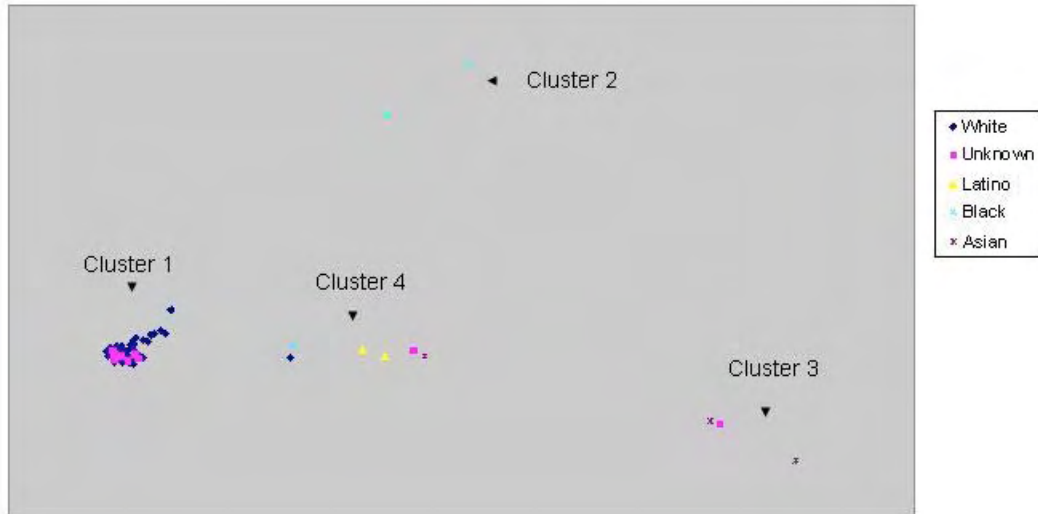


Supplementary Materials



Supplementary Figure 1. Population stratification among the 102 subjects in the ABCoN data. The 102 subjects are divided into 3 distinct clusters – cluster 1, 2, and 3, which are located in the 3 corners in the plot. Cluster 4 seems to be admixed population. Cluster 1 is the largest population cluster, including 89 patients with major European origin, among them 83 were self-reported to be white and 6 had missing ethnicity data. Cluster 2, 3, and 4 include 2, 4, and 6 patients; respectively.

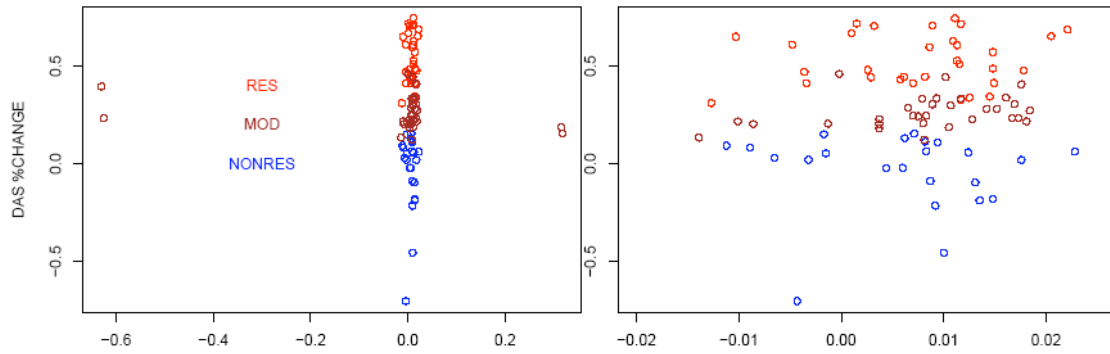


Fig. 2a.

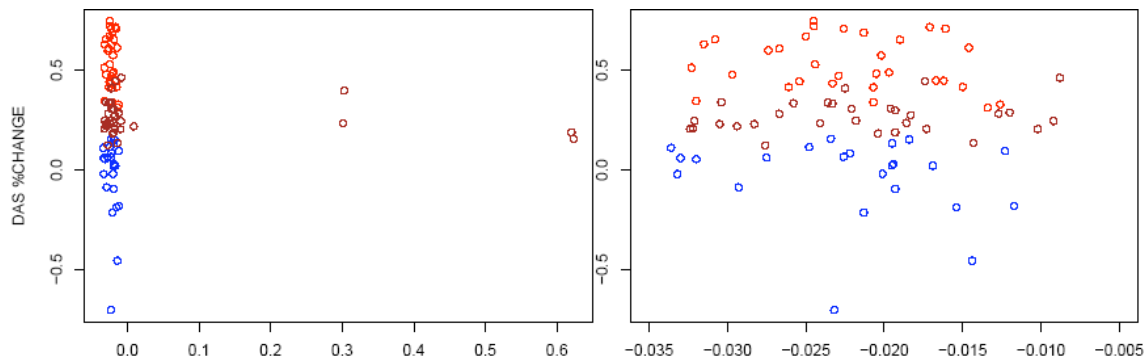


Fig. 2b.

Supplementary Figure 2. Phenotypic difference among 89 individuals appears not to be correlated to the top principal components. Fig 2a. shows DAS change/responding status vs. PC1 and the right figure is in a finer scale. Fig. 2b shows DAS change/responding status vs. PC2 and the right figure is in a finer scale.

Supplementary Table 1. No significant correlation between the top 10 principal components and changes in DAS 28 score (*delDAS28*)

	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
Pearson correlation										
p-value	0.72	0.63	0.14	0.93	0.52	0.16	0.55	0.92	0.95	0.2

Supplementary Table 2. SNPs with RelDAS28 p-values ≤ 0.001

SNP	p-value (RelDAS28) ¹	Allele associated with non- response (Allele Frequency) ²	Chr	Physical Positions	Known Genes	Location
rs2075973	0.00056	A (0.726)	1	9290163	SPSB1	intron
rs12041734	0.00084	G (0.2571)	1	18306896	IGSF21	intron
rs12127343	7.00E-04	G (0.5286)	1	21615079	ALPL	intron
rs885813	0.00084	G (0.4476)	1	21622380	ALPL	intron
rs1983833	0.00042	A (0.1429)	1	52554291	ORC1L	intron
rs7531139	0.00094	A (0.7892)	1	71268188	ZNF265	flanking_5UTR
rs9662349	0.001	A (0.4143)	1	81890073	LPHN2	flanking_5UTR
rs2170331	0.001	A (0.2762)	1	86027745	COL24A1	intron
rs6665006	0.001	G (0.2762)	1	86136671	COL24A1	intron
rs11161755	9.00E-04	G (0.9238)	1	86328292	COL24A1	intron
rs983332	4.55E-06	A (0.2143)	1	87844401	LMO4	flanking_3UTR
rs17426089	0.00015	A (0.1762)	1	87860097	LMO4	flanking_3UTR
rs10518398	0.00093	A (0.9095)	1	87904321	LMO4	flanking_3UTR
rs17130136	0.00066	A (0.1286)	1	87925848	LMO4	flanking_3UTR
rs928655	3.50E-05	A (0.7667)	1	89561595	GBP6	intron
rs10493826	4.00E-04	A (0.7905)	1	89682184	LRRC8B	flanking_5UTR
rs7551313	0.00042	A (0.1095)	1	109111923	C1orf62	flanking_5UTR
rs6664266	0.00061	A (0.4571)	1	114531036	TRIM33	flanking_3UTR
rs7536830	0.00097	A (0.3667)	1	142886991	HFE2	flanking_5UTR
rs9659073	0.001	G (0.5913)	1	147340427	TSRC1	intron
rs3820403	0.001	G (0.3476)	1	164990038	TBX19	intron
rs11576706	0.00087	G (0.2714)	1	168180055	BAT2D1	flanking_5UTR
rs12759907	0.00021	G (0.1762)	1	168191165	BAT2D1	intron
rs235900	0.00038	A (0.1857)	1	168310189	BAT2D1	flanking_3UTR
rs9787394	0.001	G (0.9286)	1	168882157	DNM3	intron
rs6663339	0.001	A (0.1095)	1	177273982	XPR1	flanking_5UTR
rs10489397	2.00E-04	C (0.8857)	1	183330267	PTGS2	flanking_3UTR
rs2383513	2.00E-04	A (0.8857)	1	183331181	PTGS2	flanking_3UTR
rs10754227	0.00065	A (0.4048)	1	185466993	C1orf99	flanking_3UTR
rs3890694	0.00065	G (0.4048)	1	185478053	C1orf99	flanking_3UTR
rs1890397	0.00072	G (0.4429)	1	189502590	RGS2	flanking_5UTR
rs3001167	0.00023	G (0.919)	1	191262571	CDC73	flanking_3UTR
rs3009384	0.00023	G (0.919)	1	191274940	CDC73	flanking_3UTR
rs2038926	0.00084	G (0.3143)	1	195332854	PTPRC	flanking_5UTR
rs1998843	0.00084	A (0.3143)	1	195364013	PTPRC	flanking_3UTR
rs4421618	0.00074	G (0.0952)	1	197386451	DDX59	flanking_5UTR
rs7526286	0.00036	A (0.1)	1	197396246	DDX59	flanking_5UTR
rs6655965	0.00079	G (0.5524)	1	200412149	ATP2B4	intron
rs1341152	0.00042	G (0.8702)	1	210387829	PROX1	flanking_5UTR
rs9428452	0.00083	A (0.1905)	1	235492270	CHRM3	flanking_5UTR
rs10924249	0.001	A (0.219)	1	242096683	SMYD3	flanking_3UTR
rs10183226	0.00012	C (0.4619)	2	1383763	TPO	flanking_5UTR

