

ONLINE SUPPLEMENTARY DATA

Supplementary Table 1: The independent genome-wide significant single SNPs in RACI-UK*.

Order	SNP	chr	pos	OR	P _{gwas}	P _{final}
1	rs6931277	6	32 615 580	2.53	7.23E-182	2.30E-191
2	rs17496549	6	32 441 931	1.43	5.17E-18	7.24E-59
3	rs2476601	1	113 834 946	1.72	1.96E-37	1.07E-28
4	rs2596560	6	31 387 541	1.22	4.35E-10	1.26E-19
5	rs1431403	6	33 079 254	0.77	1.05E-16	7.62E-11
6	rs71624119	5	56 144 903	0.8	1.13E-10	7.41E-09
7	rs9275602	6	32 715 035	1.37	8.86E-21	1.54E-06
8	rs928722	6	137 652 695	1.2	4.81E-08	1.62E-06
9	rs2524084	6	31 273 862	1.3	1.33E-19	1.88E-05
10	rs4540292	6	31 349 405	1.17	3.46E-08	5.74E-05
11	rs2844804	6	29 974 349	1.21	2.30E-11	7.96E-05
12	rs17499655	6	32 704 358	1.31	4.05E-12	3.46E-05
13	rs10484565	6	32 827 255	1.52	6.81E-18	8.29E-05
14	rs13196329	6	32 357 594	1.9	1.26E-09	3.84E-04
15	rs17422797	6	32 297 751	1.56	3.49E-19	4.25E-05
16	rs3819721	6	32 837 021	1.63	2.37E-56	1.18E-03
17	rs2235359	6	28 247 863	0.76	1.71E-10	3.27E-03
18	rs9276826	6	32 862 791	1.29	1.24E-08	3.42E-03
19	rs1503836	1	113 998 876	1.19	1.67E-09	1.06E-02
20	rs13193645	6	32 628 547	1.27	1.81E-10	1.36E-02

*: Order - the order of SNPs selected in the forward selection process;

chr: chromosome; pos: base pair position; OR: odds ratio

P_{gwas}: the P value from the GWAS analysis;

P_{final}: the P value in the model fitting all independent SNPs

Supplementary Table 2: Immunochip-wide significant non-MHC SNP pairs in RACI-UK and their replication in RACI-US and RACI-SE*.

