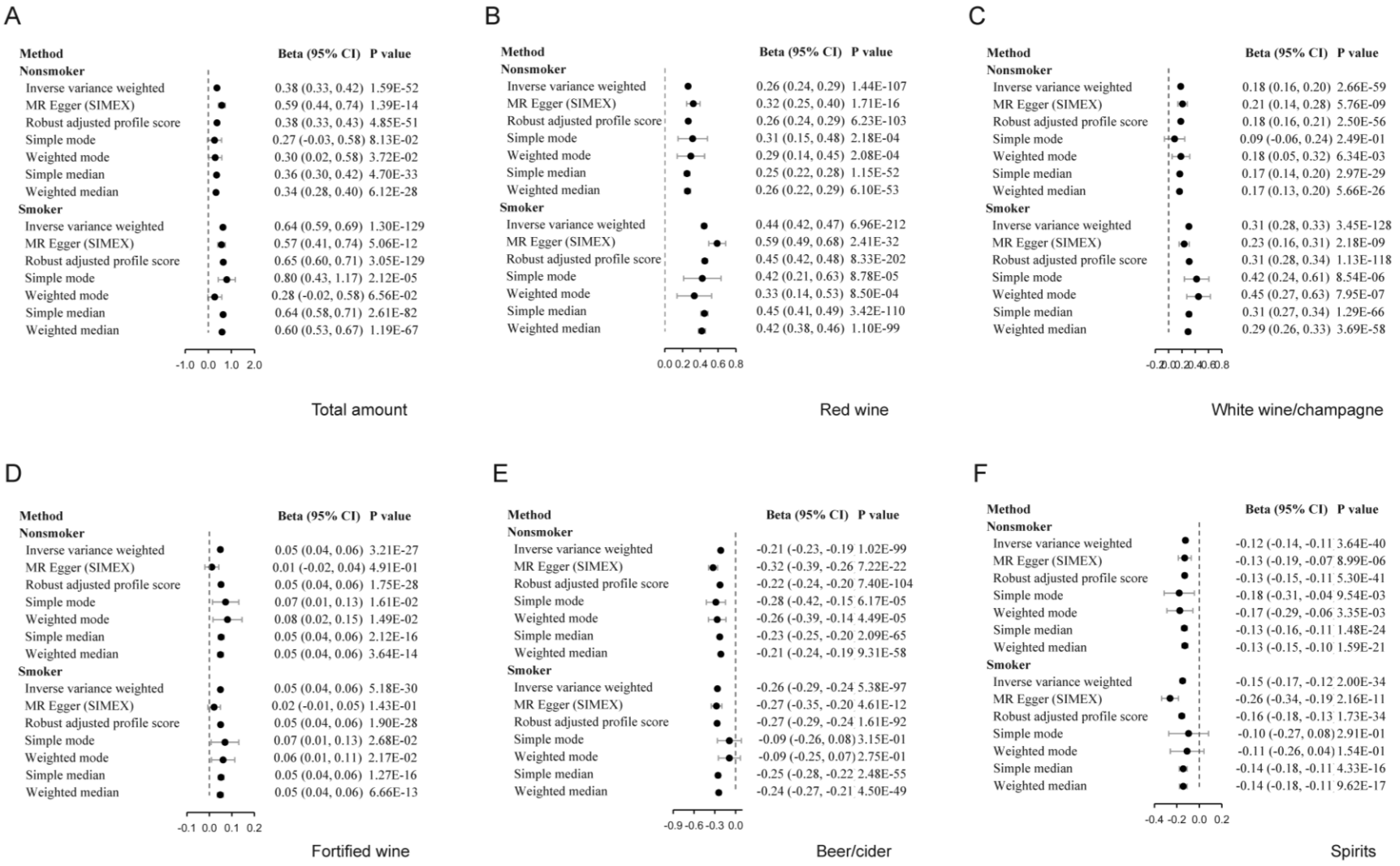
Supplementary information

Supplementary Table 1 Educational attainment measures*

1) College or University degree	1) ISCED 5 (20)
2) A levels/AS levels or equivalent	2) ISCED 3
3) O levels/GCSEs or equivalent	3) ISCED 2
4) CSEs or equivalent	4) ISCED 2
5) NVQ or HND or HNC or equivalent	5) ISCED (19)
6) Other prof. qual. eg: nursing, teaching	6) ISCED 4
7) None of the above	7) ISCED 1
8) Prefer not to answer	8) Excluded

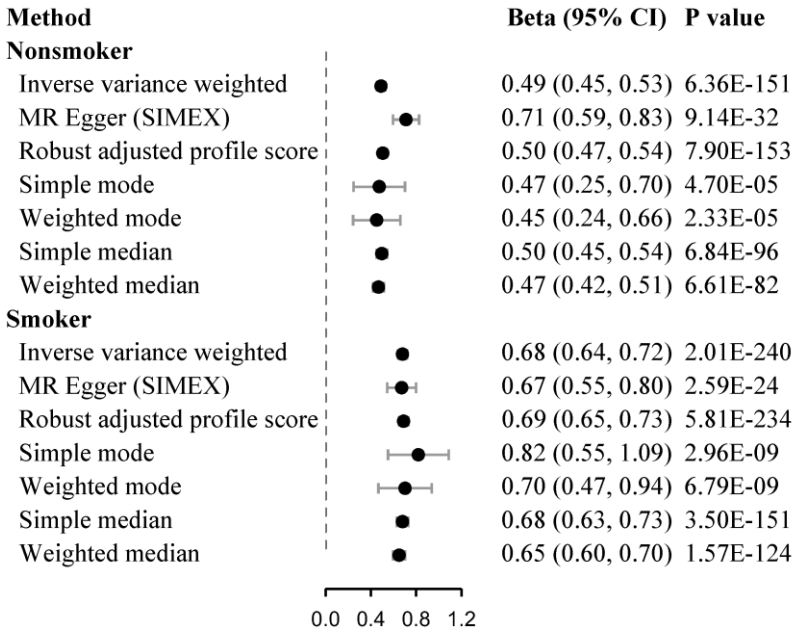
*Data were obtained under question: “Which of the following qualifications do you have? (You can select more than one)”.

Categories are mapped onto years of education using the ISCED scale as follows: none of the above (no qualifications) = 7 years of education; CSEs or equivalent = 10 years; O levels/GCSEs or equivalent = 10 years; A levels/AS levels or equivalent = 13 years; other professional qualification = 15 years; NVQ or HNC or equivalent = 19 years; college or university degree = 20 years of education. Highest category assigned to respondents who selected multiple options[1].

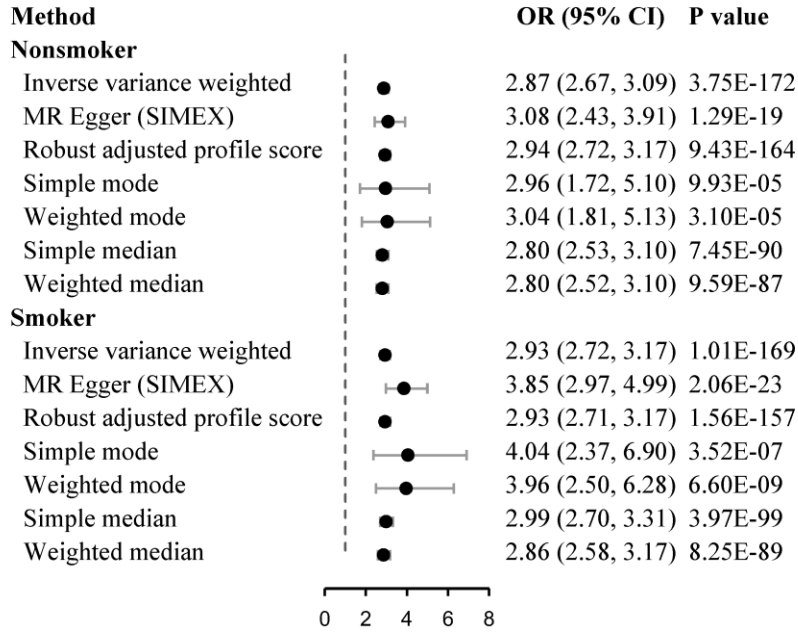


Supplementary Figure 1 Associations of educational attainment and amount of total and specific alcohol intake from Mendelian Randomization (MR) analyses stratified by smoking status.

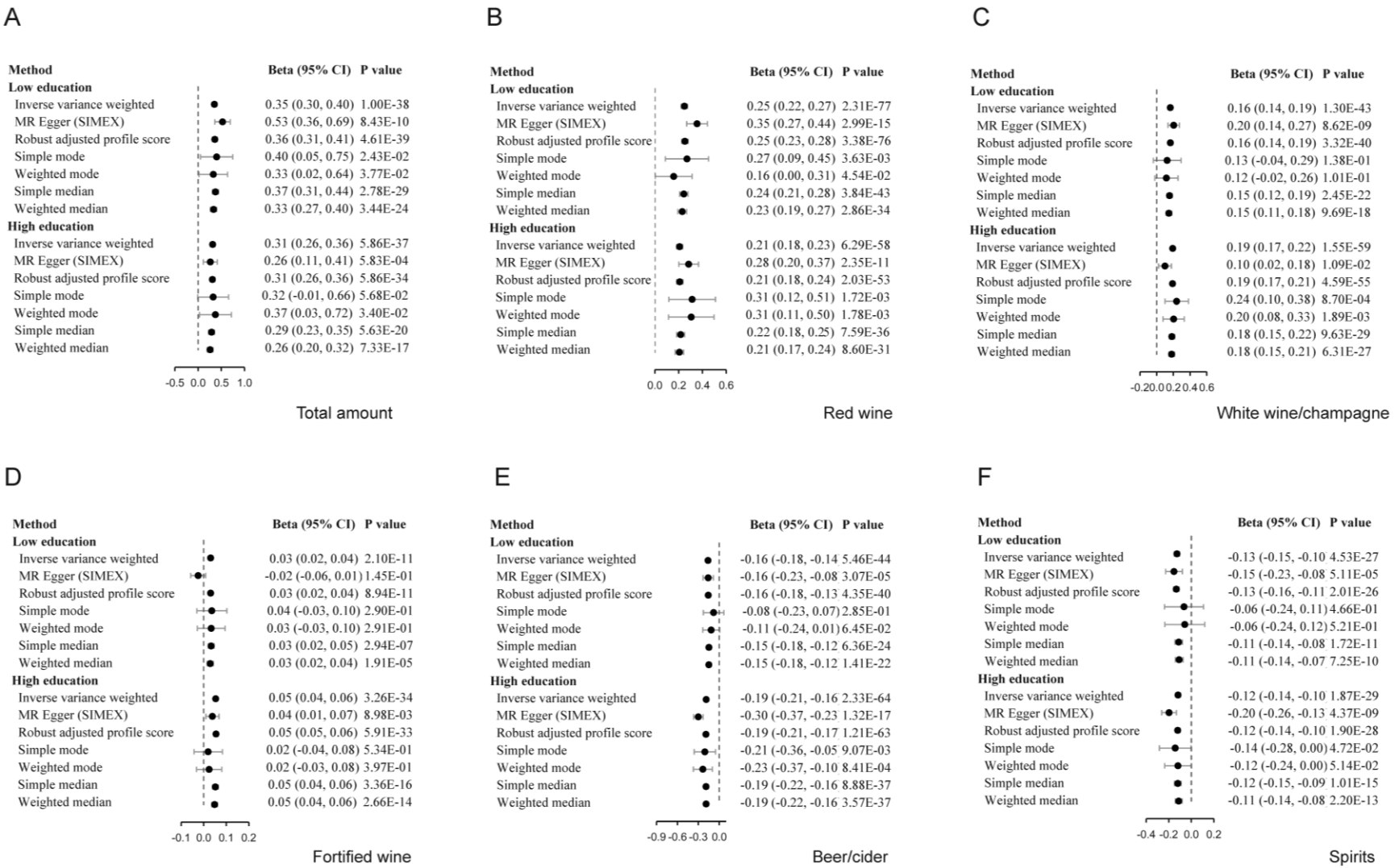
Panel A, the total amount of alcohol intake; panel B, red wine; panel C, white wine/champagne; panel D, fortified wine; panel E, beer/cider; panel F, spirits.



Supplementary Figure 2 Associations of educational attainment and alcohol intake frequency from Mendelian Randomization (MR) analyses stratified by smoking status.

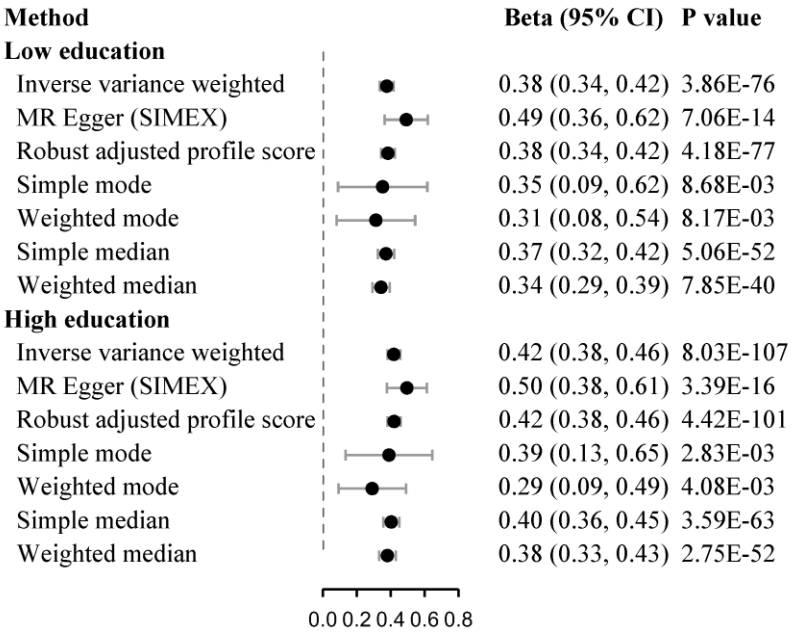


Supplementary Figure 3 Associations of educational attainment and alcohol taken with meals from Mendelian Randomization (MR) analyses stratified by smoking status.

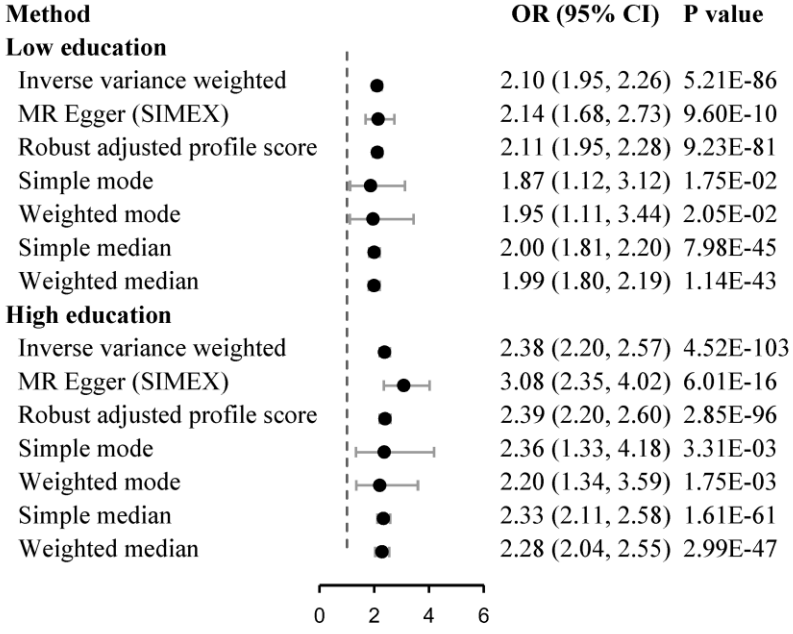


Supplementary Figure 4 Associations of educational attainment and amount of total and specific alcohol intake from Mendelian Randomization (MR) analyses stratified by educational attainment.