rs6750888	0.00047	G (0.1429)	2	6717102	FLJ42418	flanking_3UTR
rs1505687	0.00065	A (0.2714)	2	6818838	FLJ42418	flanking_3UTR
rs10164492	0.001	A (0.4619)	2	12361646	LPIN1	flanking_3UTR
rs919432	0.00074	G (0.4095)	2	16465684	FAM49A	flanking_3UTR
rs2028208	0.001	G (0.2095)	2	20072445	WDR35	intron
rs11124430	0.00066	G (0.6143)	2	35513043	CRIM1	flanking_5UTR
rs11897836	0.001	G (0.2095)	2	43335566	ZFP36L2	flanking_3UTR
rs6708660	8.00E-04	A (0.6381)	2	43664033	THADA	intron
rs6707783	0.001	A (0.0905)	2	51965542	NRXN1	flanking_5UTR
rs6546177	0.001	A (0.4095)	2	65889084	FLJ16124	intron
rs4513310	8.00E-04	A (0.2524)	2	84767024	LOC200383	flanking_5UTR
rs796063	8.00E-04	G (0.4519)	2	101187961	TBC1D8	flanking_5UTR
rs12464067	0.001	G (0.3905)	2	105874630	NCK2	intron
rs6732469	0.00037	G (0.3857)	2	128723691	HS6ST1	flanking_3UTR
rs16845267	0.00075	A (0.2548)	2	141657972	LRP1B	intron
rs2714174	0.00092	A (0.3317)	2	141952733	LRP1B	intron
rs6748811	0.00056	C (0.0619)	2	156703282	NR4A2	flanking_3UTR
rs2882618	0.001	C (0.9143)	2	156719385	NR4A2	flanking_3UTR
rs7607967	0.001	G (0.5962)	2	166938843	SCN9A	intron
rs13393173	3.66E-06	A (0.1238)	2	169214598	LASS6	intron
rs17202792	0.00038	A (0.9143)	2	169229228	LASS6	intron
rs6745717	7.50E-05	A (0.8333)	2	212402737	ERBB4	intron
rs1403364	0.00039	G (0.7143)	2	226729255	IRS1	flanking_3UTR
rs1040223	0.00079	A (0.5476)	2	226742278	IRS1	flanking_3UTR
rs2396297	0.001	A (0.4286)	2	226811479	IRS1	flanking_3UTR
rs1522811	0.00024	C (0.7048)	2	226817959	IRS1	flanking_3UTR
rs16827953	0.00061	A (0.0857)	2	232026855	FLJ12584	intron
rs7594399	0.001	C (0.9)	2	232075903	B3GNT7	flanking_5UTR
rs11563251	0.00056	A (0.9327)	2	234461384	UGT1A8	intron
rs4663335	0.00055	A (0.1333)	2	234471090	UGT1A10	flanking_3UTR
rs3791575	0.001	A (0.3077)	2	239852916	HDAC4	intron
rs843451	7.00E-04	A (0.6952)	2	240067248	HDAC4	flanking_5UTR
rs709274	8.00E-04	A (0.7952)	2	240068225	HDAC4	flanking_5UTR
rs1395442	0.001	G (0.8269)	3	62650337	CADPS	intron
rs496184	0.00025	A (0.5476)	3	62699909	CADPS	intron
rs9790242	0.00076	C (0.9048)	3	65078890	MAGI1	flanking_3UTR
rs7614718	0.00013	C (0.6058)	3	80481144	ROBO1	flanking_5UTR
rs6775443	7.00E-04	G (0.6346)	3	140360622	BPESC1	flanking_3UTR
rs3849448	0.00056	A (0.0673)	3	171462521	PRKCI	intron
rs7622037	0.00074	A (0.6566)	3	176451255	NAALADL2	intron
rs17632548	0.001	A (0.0913)	3	178765511	TBL1XR1	flanking_5UTR
rs10029689	8.90E-05	G (0.152)	4	1502214	FAM53A	flanking_3UTR
rs733175	8.00E-04	G (0.1238)	4	9726410	SLC2A9	flanking_5UTR
rs9884830	0.00089	A (0.1524)	4	25704066	KIAA0746	flanking_5UTR
rs11725410	0.00085	G (0.3667)	4	26177641	CCKAR	flanking_5UTR
rs6837194	0.001	A (0.9238)	4	29451545	PCDH7	flanking_5UTR
rs1441209	1.40E-05	G (0.2381)	4	35161518	CENTD1	flanking_3UTR
rs2028446	1.40E-05	A (0.2356)	4	35171618	CENTD1	flanking_3UTR
rs6531358	1.60E-05	G (0.2333)	4	35178895	CENTD1	flanking_3UTR
rs437943	3.90E-06	G (0.3381)	4	35194664	CENTD1	flanking_3UTR