SNP1	SNP2	chr1	pos1	chr2	pos2	P_SNP1_UK	P_SNP2_UK	P _{int} _UK	df _{int} _UK	P_SNP1_US	P_SNP2_US	P _{int} _US	df _{int} _US	P_SNP1_SE	P_SNP2_SE	P _{int} _SE	df _{int} _SE
rs2244013	rs6688452	1	3425966	1	24910443	2.6E-01	6.2E-01	6.8E-09	4	1.9E-01	3.4E-01	2.3E-01	4	8.3E-01	3.5E-01	6.5E-01	4
rs41283518	rs4663254	1	113913179	2	237355421	9.8E-01	5.5E-01	1.8E-09	4	2.9E-01	2.3E-01	1.2E-01	3	4.5E-01	5.1E-01	5.0E-01	4
rs4656078	rs1010779	1	89013391	7	68973967	3.2E-01	4.9E-01	2.1E-10	4	1.1E-01	4.5E-01	7.1E-01	4	5.6E-01	3.5E-01	1.0E-01	4
rs6681720	rs17340646	1	173415283	7	129082460	2.0E-01	7.4E-02	9.1E-09	4	1.8E-02	3.7E-01	5.4E-02	3	7.9E-01	3.1E-01	6.5E-01	4
rs11993	rs17340646	1	173418019	7	129082460	2.2E-01	7.4E-02	8.9E-09	4	1.5E-02	3.6E-01	6.3E-02	3	8.3E-01	3.1E-01	5.6E-01	4
rs4279882	rs17340646	1	173418803	7	129082460	2.1E-01	7.4E-02	8.7E-09	4	1.2E-02	4.1E-01	6.0E-02	3	N/A	N/A	N/A	N/A
rs6425230	rs17340646	1	173418899	7	129082460	2.8E-01	7.2E-02	4.9E-09	4	3.4E-02	4.1E-01	3.6E-02	4	6.9E-01	3.7E-01	4.6E-01	4
rs12136685	rs6496518	1	8131732	15	88688433	4.1E-01	2.1E-01	3.7E-09	4	4.1E-01	4.7E-01	8.9E-01	4	5.9E-01	6.5E-01	7.9E-02	4
rs12136685	rs4244884	1	8131732	15	88689059	4.1E-01	3.0E-01	2.6E-09	4	4.1E-01	4.8E-01	8.9E-01	4	5.9E-01	6.9E-01	8.5E-02	4
rs12133365	rs6496518	1	8131760	15	88688433	4.1E-01	2.1E-01	3.6E-09	4	4.3E-01	4.6E-01	8.9E-01	4	5.9E-01	6.5E-01	7.9E-02	4
rs12133365	rs4244884	1	8131760	15	88689059	4.1E-01	3.0E-01	2.6E-09	4	4.3E-01	4.8E-01	8.9E-01	4	5.9E-01	6.9E-01	8.7E-02	4
rs12144409	rs6496518	1	8131829	15	88688433	4.0E-01	2.1E-01	3.8E-09	4	4.2E-01	4.7E-01	8.9E-01	4	5.9E-01	6.5E-01	7.9E-02	4
rs12144409	rs4244884	1	8131829	15	88689059	4.0E-01	3.0E-01	2.7E-09	4	4.2E-01	4.9E-01	8.9E-01	4	5.9E-01	6.9E-01	8.5E-02	4
rs11121105	rs6496518	1	8132035	15	88688433	4.8E-01	2.1E-01	3.6E-09	4	5.0E-01	4.6E-01	8.7E-01	4	5.9E-01	6.5E-01	9.8E-02	4
rs11121105	rs4244884	1	8132035	15	88689059	4.8E-01	3.0E-01	2.6E-09	4	5.0E-01	4.8E-01	8.7E-01	4	5.9E-01	6.9E-01	1.0E-01	4
rs7534867	rs6496518	1	8132566	15	88688433	5.0E-01	2.1E-01	3.2E-09	4	4.4E-01	4.8E-01	8.9E-01	4	5.8E-01	6.6E-01	7.9E-02	4
rs7534867	rs4244884	1	8132566	15	88689059	5.0E-01	3.0E-01	2.2E-09	4	4.4E-01	4.9E-01	8.9E-01	4	5.8E-01	7.1E-01	8.5E-02	4
rs12566369	rs6496518	1	8132865	15	88688433	4.5E-01	2.1E-01	6.9E-09	4	3.0E-01	4.7E-01	7.6E-01	4	5.6E-01	6.9E-01	7.2E-02	4
rs12566369	rs4244884	1	8132865	15	88689059	4.5E-01	3.0E-01	4.9E-09	4	3.0E-01	4.9E-01	7.6E-01	4	5.6E-01	7.4E-01	7.9E-02	4
rs4488803	rs1974226	3	58232625	6	52190537	5.5E-01	4.1E-01	1.9E-10	4	1.9E-01	1.0E-02	6.2E-01	4	9.3E-01	1.1E-02	9.3E-01	4
rs750870	rs17644694	3	143081209	14	43352880	1.9E-01	9.1E-01	7.2E-09	4	4.8E-01	1.0E-01	8.5E-01	4	1.7E-01	9.8E-01	1.9E-01	4
rs750870	rs11157350	3	143081209	14	43355572	1.9E-01	9.1E-01	9.8E-09	4	4.8E-01	1.3E-01	7.9E-01	4	1.7E-01	9.8E-01	1.9E-01	4
rs67042607	rs11246234	6	167001916	11	645336	5.5E-01	1.6E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs9459835	rs11246234	6	167004063	11	645336	5.6E-01	1.5E-01	1.1E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs4710171	rs11246234	6	167016698	11	645336	4.1E-01	1.6E-01	4.8E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs9459839	rs11246234	6	167018341	11	645336	5.0E-01	1.6E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs1894603	rs11246234	6	167021198	11	645336	5.4E-01	1.5E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