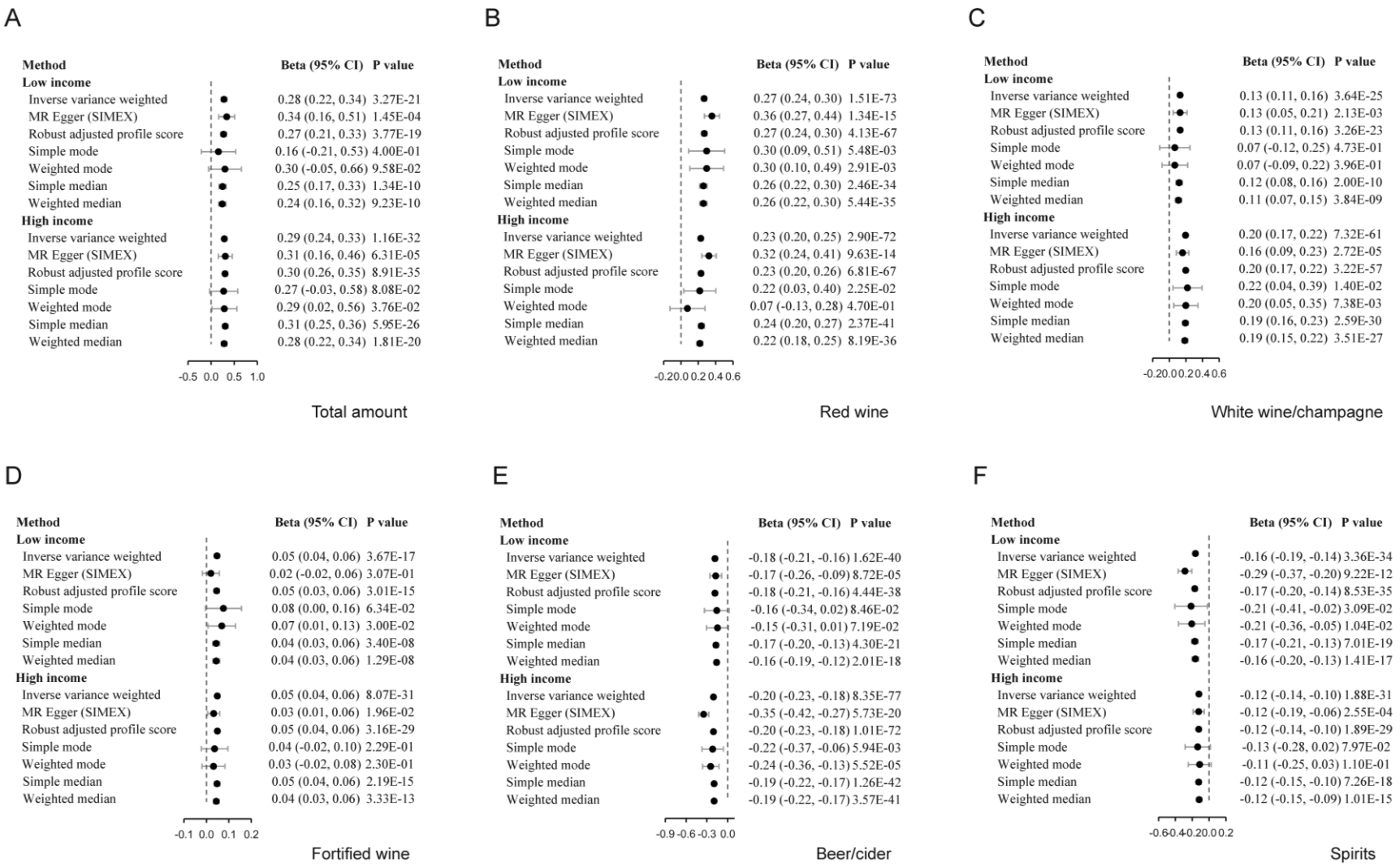
Panel A, the total amount of alcohol intake; panel B, red wine; panel C, white wine/champagne; panel D, fortified wine; panel E, beer/cider; panel F, spirits. Education was dichotomized into less than 16 years and 16 years or more than 16 years.



Supplementary Figure 5 Associations of educational attainment and alcohol intake frequency from Mendelian Randomization (MR) analyses stratified by educational attainment. Education was dichotomized into less than 16 years and 16 years or more than 16 years.

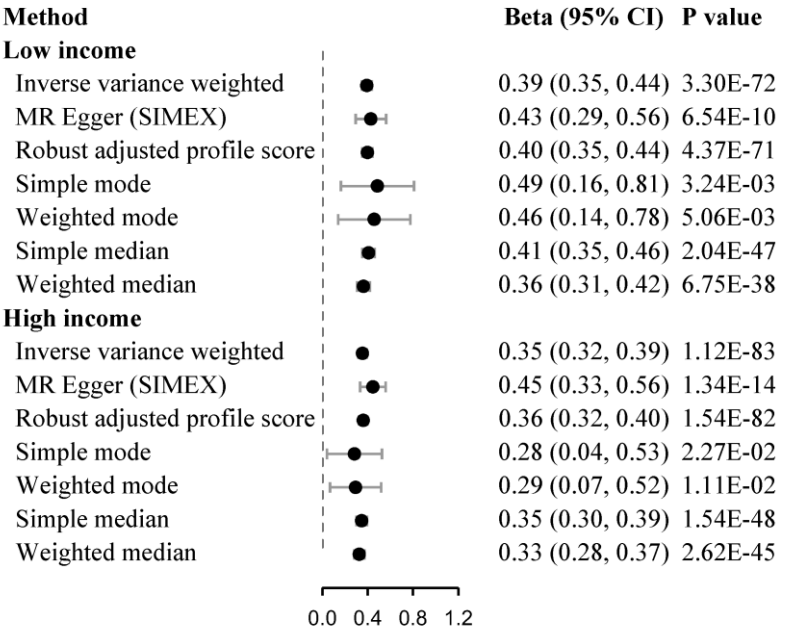


Supplementary Figure 6 Associations of educational attainment and alcohol taken with meals from Mendelian Randomization (MR) analyses stratified by educational attainment. Education was dichotomized into less than 16 years and 16 years or more than 16 years.

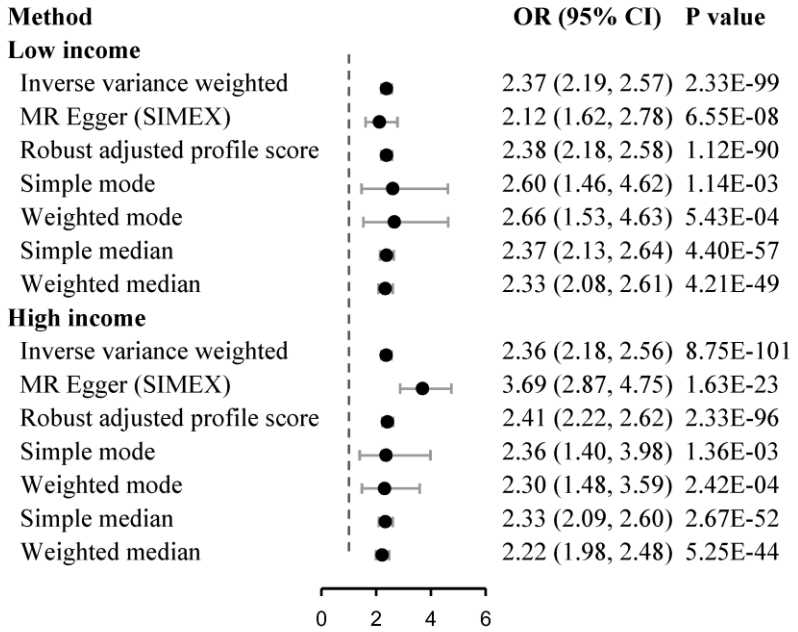


Supplementary Figure 7 Associations of educational attainment and amount of total and specific alcohol intake from Mendelian Randomization (MR) analyses stratified by income.

Panel A, the total amount of alcohol intake; panel B, red wine; panel C, white wine/champagne; panel D, fortified wine; panel E, beer/cider; panel F, spirits. Income was dichotomized into less than £31 000 and £31 000 or more than £31 000.



Supplementary Figure 8 Associations of educational attainment and alcohol intake frequency from Mendelian Randomization (MR) analyses stratified by income. Income was dichotomized into less than £31 000 and £31 000 or more than £31 000.



Supplementary Figure 9 Associations of educational attainment and alcohol taken with meals from Mendelian Randomization (MR) analyses stratified by income. Income was dichotomized into less than £31 000 and £31 000 or more than £31 000.

Supplementary Table 2 Characteristics of SNPs included as instrument variables in the Mendelian randomization analysis between education attainment and alcohol intake[1]

SNP	Chr	Position	Allele 1	Allele2	Frequency Allele 1	Effect size	SE	*P*-value
rs9859556	3	49455986	T	G	0.3132	0.0290	0.0015	4.610E-82
rs7029718	9	23358495	A	G	0.4108	0.0244	0.0014	7.820E-65
rs1334297	13	58335375	A	G	0.7375	0.0257	0.0016	2.530E-58
rs9375188	6	98555272	T	C	0.4847	0.0212	0.0014	8.780E-52
rs2526398	3	50187596	C	G	0.3468	-0.0222	0.0015	2.470E-51
rs13018640	2	100821545	T	C	0.6017	-0.0215	0.0014	1.050E-50
rs34305371	1	72733610	A	G	0.0985	0.0314	0.0024	1.100E-39
rs6449503	5	60095272	A	G	0.5038	0.0185	0.0014	1.840E-39
rs1689510	12	56396768	C	G	0.3315	0.0194	0.0015	1.350E-38
rs11082011	18	35145122	T	C	0.6716	0.0194	0.0015	2.060E-38
rs1008078	1	91189731	T	C	0.4019	-0.0182	0.0014	4.500E-37
rs61104616	5	88163771	A	G	0.5249	-0.0172	0.0014	1.560E-34
rs12076635	1	44026656	C	G	0.7811	0.0207	0.0017	3.330E-34
rs66568921	3	85672018	T	G	0.6441	-0.0181	0.0015	7.600E-34
rs56319902	17	43871982	T	C	0.2155	-0.0206	0.0017	5.810E-33
rs73344830	10	103816828	A	G	0.4181	0.0170	0.0014	1.000E-32
rs11678980	2	162101261	A	G	0.4527	-0.0166	0.0014	1.600E-31
rs11588857	1	204587047	A	G	0.2131	0.0199	0.0017	4.450E-31
rs10773002	12	123746961	A	T	0.2520	0.0185	0.0016	2.500E-30
rs176218	14	29600506	T	G	0.1958	0.0200	0.0018	1.100E-29
rs7849487	9	1757274	T	G	0.6578	-0.0167	0.0015	1.250E-29
rs10189857	2	60713235	A	G	0.5654	0.0158	0.0014	4.690E-29
rs4787457	16	28555400	A	G	0.6339	0.0162	0.0015	1.230E-28
rs4919624	10	104021085	A	G	0.8022	0.0193	0.0018	6.520E-28
rs111226181	3	49931760	T	G	0.1773	-0.0201	0.0018	1.350E-27
rs35417702	7	71739916	T	C	0.5235	-0.0152	0.0014	2.400E-27
rs55736314	3	71586293	C	G	0.5990	-0.0154	0.0014	4.590E-27
rs6452793	5	87818174	T	G	0.2340	0.0175	0.0017	4.470E-26
rs10215082	7	92657985	A	G	0.4661	-0.0149	0.0014	7.030E-26
rs62262671	3	49649873	A	G	0.8634	0.0213	0.0020	2.220E-25
rs3897821	1	243420388	A	G	0.6654	0.0154	0.0015	3.580E-25
rs6557171	6	152234593	T	C	0.3232	-0.0155	0.0015	5.480E-25
rs13240401	7	2194396	T	C	0.7812	0.0176	0.0017	2.360E-24
rs2568955	1	72762169	T	C	0.2481	-0.0165	0.0016	2.510E-24
rs324885	5	87897271	A	C	0.5257	0.0142	0.0014	4.110E-24
rs363096	4	3180021	T	C	0.4245	-0.0143	0.0014	5.770E-24
rs76076331	2	10977585	T	C	0.1346	0.0206	0.0021	1.710E-23
rs2992037	1	43949810	A	G	0.3223	0.0149	0.0015	4.180E-23
rs17411339	18	50807359	A	G	0.5612	0.0140	0.0014	5.100E-23
rs7683416	4	106152984	T	C	0.4592	0.0139	0.0014	6.050E-23
rs12028010	1	41764471	T	C	0.7711	0.0164	0.0017	9.780E-23
rs113520408	7	128402782	A	G	0.2756	0.0155	0.0016	1.030E-22
rs12375949	9	124617900	T	C	0.4312	-0.0138	0.0014	1.610E-22
rs71413877	2	100924822	A	G	0.0410	0.0351	0.0036	2.660E-22
rs11157931	14	23403193	A	C	0.3924	-0.0139	0.0014	3.860E-22
rs9490512	6	98537993	A	G	0.4496	-0.0136	0.0014	4.000E-22
rs9411331	9	134883419	A	C	0.6840	0.0145	0.0015	7.630E-22
rs72819118	2	100451357	T	C	0.0942	-0.0231	0.0024	8.290E-22
rs660001	5	113866598	A	G	0.2113	-0.0164	0.0017	1.660E-21
rs7924036	10	65191645	T	G	0.5124	0.0133	0.0014	2.550E-21
rs12468040	2	44854981	T	G	0.3819	0.0137	0.0014	3.120E-21
rs13010288	2	51824512	T	G	0.1288	0.0198	0.0021	3.440E-21
rs4500960	2	162818621	T	C	0.4647	-0.0131	0.0014	1.040E-20
rs1054442	12	49389320	A	C	0.6223	-0.0136	0.0015	1.100E-20

rs746839	8	142617261	C	G	0.6283	0.0135	0.0015	1.190E-20
rs11772232	7	1856273	T	C	0.1691	0.0177	0.0019	1.200E-20
rs4490539	5	60685757	A	G	0.6983	0.0142	0.0015	1.310E-20
rs10810099	9	14161927	A	G	0.2734	-0.0146	0.0016	1.910E-20
rs9616947	22	51151631	T	C	0.3818	-0.0134	0.0015	3.580E-20
rs7590368	2	10961474	T	C	0.7335	-0.0146	0.0016	3.980E-20
rs12506221	4	67899235	T	G	0.4360	-0.0130	0.0014	4.230E-20
rs10875121	1	98417446	C	G	0.8361	0.0174	0.0019	4.460E-20
rs12761761	10	133775375	T	C	0.2395	0.0153	0.0017	4.790E-20
rs2725370	8	30852826	T	C	0.3017	-0.0141	0.0015	4.960E-20
rs56391344	15	78006899	A	G	0.2526	0.0148	0.0016	7.490E-20
rs72962169	11	72365669	T	C	0.1595	-0.0174	0.0019	1.260E-19
rs11675476	2	193853269	T	C	0.5224	-0.0127	0.0014	1.370E-19
rs2838006	21	42653567	T	C	0.3597	0.0132	0.0015	1.380E-19
rs72828517	6	19036035	T	C	0.8273	-0.0168	0.0019	1.380E-19
rs11774212	8	145686505	T	C	0.5163	0.0128	0.0014	1.400E-19
rs72829857	6	16966052	A	G	0.7610	-0.0149	0.0016	1.520E-19
rs2179152	6	26325888	T	C	0.3673	-0.0131	0.0015	1.680E-19
rs79265434	7	24621381	A	G	0.8834	-0.0197	0.0022	1.980E-19
rs62182994	2	212599303	T	C	0.6894	0.0137	0.0015	2.550E-19
rs7323027	13	58693790	A	G	0.3719	0.0130	0.0015	3.910E-19
rs2290601	3	108112760	T	C	0.7720	-0.0149	0.0017	4.490E-19
rs178183	14	26979412	T	C	0.2455	0.0145	0.0016	4.810E-19
rs171697	5	103956516	C	G	0.6712	0.0133	0.0015	4.850E-19
rs112375785	6	98224217	A	G	0.1435	0.0184	0.0021	6.000E-19
rs6065080	20	59832791	T	C	0.3589	-0.0130	0.0015	7.490E-19
rs2545795	5	176887106	A	C	0.4437	0.0125	0.0014	1.030E-18
rs4757957	11	12881398	C	G	0.6911	0.0133	0.0015	1.790E-18
rs613872	18	53210302	T	G	0.8285	-0.0163	0.0019	1.950E-18
rs13107325	4	103188709	T	C	0.0721	-0.0239	0.0027	1.980E-18
rs728054	7	137072364	A	G	0.3561	-0.0128	0.0015	2.340E-18
rs57352738	7	133304694	A	T	0.2040	-0.0152	0.0017	2.510E-18
rs10460095	18	22624708	A	G	0.5714	-0.0124	0.0014	2.610E-18
rs790647	10	106776484	A	C	0.2278	-0.0145	0.0017	3.810E-18
rs9349956	6	14718260	A	C	0.8211	-0.0159	0.0018	4.890E-18
rs6715849	2	100306378	A	G	0.4401	-0.0122	0.0014	6.870E-18
rs575113	1	110046373	A	G	0.2941	0.0133	0.0015	7.520E-18
rs76577427	1	110761099	C	G	0.9006	0.0203	0.0024	7.780E-18
rs9616906	22	51104680	A	G	0.4477	0.0122	0.0014	8.310E-18
rs4719944	7	3496032	T	C	0.5462	-0.0121	0.0014	9.250E-18
rs9289300	3	127144988	T	C	0.8412	-0.0164	0.0019	1.000E-17
rs72671456	14	29662737	A	G	0.1374	-0.0174	0.0020	1.270E-17
rs12643771	4	140753103	T	C	0.3094	0.0130	0.0015	1.320E-17
rs4726070	7	151328218	A	G	0.6021	0.0122	0.0014	1.360E-17
rs362307	4	3241845	T	C	0.0772	-0.0226	0.0027	1.550E-17
rs11210400	1	74490459	A	C	0.5380	0.0120	0.0014	1.630E-17
rs17563464	5	26913774	A	C	0.2173	-0.0147	0.0017	1.740E-17
rs717996	12	84133820	T	C	0.5986	-0.0122	0.0014	1.890E-17
rs7526112	1	93747683	T	G	0.6406	0.0124	0.0015	2.070E-17
rs17502934	2	50994255	T	G	0.1489	-0.0167	0.0020	2.120E-17
rs9882532	3	16865845	T	C	0.6368	0.0124	0.0015	2.150E-17
rs6493265	15	47513253	T	C	0.3915	-0.0122	0.0014	2.260E-17
rs17489649	5	109156184	A	G	0.6788	0.0127	0.0015	2.770E-17
rs76878669	11	66092567	C	G	0.7609	0.0141	0.0017	3.100E-17
rs10496091	2	61482261	A	G	0.2841	-0.0131	0.0016	3.710E-17
rs4467547	4	21945933	T	G	0.4070	0.0121	0.0014	4.880E-17
rs3026996	1	159167290	A	C	0.7606	0.0138	0.0016	5.420E-17
rs72624911	3	49064576	T	C	0.0475	0.0282	0.0034	5.590E-17