rs10517554	0.00071	A (0.5667)	4	40912356	APBB2	intron
rs2125489	0.001	A (0.1476)	4	55794411	KDR	intron
rs6840362	0.001	A (0.3238)	4	89257099	SPP1	intron
rs7667609	5.00E-04	A (0.2692)	4	101838719	EMCN	flanking_5UTR
rs223502	8.00E-04	G (0.2905)	4	103997961	MANBA	intron
rs1542986	0.001	A (0.101)	4	134475682	PCDH10	flanking_3UTR
rs1500837	0.001	A (0.4381)	4	143172461	INPP4B	flanking_3UTR
rs2314095	0.00091	C (0.9279)	4	162731398	FSTL5	intron
rs1505485	0.001	C (0.5762)	4	173338072	GALNT7	flanking_5UTR
rs2309464	0.00096	C (0.2286)	4	182616557	MGC45800	flanking_3UTR
rs10026892	0.001	G (0.3592)	4	184886414	MGC10198	flanking_3UTR
rs1392468	0.00055	G (0.3413)	5	1797753	MRPL36	flanking_3UTR
rs2242411	9.90E-05	A (0.5429)	5	1806306	MRPL36	flanking_3UTR
rs1038046	5.00E-04	A (0.7596)	5	3198652	CEI	flanking_3UTR
rs1609446	0.001	C (0.8952)	5	3273349	IRX1	flanking_5UTR
rs3087948	0.001	G (0.7905)	5	14821308	ANKH	intron
rs17649734	0.00061	A (0.1714)	5	16432078	ZNF622	flanking_3UTR
rs6887552	0.00092	G (0.6667)	5	67028978	CD180	flanking_5UTR
rs680500	0.00029	G (0.2571)	5	73547443	ENC1	flanking_3UTR
rs2112270	0.00071	C (0.5905)	5	89210540	CETN3	flanking_3UTR
rs26534	0.00063	A (0.5667)	5	115203600	ATG12	intron
rs10057536	0.00019	G (0.1762)	5	117677228	DTWD2	flanking_3UTR
rs1493383	5.00E-04	G (0.8238)	5	152971591	GRIA1	intron
rs254850	0.001	A (0.2333)	5	158599309	UBLCP1	flanking_5UTR
rs7725968	0.00053	G (0.8143)	5	160119984	PTTG1	flanking_3UTR
rs1838467	0.001	A (0.1476)	5	160998740	GABRA6	flanking_5UTR
rs1422531	0.00031	A (0.2067)	5	166725971	KIBRA	flanking_5UTR
rs1422422	1.70E-05	G (0.6476)	5	167665378	KIBRA	intron
rs4976592	2.10E-05	G (0.7143)	5	167676785	KIBRA	intron
rs10475944	0.00078	G (0.9238)	5	169873337	KCNIP1	intron
rs12518180	0.001	A (0.2286)	5	175992222	SNCB	flanking_5UTR
rs1418707	0.00066	A (0.7952)	6	150800	DUSP22	flanking_5UTR
rs2012025	0.00029	G (0.5095)	6	1571543	GMDS	intron
rs9378784	0.00069	A (0.6238)	6	3261745	C6orf85	intron
rs11759185	0.00057	A (0.1762)	6	5903614	NRN1	flanking_3UTR
rs3024444	0.00016	G (0.0673)	6	6120173	F13A1	intron
rs10498668	0.00057	G (0.9327)	6	6284445	F13A1	flanking_5UTR
rs10484749	0.00099	G (0.9471)	6	8326004	SLC35B3	flanking_3UTR
rs2294418	0.00023	G (0.9087)	6	11867362	C6orf105	intron
rs1014610	0.00025	A (0.9286)	6	14889846	JARID2	flanking_5UTR
rs2472814	0.00033	A (0.9333)	6	14898195	JARID2	flanking_5UTR
rs199002	0.001	A (0.3619)	6	23576219	VMP	flanking_5UTR
rs199072	0.001	A (0.3619)	6	23583452	VMP	flanking_5UTR
rs1880269	0.00094	A (0.3476)	6	25333492	LRRC16	flanking_5UTR
rs2328853	0.001	A (0.2356)	6	25456168	LRRC16	intron
rs716796	0.00092	A (0.1923)	6	25501125	LRRC16	intron
rs1997823	0.00048	A (0.9143)	6	72296703	C6orf155	flanking_5UTR
rs6902731	7.00E-04	A (0.1095)	6	75274664	COL12A1	flanking_3UTR
rs562034	0.00012	C (0.1381)	6	85901908	NT5E	flanking_5UTR
rs581170	0.00083	A (0.1524)	6	85938437	NT5E	flanking_5UTR

rs4076053	0.001	G (0.4286)	6	88683580	SPACA1	flanking_5UTR
rs1444139	0.00044	G (0.6381)	6	92952385	EPHA7	flanking_3UTR
rs6932793	1.10E-05	G (0.1298)	6	117878836	ROS1	flanking_5UTR
rs11153668	0.00057	G (0.2714)	6	117959754	DCBLD1	intron
rs3756894	0.00073	C (0.9476)	6	117964181	DCBLD1	intron
rs953412	0.001	G (0.0905)	6	118546711	SLC35F1	intron
rs17053352	7.00E-04	G (0.219)	6	125903635	HEY2	flanking_5UTR
rs3799488	0.001	G (0.1238)	6	137561473	IFNGR1	intron
rs317802	0.00067	A (0.4087)	6	159061740	SYTL3	intron
rs9365597	0.00035	G (0.3667)	6	164077150	QKI	flanking_3UTR
rs10945919	3.41E-07	G (0.319)	6	164157088	QKI	flanking_3UTR
rs6455920	0.001	G (0.2143)	6	164161330	QKI	flanking_3UTR
rs9356148	7.00E-05	A (0.419)	6	164163929	QKI	flanking_3UTR
rs10486281	0.00048	G (0.7714)	7	8795946	NXPH1	flanking_3UTR
rs11765761	0.00063	G (0.201)	7	8882102	NXPH1	flanking_3UTR
rs2350423	0.001	A (0.3048)	7	8890814	NXPH1	flanking_3UTR
rs34080	0.00048	A (0.6714)	7	12736909	ARL4	flanking_3UTR
rs2389409	0.001	G (0.581)	7	15280029	FLJ16237	intron
rs7783402	0.001	A (0.7476)	7	19853669	7A5	flanking_3UTR
rs11766273	0.00085	A (0.9286)	7	22548903	IL6	flanking_3UTR
rs3757446	0.00034	A (0.9223)	7	22668017	TOMM7	flanking_5UTR
rs757139	0.00038	C (0.4905)	7	24752595	OSBPL3	intron
rs2392015	5.00E-04	G (0.7286)	7	31804120	PDE1C	intron
rs7797162	5.00E-04	A (0.7905)	7	37249108	ELMO1	intron
rs2052148	0.001	A (0.5579)	7	43172203	HECW1	intron
rs6979413	0.00056	G (0.6143)	7	51530272	COBL	flanking_5UTR
rs6460169	0.00045	A (0.7571)	7	63492623	ZNF680	flanking_5UTR
rs4527771	0.001	A (0.3905)	7	67328938	AUTS2	flanking_5UTR
rs1527721	0.001	A (0.8714)	7	94468022	PON1	flanking_3UTR
rs854547	5.60E-06	A (0.6286)	7	94568507	PON1	flanking_3UTR
rs854548	3.25E-06	G (0.7333)	7	94570471	PON1	flanking_3UTR
rs854555	1.56E-06	C (0.6619)	7	94575042	PON1	intron
rs4236552	0.00087	G (0.7087)	7	100204582	MUC17	flanking_5UTR
rs1968201	7.30E-06	G (0.9143)	7	102401386	FLJ36166	flanking_3UTR
rs6465908	7.20E-05	A (0.119)	7	102422288	FLJ36166	intron
rs7385345	7.20E-05	A (0.119)	7	102438882	FLJ36166	intron
rs3087615	1.20E-05	A (0.9183)	7	102546074	PMPCB	coding
rs10257369	7.20E-05	G (0.119)	7	102565350	PSMC2	flanking_5UTR
rs10266523	0.00017	G (0.1238)	7	102568009	PSMC2	flanking_5UTR
rs7804867	0.00039	A (0.181)	7	102627708	SLC26A5	intron
rs4730274	0.001	A (0.5)	7	107073670	SLC26A3	flanking_5UTR
rs10487809	0.001	A (0.381)	7	123306032	SPAM1	flanking_3UTR
rs1860487	0.00099	G (0.5095)	7	123309087	SPAM1	flanking_3UTR
rs10240712	0.001	G (0.8857)	7	137300127	AKR1D1	flanking_3UTR
rs1024528	0.00072	G (0.4)	7	146663529	CNTNAP2	intron
rs2240379	0.00091	A (0.9333)	8	183585	ZNF596	intron
rs7823711	0.00068	A (0.581)	8	804529	ERICH1	flanking_5UTR
rs1504772	8.00E-04	G (0.5721)	8	4087225	CSMD1	intron
rs1481587	0.001	G (0.8429)	8	13580540	C8orf48	flanking_3UTR
rs11990415	0.001	G (0.319)	8	16647231	FGF20	flanking_3UTR

