839335	1	MAGI3	114,233,871	G	0.3378	0.2485	A	9.48	0.002077	1.543
rs12035317	1	MAGI3	114,096,097	G	0.3288	0.2456	T	8.297	0.003971	1.505
rs2251396	6	MICA	31,364,707	T	0.4459	0.2176	C	59.69	1.11E-14	2.893
rs2523454	6	MICA	31,367,865	T	0.4541	0.2396	C	50.8	1.02E-12	2.64
rs2256175	6	MICA	31,380,449	G	0.6081	0.4147	A	35.89	2.08E-09	2.19
rs2844513	6	MICA	31,388,214	T	0.3676	0.5397	C	28.45	9.61E-08	0.4957
rs2523467	6	MICA	31,362,930	A	0.273	0.4368	G	27.31	1.73E-07	0.4842
rs2442749	6	MICA	31,352,040	G	0.4459	0.2885	A	26.27	2.96E-07	1.985
rs2596542	6	MICA	31,366,595	A	0.2811	0.4353	G	24.16	8.85E-07	0.5072
rs2844529	6	MICA	31,353,593	T	0.2838	0.4353	C	23.3	1.38E-06	0.514
rs2428486	6	MICA	31,354,104	G	0.2946	0.4353	A	20.02	7.66E-06	0.5418
rs2524279	6	MICA	31,392,906	C	0.1141	0.05588	T	11.49	0.0006998	2.177
rs2844533	6	MICA	31,350,802	C	0.3108	0.2485	T	4.711	0.02998	1.364
rs2857595	6	NCR3	31,568,469	T	0.5324	0.2345	C	94.72	2.20E-22	3.717
rs2857596	6	NCR3	31,567,422	C	0.1603	0.2294	A	6.989	0.008202	0.6414
rs2071591	6	NFKBIL1	31,515,799	T	0.4405	0.2935	C	22.89	1.72E-06	1.895
rs928815	6	NFKBIL1	31,531,215	A	0.2973	0.4471	C	22.5	2.10E-06	0.5233
rs2516390	6	NFKBIL1	31,529,883	G	0.3027	0.4471	A	20.87	4.91E-06	0.5369
rs3131296	6	NOTCH4	32,172,993	A	0.273	0.1015	G	51.94	5.72E-13	3.325
rs9268005	6	NOTCH4	32,224,388	C	0.1071	0.295	A	47.28	6.16E-12	0.2868
rs434841	6	NOTCH4	32,191,041	A	0.4892	0.3118	G	32.21	1.39E-08	2.114
rs3130299	6	NOTCH4	32,203,537	G	0.1757	0.3132	A	23.29	1.39E-06	0.4673
rs9267992	6	NOTCH4	32,220,397	G	0.02162	0.09412	A	19.72	8.98E-06	0.2127
rs377763	6	NOTCH4	32,199,144	T	0.3514	0.2242	G	19.68	9.15E-06	1.874
rs3132946	6	NOTCH4	32,190,028	A	0.02703	0.09559	G	16.98	3.77E-05	0.2628
rs2267644	6	NOTCH4	32,192,560	A	0.07568	0.03676	G	7.57	0.005936	2.145
rs3134798	6	NOTCH4	32,184,705	C	0.1432	0.1985	T	4.983	0.0256	0.675
rs1111695	1	PHTF1	114,243,899	G	0.4703	0.3824	T	7.638	0.005715	1.434
rs6924102	6	PSMB8	32,811,383	A	0.3838	0.5603	G	29.86	4.64E-08	0.4888
rs2071543	6	PSMB8	32,811,629	A	0.2081	0.1059	C	20.56	5.77E-06	2.219
rs9357155	6	PSMB8	32,809,848	A	0.1946	0.09882	G	19.09	1.25E-05	2.203
rs3763349	6	PSMB8	32,808,232	T	0.3216	0.4441	C	14.97	0.0001093	0.5934
rs3130564	6	PSORS1C1	31,101,674	T	0.3054	0.1397	C	41.42	1.23E-10	2.708
rs1265099	6	PSORS1C1	31,105,413	C	0.5324	0.3941	T	18.58	1.63E-05	1.751
rs2476601	1	PTPN22	114,377,568	A	0.1892	0.06029	G	42.11	8.63E-11	3.637
rs1217418	1	PTPN22	114,401,231	A	0.5216	0.4279	G	8.463	0.003624	1.458
rs1015166	6	TAP2	32,798,731	T	0.4892	0.2676	C	51.99	5.57E-13	2.62
rs241453	6	TAP2	32,796,226	T	0.1486	0.3088	C	32.58	1.14E-08	0.3908
rs241440	6	TAP2	32,797,361	A	0.1486	0.3083	G	32.36	1.28E-08	0.3918
rs241447	6	TAP2	32,796,751	G	0.1486	0.3074	A	32.07	1.49E-08	0.3935