rs7749278	rs11246234	6	167021837	11	645336	5.6E-01	1.6E-01	1.1E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs3833941	rs11246234	6	167022310	11	645336	5.5E-01	1.6E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs2301436	rs11246234	6	167024500	11	645336	5.5E-01	1.5E-01	9.8E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs2282861	rs11246234	6	167026640	11	645336	5.5E-01	1.6E-01	9.5E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs2282860	rs11246234	6	167026756	11	645336	5.4E-01	1.7E-01	9.5E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs9459845	rs11246234	6	167027013	11	645336	5.4E-01	1.6E-01	9.3E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs9457257	rs11246234	6	167027248	11	645336	5.2E-01	1.6E-01	9.8E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ccc- 6N/A67360950- T-A	rs11246234	6	167027473	11	645336	5.2E-01	1.6E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs61710173	rs11246234	6	167027476	11	645336	5.2E-01	1.6E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs9459846	rs11246234	6	167027535	11	645336	5.2E-01	1.6E-01	9.5E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs2181059	rs11246234	6	167028136	11	645336	5.5E-01	1.6E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs2237277	rs11246234	6	167028619	11	645336	5.5E-01	1.6E-01	1.0E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs2237273	rs11246234	6	167029529	11	645336	5.2E-01	1.6E-01	9.5E-09	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs9295384	rs11246234	6	167034625	11	645336	4.8E-01	1.6E-01	1.1E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs34458103	rs11246234	6	167034890	11	645336	4.9E-01	1.6E-01	1.1E-08	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
rs6466198	rs2173577	7	107839681	8	74135771	7.2E-01	8.9E-02	6.6E-09	4	4.8E-01	3.9E-01	1.0E+00	4	2.8E-01	2.8E-01	2.5E-01	4
rs6466198	rs2173576	7	107839681	8	74135805	7.1E-01	1.0E-01	6.9E-09	4	4.8E-01	3.1E-01	1.0E+00	4	2.8E-01	3.2E-01	2.6E-01	4
rs10269037	rs2836831	7	37336846	21	39014453	4.6E-01	8.3E-01	2.9E-09	4	9.3E-01	8.9E-01	7.9E-01	4	9.8E-01	2.6E-01	5.8E-02	4
rs10239448	rs2836831	7	37336878	21	39014453	4.6E-01	8.3E-01	2.5E-09	4	9.3E-01	8.9E-01	7.9E-01	4	9.8E-01	2.7E-01	5.6E-02	4
rs4720243	rs2836831	7	37337976	21	39014453	4.2E-01	8.3E-01	4.2E-09	4	9.5E-01	8.9E-01	7.9E-01	4	9.8E-01	2.9E-01	6.5E-02	4
rs7804200	rs2836831	7	37339514	21	39014453	4.2E-01	8.3E-01	2.7E-09	4	9.5E-01	8.9E-01	7.9E-01	4	9.8E-01	2.7E-01	5.2E-02	4
rs2133165	rs3790036	11	36530697	14	94306784	5.6E-01	2.1E-01	3.3E-09	4	1.4E-01	7.4E-01	5.6E-01	4	3.4E-01	1.5E-01	4.1E-01	3
rs17547025	rs9806697	12	102932492	15	47778596	5.0E-02	2.1E-01	8.3E-09	4	3.2E-01	2.4E-01	2.6E-02	4	5.2E-01	7.6E-01	9.5E-01	4

*: SNP1 (SNP2): the first (second) epistatic SNP; chr1 (chr2): the chromosome of SNP1 (SNP2); pos1 (pos2): the base pair position of SNP1 (SNP2); P_SNP1_UK, P_SNP2_UK, P_int_UK, df_int_UK: the P value of SNP1, SNP2 and their interactions and degrees of freedom of the interactions in RACI-UK; P_SNP1_US, P_SNP2_US, P_int_US, df_int_US: the P value of SNP1, SNP2 and their interactions and degrees of freedom of the interactions in RACI-US; P_SNP1_SE, P_SNP2_SE, P_int_SE, df_int_SE: the P value of SNP1, SNP2 and their interactions and degrees of freedom of the interactions in RACI-SE; N/A: at least one SNP had no genotypes available; epistatic pair in bold was reported.

Supplementary Table 3: non-MHC local interactions in RACI-UK and their replication in RACI-US and RACI-SE.