rs9933256	16	1246748	A	G	0.5558	0.0119	0.0014	6.060E-17
rs2923424	8	42382222	A	G	0.6069	0.0120	0.0014	6.310E-17
rs635754	1	96484940	A	G	0.5809	0.0119	0.0014	6.360E-17
rs17428076	2	172851936	C	G	0.7598	0.0137	0.0016	6.410E-17
rs7977614	12	110115286	A	G	0.7143	-0.0134	0.0016	6.840E-17
rs77609760	2	142358950	A	G	0.9346	0.0236	0.0028	7.710E-17
rs12591647	15	65959729	T	C	0.8171	-0.0152	0.0018	7.780E-17
rs6824567	4	2883172	T	C	0.2827	0.0130	0.0016	8.910E-17
rs12957463	18	37412228	A	G	0.7953	0.0146	0.0018	9.200E-17
rs2496482	14	99750164	T	C	0.4161	0.0121	0.0015	9.200E-17
rs11663602	18	77578191	A	C	0.2761	-0.0130	0.0016	9.270E-17
rs75177132	19	4386911	T	C	0.0476	0.0298	0.0036	1.010E-16
rs10899282	11	76504698	A	G	0.2279	0.0140	0.0017	1.050E-16
rs2081652	4	159862913	A	T	0.6610	0.0123	0.0015	1.090E-16
rs7974852	12	14511679	A	C	0.5235	0.0117	0.0014	1.140E-16
rs13318986	3	82533639	A	G	0.3311	0.0124	0.0015	1.170E-16
rs2570497	2	104441546	T	C	0.6367	-0.0121	0.0015	1.270E-16
rs17598675	4	176647637	T	C	0.5132	-0.0116	0.0014	1.370E-16
rs34155847	4	3252130	A	G	0.2483	0.0135	0.0016	1.430E-16
rs11121177	1	8445946	A	G	0.1785	0.0151	0.0018	1.440E-16
rs34106693	2	101151830	C	G	0.8318	0.0159	0.0019	1.620E-16
rs4984682	16	740404	C	G	0.7674	-0.0138	0.0017	1.820E-16
rs6704768	2	233592501	A	G	0.5648	-0.0116	0.0014	1.840E-16
rs114468556	5	92870246	A	T	0.0421	0.0293	0.0036	1.990E-16
rs1569092	1	74858724	A	G	0.1520	0.0160	0.0020	2.120E-16
rs2910823	5	59498175	T	G	0.5359	0.0115	0.0014	2.500E-16
rs10984445	9	121980586	A	G	0.4604	0.0115	0.0014	2.580E-16
rs34098770	16	12237812	A	G	0.1520	-0.0160	0.0020	2.950E-16
rs6569077	6	98212409	T	C	0.3894	0.0118	0.0014	3.290E-16
rs4984541	15	96911139	A	G	0.7666	-0.0138	0.0017	3.400E-16
rs7326331	13	91615838	A	G	0.2761	-0.0128	0.0016	3.420E-16
rs62260764	3	47990500	C	G	0.2559	-0.0132	0.0016	3.450E-16
rs9655780	7	104667334	A	G	0.8287	-0.0153	0.0019	3.700E-16
rs10166286	2	101128095	T	C	0.1730	0.0151	0.0019	3.790E-16
rs12646523	4	170944698	T	C	0.2483	-0.0132	0.0016	3.790E-16
rs13163062	5	106955451	T	C	0.4260	0.0115	0.0014	4.430E-16
rs6442126	3	48525955	A	T	0.6593	-0.0121	0.0015	4.720E-16
rs11081529	18	75902735	T	C	0.7112	0.0126	0.0015	5.220E-16
rs73581580	9	140251458	A	G	0.1248	-0.0181	0.0022	5.780E-16
rs5754753	22	34296751	T	C	0.7178	-0.0126	0.0016	6.150E-16
rs1656614	15	47800513	C	G	0.3140	0.0122	0.0015	6.910E-16
rs6690195	1	96221653	T	C	0.4907	-0.0113	0.0014	7.890E-16
rs35319653	4	140903155	T	C	0.3433	0.0119	0.0015	8.010E-16
rs115000530	3	69930625	A	T	0.9451	-0.0250	0.0031	1.090E-15
rs10979613	9	111687584	T	C	0.6389	-0.0117	0.0015	1.250E-15
rs17248751	16	61579618	A	G	0.7827	-0.0136	0.0017	1.280E-15
rs2998299	14	84997363	T	G	0.2137	-0.0136	0.0017	1.510E-15
rs10041403	5	67805272	T	C	0.8339	0.0151	0.0019	1.550E-15
rs11115056	12	82258775	A	G	0.0995	0.0187	0.0023	1.670E-15
rs62379838	5	120102028	T	C	0.6953	0.0121	0.0015	1.770E-15
rs73961845	2	144478983	A	G	0.6170	-0.0114	0.0014	2.520E-15
rs11736863	4	23729566	A	G	0.1895	0.0142	0.0018	2.560E-15
rs3812281	7	135082751	T	C	0.6016	0.0113	0.0014	2.700E-15
rs9556958	13	99100046	T	C	0.5233	-0.0110	0.0014	5.960E-15
rs6932108	6	98713992	C	G	0.0798	-0.0210	0.0027	6.100E-15
rs11732657	4	172427073	A	G	0.7504	-0.0126	0.0016	6.240E-15
rs13422673	2	155474355	T	C	0.4659	-0.0110	0.0014	6.480E-15
rs2052285	16	51188432	A	G	0.5959	0.0112	0.0014	7.250E-15

rs27220	5	59775136	A	G	0.3562	-0.0114	0.0015	7.520E-15
rs488476	11	95543715	C	G	0.6191	-0.0113	0.0015	8.290E-15
rs978807	18	36898459	A	G	0.1885	0.0139	0.0018	9.140E-15
rs28512462	16	24711806	C	G	0.3789	0.0112	0.0014	9.770E-15
rs3895736	3	48658467	A	C	0.1728	0.0144	0.0019	9.920E-15
rs2764684	1	58537919	T	C	0.8266	0.0143	0.0019	9.990E-15
rs10892807	11	121998254	T	C	0.5671	0.0109	0.0014	1.090E-14
rs17669337	5	92187932	T	C	0.4133	-0.0110	0.0014	1.100E-14
rs12342546	9	126329270	A	G	0.2441	-0.0128	0.0017	1.110E-14
rs61527214	16	83608599	A	G	0.4113	0.0110	0.0014	1.130E-14
rs8024	1	201845575	A	C	0.3294	-0.0115	0.0015	1.130E-14
rs7603132	2	4951548	A	G	0.1938	0.0137	0.0018	1.200E-14
rs10940921	5	30808645	T	G	0.4194	0.0111	0.0014	1.310E-14
rs6731373	2	68503044	A	G	0.3390	-0.0115	0.0015	1.390E-14
rs350281	16	12231739	T	G	0.6825	-0.0117	0.0015	1.410E-14
rs303752	18	21074255	A	G	0.4067	-0.0110	0.0014	1.470E-14
rs767943	6	23446691	A	C	0.2690	-0.0122	0.0016	1.540E-14
rs9375403	6	98831636	C	G	0.2423	0.0126	0.0016	1.660E-14
rs7254263	19	30741257	T	C	0.2850	-0.0119	0.0016	1.840E-14
rs11716398	3	50699715	A	G	0.8663	0.0159	0.0021	1.890E-14
rs803619	1	44465419	T	C	0.1076	-0.0173	0.0023	2.190E-14
rs4320563	8	87769961	A	G	0.5093	0.0109	0.0014	2.240E-14
rs11871429	17	42920929	A	G	0.7727	0.0128	0.0017	2.520E-14
rs10761251	9	96421546	A	T	0.6633	0.0113	0.0015	2.520E-14
rs6493275	15	47676579	A	T	0.7885	0.0131	0.0017	2.980E-14
rs1866823	8	57436577	A	G	0.5444	0.0107	0.0014	3.090E-14
rs7575637	2	145796251	A	G	0.4538	0.0107	0.0014	3.430E-14
rs9529146	13	31785404	T	C	0.2282	0.0127	0.0017	3.480E-14
rs35016816	16	10266115	T	C	0.8990	0.0176	0.0023	3.560E-14
rs4848924	2	124991887	A	C	0.7100	-0.0117	0.0015	3.560E-14
rs2406253	7	100077273	A	G	0.8053	0.0135	0.0018	3.580E-14
rs9267677	6	31892641	T	C	0.9029	0.0180	0.0024	3.660E-14
rs1747714	10	11161316	T	C	0.5287	0.0106	0.0014	3.820E-14
rs929511	7	8003017	T	C	0.1254	-0.0160	0.0021	3.910E-14
rs7108020	11	131289820	A	C	0.6475	0.0111	0.0015	3.910E-14
rs1729412	2	201083598	T	C	0.4224	-0.0107	0.0014	4.050E-14
rs10057590	5	124335247	A	C	0.4724	0.0106	0.0014	4.080E-14
rs77702819	2	101328728	T	G	0.0907	0.0187	0.0025	4.170E-14
rs6450476	5	57771087	A	G	0.2929	-0.0116	0.0015	4.620E-14
rs12602286	17	19236954	T	G	0.8731	0.0160	0.0021	4.620E-14
rs13163845	5	3264389	T	C	0.8488	-0.0149	0.0020	4.660E-14
rs12273435	11	133825855	A	G	0.2070	-0.0132	0.0017	4.720E-14
rs77999825	7	127572977	A	G	0.0343	0.0294	0.0039	5.080E-14
rs10798888	1	32199099	T	G	0.1725	-0.0140	0.0019	5.150E-14
rs7931563	11	61446425	T	G	0.6214	-0.0109	0.0014	5.150E-14
rs1128956	4	183724005	T	G	0.8251	-0.0140	0.0019	5.340E-14
rs17565975	11	111586950	A	G	0.5563	-0.0106	0.0014	5.540E-14
rs12332731	5	93033082	A	T	0.1882	0.0135	0.0018	5.960E-14
rs12712269	2	107564115	T	C	0.3962	-0.0107	0.0014	6.880E-14
rs12170452	22	40019773	A	G	0.4507	0.0105	0.0014	7.780E-14
rs58921703	7	2322943	T	C	0.3698	0.0109	0.0015	7.840E-14
rs1405876	7	86237581	T	G	0.6403	0.0109	0.0015	7.840E-14
rs10515007	17	50395539	T	C	0.1610	0.0143	0.0019	8.070E-14
rs35493937	2	65571139	C	G	0.2305	0.0124	0.0017	9.730E-14
rs11599236	10	106454672	T	C	0.5838	-0.0106	0.0014	9.940E-14
rs7972246	12	27209328	T	C	0.3451	0.0110	0.0015	1.010E-13
rs7640424	3	107820063	T	C	0.3063	0.0113	0.0015	1.020E-13
rs11620355	13	92044587	A	G	0.0912	0.0182	0.0025	1.090E-13

rs4396896	3	86261800	A	T	0.3916	-0.0107	0.0014	1.120E-13
rs401526	8	130929166	T	C	0.5258	-0.0104	0.0014	1.150E-13
rs12478156	2	164379658	T	C	0.6378	0.0108	0.0015	1.240E-13
rs2287838	19	9959014	A	G	0.5504	-0.0104	0.0014	1.270E-13
rs6697584	1	181509718	T	C	0.7852	-0.0126	0.0017	1.430E-13
rs12571549	10	111770013	A	G	0.1368	0.0151	0.0020	1.450E-13
rs141729694	5	87999371	T	C	0.0768	0.0195	0.0026	1.490E-13
rs1464297	2	140653749	T	C	0.6490	-0.0109	0.0015	1.490E-13
rs118134876	7	11500372	T	C	0.0578	-0.0223	0.0030	1.500E-13
rs17551064	7	49869771	A	G	0.8378	0.0141	0.0019	1.530E-13
rs1490612	4	106410855	T	G	0.0780	0.0193	0.0026	1.550E-13
rs9853928	3	103295384	T	C	0.2102	-0.0127	0.0017	1.590E-13
rs4500930	2	228985505	T	C	0.3449	-0.0109	0.0015	1.670E-13
rs4352658	6	88279872	T	C	0.0810	-0.0190	0.0026	1.710E-13
rs12875339	13	55722033	A	C	0.6449	-0.0108	0.0015	1.710E-13
rs10060023	5	124304677	T	C	0.3276	0.0110	0.0015	1.880E-13
rs34720381	1	171455322	T	C	0.0907	-0.0180	0.0024	1.900E-13
rs7460106	8	143534777	T	C	0.7620	-0.0123	0.0017	2.060E-13
rs10805383	5	63034606	A	G	0.4879	-0.0103	0.0014	2.220E-13
rs61997667	14	57280046	T	C	0.1511	-0.0144	0.0020	2.240E-13
rs55986781	2	60655551	T	C	0.0823	0.0187	0.0026	2.270E-13
rs11657342	17	79355294	A	G	0.3670	0.0140	0.0019	2.320E-13
rs2256965	6	31555130	A	G	0.4188	0.0106	0.0014	2.400E-13
rs11542663	6	119215402	A	C	0.6947	0.0112	0.0015	2.440E-13
rs144336753	8	143356114	A	G	0.0181	0.0388	0.0053	2.560E-13
rs12145078	1	197822977	A	T	0.2074	-0.0127	0.0017	2.560E-13
rs4426420	18	35104386	T	C	0.1600	-0.0140	0.0019	2.630E-13
rs17048801	4	137529847	A	T	0.3909	-0.0106	0.0014	2.750E-13
rs1120924	4	5228939	T	C	0.3362	0.0108	0.0015	2.790E-13
rs2364544	1	41833162	A	G	0.3912	-0.0105	0.0014	2.910E-13
rs1167827	7	75163169	A	G	0.4347	0.0104	0.0014	2.930E-13
rs28735993	22	51135595	A	T	0.8844	0.0162	0.0022	3.030E-13
rs56099375	8	77372988	T	C	0.2410	0.0120	0.0017	3.100E-13
rs17048855	3	8258174	A	G	0.3426	0.0108	0.0015	3.100E-13
rs479018	11	66060546	A	G	0.3255	0.0109	0.0015	3.100E-13
rs585557	11	65663547	A	G	0.8014	0.0128	0.0018	3.250E-13
rs10951590	7	39091043	T	C	0.3275	-0.0109	0.0015	3.620E-13
rs77702622	8	143367857	A	G	0.0614	-0.0213	0.0029	3.620E-13
rs72771860	5	87974682	T	G	0.0686	-0.0211	0.0029	3.640E-13
rs34748029	2	104060003	A	C	0.0876	0.0185	0.0025	3.720E-13
rs61755388	7	126541317	T	C	0.7878	0.0125	0.0017	3.880E-13
rs12503522	4	94543233	T	C	0.2820	-0.0113	0.0016	3.930E-13
rs9886703	9	82246351	A	T	0.1671	-0.0136	0.0019	4.460E-13
rs72482130	2	237054356	T	C	0.8464	0.0141	0.0019	4.590E-13
rs77025239	3	180734185	A	G	0.1559	-0.0140	0.0019	4.650E-13
rs2014830	3	50172397	T	C	0.3139	0.0110	0.0015	4.720E-13
rs111852224	18	25596884	T	C	0.1227	0.0156	0.0022	4.850E-13
rs4384309	10	133110596	A	G	0.4641	0.0102	0.0014	4.890E-13
rs7560871	2	145616899	A	G	0.0739	-0.0193	0.0027	5.240E-13
rs12524795	6	3464074	T	C	0.4374	0.0102	0.0014	5.280E-13
rs72622559	3	175672897	T	C	0.2301	-0.0120	0.0017	5.500E-13
rs9386110	6	145626208	T	C	0.8917	-0.0163	0.0023	5.660E-13
rs62179650	2	189135884	A	G	0.2995	0.0112	0.0016	5.660E-13
rs6065784	20	43717435	C	G	0.6953	0.0110	0.0015	5.780E-13
rs4673840	2	215363241	T	C	0.8420	-0.0138	0.0019	5.860E-13
rs56085180	7	2143594	A	G	0.0366	-0.0269	0.0037	5.940E-13
rs2043187	18	50394405	A	G	0.3840	0.0107	0.0015	5.940E-13
rs1329044	9	23747791	T	C	0.8276	0.0134	0.0019	6.280E-13