SNP	CHR	Gene	BP	A1	F_A	F_U	A2	CHISQ	P	OR
rs241425	6	TAP2	32,804,909	T	0.2514	0.4147	C	27.85	1.31E-07	0.4738
rs2857106	6	TAP2	32,787,570	G	0.08919	0.2103	A	25.19	5.20E-07	0.3677
rs2228397	6	TAP2	32,800,224	T	0.1162	0.2426	G	24.11	9.09E-07	0.4104
rs241427	6	TAP2	32,804,414	T	0.2	0.3426	C	23.57	1.21E-06	0.4796
rs3819715	6	TAP2	32,804,219	T	0.2459	0.3941	G	23.38	1.33E-06	0.5014
rs9784758	6	TAP2	32,788,511	C	0.1378	0.06618	T	14.81	0.0001187	2.256
rs10484565	6	TAP2	32,795,032	A	0.1216	0.075	G	6.27	0.01228	1.708
rs1150752	6	TNXB	32,064,726	G	0.1495	0.002941	A	99.66	1.81E-23	59.57
rs1150754	6	TNXB	32,050,758	A	0.3108	0.1	G	74	7.82E-18	4.059
rs3134954	6	TNXB	32,071,893	G	0.03243	0.1015	A	16.04	6.19E-05	0.2968
rs12153855	6	TNXB	32,074,804	C	0.06486	0.1195	T	7.917	0.004898	0.5112
rs12198173	6	TNXB	32,026,808	A	0.06216	0.1	G	4.334	0.03736	0.5965
rs2523989	6	TRIM31	30,078,275	A	0.2135	0.1132	G	19.05	1.28E-05	2.126
rs2523987	6	TRIM31	30,079,993	G	0.1919	0.09706	T	18.99	1.31E-05	2.209
rs2844795	6	TRIM31	30,073,847	G	0.5081	0.3765	A	17.01	3.71E-05	1.711
rs7753935	6	TRIM31	30,060,783	A	0.127	0.2271	C	15.48	8.35E-05	0.4951
rs7765810	6	TRIM31	30,063,496	A	0.1676	0.2618	C	12.06	0.0005157	0.5677

Supplemental Table F: Top pathwasy showing evidence for association with APS3v

Ingenuity Pathway	P-value
Cell_Cycle	3.00E-04
B_Cell_Development	8.00E-04
CD40_Signaling	9.00E-04
Death_Receptor_Signaling	0.0028
Communication_between_Innate_and_Adaptive_Immune_Cells	0.0032
IL_12_Signaling_and_Production_in_Macrophages	0.0045
Eicosanoid_Signaling	0.0052
IL_22_Signaling	0.0081
IL_4_Signaling	0.0151
CTLA4_Signaling_in_Cytotoxic_T_Lymphocytes	0.0196
Cdc42_Signaling	0.0338
IL_2_Signaling	0.0374

Supplemental Table G: Breakdown of recruitment of subjects to the Discovery and Replication Sets

Set	Patients/Controls	Breakdown of Recruitment
Discovery	Patients (n=346)	All recruited by the SEARCH for Diabetes In the Youth Consortium*
	Controls (n=727)	All obtained from the Illumina iControlDB database**
Replication	Patients (n=185)	HBDI: 120 *** Kahaly Group (Germany): 46 Tomer Group: 19
	Controls (n=340)	HBDI: 175 Tomer Group: 165

*For a full description of the SEARCH recuritment see: Hamman RF, Bell RA, Dabelea D, D'Agostino RB, Dolan L, Imperatore G, Lawrence JM, Linder B, Marcovina S, Mayer-Davis EJ, Pihoker C, Rodriguez BL, Saydah S, SEARCH for Diabetes in Yough Study Group. The SEARCH for diabetes in the youth study: Rationale, findings, and future directions. Diabetes Care 2014; 37: 3336-3344.

**For a description of the iControlDB database see http://genomeinformaticsalliance.org/science/icontroldb.ilmn

***Human Biological Data Interchange (HBDI) is part of NDRI (National Disease Registry Interchange, Philadelphia, PA) and recruits patients and controls from the entire US.