SNP1	SNP2	chr	pos1	pos2	P_SNP1_UK	P_SNP2_UK	P _{int} _UK	df _{int} _UK	LD	P_SNP1_US	P_SNP2_US	P _{int} _US	df _{int} _US	P_SNP1_SE	P_SNP2_SE	P _{int} _SE	df _{int} _SE
rs10158092	rs6667256	1	19211261	19868189	5.5E-01	5.1E-01	1.8E-06	4	0.00	1.5E-01	2.3E-01	6.5E-01	4	2.0E-01	9.1E-01	5.4E-02	4
rs10158092	rs6670226	1	19211261	19868209	5.5E-01	5.0E-01	1.9E-06	4	0.00	1.5E-01	2.8E-01	6.3E-01	4	2.0E-01	9.1E-01	5.4E-02	4
rs10158092	rs7553638	1	19211261	19872444	5.5E-01	4.9E-01	2.0E-06	4	0.00	1.6E-01	2.5E-01	6.0E-01	4	2.0E-01	8.9E-01	5.4E-02	4
rs10158092	rs4654903	1	19211261	19874497	5.5E-01	5.2E-01	1.1E-06	4	0.00	1.6E-01	2.5E-01	6.2E-01	4	2.0E-01	8.9E-01	5.4E-02	4
rs10158092	rs6674040	1	19211261	19875420	5.5E-01	5.2E-01	1.1E-06	4	0.00	1.6E-01	2.5E-01	6.2E-01	4	2.0E-01	8.9E-01	5.4E-02	4
rs75328060	rs41458747	1	67231386	67414659	5.0E-01	3.7E-01	3.5E-06	4	0.01	2.1E-01	2.2E-01	1.1E-01	4	2.5E-01	1.9E-01	4.5E-01	3
rs78254060	rs41458747	1	67232186	67414659	5.6E-01	3.7E-01	4.0E-06	4	0.01	2.0E-01	2.3E-01	1.1E-01	4	2.6E-01	1.9E-01	4.6E-01	3
rs11465804	rs17129935	1	67236843	67385724	6.6E-01	3.5E-01	6.6E-06	4	0.01	4.0E-01	2.0E-01	8.9E-02	4	1.2E-01	2.1E-01	5.2E-01	3
rs11465804	rs41458747	1	67236843	67414659	6.6E-01	4.0E-01	1.6E-06	4	0.01	4.0E-01	2.1E-01	1.4E-01	4	1.3E-01	2.1E-01	5.2E-01	3
rs11209026	rs17129935	1	67240275	67385724	6.9E-01	3.5E-01	8.9E-06	4	0.01	6.5E-01	2.1E-01	2.5E-01	4	9.3E-02	2.1E-01	2.8E-01	3
rs11209026	rs41458747	1	67240275	67414659	6.9E-01	4.0E-01	2.3E-06	4	0.01	6.5E-01	2.1E-01	3.3E-01	4	1.0E-01	2.1E-01	2.9E-01	3
rs80174646	rs17129935	1	67242472	67385724	6.3E-01	3.1E-01	9.3E-06	4	0.01	4.0E-01	2.3E-01	1.4E-01	4	1.4E-01	1.9E-01	3.1E-01	3
rs80174646	rs41458747	1	67242472	67414659	6.2E-01	3.7E-01	2.5E-06	4	0.01	4.1E-01	2.3E-01	2.2E-01	4	1.5E-01	1.9E-01	3.2E-01	3
rs9988642	rs17129935	1	67260421	67385724	7.1E-01	3.2E-01	3.3E-06	4	0.01	3.8E-01	2.3E-01	1.2E-01	4	1.3E-01	2.0E-01	2.9E-01	3
rs9988642	rs41458747	1	67260421	67414659	7.1E-01	3.7E-01	8.1E-07	4	0.01	3.9E-01	2.3E-01	1.9E-01	4	1.4E-01	2.0E-01	3.0E-01	3
rs72685702	rs10108	1	113376639	113973708	6.3E-07	3.0E-03	6.3E-06	4	0.01	6.9E-05	1.1E-01	1.2E-01	4	3.7E-01	4.1E-02	6.6E-01	4
rs1230661	rs57195252	1	113642968	113938965	2.1E-14	3.6E-04	4.8E-06	4	0.12	2.2E-03	3.2E-01	8.5E-05	4	2.8E-06	2.8E-02	4.7E-01	4
rs2359167	rs57195252	1	113756894	113938965	3.0E-14	6.2E-04	5.1E-06	4	0.12	3.0E-03	3.3E-01	4.4E-05	4	1.0E-06	3.5E-02	5.2E-01	4
rs61817589	rs57195252	1	113758713	113938965	2.2E-09	1.6E-09	5.0E-06	4	0.12	7.9E-03	6.6E-02	4.8E-05	4	1.9E-03	3.6E-05	4.9E-01	4
rs4145859	rs57195252	1	113769813	113938965	1.2E-14	4.1E-04	4.9E-06	4	0.12	2.3E-03	3.1E-01	3.2E-05	4	1.5E-06	3.6E-02	5.1E-01	4
rs12041547	rs57195252	1	113773598	113938965	1.7E-14	4.0E-04	5.0E-06	4	0.12	3.1E-03	3.0E-01	5.5E-05	4	1.8E-06	3.3E-02	5.2E-01	4
rs1217413	rs57195252	1	113815128	113938965	6.9E-15	4.6E-04	5.4E-06	4	0.12	2.9E-03	3.2E-01	6.0E-05	4	2.9E-06	3.0E-02	4.8E-01	4
rs2488457	rs57195252	1	113872746	113938965	5.1E-16	1.1E-03	3.7E-06	4	0.13	5.8E-03	3.1E-01	2.8E-04	4	2.4E-05	1.9E-02	3.2E-01	4
rs2488457	rs17032048	1	113872746	113984753	3.0E-11	5.8E-08	6.9E-06	4	0.11	1.9E-02	1.6E-01	1.4E-05	4	3.0E-03	2.1E-04	4.1E-01	4
rs2358816	rs57195252	1	113876746	113938965	5.9E-16	1.2E-03	5.5E-06	4	0.13	5.9E-03	2.8E-01	1.3E-04	4	2.4E-05	1.9E-02	3.0E-01	4
rs2358816	rs17032048	1	113876746	113984753	3.7E-11	5.1E-08	8.7E-06	4	0.11	1.7E-02	1.6E-01	7.4E-06	4	3.2E-03	2.1E-04	3.9E-01	4
rs12711109	rs6840978	4	122091415	122633552	1.4E-01	4.8E-02	2.9E-06	4	0.04	6.2E-01	1.1E-01	3.2E-01	4	2.0E-01	9.1E-02	2.7E-02	4
rs12711109	rs10518402	4	122091415	122633635	3.4E-01	2.4E-02	2.5E-06	4	0.04	5.5E-01	1.6E-01	3.4E-01	4	1.0E-01	1.7E-01	2.8E-02	4