rs7014143	0.001	C (0.6019)	8	21632277	GFRA2	intron
rs17089603	0.00096	G (0.181)	8	23668901	NKX3-1	flanking_5UTR
rs6468026	0.001	A (0.4429)	8	31194597	WRN	flanking_3UTR
rs11996826	0.00089	A (0.6619)	8	99228770	POP1	intron
rs6470399	0.00082	A (0.381)	8	127078098	FAM84B	flanking_3UTR
rs9693430	0.00087	A (0.9238)	8	130034016	CCDC26	flanking_3UTR
rs6988340	0.001	G (0.0667)	8	132037651	ADCY8	intron
rs7460718	0.001	C (0.0714)	8	132039547	ADCY8	intron
rs305347	0.001	A (0.9238)	8	137722126	KHDRBS3	flanking_3UTR
rs10505698	0.001	G (0.2429)	8	139368001	LOC51059	flanking_5UTR
rs10097597	0.00014	G (0.9048)	8	139721988	COL22A1	intron
rs12547337	0.00061	A (0.919)	8	139738893	COL22A1	intron
rs1454626	0.001	C (0.2304)	9	2611030	VLDLR	flanking_5UTR
rs2026828	0.001	G (0.6905)	9	4533307	SLC1A1	intron
rs7031325	0.00099	G (0.3333)	9	6645056	GLDC	flanking_5UTR
rs1094039	0.00027	A (0.4381)	9	6685472	GLDC	flanking_5UTR
rs4740861	0.00044	A (0.5686)	9	6808299	JMJD2C	intron
rs4273904	0.00081	A (0.4762)	9	9714976	PTPRD	flanking_5UTR
rs2225979	0.00048	A (0.5333)	9	9720381	PTPRD	flanking_5UTR
rs2025392	0.00082	A (0.5286)	9	9723309	PTPRD	flanking_5UTR
rs156396	0.00063	C (0.4238)	9	23519626	ELAVL2	flanking_3UTR
rs4879515	0.001	A (0.3952)	9	27472235	MOBKL2B	flanking_5UTR
rs868856	5.10E-07	A (0.2619)	9	27479251	MOBKL2B	flanking_5UTR
rs7046653	5.10E-07	A (0.2619)	9	27480967	IFNK	flanking_5UTR
rs2814707	1.91E-06	A (0.2163)	9	27526397	MOBKL2B	flanking_5UTR
rs3849942	4.68E-06	A (0.2095)	9	27533281	C9orf72	flanking_3UTR
rs1565948	4.70E-05	G (0.4905)	9	27549733	C9orf72	intron
rs774359	6.04E-07	G (0.2238)	9	27551049	C9orf72	3UTR
rs7024464	0.00096	A (0.3762)	9	79034117	TLE4	flanking_5UTR
rs3128477	0.00071	A (0.3857)	9	87511733	DAPK1	intron
rs721936	0.00095	A (0.3905)	9	87512703	DAPK1	intron
rs4743853	0.00099	A (0.6619)	9	89946917	GADD45G	flanking_3UTR
rs823920	4.70E-05	G (0.1971)	9	101742140	GRIN3A	flanking_5UTR
rs2795380	0.001	G (0.1381)	9	101758440	GRIN3A	flanking_5UTR
rs2995211	0.001	A (0.1286)	9	101788575	GRIN3A	flanking_5UTR
rs1537733	0.001	C (0.6515)	9	115062559	1-Dec	intron
rs1410201	0.001	A (0.8286)	9	118072323	TLR4	flanking_3UTR
rs1889155	0.00017	G (0.9429)	9	134324406	RXRA	flanking_5UTR
rs728939	0.00082	G (0.3)	10	3321092	PITRM1	flanking_5UTR
rs4406717	0.00051	G (0.2381)	10	5920072	ANKRD16	flanking_3UTR
rs764189	7.00E-04	A (0.5962)	10	6396216	PFKFB3	flanking_3UTR
rs7915320	0.00092	G (0.3667)	10	7553254	SFMBT2	flanking_5UTR
rs10160013	0.00054	G (0.3238)	10	29879793	SVIL	coding
rs1328325	0.00028	G (0.3798)	10	29885898	SVIL	intron
rs4749463	8.50E-05	G (0.4286)	10	29910692	SVIL	intron
rs4083633	0.00073	A (0.7921)	10	29921494	SVIL	intron
rs2492448	0.00026	G (0.7286)	10	35235412	PARD3	flanking_5UTR
rs4379724	1.00E-04	A (0.1562)	10	67288253	CTNNA3	flanking_3UTR
rs2394156	0.001	A (0.181)	10	67445913	CTNNA3	intron
rs480177	0.001	C (0.2136)	10	78659030	KCNMA1	intron

rs2902643	0.001	A (0.4524)	10	106318781	SORCS3	flanking_5UTR
rs475150	0.00041	A (0.0619)	10	116146793	KIAA1914	intron
rs10787841	0.00015	A (0.1779)	10	120244899	GPR10	flanking_3UTR
rs12573699	0.001	A (0.2837)	10	120567218	C10orf46	flanking_5UTR
rs11200334	0.001	G (0.4078)	10	123766885	TACC2	intron
rs7932964	0.001	A (0.2048)	11	2027146	LOC492304	flanking_3UTR
rs307245	0.00056	A (0.1429)	11	13438575	BTBD10	intron
rs10832052	0.00038	C (0.1476)	11	13501228	PTH	flanking_5UTR
rs10500785	0.00038	A (0.1476)	11	13530459	PTH	flanking_5UTR
rs4757637	0.00062	C (0.3381)	11	18264151	HPS5	intron
rs11028138	0.001	G (0.9293)	11	24729758	LUZP2	intron
rs10835138	0.00056	G (0.4952)	11	27215475	NY-REN-41	flanking_3UTR
rs4755714	5.00E-04	A (0.5238)	11	43490844	TTC17	flanking_3UTR
rs1466199	0.00072	G (0.5143)	11	44843130	TSPAN18	flanking_3UTR
rs1400316	0.00013	G (0.3971)	11	83264485	DLG2	intron
rs790377	0.00033	G (0.2524)	11	83310837	DLG2	intron
rs2400000	0.00052	A (0.6429)	11	94324949	HSPC148	flanking_3UTR
rs10501819	0.00047	A (0.4571)	11	94362363	JMJD2D	intron
rs4237573	0.001	A (0.5905)	11	94877571	FAM76B	flanking_3UTR
rs16923429	0.00058	A (0.1048)	11	95624950	MAML2	intron
rs593499	0.001	C (0.3381)	11	99678704	CNTN5	intron
rs1216192	0.001	A (0.1429)	11	99712710	CNTN5	intron
rs7125373	0.00072	G (0.1635)	11	115532483	MGC13125	flanking_3UTR
rs617727	0.001	C (0.4272)	11	121515390	BRCC2	flanking_5UTR
rs2282507	0.00089	A (0.1394)	11	126268589	KIRREL3	intron
rs12794558	0.00055	C (0.0952)	11	130606990	SNX19	flanking_5UTR
rs6487429	0.00081	A (0.5952)	12	24885299	BCAT1	intron
rs7967945	0.00081	A (0.5952)	12	24887168	BCAT1	intron
rs3809140	0.00073	G (0.8)	12	26169711	BHLHB3	flanking_5UTR
rs11052116	0.00061	G (0.1571)	12	32673097	FGD4	intron
rs2525055	0.00083	A (0.6474)	12	46473005	HDAC7A	intron
rs11615624	3.90E-05	A (0.9286)	12	61574610	AVPR1A	flanking_3UTR
rs699619	0.001	A (0.181)	12	61665783	AVPR1A	flanking_3UTR
rs812796	0.001	G (0.181)	12	61685535	AVPR1A	flanking_3UTR
rs1826733	0.00021	A (0.6476)	12	62909775	FLJ32549	flanking_5UTR
rs1596727	0.001	A (0.6429)	12	63609374	WIF1	flanking_3UTR
rs1402611	0.00099	G (0.4048)	12	77467203	NAV3	flanking_3UTR
rs1796135	0.00037	A (0.4905)	12	77491016	NAV3	flanking_3UTR
rs2660899	0.001	A (0.2143)	12	94932888	LTA4H	flanking_5UTR
rs759390	0.00037	A (0.6408)	12	95066993	ELK3	flanking_5UTR
rs7957408	8.00E-04	A (0.8381)	12	95323764	PCTK2	flanking_5UTR
rs149851	0.00077	G (0.1048)	12	97813855	EB-1	intron
rs616804	1.10E-05	A (0.9143)	12	97840812	EB-1	intron
rs10861467	0.001	A (0.4143)	12	104559604	LOC387882	flanking_3UTR
rs7300860	0.001	A (0.8286)	12	110217317	CUTL2	intron
rs11067138	0.00095	A (0.1286)	12	113383090	TBX5	flanking_5UTR
rs1520760	0.00092	G (0.5)	12	118326079	MGC39827	intron
rs1716470	0.00092	A (0.5)	12	118334213	MGC39827	intron
rs2248246	0.001	A (0.3333)	12	126129494	SPRR2G	flanking_5UTR
rs1396566	0.001	G (0.3381)	12	126146401	SPRR2G	flanking_5UTR