rs12750688	1	98757620	C	G	0.7406	0.0116	0.0016	6.640E-13
rs3809634	16	53538157	A	G	0.6842	-0.0109	0.0015	6.820E-13
rs62177359	2	161290337	A	C	0.9653	-0.0275	0.0038	6.870E-13
rs75203411	2	100513153	T	C	0.1713	0.0135	0.0019	7.680E-13
rs4899012	14	61003889	C	G	0.6019	-0.0103	0.0014	8.060E-13
rs11100237	4	160477041	A	G	0.5242	-0.0101	0.0014	8.170E-13
rs4358358	4	30970822	A	G	0.6937	0.0109	0.0015	8.690E-13
rs12774577	10	104959487	T	C	0.8545	0.0142	0.0020	8.690E-13
rs74545339	8	135440608	A	G	0.1142	-0.0158	0.0022	9.060E-13
rs7430651	3	116582186	T	C	0.2863	-0.0111	0.0016	9.380E-13
rs730384	14	74889870	A	G	0.4388	0.0101	0.0014	9.380E-13
rs34067381	3	123594419	T	G	0.3617	-0.0104	0.0015	9.770E-13
rs969512	4	147872742	A	T	0.6596	-0.0106	0.0015	9.840E-13
rs4497562	13	62612604	A	G	0.7295	0.0112	0.0016	1.050E-12
rs6994287	8	9340932	A	G	0.4055	0.0102	0.0014	1.110E-12
rs9888796	16	68297589	T	C	0.2625	0.0113	0.0016	1.200E-12
rs11021432	11	95837674	A	T	0.3692	0.0103	0.0015	1.250E-12
rs11703948	22	38817047	A	G	0.9026	-0.0168	0.0024	1.260E-12
rs12682775	9	135490491	T	C	0.7754	-0.0119	0.0017	1.260E-12
rs165633	22	29880773	A	G	0.7575	-0.0116	0.0016	1.270E-12
rs10752262	10	12395100	T	C	0.4192	0.0102	0.0014	1.280E-12
rs981230	5	59039858	T	C	0.4793	0.0100	0.0014	1.280E-12
rs77201694	1	44347087	A	G	0.1213	0.0156	0.0022	1.280E-12
rs56405138	4	166126745	A	T	0.1231	0.0153	0.0022	1.310E-12
rs72636697	4	68016609	T	C	0.1551	-0.0140	0.0020	1.310E-12
rs62340636	4	176940335	T	G	0.6254	0.0103	0.0014	1.470E-12
rs995698	9	87997869	A	G	0.5380	-0.0099	0.0014	1.530E-12
rs62155873	2	105969362	T	C	0.1221	-0.0151	0.0021	1.650E-12
rs114593137	1	241876565	A	T	0.7930	-0.0122	0.0017	1.650E-12
rs35929923	7	21400525	A	G	0.2495	-0.0114	0.0016	1.770E-12
rs10204051	2	103775435	T	G	0.4055	-0.0101	0.0014	1.920E-12
rs73648455	9	14077378	T	C	0.0797	-0.0183	0.0026	1.990E-12
rs192436652	19	54960747	T	C	0.0268	-0.0319	0.0045	2.060E-12
rs175325	20	22317310	A	T	0.5966	-0.0100	0.0014	2.240E-12
rs60096640	6	27636313	A	G	0.8926	0.0159	0.0023	2.240E-12
rs12405889	1	235597252	T	G	0.4890	-0.0098	0.0014	2.300E-12
rs9929556	16	62193640	T	G	0.5688	-0.0099	0.0014	2.310E-12
rs17604349	16	72210865	A	G	0.1852	0.0127	0.0018	2.360E-12
rs2216144	12	97666478	T	C	0.5306	0.0098	0.0014	2.580E-12
rs56174996	1	91145181	A	G	0.1359	-0.0143	0.0020	2.810E-12
rs13197257	6	128333682	T	G	0.2790	0.0109	0.0016	2.830E-12
rs4846724	1	221967817	A	G	0.5347	0.0098	0.0014	2.890E-12
rs356999	2	60811584	A	G	0.3802	-0.0101	0.0014	2.910E-12
rs72677177	1	72120034	A	G	0.4017	0.0100	0.0014	3.030E-12
rs6573559	14	64923166	T	G	0.3152	0.0105	0.0015	3.110E-12
rs12638072	3	65654480	A	G	0.2992	-0.0107	0.0015	3.130E-12
rs9929993	16	7664875	T	C	0.3610	-0.0102	0.0015	3.180E-12
rs79798166	5	59152140	A	G	0.0884	0.0172	0.0025	3.630E-12
rs3735478	7	44800176	T	G	0.2932	0.0108	0.0016	3.660E-12
rs77719387	3	49917021	A	T	0.0174	-0.0403	0.0058	3.780E-12
rs118093058	11	62413673	T	G	0.1330	0.0146	0.0021	3.780E-12
rs59480703	8	9653130	C	G	0.1936	-0.0123	0.0018	3.970E-12
rs4881269	10	4031519	A	G	0.3818	0.0100	0.0014	3.970E-12
rs8008382	14	104054425	T	C	0.3009	-0.0106	0.0015	4.070E-12
rs7617204	3	160821969	A	G	0.5223	-0.0097	0.0014	4.330E-12
rs1117152	12	15438032	T	G	0.7010	0.0106	0.0015	4.470E-12
rs7041702	9	33053430	A	G	0.7406	-0.0111	0.0016	4.530E-12
rs1434630	5	136557055	T	G	0.1479	-0.0137	0.0020	4.630E-12

rs4839155	1	112161489	T	G	0.7671	0.0115	0.0017	4.660E-12
rs11687736	2	225405122	A	T	0.6764	-0.0105	0.0015	4.660E-12
rs10145520	14	21930932	T	G	0.8031	-0.0122	0.0018	4.780E-12
rs711793	2	174175921	T	C	0.3474	0.0103	0.0015	5.010E-12
rs7910403	10	87039251	T	G	0.1952	0.0122	0.0018	5.080E-12
rs12285074	11	116762028	A	G	0.1012	0.0161	0.0023	5.110E-12
rs9267658	6	31845985	T	C	0.1428	0.0138	0.0020	5.250E-12
rs35811586	2	233743794	T	C	0.0547	0.0217	0.0031	5.470E-12
rs9373363	6	143150043	A	G	0.7485	-0.0111	0.0016	5.540E-12
rs721579	17	43370481	T	C	0.2617	-0.0110	0.0016	5.960E-12
rs12764593	10	107491895	C	G	0.0622	0.0202	0.0029	6.000E-12
rs62420387	6	98404243	T	C	0.0750	-0.0184	0.0027	6.160E-12
rs74415461	16	89990843	T	C	0.0843	0.0176	0.0026	6.250E-12
rs74747621	2	229061868	T	C	0.1124	0.0153	0.0022	6.290E-12
rs7147473	14	30608538	A	G	0.6719	-0.0103	0.0015	6.330E-12
rs74091672	1	73978572	A	C	0.8881	-0.0153	0.0022	6.460E-12
rs77554090	3	65711935	T	C	0.0731	-0.0186	0.0027	6.630E-12
rs981883	5	57107989	A	G	0.3886	0.0099	0.0014	6.670E-12
rs35104491	6	97390463	A	G	0.1849	0.0124	0.0018	6.810E-12
rs10937240	3	185802823	T	C	0.1899	-0.0123	0.0018	6.950E-12
rs56171318	18	35272539	T	C	0.1431	-0.0137	0.0020	7.090E-12
rs1637770	7	2190385	T	C	0.0683	0.0191	0.0028	7.320E-12
rs13133213	4	15646794	A	G	0.4980	0.0096	0.0014	7.570E-12
rs6715321	2	100109001	T	C	0.4277	-0.0097	0.0014	7.620E-12
rs7317761	13	100753796	C	G	0.7355	0.0109	0.0016	7.770E-12
rs10773208	12	122970156	T	C	0.2526	-0.0110	0.0016	8.090E-12
rs4741571	9	1667814	A	G	0.6723	-0.0102	0.0015	8.090E-12
rs6917204	6	145284716	T	C	0.7951	0.0119	0.0017	8.140E-12
rs6743032	2	126024787	A	G	0.0926	-0.0165	0.0024	8.360E-12
rs17190418	13	58746132	T	C	0.0537	-0.0213	0.0031	8.420E-12
rs13145650	4	122963344	T	C	0.9170	-0.0173	0.0025	8.990E-12
rs1671770	12	120946568	A	C	0.1786	0.0125	0.0018	9.230E-12
rs117005905	6	114218608	T	C	0.1143	0.0150	0.0022	9.350E-12
rs12888615	14	72435705	T	C	0.1991	0.0120	0.0018	9.420E-12
rs1842713	17	33200385	A	G	0.7882	-0.0117	0.0017	9.670E-12
rs3859523	19	32972296	T	C	0.8208	0.0124	0.0018	9.920E-12
rs1335482	1	78603463	T	C	0.5295	0.0096	0.0014	1.010E-11
rs9929762	16	78169675	A	G	0.5595	0.0096	0.0014	1.030E-11
rs2283076	7	126478190	A	G	0.7786	0.0115	0.0017	1.050E-11
rs62142891	2	51539113	A	G	0.2632	0.0108	0.0016	1.050E-11
rs7625428	3	56570907	T	C	0.6036	0.0098	0.0014	1.070E-11
rs4298514	8	118932887	T	C	0.6986	0.0104	0.0015	1.070E-11
rs13099165	3	168740425	T	G	0.2029	-0.0118	0.0017	1.090E-11
rs2447097	17	2278064	T	G	0.4596	0.0096	0.0014	1.100E-11
rs117799466	15	34659517	C	G	0.3619	0.0106	0.0016	1.190E-11
rs4358081	2	29100642	A	C	0.5285	-0.0095	0.0014	1.280E-11
rs12967010	18	9645035	T	C	0.7746	0.0114	0.0017	1.330E-11
rs75033012	11	61347033	C	G	0.0391	-0.0258	0.0038	1.380E-11
rs1426619	10	90091540	T	C	0.4346	0.0096	0.0014	1.400E-11
rs7928017	11	113448762	A	C	0.4341	0.0096	0.0014	1.430E-11
rs6534338	4	123026869	T	C	0.3034	0.0103	0.0015	1.460E-11
rs11732160	4	67070824	A	G	0.7154	0.0105	0.0016	1.460E-11
rs137858393	1	96454977	A	G	0.9341	0.0193	0.0029	1.550E-11
rs2761438	1	110752139	A	G	0.3807	0.0098	0.0015	1.590E-11
rs17742342	2	148633936	A	C	0.8020	-0.0119	0.0018	1.590E-11
rs2470966	7	104430889	C	G	0.6998	-0.0103	0.0015	1.620E-11
rs7167688	15	26813137	T	C	0.4917	-0.0094	0.0014	1.710E-11
rs401966	7	101695817	C	G	0.3900	-0.0097	0.0014	1.720E-11

rs7803932	7	70203673	A	G	0.1667	0.0127	0.0019	1.740E-11
rs3751331	12	58290278	A	G	0.3797	-0.0097	0.0014	1.750E-11
rs12453682	17	37770005	T	C	0.6947	0.0102	0.0015	1.810E-11
rs2220926	18	58943386	T	C	0.4308	-0.0095	0.0014	1.840E-11
rs4469771	10	68192714	T	C	0.6802	0.0101	0.0015	1.880E-11
rs1792602	11	90439633	A	G	0.3824	-0.0097	0.0014	1.900E-11
rs482787	10	99767024	T	C	0.6749	0.0100	0.0015	1.950E-11
rs34780702	1	197907554	A	G	0.7635	0.0111	0.0017	2.050E-11
rs79728014	11	46062245	A	G	0.8553	-0.0134	0.0020	2.060E-11
rs9536462	13	54124650	A	G	0.1454	0.0133	0.0020	2.100E-11
rs12694681	2	226609241	T	G	0.6883	0.0102	0.0015	2.130E-11
rs341504	13	60421219	A	T	0.3620	0.0099	0.0015	2.220E-11
rs140711597	3	48469441	C	G	0.9818	0.0366	0.0055	2.230E-11
rs7016302	8	4833041	C	G	0.8308	-0.0125	0.0019	2.260E-11
rs11652522	17	43055579	A	C	0.1045	-0.0154	0.0023	2.290E-11
rs11138947	9	72110562	T	C	0.7236	0.0105	0.0016	2.360E-11
rs7597126	2	215009358	T	C	0.4915	-0.0094	0.0014	2.460E-11
rs590013	1	29155738	T	C	0.6772	0.0100	0.0015	2.470E-11
rs4766424	12	1954096	C	G	0.1237	0.0142	0.0021	2.470E-11
rs312927	19	3274770	A	G	0.1203	-0.0147	0.0022	2.520E-11
rs2160514	12	16756508	A	C	0.5548	-0.0094	0.0014	2.540E-11
rs1035578	16	12531365	A	G	0.5272	-0.0094	0.0014	2.570E-11
rs76077165	2	162893338	A	C	0.0898	0.0165	0.0025	2.620E-11
rs2529069	7	24571038	T	C	0.7343	-0.0106	0.0016	2.660E-11
rs78193153	7	71720681	A	G	0.0647	0.0191	0.0029	2.760E-11
rs58859557	1	44010456	T	C	0.0702	0.0187	0.0028	2.820E-11
rs62109862	19	13011809	A	G	0.1418	0.0136	0.0020	2.850E-11
rs5754762	22	34329224	A	G	0.9405	0.0197	0.0030	2.950E-11
rs4328757	3	36938180	T	C	0.6119	0.0096	0.0014	2.950E-11
rs7127580	11	79144856	C	G	0.8925	-0.0150	0.0023	3.120E-11
rs6123924	20	58219764	A	G	0.8445	0.0129	0.0019	3.200E-11
rs12790196	11	57497847	T	C	0.3263	-0.0101	0.0015	3.290E-11
rs34807077	8	28680769	A	C	0.1569	0.0128	0.0019	3.290E-11
rs9527662	13	58020265	A	T	0.4193	0.0094	0.0014	3.370E-11
rs2852349	18	37182907	T	C	0.5278	-0.0093	0.0014	3.780E-11
rs9545395	13	36370970	T	C	0.8702	0.0138	0.0021	3.810E-11
rs12151248	19	13212025	T	C	0.1141	-0.0149	0.0023	3.810E-11
rs35606437	8	93327532	A	G	0.2675	0.0105	0.0016	3.980E-11
rs1865955	10	118837990	T	C	0.8244	0.0122	0.0019	4.060E-11
rs9527905	13	59403033	A	G	0.5828	-0.0094	0.0014	4.110E-11
rs4652135	1	175837673	A	C	0.7201	0.0103	0.0016	4.350E-11
rs74944275	5	102726073	T	C	0.0433	0.0231	0.0035	4.440E-11
rs114952970	2	161812352	T	C	0.0325	0.0265	0.0040	4.440E-11
rs13327482	3	196788363	A	G	0.8221	-0.0121	0.0018	4.470E-11
rs4675248	2	202880230	A	G	0.3995	-0.0094	0.0014	4.500E-11
rs2964199	5	57532775	T	C	0.3149	-0.0099	0.0015	4.610E-11
rs9830359	3	85397118	T	C	0.1117	-0.0147	0.0022	4.700E-11
rs12126231	1	184698816	A	G	0.6094	0.0095	0.0014	4.820E-11
rs6812533	4	39687838	T	C	0.7444	0.0106	0.0016	4.850E-11
rs4778058	15	93456069	T	C	0.4964	-0.0092	0.0014	4.920E-11
rs1171040	1	190400984	A	G	0.7866	-0.0113	0.0017	5.070E-11
rs6924023	6	170076041	A	G	0.7548	0.0107	0.0016	5.170E-11
rs7799141	7	132660489	A	G	0.3104	0.0099	0.0015	5.310E-11
rs10830858	11	91896638	T	C	0.5104	0.0092	0.0014	5.310E-11
rs4895650	6	145024122	T	C	0.5472	0.0093	0.0014	5.310E-11
rs13015496	2	226290705	C	G	0.1842	0.0119	0.0018	5.340E-11
rs67456868	6	119079800	A	G	0.1839	0.0119	0.0018	5.370E-11
rs11623285	14	24557642	T	G	0.8630	-0.0135	0.0021	5.580E-11