rs58729991	rs6840978	4	122094382	122633552	1.6E-01	4.7E-02	3.0E-06	4	0.04	6.6E-01	1.1E-01	3.1E-01	4	2.0E-01	9.1E-02	2.7E-02	4
rs58729991	rs10518402	4	122094382	122633635	3.6E-01	2.3E-02	2.6E-06	4	0.04	5.9E-01	1.6E-01	3.3E-01	4	1.0E-01	1.7E-01	2.8E-02	4
rs11931332	rs10518402	4	122095572	122633635	3.8E-01	2.3E-02	3.5E-06	4	0.04	4.4E-01	1.6E-01	2.2E-01	4	1.2E-01	1.7E-01	3.0E-02	4
rs11936230	rs6840978	4	122095600	122633552	1.4E-01	4.7E-02	3.0E-06	4	0.04	6.3E-01	1.1E-01	3.0E-01	4	2.1E-01	9.3E-02	2.6E-02	4
rs11936230	rs10518402	4	122095600	122633635	3.4E-01	2.3E-02	2.5E-06	4	0.04	5.6E-01	1.6E-01	3.2E-01	4	1.1E-01	1.8E-01	2.8E-02	4
rs252160	rs75970310	5	150707683	151088562	1.6E-01	7.9E-02	9.3E-06	4	0.00	8.5E-02	3.1E-01	2.1E-01	4	6.0E-01	2.1E-01	6.6E-01	4
rs252160	rs77102485	5	150707683	151095151	1.6E-01	2.3E-01	5.1E-06	4	0.00	7.9E-02	2.5E-01	3.2E-01	4	6.8E-01	1.7E-01	3.5E-01	4
rs1569699	rs1459042	6	20679079	21236316	4.1E-01	3.5E-01	2.3E-06	4	0.00	3.0E-01	4.3E-01	1.9E-01	4	2.5E-02	8.7E-01	6.6E-01	4
rs1569699	rs1459042	6	20679079	21236316	4.1E-01	3.5E-01	2.3E-06	4	0.00	3.0E-01	4.3E-01	1.9E-01	4	2.5E-02	8.7E-01	6.6E-01	4
rs9350271	rs1459042	6	20682933	21236316	4.6E-01	2.8E-01	2.3E-06	4	0.00	3.7E-01	4.5E-01	1.7E-01	4	2.0E-02	8.5E-01	7.1E-01	4
rs9350271	rs1459042	6	20682933	21236316	4.6E-01	2.8E-01	2.3E-06	4	0.00	3.7E-01	4.5E-01	1.7E-01	4	2.0E-02	8.5E-01	7.1E-01	4
rs9356744	rs1459042	6	20685255	21236316	4.3E-01	3.0E-01	2.1E-06	4	0.00	3.7E-01	4.5E-01	1.4E-01	4	2.2E-02	8.7E-01	6.5E-01	4
rs9356744	rs1459042	6	20685255	21236316	4.3E-01	3.0E-01	2.1E-06	4	0.00	3.7E-01	4.5E-01	1.4E-01	4	2.2E-02	8.7E-01	6.5E-01	4
rs74774781	rs2922248	6	126969352	127632845	6.6E-01	8.5E-01	2.8E-06	4	0.00	3.0E-01	2.7E-01	7.8E-01	4	5.1E-01	1.6E-01	3.1E-01	4
rs74774781	rs2922248	6	126969352	127632845	6.6E-01	8.5E-01	2.8E-06	4	0.00	3.0E-01	2.7E-01	7.8E-01	4	5.1E-01	1.6E-01	3.1E-01	4
rs61198215	rs2529395	7	50290101	50624341	8.3E-01	7.9E-01	1.6E-06	4	0.00	N/A	N/A	N/A	N/A	3.5E-02	1.8E-01	7.9E-01	4