rs9538644	0.001	A (0.5146)	13	59793265	TDRD3	flanking_5UTR
rs4400935	0.00022	A (0.9381)	13	65129961	PCDH9	flanking_3UTR
rs8002390	0.00022	G (0.3429)	13	69809017	KLHL1	flanking_5UTR
rs1325466	7.30E-05	A (0.7714)	13	74839922	TBC1D4	intron
rs9573531	0.00043	A (0.7762)	13	74843577	TBC1D4	intron
rs4280128	0.001	G (0.6442)	13	74876840	TBC1D4	intron
rs9543928	0.001	G (0.1635)	13	74916808	TBC1D4	intron
rs7334194	1.10E-05	A (0.1333)	13	105632881	EFNB2	flanking_3UTR
rs3949948	0.00092	G (0.351)	13	106716741	FLJ10154	flanking_5UTR
rs6492252	0.00072	G (0.5952)	13	109720695	COL4A1	intron
rs552125	0.001	G (0.8857)	13	109736814	COL4A1	intron
rs1556122	0.00024	G (0.3381)	13	109783608	COL4A2	intron
rs9521936	0.00092	G (0.481)	13	110234390	-1	-1
rs4981223	7.00E-04	G (0.4524)	14	20041624	RNASE10	flanking_5UTR
rs3811272	1.30E-05	A (0.2041)	14	21811574	DAD1	flanking_3UTR
rs3811266	2.40E-05	G (0.2333)	14	21816895	DAD1	flanking_3UTR
rs11848278	0.001	A (0.1333)	14	22793634	KIAA1443	flanking_3UTR
rs1885147	0.00041	A (0.4429)	14	28063661	FOXG1B	flanking_5UTR
rs10141935	0.00066	A (0.6333)	14	28076505	FOXG1B	flanking_5UTR
rs12587100	0.001	A (0.3143)	14	29021671	PRKD1	flanking_3UTR
rs8012626	5.40E-05	C (0.5238)	14	29822859	KIAA1333	flanking_5UTR
rs179071	7.40E-05	C (0.4804)	14	29850480	KIAA1333	flanking_5UTR
rs7150478	0.00093	A (0.2095)	14	33241754	NPAS3	intron
rs10498470	0.00093	G (0.1381)	14	54174774	SAMD4	intron
rs6573233	0.001	A (0.1667)	14	58539490	DAAM1	flanking_5UTR
rs10129697	0.00042	A (0.8762)	14	62494352	KCNH5	intron
rs8003820	0.00093	A (0.1524)	14	77038334	THSD3	flanking_5UTR
rs10135523	0.00016	C (0.3894)	14	87884771	KCNK10	flanking_5UTR
rs4899951	0.00066	A (0.3107)	14	87887099	KCNK10	flanking_5UTR
rs2781400	0.00022	A (0.1346)	14	97351978	FLJ25773	flanking_5UTR
rs857230	0.001	A (0.6143)	14	97685742	FLJ25773	flanking_5UTR
rs10144091	0.00022	A (0.181)	14	97710205	FLJ25773	flanking_5UTR
rs857229	0.00034	A (0.7429)	14	97740677	FLJ25773	flanking_5UTR
rs9323994	8.00E-04	C (0.1429)	14	98159331	FLJ25773	flanking_5UTR
rs2091918	0.001	A (0.5143)	14	104673664	JAG2	flanking_3UTR
rs11073301	0.00054	G (0.6048)	15	36279546	SPRED1	flanking_5UTR
rs11854769	0.00099	G (0.7476)	15	36289535	SPRED1	flanking_5UTR
rs3923022	0.001	G (0.3269)	15	36725830	FLJ35695	flanking_5UTR
rs2067885	0.00037	G (0.3238)	15	48009237	ATP8B4	intron
rs12916154	0.00037	G (0.4)	15	48020898	ATP8B4	intron
rs1553107	0.001	G (0.2381)	15	60888291	TLN2	intron
rs1048570	0.001	A (0.1905)	15	60907059	TLN2	intron
rs17525249	0.00013	G (0.1381)	15	91273984	CHD2	intron
rs1545189	0.001	A (0.2887)	15	91361335	CHD2	intron
rs3743887	0.00079	A (0.9333)	16	364278	TMEM8	coding
rs7191941	0.00085	A (0.8738)	16	7552509	A2BP1	intron
rs316369	0.00038	A (0.5286)	16	9636463	GRIN2A	flanking_3UTR
rs2076756	0.00089	G (0.2667)	16	49314382	CARD15	intron
rs11647703	0.00051	A (0.3524)	16	49471078	CYLD	flanking_3UTR
rs16954658	5.00E-04	C (0.0962)	16	53868795	IRX6	flanking_5UTR