rs4369924	20	41954383	A	G	0.1615	0.0125	0.0019	5.580E-11
rs10783243	12	48653003	A	G	0.5228	-0.0092	0.0014	5.800E-11
rs9771228	7	32322496	T	C	0.6491	0.0096	0.0015	5.910E-11
rs12670376	7	48823154	A	G	0.4464	0.0092	0.0014	5.990E-11
rs9927842	16	15153717	T	C	0.1490	-0.0130	0.0020	6.220E-11
rs1991585	2	16647170	T	C	0.7060	-0.0101	0.0015	6.260E-11
rs252991	5	106767346	A	G	0.3695	0.0095	0.0015	6.300E-11
rs12789313	11	25058937	T	C	0.4907	0.0092	0.0014	6.790E-11
rs11158800	14	69747046	A	G	0.5044	-0.0091	0.0014	7.150E-11
rs12477385	2	166144850	T	G	0.2264	0.0109	0.0017	7.150E-11
rs67224963	5	63787810	A	G	0.2052	0.0113	0.0017	7.190E-11
rs913509	9	134737751	A	G	0.6560	0.0096	0.0015	7.420E-11
rs939400	2	50645890	T	G	0.3685	-0.0095	0.0015	7.520E-11
rs139244147	7	111912738	A	G	0.0604	-0.0193	0.0030	7.710E-11
rs4851263	2	100801867	A	G	0.1030	-0.0151	0.0023	7.860E-11
rs743316	21	35252696	T	C	0.7915	0.0112	0.0017	8.210E-11
rs7321274	13	69146186	A	G	0.7999	0.0114	0.0018	8.210E-11
rs1329125	1	234740880	T	C	0.3273	-0.0097	0.0015	8.370E-11
rs118040169	19	13109531	A	G	0.9650	-0.0248	0.0038	8.470E-11
rs13246220	7	39324253	T	G	0.6117	-0.0093	0.0014	8.530E-11
rs4941735	13	31641248	T	C	0.5703	0.0092	0.0014	8.630E-11
rs17680712	8	87300775	T	C	0.4369	-0.0092	0.0014	8.630E-11
rs57349798	6	37486052	A	G	0.4094	0.0093	0.0014	8.630E-11
rs17144467	7	122098782	A	C	0.6867	0.0098	0.0015	8.740E-11
rs2297293	21	47125046	C	G	0.3141	0.0099	0.0015	8.800E-11
rs74787922	2	141598681	A	C	0.9333	0.0182	0.0028	8.970E-11
rs1050847	16	87443734	T	C	0.5626	0.0092	0.0014	9.200E-11
rs72902523	18	36565421	T	C	0.2594	-0.0103	0.0016	9.850E-11
rs1106090	2	58068741	A	G	0.6228	0.0094	0.0014	1.000E-10
rs12891042	14	34018986	T	C	0.5853	0.0092	0.0014	1.020E-10
rs10098073	8	143309504	A	C	0.4775	-0.0091	0.0014	1.030E-10
rs13010566	2	125873208	A	C	0.4718	-0.0091	0.0014	1.030E-10
rs2336721	3	53028375	T	C	0.3778	0.0095	0.0015	1.050E-10
rs1007731	14	37054590	A	C	0.1159	-0.0143	0.0022	1.050E-10
rs10042828	5	88308777	A	G	0.8885	-0.0145	0.0022	1.060E-10
rs2434672	5	11471879	A	C	0.5321	0.0091	0.0014	1.060E-10
rs6881581	5	140946355	A	G	0.3278	-0.0096	0.0015	1.080E-10
rs72792395	2	44886144	T	C	0.1093	-0.0145	0.0022	1.090E-10
rs10750539	11	133548873	A	G	0.3517	-0.0095	0.0015	1.110E-10
rs1485300	8	120082253	C	G	0.6682	0.0098	0.0015	1.140E-10
rs9388490	6	126704795	T	C	0.4437	0.0091	0.0014	1.150E-10
rs12519073	5	136776762	T	C	0.2317	-0.0107	0.0017	1.160E-10
rs12912465	15	77309459	T	C	0.2690	-0.0104	0.0016	1.170E-10
rs76552497	8	12679680	T	C	0.1704	-0.0120	0.0019	1.170E-10
rs6573552	14	64750233	T	C	0.4960	-0.0090	0.0014	1.170E-10
rs1717204	3	118461145	A	C	0.1818	-0.0117	0.0018	1.200E-10
rs11693885	2	60122046	A	G	0.4522	-0.0091	0.0014	1.220E-10
rs7012546	8	105067737	T	C	0.4166	0.0092	0.0014	1.250E-10
rs2665668	2	60768978	A	G	0.6413	-0.0094	0.0015	1.250E-10
rs1301838	11	99670514	T	C	0.3227	-0.0096	0.0015	1.290E-10
rs62256284	3	70526305	T	C	0.2093	0.0111	0.0017	1.320E-10
rs198262	14	57283283	T	C	0.9574	-0.0223	0.0035	1.320E-10
rs2212430	11	109289538	T	C	0.3038	-0.0100	0.0016	1.320E-10
rs13029602	2	29574875	T	C	0.6059	-0.0092	0.0014	1.330E-10
rs7692359	4	83209346	T	C	0.7786	-0.0109	0.0017	1.400E-10
rs1738050	1	44707295	C	G	0.6197	-0.0093	0.0014	1.420E-10
rs17110109	12	54668908	T	C	0.6163	-0.0093	0.0014	1.470E-10
rs11789013	9	109677417	T	C	0.7585	0.0106	0.0016	1.470E-10

rs12438177	15	55951432	A	G	0.3676	0.0093	0.0015	1.480E-10
rs1527878	2	183446535	A	G	0.7566	-0.0105	0.0016	1.490E-10
rs7190	18	5889765	A	G	0.3514	-0.0095	0.0015	1.500E-10
rs9359939	6	92133241	A	C	0.2431	-0.0105	0.0016	1.510E-10
rs4480339	1	91096799	A	C	0.6926	-0.0097	0.0015	1.530E-10
rs2029401	5	92891029	A	G	0.4278	-0.0091	0.0014	1.530E-10
rs111821073	9	99084793	T	C	0.1567	0.0124	0.0019	1.580E-10
rs2368831	12	188285	T	C	0.5736	-0.0092	0.0014	1.630E-10
rs62155350	2	98932980	A	G	0.0186	0.0338	0.0053	1.690E-10
rs10772644	12	13417617	C	G	0.8887	0.0142	0.0022	1.690E-10
rs56794817	17	60001978	A	G	0.1615	0.0122	0.0019	1.690E-10
rs112806496	2	80421805	C	G	0.9129	-0.0160	0.0025	1.720E-10
rs12431682	14	101539999	T	C	0.3699	-0.0093	0.0015	1.730E-10
rs17747544	20	41211913	A	G	0.4701	-0.0090	0.0014	1.740E-10
rs7772172	6	16662928	A	G	0.4009	0.0091	0.0014	1.740E-10
rs7552964	1	69331299	A	T	0.1013	0.0148	0.0023	1.780E-10
rs9924031	16	19267144	C	G	0.3828	0.0093	0.0015	1.810E-10
rs4812697	20	41975395	T	G	0.9248	0.0171	0.0027	1.880E-10
rs4925109	17	17661802	A	G	0.3172	-0.0096	0.0015	1.910E-10
rs6472208	8	66474730	T	C	0.4033	-0.0091	0.0014	2.000E-10
rs73191311	8	4796094	A	G	0.3363	-0.0094	0.0015	2.030E-10
rs11894424	2	80588091	A	C	0.9524	0.0209	0.0033	2.140E-10
rs1603460	12	23092626	T	G	0.4206	0.0090	0.0014	2.200E-10
rs66671632	8	143680772	T	C	0.1299	-0.0133	0.0021	2.240E-10
rs567003	7	105341608	A	G	0.3538	0.0094	0.0015	2.270E-10
rs2942884	2	101323578	A	G	0.4639	-0.0090	0.0014	2.270E-10
rs17133297	7	3455401	A	T	0.8958	-0.0146	0.0023	2.280E-10
rs4731413	7	127836132	A	G	0.2058	0.0111	0.0017	2.310E-10
rs1123285	14	57274519	C	G	0.6659	-0.0094	0.0015	2.380E-10
rs62194170	2	161866504	A	G	0.2025	0.0111	0.0017	2.410E-10
rs1734370	2	10978710	A	G	0.7171	0.0099	0.0016	2.420E-10
rs11174399	12	62646556	A	G	0.2008	0.0111	0.0018	2.420E-10
rs72667460	1	66536012	T	C	0.0539	0.0197	0.0031	2.440E-10
rs75500877	1	181596751	T	C	0.0485	0.0207	0.0033	2.480E-10
rs9849884	3	68869923	A	T	0.5836	-0.0090	0.0014	2.510E-10
rs112210983	16	14674204	A	G	0.2308	0.0105	0.0017	2.660E-10
rs57437407	3	86173623	A	G	0.8900	-0.0145	0.0023	2.670E-10
rs42210	5	166408788	C	G	0.7122	-0.0098	0.0016	2.740E-10
rs1952183	14	89844111	A	G	0.5078	-0.0089	0.0014	2.760E-10
rs7650602	3	141147414	T	C	0.5599	-0.0089	0.0014	2.770E-10
rs142747148	13	58271461	A	G	0.9811	0.0329	0.0052	2.840E-10
rs34262657	15	63849287	T	G	0.9619	-0.0240	0.0038	2.840E-10
rs7451726	6	28382494	A	G	0.7947	0.0109	0.0017	2.860E-10
rs116656374	3	49413266	T	G	0.0373	-0.0242	0.0038	2.950E-10
rs7356536	5	87083961	T	C	0.8647	-0.0129	0.0021	2.950E-10
rs10009513	4	38591860	A	G	0.4830	0.0088	0.0014	3.020E-10
rs1918394	3	74903904	T	C	0.1658	0.0119	0.0019	3.040E-10
rs137079	22	42977907	T	C	0.1375	0.0128	0.0020	3.060E-10
rs13261773	8	120187090	C	G	0.1602	0.0122	0.0019	3.120E-10
rs80257979	12	49402562	T	G	0.9677	-0.0252	0.0040	3.310E-10
rs9977825	21	46494995	T	C	0.3655	-0.0092	0.0015	3.370E-10
rs34286836	6	148273664	T	C	0.4479	-0.0089	0.0014	3.440E-10
rs187580	5	102627355	T	G	0.7671	-0.0104	0.0017	3.560E-10
rs182355396	3	50920457	A	C	0.0084	-0.0525	0.0084	3.670E-10
rs10205057	2	186139826	T	C	0.5619	0.0090	0.0014	3.670E-10
rs12810587	12	122675576	T	C	0.3256	0.0094	0.0015	3.700E-10
rs32940	5	141132286	T	C	0.3001	-0.0096	0.0015	3.720E-10
rs61739710	21	34925689	A	G	0.2813	-0.0099	0.0016	3.740E-10

rs3111251	1	211409844	T	C	0.4325	-0.0090	0.0014	3.880E-10
rs2365376	5	88740323	A	C	0.3503	0.0092	0.0015	3.930E-10
rs3948495	2	57383133	T	G	0.4079	-0.0089	0.0014	3.950E-10
rs13281564	8	119483316	A	G	0.5129	0.0088	0.0014	4.020E-10
rs12325727	17	47028472	A	G	0.4756	0.0088	0.0014	4.100E-10
rs17113730	12	74936526	A	G	0.0717	-0.0170	0.0027	4.100E-10
rs4663617	2	236744626	A	T	0.2350	0.0104	0.0017	4.120E-10
rs10974256	9	3952892	A	G	0.3411	-0.0093	0.0015	4.120E-10
rs11130380	3	53758950	T	G	0.6135	0.0090	0.0014	4.170E-10
rs2254681	1	159248048	A	G	0.2517	0.0101	0.0016	4.250E-10
rs10761202	9	96019970	T	C	0.4946	0.0088	0.0014	4.280E-10
rs2702576	4	15058245	A	G	0.3829	-0.0090	0.0014	4.410E-10
rs17622379	17	50726846	T	C	0.1853	-0.0113	0.0018	4.520E-10
rs76235882	9	121096681	A	G	0.9660	0.0241	0.0039	4.520E-10
rs117468730	16	10205467	A	G	0.0205	-0.0310	0.0050	4.570E-10
rs11030102	11	27681596	C	G	0.7479	0.0101	0.0016	4.600E-10
rs2885198	3	143636421	A	G	0.5318	0.0088	0.0014	4.630E-10
rs580652	11	84904742	T	C	0.9017	-0.0147	0.0024	4.650E-10
rs9820604	3	72363674	T	C	0.8254	0.0115	0.0018	4.800E-10
rs806816	10	32285942	A	T	0.7498	0.0101	0.0016	4.800E-10
rs62092949	18	48779673	T	C	0.4856	-0.0087	0.0014	4.860E-10
rs2023016	6	162981266	C	G	0.7899	0.0107	0.0017	4.910E-10
rs481940	1	71442457	T	C	0.2546	0.0100	0.0016	4.940E-10
rs72694479	14	85112638	T	G	0.1412	0.0127	0.0020	4.940E-10
rs10844179	12	32469601	A	G	0.2257	0.0104	0.0017	5.030E-10
rs9858921	3	161148946	A	G	0.4661	-0.0087	0.0014	5.190E-10
rs1391513	1	216693263	T	C	0.6911	-0.0095	0.0015	5.250E-10
rs11023764	11	15910939	A	G	0.6418	0.0091	0.0015	5.320E-10
rs13296345	9	14791348	T	C	0.6299	0.0090	0.0015	5.350E-10
rs11003463	10	51801793	T	G	0.6114	0.0091	0.0015	5.580E-10
rs1408284	6	93893586	C	G	0.8639	-0.0127	0.0020	5.710E-10
rs4458044	17	43873727	C	G	0.2581	0.0101	0.0016	5.710E-10
rs78440611	12	123144189	A	G	0.9026	-0.0147	0.0024	5.710E-10
rs139980871	18	36648364	T	C	0.0633	0.0180	0.0029	5.780E-10
rs76876592	13	67141932	A	G	0.8609	0.0126	0.0020	5.820E-10
rs1933264	6	153391618	T	C	0.7491	0.0100	0.0016	5.850E-10
rs7035315	9	83231511	A	G	0.6292	-0.0090	0.0015	5.850E-10
rs7495033	15	75206225	A	T	0.6890	0.0095	0.0015	5.920E-10
rs4423373	15	27988340	A	G	0.5386	-0.0087	0.0014	6.000E-10
rs17131123	1	91126097	A	G	0.9659	-0.0243	0.0039	6.290E-10
rs12359372	10	67767951	T	C	0.6624	-0.0092	0.0015	6.330E-10
rs763553	8	31445496	A	G	0.4452	0.0087	0.0014	6.410E-10
rs72906124	2	157076201	T	C	0.9420	0.0185	0.0030	6.440E-10
rs6956283	7	98756597	T	C	0.7342	0.0098	0.0016	6.440E-10
rs76241605	4	140717160	A	G	0.1142	0.0139	0.0022	6.480E-10
rs76246107	19	50121274	A	G	0.0941	-0.0162	0.0026	6.520E-10
rs9513754	13	101043420	T	C	0.2906	0.0096	0.0016	6.640E-10
rs255053	16	68020492	A	G	0.1913	-0.0111	0.0018	6.680E-10
rs8016504	14	33308021	A	C	0.5427	-0.0087	0.0014	6.840E-10
rs62155770	2	99981222	A	G	0.9474	-0.0196	0.0032	6.880E-10
rs62090515	18	42671636	A	G	0.3605	-0.0090	0.0015	6.880E-10
rs151381	4	103118768	T	C	0.4927	-0.0087	0.0014	7.010E-10
rs10080647	6	114742335	A	C	0.1405	0.0124	0.0020	7.050E-10
rs1408430	20	14917048	C	G	0.7193	0.0096	0.0016	7.090E-10
rs232496	21	22734409	T	C	0.3657	0.0090	0.0015	7.140E-10
rs10519504	4	140640283	T	G	0.1561	0.0119	0.0019	7.310E-10
rs236318	1	94050221	C	G	0.2346	-0.0102	0.0017	7.400E-10
rs1267062	2	162000266	C	G	0.1781	0.0113	0.0018	7.400E-10