rs2366034	rs2529396	7	50291660	50619631	7.8E-01	6.8E-01	6.5E-06	4	0.00	6.6E-01	1.4E-02	5.2E-01	4	2.8E-02	1.7E-01	8.9E-01	4
rs2366034	rs2529395	7	50291660	50624341	7.8E-01	7.8E-01	6.8E-07	4	0.00	6.5E-01	1.2E-02	6.0E-01	4	3.2E-02	1.7E-01	7.9E-01	4
rs117518292	rs17799348	8	10967931	11476012	8.3E-02	3.5E-01	1.8E-06	4	0.00	1.8E-01	1.1E-02	8.9E-01	3	1.0E-01	7.4E-02	9.3E-01	3
rs16922296	rs111880687	8	55867106	55951597	1.3E-01	7.4E-01	3.7E-06	4	0.04	N/A	N/A	N/A	N/A	7.6E-01	1.4E-01	3.2E-01	3
rs7832803	rs6651252	8	128149394	128554935	4.8E-01	3.1E-03	5.8E-06	4	0.00	5.2E-02	7.6E-03	3.0E-01	4	1.3E-01	4.5E-01	6.8E-01	4
rs1272633	rs60472814	10	79305751	79317687	6.8E-01	6.6E-01	8.9E-06	4	0.02	4.7E-02	2.5E-01	6.9E-02	4	6.6E-01	1.6E-02	8.3E-01	4
rs117397946	rs9567450	13	43988893	44634608	5.0E-01	4.1E-01	2.6E-06	4	0.00	5.4E-01	6.3E-01	6.0E-01	2	4.8E-01	1.9E-02	2.2E-02	4
rs1038037	rs7150847	14	97988123	98348719	8.1E-01	4.2E-01	5.1E-06	4	0.00	4.1E-01	6.8E-01	7.2E-01	4	7.1E-01	8.9E-01	3.1E-01	4
rs1038037	rs10138940	14	97988123	98350498	8.1E-01	4.9E-01	4.6E-06	4	0.00	4.2E-01	6.9E-01	7.1E-01	4	6.9E-01	8.7E-01	3.0E-01	4
rs73164749	rs7289095	22	30181669	30262733	8.9E-02	6.2E-02	7.8E-06	4	0.13	1.6E-01	8.7E-01	8.9E-01	4	9.1E-01	5.6E-01	5.6E-01	4
rs73164752	rs7289095	22	30184512	30262733	9.3E-01	6.6E-02	4.6E-06	4	0.15	7.9E-02	8.7E-01	4.8E-01	3	4.3E-01	5.6E-01	3.8E-01	3

*: SNP1 (SNP2): the first (second) epistatic SNP; chr: the chromosome of the local interaction SNPs; pos1 (pos2): the base pair position of SNP1 (SNP2); P_SNP1_UK, P_SNP2_UK, P_{int}_UK, df_{int}_UK: the P value of SNP1, SNP2 and their interactions and degrees of freedom of the interactions in RACI-UK; P_SNP1_US, P_SNP2_US, P_{int}_US, df_{int}_US: the P value of SNP1, SNP2 and their interactions and degrees of freedom of the interactions in RACI-US; P_SNP1_SE, P_SNP2_SE, P_{int}_SE, df_{int}_SE: the P value of SNP1, SNP2 and their interactions and degrees of freedom of the interactions in RACI-SE; N/A: at least one SNP had no genotypes available; epistatic pair in bold was reported