rs924465	0.00048	A (0.3143)	16	58246745	GOT2	flanking_5UTR
rs7200930	0.00048	G (0.6095)	16	75105130	CNTNAP4	intron
rs4243175	6.10E-05	G (0.8571)	16	78037924	MAF	flanking_3UTR
rs11645514	6.10E-05	A (0.8571)	16	78041992	MAF	flanking_3UTR
rs9930233	0.001	G (0.6923)	16	81438595	CDH13	intron
rs8054307	0.001	C (0.2095)	16	82173233	CDH13	intron
rs372395	0.001	G (0.5962)	16	84332418	MGC17624	intron
rs11078629	0.00085	G (0.7333)	17	1151162	TUSC5	flanking_3UTR
rs902966	0.00074	A (0.7381)	17	1180385	YWHAE	flanking_3UTR
rs2307143	0.00065	A (0.281)	17	2036504	C17orf31	intron
rs903160	0.00065	A (0.281)	17	2038515	C17orf31	coding
rs1563966	0.00053	A (0.3095)	17	2042704	C17orf31	intron
rs16952025	0.00064	A (0.619)	17	2063548	C17orf31	intron
rs12451892	0.001	A (0.619)	17	2194732	RUTBC1	intron
rs7207552	0.001	G (0.9423)	17	3843556	ZZEF1	flanking_3UTR
rs8070753	0.00092	A (0.3619)	17	9205453	STX8	intron
rs7222875	0.001	G (0.2048)	17	16497233	ZNF624	intron
rs10512432	0.00028	A (0.3714)	17	25836246	GOSR1	intron
rs197925	0.001	G (0.6238)	17	42365720	GOSR2	intron
rs2074189	0.00074	A (0.5286)	17	43242950	OSBPL7	intron
rs8064241	0.00012	G (0.5385)	17	43288340	SP6	flanking_5UTR
rs8072173	5.00E-04	C (0.3905)	17	48985002	KIF2B	flanking_5UTR
rs8081909	0.001	G (0.2143)	17	64299023	ABCA8	flanking_3UTR
rs2120192	0.001	G (0.2143)	17	64301554	ABCA8	flanking_3UTR
rs180167	0.001	A (0.0922)	17	65547344	KCNJ16	flanking_5UTR
rs1859983	0.001	A (0.3317)	17	66933589	SOX9	flanking_5UTR
rs1624922	0.00013	G (0.9272)	17	71112486	RECQL5	flanking_3UTR
rs9897045	0.00031	A (0.1333)	17	72173649	MXRA7	flanking_3UTR
rs4969367	0.00066	A (0.12)	17	76646610	BAIAP2	intron
rs7406505	0.00018	A (0.7837)	17	77073994	ACTG1	flanking_3UTR
rs8182360	0.00038	A (0.8667)	17	77086490	ACTG1	flanking_3UTR
rs10502353	0.00082	C (0.3286)	18	7137079	LAMA1	flanking_5UTR
rs676147	0.00068	A (0.1893)	18	10114648	VAPA	flanking_3UTR
rs3786284	0.001	A (0.1619)	18	12000646	IMPA2	intron
rs8092489	0.001	A (0.4899)	18	19151312	C18orf45	intron
rs527790	0.001	A (0.4381)	18	20314913	HRH4	flanking_3UTR
rs543679	0.00041	G (0.481)	18	20318292	HRH4	flanking_3UTR
rs1945168	0.00073	G (0.5286)	18	20378416	HRH4	flanking_3UTR
rs7241357	0.00026	G (0.5667)	18	25335967	CDH2	flanking_5UTR
rs11083340	0.001	A (0.9048)	18	25339059	CDH2	flanking_5UTR
rs9956546	0.001	G (0.0857)	18	32136446	FHOD3	intron
rs11877743	0.00097	G (0.6143)	18	37650755	PIK3C3	flanking_5UTR
rs1983249	0.00093	A (0.6476)	18	40388445	SETBP1	flanking_5UTR
rs12458686	0.00041	A (0.0952)	18	41118655	SETBP1	flanking_3UTR
rs11082439	0.00064	A (0.1143)	18	41124301	SETBP1	flanking_3UTR
rs2684847	0.001	C (0.2143)	18	43024315	IER3IP1	flanking_5UTR
rs2850542	0.00039	C (0.4381)	18	46657558	ME2	flanking_5UTR
rs606073	0.00032	G (0.3619)	18	46739965	ELAC1	flanking_5UTR
rs674965	0.00043	A (0.3571)	18	46746491	ELAC1	flanking_5UTR
rs6566822	0.00037	A (0.1442)	18	52376631	TXNL1	flanking_3UTR

rs7229222	0.00079	A (0.2)	18	58362041	ZCCHC2	intron
rs5009257	0.00016	A (0.3)	18	58390947	ZCCHC2	intron
rs1529210	0.001	G (0.2429)	18	66610529	SOCS6	flanking_3UTR
rs7407221	0.001	G (0.601)	18	71168570	SDCCAG33	flanking_3UTR
rs1107920	0.00023	A (0.1905)	19	38382536	LRP3	intron
rs12609177	0.00067	G (0.2714)	19	38397295	SLC7A10	intron
rs4802262	5.30E-05	A (0.2857)	19	50841726	EML2	flanking_5UTR
rs6509807	0.00032	G (0.3143)	19	58859082	DPRX	flanking_3UTR
rs6056558	0.00063	A (0.519)	20	933530	RSPO4	flanking_5UTR
rs6084265	8.50E-05	G (0.5)	20	3018898	AVP	flanking_5UTR
rs3848777	0.00072	A (0.1381)	20	13919235	C20orf133	flanking_5UTR
rs10485770	0.00035	C (0.1324)	20	13943214	C20orf133	intron
rs6110153	0.00074	C (0.1762)	20	13984529	C20orf133	flanking_3UTR
rs4814277	0.00072	A (0.1381)	20	13989207	C20orf133	flanking_3UTR
rs10485771	8.00E-04	G (0.181)	20	13999103	C20orf133	flanking_5UTR
rs4814278	0.00078	G (0.219)	20	13999325	C20orf133	flanking_5UTR
rs2990505	0.00058	A (0.203)	20	14014276	C20orf133	coding
rs11906933	0.001	A (0.181)	20	14072369	C20orf133	flanking_3UTR
rs6079319	0.00049	G (0.2095)	20	14076212	C20orf133	flanking_3UTR
rs2224738	0.001	A (0.3762)	20	14103881	C20orf133	flanking_3UTR
rs994868	0.001	A (0.3762)	20	14107442	C20orf133	flanking_3UTR
rs6138150	2.84E-06	A (0.8381)	20	23795009	CST5	flanking_3UTR
rs6028945	2.02E-07	A (0.1214)	20	38254219	MAFB	flanking_3UTR
rs6071980	2.89E-06	G (0.1286)	20	38301990	MAFB	flanking_3UTR
rs6029388	0.00075	A (0.9286)	20	38925458	TOP1	flanking_5UTR
rs874400	5.00E-04	G (0.4095)	20	46228063	SULF2	flanking_5UTR
rs6069767	0.00046	C (0.432)	20	54516885	C20orf43	intron
rs6025794	0.001	A (0.6667)	20	55818425	TMEPAI	flanking_5UTR
rs928163	0.00027	G (0.7067)	20	55823160	TMEPAI	flanking_5UTR
rs416707	0.00041	A (0.726)	21	21048681	NCAM2	flanking_5UTR
rs229126	0.00095	A (0.5476)	21	27168837	ADAMTS1	flanking_5UTR
rs229055	0.001	G (0.5485)	21	27185091	ADAMTS5	flanking_3UTR
rs229079	0.00057	G (0.381)	21	27219920	ADAMTS5	intron
rs2831475	0.00099	G (0.3835)	21	28374216	C21orf94	flanking_3UTR
rs476861	0.001	G (0.8714)	21	43659936	SNF1LK	3UTR
rs450718	0.00089	G (0.1058)	22	16868534	PEX26	flanking_5UTR
rs370534	9.10E-05	A (0.9286)	22	21581605	RTDR1	flanking_3UTR
rs464805	9.10E-05	G (0.9286)	22	21581857	RTDR1	flanking_3UTR
rs738651	0.00037	G (0.0857)	22	24942459	SEZ6L	intron
rs134806	0.001	A (0.1667)	22	25997765	MN1	flanking_3UTR
rs5997597	1.90E-05	A (0.9286)	22	28959686	LIF	flanking_3UTR
rs5753298	0.001	G (0.2048)	22	29453317	OSBP2	intron
rs2016586	0.001	A (0.3238)	22	34449764	APOL5	intron
rs130334	0.001	G (0.4143)	22	41391029	CYB5R3	flanking_5UTR
rs135809	0.001	A (0.9381)	22	48271069	FLJ44385	flanking_3UTR

Note: 1. P-values were obtained using the continuous *relDAS28* as a dependent variable;