rs1671269	18	50109971	T	C	0.7524	-0.0100	0.0016	7.400E-10
rs13381557	18	44513371	A	G	0.5413	-0.0087	0.0014	7.400E-10
rs68145588	17	75864805	T	G	0.1395	-0.0127	0.0021	7.530E-10
rs7171405	15	61466893	A	G	0.2432	-0.0101	0.0016	7.530E-10
rs11211123	1	45957609	A	G	0.2228	0.0104	0.0017	7.620E-10
rs2740795	8	91927455	A	T	0.7377	0.0098	0.0016	7.710E-10
rs17205908	6	127764305	T	C	0.3311	-0.0092	0.0015	7.710E-10
rs10928190	2	144376033	T	C	0.4520	-0.0087	0.0014	7.760E-10
rs4984613	15	65023232	T	G	0.0683	0.0174	0.0028	7.760E-10
rs17609255	17	50274170	T	C	0.4176	-0.0087	0.0014	7.900E-10
rs11919835	3	70954273	C	G	0.3857	0.0089	0.0015	7.950E-10
rs6720515	2	156603535	A	T	0.7763	0.0103	0.0017	7.950E-10
rs35751693	2	98242555	T	C	0.0348	-0.0246	0.0040	8.040E-10
rs16975275	15	96046556	A	G	0.2306	-0.0102	0.0017	8.140E-10
rs181214	17	56179482	T	C	0.2225	-0.0104	0.0017	8.190E-10
rs818415	16	65448079	T	G	0.8092	-0.0110	0.0018	8.190E-10
rs117273411	9	23385738	T	C	0.9540	-0.0211	0.0034	8.590E-10
rs62506074	8	30906089	T	C	0.3430	0.0091	0.0015	8.640E-10
rs2007655	10	34586689	T	G	0.4976	0.0086	0.0014	8.640E-10
rs4685405	3	16981683	T	G	0.1824	-0.0111	0.0018	8.690E-10
rs34363861	2	73490412	A	G	0.5194	0.0087	0.0014	8.690E-10
rs1963381	18	36125986	A	G	0.7506	0.0099	0.0016	8.800E-10
rs72673097	1	44087925	A	G	0.0299	0.0257	0.0042	8.900E-10
rs2554835	18	74141190	A	G	0.3998	0.0088	0.0014	8.950E-10
rs9927049	16	71860008	A	G	0.7453	0.0099	0.0016	9.280E-10
rs72944064	18	63516255	T	C	0.7437	-0.0098	0.0016	9.390E-10
rs6729612	2	152780167	T	C	0.6760	0.0092	0.0015	9.390E-10
rs11917701	3	117174568	A	G	0.4041	-0.0087	0.0014	9.450E-10
rs6696068	1	53740797	T	G	0.3838	-0.0088	0.0014	9.500E-10
rs7449561	6	66215549	A	G	0.2260	0.0102	0.0017	9.730E-10
rs112512729	3	24905460	T	G	0.9282	-0.0166	0.0027	9.910E-10
rs9866123	3	20631298	A	G	0.4804	0.0086	0.0014	1.020E-09
rs143812851	16	61773849	A	G	0.1735	-0.0113	0.0019	1.030E-09
rs164938	3	10315103	T	G	0.3922	-0.0088	0.0014	1.050E-09
rs29792	5	168978148	A	T	0.3032	-0.0093	0.0015	1.060E-09
rs1061801	6	33282338	A	G	0.1870	-0.0110	0.0018	1.060E-09
rs7255223	19	32824310	A	C	0.2691	0.0097	0.0016	1.060E-09
rs188251563	10	103744305	A	G	0.9895	0.0428	0.0070	1.070E-09
rs60717745	7	75846083	C	G	0.8440	-0.0118	0.0019	1.080E-09
rs1880692	11	80338069	A	G	0.5346	0.0086	0.0014	1.090E-09
rs6469654	8	117632965	C	G	0.7769	-0.0103	0.0017	1.100E-09
rs1880088	11	20959185	A	T	0.2618	-0.0097	0.0016	1.110E-09
rs10947439	6	33774948	T	C	0.6627	0.0090	0.0015	1.110E-09
rs12709186	16	7249472	A	G	0.3236	-0.0091	0.0015	1.120E-09
rs7575938	2	166910677	A	G	0.3408	0.0090	0.0015	1.130E-09
rs6871635	5	133830395	A	G	0.4300	-0.0087	0.0014	1.160E-09
rs1980129	4	17045911	A	G	0.4738	0.0085	0.0014	1.170E-09
rs11780023	8	141992778	T	C	0.5051	0.0085	0.0014	1.170E-09
rs7775100	6	96519657	T	C	0.3906	-0.0087	0.0014	1.200E-09
rs74462621	8	133732856	T	C	0.1357	0.0125	0.0020	1.210E-09
rs73643713	9	4163612	T	C	0.9280	-0.0165	0.0027	1.240E-09
rs62190914	2	236788175	T	C	0.6360	0.0089	0.0015	1.250E-09
rs1538389	1	112327144	T	C	0.1894	-0.0109	0.0018	1.270E-09
rs17883331	19	4954455	A	G	0.1918	-0.0108	0.0018	1.290E-09
rs73874335	3	157933483	T	C	0.0607	-0.0178	0.0029	1.290E-09
rs2929860	3	128691941	T	C	0.1878	0.0110	0.0018	1.330E-09
rs1427298	2	145214421	T	C	0.4264	0.0086	0.0014	1.330E-09
rs1009470	9	122289187	T	G	0.4414	0.0086	0.0014	1.340E-09

rs893522	3	165560618	A	C	0.9112	0.0149	0.0025	1.390E-09
rs138484388	3	49511263	T	C	0.0224	-0.0306	0.0051	1.400E-09
rs322614	11	29755547	A	G	0.3817	-0.0087	0.0014	1.430E-09
rs12746551	1	114374966	C	G	0.9689	0.0248	0.0041	1.440E-09
rs2416759	9	123358262	A	G	0.6986	-0.0093	0.0015	1.450E-09
rs429150	6	32075563	T	C	0.5292	0.0085	0.0014	1.500E-09
rs11876620	18	52737309	T	C	0.0973	0.0143	0.0024	1.520E-09
rs16871807	5	3437297	T	C	0.3297	0.0090	0.0015	1.590E-09
rs12970264	18	77627950	A	G	0.4386	-0.0085	0.0014	1.610E-09
rs11644446	16	7943552	A	G	0.1562	0.0117	0.0019	1.610E-09
rs2024568	20	44732089	T	C	0.2535	-0.0097	0.0016	1.610E-09
rs4687735	3	53684371	T	C	0.0475	-0.0200	0.0033	1.630E-09
rs76267866	3	70540347	A	T	0.7926	0.0104	0.0017	1.640E-09
rs1841023	4	163735584	A	C	0.6904	-0.0092	0.0015	1.640E-09
rs1758747	9	25300643	A	G	0.6962	0.0092	0.0015	1.640E-09
rs12659776	5	167621274	T	G	0.5399	0.0085	0.0014	1.640E-09
rs113588399	6	157236426	T	C	0.2079	-0.0104	0.0017	1.670E-09
rs12028229	1	72986136	T	G	0.2631	0.0099	0.0016	1.670E-09
rs7597412	2	142069014	C	G	0.3688	0.0088	0.0015	1.680E-09
rs17574007	2	51230274	A	C	0.1215	-0.0129	0.0021	1.690E-09
rs12127928	1	28708529	T	C	0.8057	0.0108	0.0018	1.690E-09
rs11598765	10	23953725	A	G	0.1966	-0.0106	0.0018	1.730E-09
rs6060308	20	33794378	A	G	0.2788	0.0095	0.0016	1.760E-09
rs1544	21	33085585	A	G	0.2636	-0.0096	0.0016	1.760E-09
rs2358628	14	74631757	A	C	0.3122	-0.0091	0.0015	1.780E-09
rs7967550	12	92145307	A	G	0.3998	-0.0086	0.0014	1.790E-09
rs62051146	16	72497721	A	C	0.8886	-0.0134	0.0022	1.790E-09
rs852771	1	58288317	T	C	0.6963	0.0092	0.0015	1.840E-09
rs12761729	10	107619932	T	C	0.7441	-0.0098	0.0016	1.870E-09
rs2898191	21	34288509	A	C	0.6921	0.0093	0.0015	1.880E-09
rs6946362	7	6574807	T	C	0.6884	0.0091	0.0015	1.890E-09
rs2100249	7	113848497	T	G	0.3488	-0.0089	0.0015	1.910E-09
rs2916490	2	80192352	A	G	0.3023	-0.0092	0.0015	1.920E-09
rs6480234	10	68636894	T	C	0.5250	-0.0084	0.0014	1.940E-09
rs114810763	6	30398390	A	G	0.1549	-0.0121	0.0020	1.980E-09
rs28513882	3	107296628	A	G	0.1783	-0.0110	0.0018	2.030E-09
rs10208	17	42300278	T	C	0.3173	0.0091	0.0015	2.070E-09
rs11724690	4	186764747	T	G	0.2887	0.0093	0.0015	2.080E-09
rs2657283	10	76920199	T	C	0.5884	0.0085	0.0014	2.080E-09
rs933738	12	49943122	A	G	0.8193	-0.0110	0.0018	2.080E-09
rs41282553	22	31286928	A	G	0.0339	0.0237	0.0040	2.090E-09
rs9513416	13	99055774	A	G	0.8437	-0.0116	0.0019	2.180E-09
rs4658019	1	196149936	T	C	0.4531	0.0084	0.0014	2.190E-09
rs4788115	16	28998111	A	T	0.1804	0.0111	0.0019	2.270E-09
rs34394051	1	6853091	A	G	0.8429	-0.0117	0.0020	2.300E-09
rs9568798	13	53614554	T	C	0.2912	-0.0093	0.0016	2.300E-09
rs12054166	3	150093445	C	G	0.7399	0.0096	0.0016	2.300E-09
rs8097125	18	13005473	T	C	0.3802	0.0086	0.0014	2.310E-09
rs4719460	7	859610	T	C	0.6560	-0.0088	0.0015	2.340E-09
rs59967356	3	71639294	T	C	0.8698	-0.0127	0.0021	2.340E-09
rs312945	2	21328825	A	G	0.3051	-0.0091	0.0015	2.340E-09
rs7816777	8	19371767	T	C	0.3526	-0.0088	0.0015	2.350E-09
rs9465509	6	19744129	A	G	0.4824	-0.0084	0.0014	2.350E-09
rs1404549	3	65454923	A	G	0.3278	-0.0089	0.0015	2.380E-09
rs12962845	18	22654102	C	G	0.1325	-0.0123	0.0021	2.380E-09
rs7855503	9	86381638	C	G	0.3478	0.0088	0.0015	2.390E-09
rs1564347	15	73438848	T	G	0.3433	0.0088	0.0015	2.390E-09
rs736281	14	94287830	T	C	0.3931	0.0086	0.0014	2.490E-09

rs12113634	7	111996952	T	C	0.6504	0.0088	0.0015	2.500E-09
rs631287	9	128412676	A	G	0.5580	0.0084	0.0014	2.520E-09
rs6917154	6	167135156	T	C	0.1236	0.0127	0.0021	2.550E-09
rs6757087	2	212680523	T	G	0.5755	-0.0085	0.0014	2.550E-09
rs28587776	5	177030177	T	C	0.3541	0.0088	0.0015	2.550E-09
rs2034631	4	82225529	T	C	0.6508	0.0089	0.0015	2.640E-09
rs62103198	18	77634276	T	C	0.9087	-0.0147	0.0025	2.690E-09
rs1542354	2	221814085	A	G	0.4764	-0.0084	0.0014	2.720E-09
rs8052523	16	9293246	T	C	0.5697	-0.0084	0.0014	2.730E-09
rs622169	1	244437407	T	C	0.4536	0.0086	0.0014	2.730E-09
rs34811474	4	25408838	A	G	0.2242	0.0104	0.0017	2.750E-09
rs12981405	19	19651577	T	C	0.1664	-0.0112	0.0019	2.750E-09
rs2332179	3	122079430	A	G	0.8610	0.0121	0.0020	2.760E-09
rs62174974	2	185053385	A	G	0.1949	-0.0105	0.0018	2.760E-09
rs10877283	12	59837734	T	G	0.5973	0.0085	0.0014	2.860E-09
rs10411759	19	1857297	A	G	0.1561	0.0116	0.0020	2.880E-09
rs72917504	2	175225018	T	C	0.0583	-0.0178	0.0030	2.910E-09
rs113615161	7	114519339	T	C	0.1330	-0.0123	0.0021	2.980E-09
rs17882802	10	101983413	A	G	0.4295	0.0084	0.0014	3.000E-09
rs60589532	2	58072605	A	G	0.9345	0.0168	0.0028	3.030E-09
rs1097784	16	10249416	T	C	0.5021	-0.0083	0.0014	3.050E-09
rs10193498	2	174094345	A	T	0.7550	0.0097	0.0016	3.100E-09
rs79855925	5	60095384	T	C	0.0488	-0.0194	0.0033	3.100E-09
rs10831656	11	11660815	T	C	0.3134	0.0090	0.0015	3.100E-09
rs4785187	16	49766772	A	G	0.2253	-0.0100	0.0017	3.120E-09
rs2199409	11	39915234	T	C	0.7962	0.0103	0.0017	3.140E-09
rs7905192	10	12711949	T	C	0.5720	0.0084	0.0014	3.140E-09
rs55826493	2	12836640	T	G	0.1216	-0.0127	0.0021	3.160E-09
rs1427829	12	89760744	A	G	0.4546	-0.0083	0.0014	3.290E-09
rs61853335	10	64884737	T	C	0.1769	-0.0109	0.0018	3.290E-09
rs1529597	15	57190064	A	C	0.9637	0.0223	0.0038	3.360E-09
rs12614263	2	4123797	A	G	0.4959	0.0083	0.0014	3.380E-09
rs1024268	1	70117404	T	C	0.4186	-0.0084	0.0014	3.400E-09
rs9371883	6	155644978	C	G	0.6430	-0.0087	0.0015	3.420E-09
rs6490618	13	21338343	T	C	0.3270	0.0088	0.0015	3.480E-09
rs28505285	7	44377654	C	G	0.1884	0.0106	0.0018	3.500E-09
rs12568153	1	213151580	T	G	0.2902	-0.0091	0.0015	3.520E-09
rs1467737	9	124982500	T	C	0.4746	-0.0084	0.0014	3.520E-09
rs2805064	9	24530615	C	G	0.7291	0.0093	0.0016	3.540E-09
rs7849480	9	14648130	A	G	0.4353	-0.0084	0.0014	3.540E-09
rs4127499	11	122176383	A	G	0.3495	0.0087	0.0015	3.560E-09
rs74944857	4	66496914	T	G	0.3223	-0.0089	0.0015	3.620E-09
rs34298584	18	39026695	A	G	0.1688	0.0111	0.0019	3.670E-09
rs12005151	9	135030649	A	G	0.3615	0.0087	0.0015	3.730E-09
rs150252215	3	49296234	A	T	0.0437	0.0204	0.0035	3.820E-09
rs58779949	11	64007159	A	C	0.1698	0.0110	0.0019	3.840E-09
rs6020560	20	49119419	T	C	0.5258	-0.0083	0.0014	3.840E-09
rs34316274	16	1018697	A	G	0.7620	0.0097	0.0017	3.860E-09
rs17186106	4	91703241	T	G	0.1771	0.0108	0.0018	3.950E-09
rs977143	18	38028165	A	G	0.3725	0.0085	0.0015	3.950E-09
rs9563168	13	54247827	A	G	0.2117	0.0101	0.0017	4.070E-09
rs11030084	11	27643725	T	C	0.1845	0.0106	0.0018	4.070E-09
rs4664983	2	159454438	T	C	0.1987	-0.0103	0.0018	4.110E-09
rs6503409	17	43058742	T	C	0.3463	0.0087	0.0015	4.110E-09
rs6774533	3	62471086	T	C	0.6985	0.0090	0.0015	4.180E-09
rs1107871	12	132240659	A	G	0.5506	-0.0083	0.0014	4.180E-09
rs16966271	15	38423730	T	C	0.2819	0.0092	0.0016	4.210E-09
rs58996896	2	123735005	A	G	0.7388	-0.0094	0.0016	4.230E-09

rs2458370	1	117874944	T	C	0.6409	-0.0086	0.0015	4.230E-09
rs10742591	11	41548956	A	T	0.6097	-0.0084	0.0014	4.260E-09
rs117623407	19	32204489	A	G	0.8536	-0.0118	0.0020	4.300E-09
rs2962378	5	90950210	A	G	0.7872	0.0101	0.0017	4.300E-09
rs2373124	7	85830272	A	G	0.7604	-0.0096	0.0016	4.350E-09
rs2870281	4	91945572	A	C	0.4410	-0.0083	0.0014	4.350E-09
rs4810894	20	47532999	A	G	0.3706	-0.0085	0.0015	4.380E-09
rs10046069	5	89115576	A	G	0.1203	0.0127	0.0022	4.400E-09
rs10006235	4	130670108	T	C	0.2689	-0.0093	0.0016	4.480E-09
rs12123293	1	210912835	T	C	0.6476	0.0086	0.0015	4.480E-09
rs28482086	1	75226252	A	G	0.3494	0.0086	0.0015	4.510E-09
rs12646216	4	45980056	T	C	0.3889	0.0084	0.0014	4.560E-09
rs854796	17	18070761	A	G	0.6932	0.0090	0.0015	4.660E-09
rs1593022	5	106685563	T	G	0.2256	-0.0099	0.0017	4.690E-09
rs736471	3	50519392	T	C	0.4653	0.0083	0.0014	4.690E-09
rs8009933	14	39600212	A	G	0.6783	0.0088	0.0015	4.720E-09
rs183869217	2	81751340	C	G	0.9409	0.0174	0.0030	4.720E-09
rs35754740	16	63127870	T	C	0.5811	0.0083	0.0014	4.770E-09
rs62018216	15	51387404	T	G	0.1549	0.0113	0.0019	4.830E-09
rs59300999	21	33072363	T	C	0.9325	-0.0164	0.0028	4.850E-09
rs13177031	5	60853523	A	T	0.3703	-0.0085	0.0015	4.880E-09
rs72896637	2	183543531	T	G	0.0707	0.0162	0.0028	4.880E-09
rs72834698	6	26176517	A	G	0.1440	0.0117	0.0020	4.910E-09
rs2926702	8	71167994	T	C	0.8739	-0.0124	0.0021	4.910E-09
rs143743568	22	39289014	A	G	0.1540	0.0118	0.0020	4.990E-09
rs39998	16	28133152	A	C	0.2967	0.0090	0.0015	5.020E-09
rs13154429	5	59608950	C	G	0.1016	-0.0136	0.0023	5.020E-09
rs9927137	16	30634300	A	G	0.5298	0.0082	0.0014	5.110E-09
rs57148205	2	225689421	A	G	0.2438	0.0095	0.0016	5.170E-09
rs8103741	19	2325005	A	G	0.8220	-0.0108	0.0019	5.170E-09
rs16901689	5	11507368	T	G	0.1634	0.0111	0.0019	5.170E-09
rs2077235	16	3629227	T	C	0.2373	0.0097	0.0017	5.200E-09
rs4739235	8	21287105	A	G	0.1701	0.0109	0.0019	5.260E-09
rs10879676	12	74152402	T	C	0.5833	-0.0083	0.0014	5.290E-09
rs7894722	10	9972046	T	C	0.3748	0.0085	0.0014	5.410E-09
rs173003	19	36240960	A	C	0.4934	-0.0082	0.0014	5.500E-09
rs1835339	2	183393680	T	C	0.6132	0.0084	0.0014	5.590E-09
rs62370510	5	52789198	A	T	0.1771	-0.0109	0.0019	5.590E-09
rs6977237	7	14027991	T	C	0.4725	0.0082	0.0014	5.590E-09
rs7158218	14	73934880	A	C	0.7117	-0.0090	0.0015	5.630E-09
rs13190235	5	65964783	T	C	0.9036	-0.0138	0.0024	5.660E-09
rs1910005	5	81110866	T	C	0.7080	-0.0090	0.0015	5.660E-09
rs71646142	1	212369228	T	C	0.1893	0.0104	0.0018	5.690E-09
rs162445	5	7943246	A	G	0.0788	0.0152	0.0026	5.720E-09
rs75756843	12	110111274	A	G	0.0214	0.0288	0.0049	5.790E-09
rs5754581	22	33910736	T	C	0.5542	-0.0082	0.0014	5.850E-09
rs13398860	2	50692940	A	G	0.6529	0.0086	0.0015	5.890E-09
rs79585412	21	46487730	T	C	0.9428	-0.0178	0.0031	5.920E-09
rs55675587	1	66224881	T	C	0.1926	-0.0103	0.0018	5.920E-09
rs42302	5	74965554	A	G	0.3441	0.0086	0.0015	5.960E-09
rs9435340	1	107593201	A	T	0.6615	0.0086	0.0015	5.990E-09
rs7958371	12	103456084	A	T	0.3552	-0.0085	0.0015	5.990E-09
rs9649	17	34050934	T	C	0.1749	0.0108	0.0019	6.130E-09
rs912883	6	41552040	T	C	0.6781	0.0087	0.0015	6.200E-09
rs2522545	4	106378284	T	C	0.4083	-0.0083	0.0014	6.230E-09
rs6853599	4	3445610	T	C	0.1787	0.0108	0.0019	6.270E-09
rs4904523	14	89723630	A	G	0.5208	-0.0082	0.0014	6.270E-09
rs2542673	16	54206715	A	C	0.3243	0.0088	0.0015	6.300E-09

rs2964255	5	152052332	A	G	0.3066	0.0088	0.0015	6.340E-09
rs17686649	6	93568527	T	C	0.2192	-0.0098	0.0017	6.370E-09
rs10782651	1	77934335	T	C	0.5516	-0.0082	0.0014	6.370E-09
rs6445633	3	54230638	A	C	0.3127	0.0088	0.0015	6.370E-09
rs17536059	11	110957335	C	G	0.1721	-0.0108	0.0019	6.450E-09
rs74453875	3	52046707	A	G	0.0392	0.0214	0.0037	6.480E-09
rs11720093	3	50562042	T	C	0.0809	0.0150	0.0026	6.480E-09
rs13388333	2	242400597	A	G	0.6337	0.0085	0.0015	6.480E-09
rs12952191	17	52077386	T	C	0.4895	-0.0081	0.0014	6.520E-09
rs1890132	1	199427321	T	C	0.7056	-0.0089	0.0015	6.560E-09
rs4712371	6	19227667	A	G	0.1217	-0.0124	0.0021	6.630E-09
rs1505676	4	62127291	C	G	0.6293	0.0084	0.0015	6.670E-09
rs11613431	12	26684343	A	G	0.2620	-0.0094	0.0016	6.710E-09
rs4977885	9	23687983	A	G	0.3971	-0.0084	0.0014	6.780E-09
rs67790232	12	46079172	A	G	0.7940	0.0101	0.0017	6.900E-09
rs12467175	2	229189860	T	C	0.4923	-0.0081	0.0014	6.900E-09
rs10795831	10	10943379	T	G	0.2120	-0.0099	0.0017	6.980E-09
rs17148998	10	10909401	A	G	0.2042	0.0101	0.0017	6.980E-09
rs9666728	11	87907712	T	C	0.4427	-0.0082	0.0014	7.100E-09
rs6780414	3	67384670	T	C	0.8176	0.0105	0.0018	7.100E-09
rs79997166	2	161808690	A	C	0.9375	0.0172	0.0030	7.140E-09
rs115693355	3	108284214	A	G	0.0192	0.0309	0.0053	7.220E-09
rs13397529	2	161235981	C	G	0.2363	-0.0097	0.0017	7.220E-09
rs186456786	13	58698035	A	G	0.9906	0.0455	0.0079	7.260E-09
rs73405293	12	117522917	A	G	0.1516	0.0113	0.0020	7.420E-09
rs12601380	17	34904985	A	C	0.5739	-0.0082	0.0014	7.420E-09
rs13212041	6	78171124	T	C	0.7978	0.0101	0.0018	7.420E-09
rs56408528	2	193706511	T	C	0.5121	-0.0082	0.0014	7.470E-09
rs3847228	9	1798805	T	C	0.4060	0.0083	0.0014	7.470E-09
rs10996167	10	66813928	C	G	0.6512	0.0113	0.0020	7.470E-09
rs4283754	5	59570258	A	G	0.4787	-0.0084	0.0014	7.550E-09
rs4502401	2	199323526	T	C	0.6542	0.0085	0.0015	7.550E-09
rs7146625	14	84788153	A	G	0.7313	0.0091	0.0016	7.550E-09
rs3781339	10	105428152	T	C	0.1962	-0.0104	0.0018	7.550E-09
rs2321157	13	58736901	A	G	0.5303	-0.0081	0.0014	7.640E-09
rs35111506	11	65334712	C	G	0.9432	-0.0175	0.0030	7.900E-09
rs12516990	5	145927688	C	G	0.2106	-0.0099	0.0017	7.900E-09
rs11209894	1	41798668	A	G	0.1377	0.0119	0.0021	8.030E-09
rs4787028	16	7533021	T	C	0.6622	0.0086	0.0015	8.080E-09
rs633279	6	93840705	A	T	0.2957	-0.0089	0.0015	8.120E-09
rs12304188	12	97981272	A	G	0.8420	0.0111	0.0019	8.170E-09
rs61958175	13	58680250	A	G	0.9538	-0.0198	0.0034	8.220E-09
rs28669886	12	106722701	A	G	0.3548	-0.0084	0.0015	8.310E-09
rs3790609	1	113056990	T	C	0.1744	0.0107	0.0019	8.350E-09
rs6989141	8	142681460	A	G	0.2080	0.0100	0.0017	8.400E-09
rs2929032	8	56371745	A	G	0.4654	-0.0081	0.0014	8.400E-09
rs9916901	18	40238335	T	G	0.7377	0.0092	0.0016	8.400E-09
rs1779549	14	84640016	A	C	0.4600	0.0081	0.0014	8.450E-09
rs75434274	7	155424887	A	G	0.9205	0.0151	0.0026	8.540E-09
rs6428587	1	90825188	T	C	0.6323	0.0084	0.0015	8.590E-09
rs80223410	12	56367966	T	C	0.1426	-0.0118	0.0020	8.640E-09
rs72883760	11	29331969	A	G	0.1985	0.0101	0.0018	8.640E-09
rs9294770	6	68242866	T	C	0.3879	0.0083	0.0014	8.740E-09
rs1693584	8	101748917	T	C	0.6856	-0.0087	0.0015	8.790E-09
rs7084508	10	133932946	T	C	0.3479	-0.0085	0.0015	8.790E-09
rs648044	11	114030799	A	G	0.3892	0.0083	0.0015	8.890E-09
rs8046072	16	3562075	A	G	0.8017	0.0101	0.0018	9.040E-09
rs702606	5	53167117	T	C	0.8654	0.0118	0.0021	9.190E-09

rs16851779	2	215189950	T	C	0.9246	-0.0153	0.0027	9.240E-09
rs13034349	2	98329197	T	C	0.4076	-0.0082	0.0014	9.290E-09
rs9870317	3	182514636	A	C	0.3212	0.0086	0.0015	9.350E-09
rs11765387	7	32494790	T	C	0.6734	0.0086	0.0015	9.400E-09
rs2954114	12	122169884	A	C	0.4680	-0.0081	0.0014	9.400E-09
rs150537577	4	705629	A	G	0.9195	-0.0151	0.0026	9.500E-09
rs4972748	2	176098010	T	C	0.8204	0.0105	0.0018	9.500E-09
rs2314338	17	38344485	T	C	0.7304	0.0093	0.0016	9.500E-09
rs795230	11	30774525	T	C	0.4283	0.0081	0.0014	9.560E-09
rs4915735	1	61808444	A	G	0.1408	0.0116	0.0020	9.560E-09
rs2088913	3	117310069	A	G	0.5732	0.0081	0.0014	9.610E-09
rs12234369	7	11893275	A	G	0.3142	0.0087	0.0015	9.610E-09
rs6043521	20	15739745	T	C	0.6035	-0.0083	0.0014	9.720E-09
rs2588959	10	63598957	T	C	0.5019	-0.0080	0.0014	9.880E-09
rs17667540	2	181614913	A	G	0.3053	-0.0087	0.0015	9.940E-09
rs3766979	1	181636598	A	G	0.3386	0.0085	0.0015	9.940E-09
rs57204268	11	133844024	A	G	0.8497	0.0114	0.0020	9.940E-09
rs6695132	1	234734655	T	C	0.2216	0.0097	0.0017	1.010E-08
rs150421637	3	51047621	A	G	0.0169	0.0349	0.0061	1.040E-08
rs73106136	20	43491477	T	G	0.0828	-0.0147	0.0026	1.050E-08
rs10943588	6	79510994	A	C	0.6187	0.0084	0.0015	1.050E-08
rs13026611	2	128153335	A	G	0.3555	-0.0084	0.0015	1.050E-08
rs115732722	3	180691034	A	G	0.0101	-0.0415	0.0072	1.060E-08
rs3848715	20	44564682	A	G	0.5129	-0.0080	0.0014	1.070E-08
rs868456	4	32150029	A	G	0.7117	0.0089	0.0015	1.070E-08
rs548897	1	57718030	A	G	0.4500	0.0081	0.0014	1.100E-08
rs7182216	15	84422506	C	G	0.2277	-0.0096	0.0017	1.100E-08
rs61387839	2	48688635	A	G	0.6950	0.0088	0.0015	1.110E-08
rs2126069	11	115473374	T	C	0.4773	0.0080	0.0014	1.110E-08
rs73457936	9	23233667	A	G	0.9151	0.0144	0.0025	1.110E-08
rs2011603	4	18025484	A	G	0.7359	-0.0091	0.0016	1.120E-08
rs72993796	2	240321051	T	C	0.8836	0.0127	0.0022	1.120E-08
rs7714719	5	106498927	C	G	0.8602	0.0116	0.0020	1.120E-08
rs10169002	2	140563368	A	G	0.5305	-0.0080	0.0014	1.150E-08
rs6744040	2	49908151	A	G	0.5117	-0.0080	0.0014	1.150E-08
rs6711399	2	200462840	T	C	0.1779	-0.0107	0.0019	1.160E-08
rs117398064	12	26523628	C	G	0.0912	-0.0141	0.0025	1.160E-08
rs182902112	5	153304758	A	C	0.0186	-0.0300	0.0053	1.170E-08
rs8066044	17	1367352	A	G	0.2712	0.0090	0.0016	1.170E-08
rs62252819	3	53440128	A	T	0.7522	-0.0094	0.0017	1.200E-08
rs4730020	7	104189082	T	C	0.2697	0.0090	0.0016	1.210E-08
rs9974899	21	42006441	T	C	0.2538	-0.0093	0.0016	1.220E-08
rs1554798	2	156835059	A	C	0.4667	-0.0080	0.0014	1.220E-08
rs73082325	3	48981024	C	G	0.9701	-0.0252	0.0044	1.240E-08
rs339057	7	128376900	A	G	0.4185	-0.0081	0.0014	1.260E-08
rs6752228	2	161547697	T	G	0.5523	-0.0080	0.0014	1.260E-08
rs61757207	16	70358495	A	G	0.9854	0.0359	0.0063	1.270E-08
rs6461536	7	21131807	A	G	0.7118	0.0088	0.0015	1.280E-08
rs2469226	15	77246990	A	T	0.2228	0.0096	0.0017	1.280E-08
rs2976397	8	143764613	T	G	0.4317	0.0081	0.0014	1.300E-08
rs61748951	1	156038058	A	C	0.0239	-0.0273	0.0048	1.310E-08
rs1728118	6	108029518	A	C	0.7272	0.0089	0.0016	1.320E-08
rs4894658	3	173928736	C	G	0.2619	0.0091	0.0016	1.340E-08
rs563954	11	132391656	A	G	0.4639	-0.0081	0.0014	1.340E-08
rs387027	16	12085343	A	C	0.3609	-0.0083	0.0015	1.360E-08
rs114958262	3	108039298	T	C	0.0350	-0.0220	0.0039	1.360E-08
rs13009915	2	100423158	T	C	0.0378	0.0212	0.0037	1.360E-08
rs10793903	9	134976652	A	G	0.1146	0.0126	0.0022	1.370E-08