2. Allele information was retrieved from Illumina 550 K chip genotyping.

Supplementary Table 3. SNPs with adjusted EIGENSTRAT Chi-square p-values ≤ 0.001

for non-response vs. response to anti-TNF therapy

SNPID	Chr	Physical position	Chi-square (Before adjusted)	Chi-square (After adjusted)	In table 2 ¹
rs7553178	1	2236917	6.2212	11.0934	
rs953043	1	8708717	11.178	7.1575	
rs2072944	1	23151178	5.9422	11.216	
rs4927024	1	53838725	11.2806	8.1661	
rs6424414	1	71167491	10.9631	8.0274	
rs12566647	1	80914240	7.5508	10.9913	
rs634294	1	85115018	11.0516	7.492	
rs677911	1	85117908	12.6658	8.9205	
rs983332	1	87844401	17.8641	15.2801	*
rs17426089	1	87860097	14.3731	10.749	
rs10518398	1	87904321	11.0949	12.6041	
rs17130136	1	87925848	14.0742	16.1114	
rs928655	1	89561595	12.7968	12.6746	*
rs2031494	1	92677990	9.2768	11.9658	
rs1556562	1	92746044	9.2768	11.9658	
rs10493865	1	93193661	10.4733	12.4321	
rs6327	1	1.16E+08	11.0498	6.0533	
rs9659073	1	1.47E+08	12.6143	8.2764	
rs6655975	1	1.47E+08	11.8149	8.1765	
rs10489397	1	1.83E+08	11.447	9.0875	
rs2383513	1	1.83E+08	11.447	9.0875	
rs3001167	1	1.91E+08	13.1888	15.7904	
rs3009384	1	1.91E+08	13.1888	15.7904	
rs7526286	1	1.97E+08	12.0493	8.0426	
rs907698	1	1.99E+08	10.8468	8.6126	
rs13375803	1	2.05E+08	10.2491	14.5602	
rs2343126	1	2.39E+08	10.5607	11.3119	
rs1413214	1	2.39E+08	12.9604	14.0088	
rs1413213	1	2.39E+08	12.9604	14.0088	
rs10183226	2	1383763	13.0704	14.2933	
rs2430424	2	10568623	11.7237	10.2707	
rs6740355	2	21635495	6.9891	11.3715	
rs2194562	2	21681291	4.0338	12.8366	
rs2577720	2	23460266	5.1264	11.972	
rs11124430	2	35513043	10.9145	7.7462	
rs3770949	2	36515414	11.0516	11.2145	
rs1523785	2	36649435	6.6857	11.8113	
rs7581802	2	62001589	12.0493	7.6687	
rs6542345	2	1.17E+08	11.0632	8.5392	
rs2350121	2	1.56E+08	5.4019	11.208	
rs2882618	2	1.57E+08	11.492	7.7248	
rs1858104	2	1.66E+08	11.9408	12.3015	
rs13781	2	1.71E+08	10.914	6.6953	
rs4972806	2	1.77E+08	11.6496	9.2791	

rs6749771	2	1.77E+08	12.9647	12.0624
rs2177086	2	2.03E+08	9.8413	11.204
rs9288433	2	2.12E+08	10.9235	7.1955
rs6749528	2	2.2E+08	10.6372	12.8607
rs4542840	2	2.21E+08	10.4724	13.0229
rs16827953	2	2.32E+08	10.2491	10.851
rs7594399	2	2.32E+08	10.2491	10.851
rs4663335	2	2.34E+08	11.8001	7.6328
rs4265959	2	2.37E+08	12.0493	8.7859
rs4571012	2	2.37E+08	12.0493	8.7859
rs7582574	2	2.37E+08	12.0493	8.7859
rs3791428	2	2.4E+08	11.3791	8.5947
rs9814792	3	13230140	8.8637	12.2257
rs1993332	3	16047075	12.3181	7.6698
rs7432308	3	18852566	9.8907	11.1824
rs985632	3	1.01E+08	11.6702	10.4373
rs1447690	3	1.36E+08	10.9145	9.8349
rs1521558	3	1.4E+08	11.5897	7.8288
rs9289668	3	1.45E+08	5.8226	11.457
rs2720016	3	1.65E+08	10.9208	8.2582
rs9815702	3	1.65E+08	13.0275	10.4671
rs9828937	3	1.78E+08	12.6578	8.0214
rs6765746	3	1.95E+08	11.2267	9.638
rs11721614	4	1467513	8.6198	14.2818
rs4692256	4	27420987	14.2539	10.0289
rs10014448	4	27436410	11.0424	6.3443
rs1441209	4	35161518	11.7974	8.8041
rs2028446	4	35171618	11.7974	8.8041
rs6531358	4	35178895	11.7974	8.8041
rs437943	4	35194664	14.4117	9.8206 *
rs13133564	4	44293233	7.7076	11.2275
rs7684647	4	44390774	10.9244	11.0012
rs6837549	4	72961856	6.8399	12.0011
rs6534625	4	81167176	11.5287	12.5165
rs223502	4	1.04E+08	8.4365	10.9241
rs7668591	4	1.31E+08	11.8169	6.6514
rs4863960	4	1.31E+08	11.9963	5.9746
rs1500837	4	1.43E+08	11.8975	10.6617
rs10003349	4	1.49E+08	11.9453	6.9761
rs2331452	4	1.7E+08	11.8859	10.8513
rs9685165	4	1.76E+08	11.4013	8.1003
rs10520376	4	1.79E+08	12.6578	8.6866
rs10026892	4	1.85E+08	12.5412	6.8959
rs10014577	4	1.9E+08	11.7737	12.7421
rs2242411	5	1806306	11.4752	9.0579
rs11741203	5	2271025	10.0517	11.5121
rs1038046	5	3198652	14.7924	9.4066
rs3777253	5	9174591	12.4472	8.8084
rs1530880	5	30024410	8.6314	12.1141
rs32030	5	66775094	11.16	10.069

rs2288394	5	79409559	12.3497	12.581
rs10035607	5	89151688	11.8338	8.7912
rs2112270	5	89210540	13.6601	11.2853
rs2652735	5	89448920	9.992	12.4917
rs1397793	5	90507207	14.1077	11.5833
rs216143	5	1.49E+08	8.2155	11.0431
rs1549919	5	1.49E+08	14.3011	14.9281
rs216124	5	1.49E+08	10.839	13.8769
rs1493383	5	1.53E+08	9.8907	10.9109
rs7725968	5	1.6E+08	11.7179	9.0845
rs1422531	5	1.67E+08	13.2609	10.6231
rs10516032	5	1.67E+08	10.84	10.5595
rs1422422	5	1.68E+08	13.6204	10.8793
rs4976592	5	1.68E+08	11.9604	11.1104
rs9313585	5	1.72E+08	8.8116	12.7451
rs2294418	6	11867362	12.7569	9.656
rs1014610	6	14889846	11.2806	12.384
rs2472814	6	14898195	11.2806	12.384
rs7756992	6	20787688	7.4222	11.8993
rs4712540	6	20871150	8.7341	11.2151
rs411326	6	32319295	5.724	11.0929
rs1997980	6	42259213	12.3148	8.629
rs4714885	6	45963492	10.9235	10.5299
rs12606	6	76681461	11.4601	7.8664
rs6932793	6	1.18E+08	16.5	10.301
rs1361285	6	1.18E+08	11.9874	7.698
rs7772821	6	1.33E+08	11.9604	14.4485
rs7765680	6	1.48E+08	11.6925	6.3005
rs3734805	6	1.52E+08	10.84	11.2794
rs2275925	6	1.61E+08	11.9082	9.557
rs9365597	6	1.64E+08	9.834	11.1816
rs10945919	6	1.64E+08	12.0676	11.14 *
rs1022614	6	1.71E+08	11.2806	7.3612
rs9460139	6	1.71E+08	11.2806	7.3612
rs4719607	7	2433192	10.978	8.171
rs10486281	7	8795946	12.4114	6.0643
rs11765761	7	8882102	12.6852	9.94
rs2350423	7	8890814	11.8149	6.2107
rs757139	7	24752595	11.6424	8.458
rs2040666	7	27741433	7.4729	12.7405
rs37476	7	38620485	6.8625	11.1556
rs17240051	7	38738851	9.622	12.3078
rs4141153	7	41241186	6.8086	11.9794
rs1006108	7	42935862	12.7388	14.6511
rs11763184	7	56307345	10.9067	8.49
rs12535057	7	75133689	3.8831	10.9371
rs4291215	7	83913179	10.9267	6.4752
rs2106295	7	93575940	12.7994	12.4671
rs854548	7	94570471	14.0268	12.8162 *
rs854555	7	94575042	12.7556	10.7698 *

rs976399	7	1.09E+08	5.311	13.0039	
rs3734969	7	1.28E+08	6.8014	10.858	
rs7823711	8	804529	10.84	9.4204	
rs2045637	8	2963188	12.3161	10.1076	
rs270083	8	3265672	7.0618	11.5485	
rs11778675	8	3283036	8.2374	11.5244	
rs7011009	8	5245904	13.1888	9.0037	
rs7014143	8	21632277	13.2609	10.6536	
rs6468026	8	31194597	10.9082	6.1671	
rs920983	8	82041225	6.9677	12.6603	
rs726723	8	84160382	9.7339	11.6893	
rs1348262	8	1.07E+08	6.5288	11.1128	*
rs868856	9	27479251	14.3011	9.6079	*
rs7046653	9	27480967	14.3011	9.6079	*
rs2814707	9	27526397	12.5972	7.1755	*
rs3849942	9	27533281	11.3791	6.3261	*
rs1565948	9	27549733	13.0826	8.6141	
rs774359	9	27551049	13.1879	8.0482	*
rs10116800	9	76263816	8.8095	10.9566	
rs4877453	9	88427471	6.6166	11.3602	
rs3789889	9	90650896	11.0155	9.0418	
rs823920	9	1.02E+08	16.1351	14.7782	
rs1584415	9	1.03E+08	11.3167	10.9699	
rs786963	9	1.13E+08	12.3658	11.8605	
rs10733595	9	1.13E+08	8.253	11.4821	
rs10983127	9	1.16E+08	11.6459	6.4868	
rs2809380	9	1.18E+08	12.3658	13.9581	
rs1572049	9	1.36E+08	11.2806	8.824	
rs764189	10	6396216	11.1462	8.0265	
rs751595	10	50634662	13.7962	12.6919	
rs4935116	10	56071276	11.3791	8.5977	
rs4237311	10	68277344	4.3845	11.0135	
rs10510103	10	1.24E+08	11.8149	7.4958	
rs2542615	10	1.31E+08	12.2342	7.6976	
rs2676441	10	1.31E+08	13.7434	8.2129	
rs4150579	11	18313756	11.3478	7.8332	
rs1400316	11	83264485	13.4625	14.1234	
rs7942499	11	83287906	11.9601	10.7108	
rs790377	11	83310837	12.5738	11.0915	
rs790381	11	83312631	11.0516	9.6708	
rs10791305	11	99669167	12.6438	6.1526	
rs593499	11	99678704	13.6162	6.9233	
rs7484006	11	99680579	12.7994	6.5934	
rs1145411	11	99752169	12.8455	8.0373	
rs7951671	11	99761460	11.7792	7.2557	
rs518677	11	99792469	10.9802	6.4761	
rs2238092	12	2593527	8.0318	11.0852	
rs6487429	12	24885299	11.0162	12.3352	
rs7967945	12	24887168	11.0162	12.3352	
rs3809140	12	26169711	12.3275	7.7664	

rs10877921	12	61526939	13.1888	9.3795
rs699619	12	61665783	10.0336	11.6704
rs812796	12	61685535	10.0336	11.6704
rs1826733	12	62909775	13.0219	8.227
rs1657050	12	62913326	11.7445	10.8877
rs464817	12	63601564	11.8989	7.2675
rs1596727	12	63609374	13.1404	9.796
rs10878503	12	65441877	6.6269	10.8523
rs2056376	12	77386126	6.6093	10.8312
rs1796135	12	77491016	9.7044	11.3696
rs10861467	12	1.05E+08	9.2159	16.0954
rs10850503	12	1.09E+08	12.2118	7.4619
rs1396566	12	1.26E+08	11.5807	6.2766
rs736081	13	23557726	12.0031	9.0897
rs9601665	13	81128027	11.8001	10.6033
rs12860685	13	92481066	11.3046	6.1067
rs466432	13	92488907	11.6925	6.9767
rs7328769	13	92495230	11.6925	6.9767
rs9516155	13	92502207	13.18	9.6477
rs877856	13	98792031	8.0727	11.5728
rs552125	13	1.1E+08	11.447	9.5168
rs3811266	14	21816895	11.3542	6.6369
rs12436395	14	29775777	12.0534	9.6899
rs8012626	14	29822859	16.8704	15.9659
rs179071	14	29850480	17.2337	18.8178
rs1152455	14	55591814	11.3397	7.3862
rs2622324	14	55599846	10.9235	6.6062
rs7143202	14	58563776	11.7371	10.7672
rs10135523	14	87884771	10.9267	9.8655
rs857230	14	97685742	11.3268	8.0729
rs10144091	14	97710205	11.7737	6.1217
rs857229	14	97740677	11.3167	7.7509
rs345788	15	31179080	5.6069	10.9842
rs2045014	15	34777452	7.0447	12.1361
rs970497	15	36269186	12.9809	10.6152
rs2067885	15	48009237	12.5555	9.1978
rs8041687	15	86999564	10.84	11.8837
rs12101909	15	90006111	11.7737	8.0713
rs8051485	16	226983	11.9068	9.2788
rs1528345	16	8439436	11.098	7.9498
rs2719647	16	10739945	10.563	13.3059
rs746557	16	12356323	5.6433	11.143
rs2106949	16	18032061	10.5055	11.5145
rs205138	16	25523872	11.8263	8.5203
rs11647703	16	49471078	8.0129	11.1778
rs6499813	16	54549066	11.9025	10.4896
rs12932558	16	54600670	14.0344	13.8228
rs7200930	16	75105130	14.3296	11.1978
rs898962	16	80055453	10.906	5.4675
rs9930233	16	81438595	9.8882	11.0465

rs8054307	16	82173233	13.6315	9.6879
rs372395	16	84332418	8.6116	11.2949
rs2010409	17	23413267	8.2079	11.6711
rs8064241	17	43288340	11.9882	11.7869
rs998113	17	52520226	11.1973	10.9295
rs3826296	17	52524480	11.1973	10.9295
rs17494053	17	54922333	11.2806	10.4875
rs8081909	17	64299023	15.9986	10.8933
rs2120192	17	64301554	15.9986	10.8933
rs10512574	17	65849559	10.9709	7.1464
rs2354762	17	69490564	6.405	11.173
rs3743990	17	71102780	10.84	9.7642
rs2589142	17	76458857	8.8612	12.4459
rs11081037	18	3343012	5.6093	11.27
rs692849	18	6986232	12.6852	9.6533
rs450015	18	7154754	13.6325	9.0771
rs390537	18	7157130	11.8311	8.8638
rs676147	18	10114648	12.2188	11.1457
rs659259	18	10116122	8.3211	11.0794
rs10221443	18	25458399	12.2528	7.7879
rs2684847	18	43024315	10.5055	13.1216
rs1893948	18	43963551	11.2712	9.819
rs5009257	18	58390947	10.9805	11.1178
rs8087441	18	68042481	9.9297	11.644
rs1667903	18	72977686	8.2929	12.1773
rs2303146	19	7453074	11.034	4.8976
rs3745356	19	7459021	11.034	4.8976
rs11878360	19	7461092	11.034	4.8976
rs1107920	19	38382536	13.7253	8.9639
rs12609177	19	38397295	11.0155	9.5737
rs10418743	19	60245180	7.7457	14.5494
rs1189	19	60247966	9.249	16.435
rs260441	19	63432982	6.7222	13.0223
rs6084265	20	3018898	10.856	8.1294
rs8121939	20	6162234	13.0401	7.9422
rs6117741	20	7211727	14.5965	9.846
rs2423191	20	7241535	16.4764	11.4141
rs6054907	20	7242973	16.6712	12.0198
rs4813825	20	7245420	13.4013	10.6112
rs2423214	20	7290895	16.442	11.1033
rs6105055	20	13168348	11.2806	11.3352
rs6109781	20	13181011	14.2305	12.905
rs6138150	20	23795009	14.4495	9.741 *
rs6028945	20	38254219	11.6235	7.6575 *
rs237730	20	47373897	10.839	9.5935
rs205795	20	55806890	10.9235	8.6792
rs416707	21	21048681	14.1981	10.5042
rs2298686	21	41854057	7.4059	10.8509
rs1003854	21	44534535	12.9809	11.1777
rs450718	22	16868534	12.5143	7.7359

rs464805	22	21576411	13.1888	8.4164
rs370534	22	21581605	13.1888	8.4164
rs5753298	22	29453317	11.3791	7.8109
rs7364180	22	40543356	11.2202	12.7676

Note: 1. The marked SNPs are also included in Table 2 in the main text.