rs1066769	2	189580148	A	G	0.0311	-0.0230	0.0041	1.380E-08
rs10499535	7	21690606	A	G	0.5013	0.0080	0.0014	1.400E-08
rs6951996	7	96646437	A	T	0.0522	-0.0182	0.0032	1.410E-08
rs35745455	7	5824100	A	G	0.5010	0.0080	0.0014	1.430E-08
rs2977464	8	141545193	T	C	0.1869	0.0102	0.0018	1.460E-08
rs382196	3	9145554	T	G	0.3814	-0.0082	0.0014	1.470E-08
rs10444280	11	41155897	T	C	0.7982	0.0100	0.0018	1.470E-08
rs713584	5	136416957	A	G	0.4248	-0.0080	0.0014	1.480E-08
rs7030373	9	121161926	A	G	0.2074	-0.0098	0.0017	1.490E-08
rs117895796	12	49729637	T	C	0.0143	0.0362	0.0064	1.510E-08
rs66721975	2	191701185	A	G	0.2903	-0.0087	0.0015	1.510E-08
rs36085856	15	70379236	C	G	0.0734	0.0201	0.0036	1.520E-08
rs2131167	12	99633189	A	G	0.4458	0.0080	0.0014	1.520E-08
rs116967397	13	58466434	A	C	0.9829	0.0315	0.0056	1.530E-08
rs78714229	6	25793055	T	C	0.9436	0.0172	0.0030	1.550E-08
rs9597907	13	59496462	T	C	0.0738	0.0152	0.0027	1.560E-08
rs11155813	6	152149435	T	C	0.8937	-0.0129	0.0023	1.570E-08
rs214626	9	135718584	A	G	0.1894	0.0101	0.0018	1.580E-08
rs1220779	7	54734673	A	G	0.4679	-0.0079	0.0014	1.580E-08
rs9926649	16	66750040	T	G	0.0528	0.0177	0.0031	1.580E-08
rs347661	5	62549141	T	C	0.4347	-0.0081	0.0014	1.580E-08
rs10074178	5	93927705	A	G	0.5129	0.0079	0.0014	1.580E-08
rs111370527	9	96203756	T	C	0.0785	0.0151	0.0027	1.610E-08
rs1392816	1	66481188	T	C	0.3831	0.0082	0.0014	1.610E-08
rs111530150	13	54342123	T	C	0.0228	0.0269	0.0048	1.620E-08
rs2098526	2	162845276	A	G	0.0279	-0.0241	0.0043	1.620E-08
rs4735297	8	95589340	A	G	0.6741	-0.0086	0.0015	1.620E-08
rs4793090	17	40686342	A	G	0.6635	0.0084	0.0015	1.670E-08
rs13016316	2	225337188	A	C	0.0908	-0.0138	0.0024	1.670E-08
rs72919450	2	81999568	T	C	0.0997	-0.0132	0.0023	1.670E-08
rs78648104	6	50683009	T	C	0.9137	-0.0141	0.0025	1.700E-08
rs6792805	3	118675196	A	G	0.7356	-0.0090	0.0016	1.700E-08
rs7899270	10	111258134	A	C	0.6524	-0.0084	0.0015	1.740E-08
rs11190955	10	103112165	T	C	0.3540	-0.0083	0.0015	1.740E-08
rs142014757	18	77511268	A	G	0.8085	0.0102	0.0018	1.740E-08
rs73039077	3	17036387	C	G	0.2471	0.0092	0.0016	1.750E-08
rs13266287	8	17871598	A	T	0.6687	-0.0085	0.0015	1.750E-08
rs34967082	2	215382654	A	G	0.4161	-0.0080	0.0014	1.770E-08
rs62007304	15	77723195	A	C	0.9753	0.0264	0.0047	1.800E-08
rs9291437	4	22165255	C	G	0.3907	-0.0081	0.0014	1.820E-08
rs13361043	5	58318963	T	C	0.9329	-0.0158	0.0028	1.840E-08
rs76167224	12	56507702	T	C	0.9487	-0.0187	0.0033	1.880E-08
rs12953422	18	31192529	A	G	0.5847	-0.0080	0.0014	1.890E-08
rs57016874	2	220310112	T	C	0.0387	0.0209	0.0037	1.900E-08
rs2183271	10	21957229	T	C	0.6364	0.0084	0.0015	1.910E-08
rs72824753	6	14619148	T	C	0.9005	0.0133	0.0024	1.930E-08
rs34624793	2	144916804	T	C	0.8636	0.0116	0.0021	1.940E-08
rs138096147	3	48179876	A	G	0.0323	0.0234	0.0042	1.950E-08
rs73219806	8	26279173	A	C	0.1683	0.0106	0.0019	1.970E-08
rs6946136	7	135423424	A	G	0.6116	0.0081	0.0014	1.990E-08
rs17170519	7	32861230	C	G	0.8991	0.0132	0.0023	1.990E-08
rs113205706	7	39246987	A	G	0.0944	-0.0135	0.0024	2.000E-08
rs1196760	12	105606068	C	G	0.9105	0.0139	0.0025	2.000E-08
rs7766240	6	16954368	T	C	0.0964	-0.0134	0.0024	2.000E-08
rs17069646	5	167452251	T	C	0.6881	0.0085	0.0015	2.010E-08
rs13169187	5	51716957	A	G	0.5374	-0.0079	0.0014	2.010E-08
rs72709560	4	178540163	A	G	0.6865	0.0085	0.0015	2.030E-08
rs322744	7	127780401	T	C	0.2609	-0.0090	0.0016	2.040E-08

rs61798586	4	36691695	A	C	0.1444	-0.0112	0.0020	2.050E-08
rs10480450	7	108283606	A	G	0.9341	0.0158	0.0028	2.050E-08
rs77826402	2	100251389	T	C	0.0730	0.0151	0.0027	2.050E-08
rs10192834	2	207725616	T	C	0.6550	0.0083	0.0015	2.050E-08
rs16958559	17	55659233	T	G	0.7865	0.0096	0.0017	2.070E-08
rs10789285	1	69788482	T	G	0.7542	0.0091	0.0016	2.070E-08
rs2416214	5	108943485	A	C	0.4367	0.0079	0.0014	2.090E-08
rs710629	12	67697856	A	G	0.6450	0.0082	0.0015	2.090E-08
rs11733439	4	30534692	A	G	0.7883	-0.0096	0.0017	2.100E-08
rs73034295	11	133822133	A	G	0.2016	0.0099	0.0018	2.110E-08
rs6543810	2	34380023	T	C	0.3771	0.0082	0.0015	2.110E-08
rs10927053	1	243811321	A	T	0.8886	-0.0125	0.0022	2.130E-08
rs11265191	1	159400359	T	C	0.3346	0.0083	0.0015	2.140E-08
rs80037907	8	87170913	T	C	0.1589	-0.0107	0.0019	2.160E-08
rs17650634	2	139420392	T	C	0.8287	-0.0104	0.0019	2.190E-08
rs190102446	18	57048571	T	C	0.0364	-0.0210	0.0037	2.190E-08
rs11596387	10	103606122	T	G	0.0246	0.0258	0.0046	2.200E-08
rs111235962	1	20871750	T	C	0.0962	0.0133	0.0024	2.210E-08
rs11591870	10	65494036	T	C	0.7980	0.0098	0.0017	2.250E-08
rs1955250	4	118514236	A	C	0.9137	-0.0140	0.0025	2.260E-08
rs1747817	1	197711492	T	C	0.7614	-0.0092	0.0016	2.290E-08
rs9611597	22	41864190	A	T	0.8350	-0.0107	0.0019	2.300E-08
rs10949263	6	14886977	A	G	0.2443	-0.0091	0.0016	2.330E-08
rs7965154	12	23697725	A	C	0.3062	-0.0085	0.0015	2.330E-08
rs113720505	13	57477706	A	G	0.0659	0.0164	0.0029	2.340E-08
rs399821	3	21500324	A	G	0.5321	-0.0078	0.0014	2.340E-08
rs60726488	10	110882068	T	C	0.2561	-0.0090	0.0016	2.350E-08
rs113731629	4	170984229	T	C	0.9859	0.0339	0.0061	2.360E-08
rs10192369	2	161380888	A	G	0.4960	-0.0078	0.0014	2.360E-08
rs78702390	7	68618770	C	G	0.0583	0.0167	0.0030	2.380E-08
rs1861786	12	14000467	A	G	0.3813	-0.0081	0.0014	2.390E-08
rs884108	1	204591237	A	G	0.2220	-0.0094	0.0017	2.390E-08
rs17440885	1	67208622	A	G	0.9352	0.0160	0.0029	2.420E-08
rs1006749	20	41716653	A	G	0.5237	0.0079	0.0014	2.430E-08
rs11845781	14	89276431	T	C	0.5552	-0.0079	0.0014	2.430E-08
rs2092248	6	19205458	T	C	0.3310	-0.0083	0.0015	2.430E-08
rs7218235	17	2564267	A	G	0.2135	-0.0097	0.0017	2.440E-08
rs317050	4	35446302	T	C	0.5048	0.0078	0.0014	2.500E-08
rs113552169	5	60644403	C	G	0.9816	0.0294	0.0053	2.510E-08
rs4255791	16	28274804	A	G	0.3301	-0.0084	0.0015	2.510E-08
rs8030487	15	97119595	A	G	0.6907	0.0085	0.0015	2.520E-08
rs66482320	21	42688931	C	G	0.8880	0.0124	0.0022	2.570E-08
rs13168136	5	26898629	A	G	0.7668	-0.0092	0.0017	2.570E-08
rs11720985	3	122214045	T	C	0.3060	0.0085	0.0015	2.570E-08
rs4925065	17	19914546	T	C	0.5214	-0.0078	0.0014	2.590E-08
rs10251438	7	137006969	A	C	0.4955	0.0078	0.0014	2.650E-08
rs11213482	11	110435636	A	G	0.8360	-0.0106	0.0019	2.680E-08
rs1518890	3	34271042	T	C	0.2542	-0.0090	0.0016	2.680E-08
rs8192465	7	99566007	A	G	0.0218	-0.0272	0.0049	2.690E-08
rs7561705	2	143446472	A	G	0.4720	0.0078	0.0014	2.710E-08
rs7226824	18	27676827	T	C	0.5305	-0.0078	0.0014	2.720E-08
rs7875078	9	14494845	A	C	0.4564	-0.0078	0.0014	2.720E-08
rs1905616	8	93235675	A	G	0.3270	0.0083	0.0015	2.740E-08
rs6736025	2	58797634	T	G	0.4354	0.0079	0.0014	2.770E-08
rs11640569	16	48791392	A	G	0.1420	0.0112	0.0020	2.770E-08
rs7630133	3	123923288	A	G	0.6553	0.0082	0.0015	2.800E-08
rs6567288	18	60218334	A	G	0.5719	-0.0079	0.0014	2.810E-08
rs9633970	11	132502212	T	C	0.7606	0.0091	0.0016	2.810E-08

rs6706275	2	240265617	T	C	0.3246	0.0083	0.0015	2.810E-08
rs2989751	9	96366647	A	G	0.2440	-0.0092	0.0017	2.890E-08
rs34309	5	67564383	A	G	0.3816	0.0080	0.0014	2.940E-08
rs72972965	2	140454376	A	C	0.3496	0.0083	0.0015	2.940E-08
rs12765185	10	134977077	A	T	0.2769	-0.0088	0.0016	2.960E-08
rs115438240	2	185883877	T	G	0.9435	-0.0169	0.0030	2.960E-08
rs2718277	7	74133929	T	C	0.0832	0.0142	0.0026	2.990E-08
rs4938815	11	120441647	T	G	0.7041	0.0085	0.0015	2.990E-08
rs7716161	5	72179574	C	G	0.1696	0.0105	0.0019	3.000E-08
rs1368250	2	157485517	T	C	0.0284	0.0250	0.0045	3.000E-08
rs10122669	9	116555771	A	G	0.4143	-0.0079	0.0014	3.000E-08
rs12574281	11	131205421	A	C	0.6310	-0.0080	0.0015	3.040E-08
rs9300612	13	101283219	T	C	0.6944	0.0084	0.0015	3.070E-08
rs9442750	6	72886012	A	G	0.7439	-0.0089	0.0016	3.150E-08
rs2299156	7	50764404	T	C	0.1890	0.0099	0.0018	3.150E-08
rs2082317	4	171824549	T	C	0.5301	-0.0078	0.0014	3.190E-08
rs6091570	20	51299884	A	G	0.3491	0.0081	0.0015	3.200E-08
rs57661533	12	78629917	T	C	0.1341	-0.0114	0.0021	3.240E-08
rs2736752	3	60817322	T	G	0.7869	0.0095	0.0017	3.240E-08
rs114192810	4	17969142	T	G	0.9801	-0.0279	0.0051	3.260E-08
rs1051860	14	58838668	A	G	0.4071	-0.0079	0.0014	3.290E-08
rs6689641	1	110720400	A	G	0.4556	0.0078	0.0014	3.290E-08
rs10181071	2	142862830	A	G	0.8265	0.0102	0.0019	3.310E-08
rs78116078	1	18434125	C	G	0.7180	0.0086	0.0016	3.330E-08
rs4846010	1	11531059	A	G	0.2128	0.0099	0.0018	3.350E-08
rs2994326	1	243651026	T	C	0.1852	-0.0100	0.0018	3.380E-08
rs10032941	4	15402115	T	C	0.6365	-0.0080	0.0015	3.420E-08
rs11663678	18	42908726	T	C	0.8842	-0.0121	0.0022	3.420E-08
rs2958182	18	53149021	A	T	0.3414	0.0082	0.0015	3.460E-08
rs2276209	18	36942457	A	C	0.7040	0.0085	0.0015	3.490E-08
rs117668569	7	112816099	T	G	0.9718	0.0234	0.0042	3.490E-08
rs4724083	7	42007071	T	C	0.3227	0.0083	0.0015	3.530E-08
rs62409395	4	25605036	T	C	0.7755	0.0101	0.0018	3.550E-08
rs10983324	9	119485337	A	C	0.3041	0.0084	0.0015	3.550E-08
rs12473986	2	173682948	T	C	0.2907	-0.0085	0.0015	3.570E-08
rs72881110	2	44754020	A	T	0.0753	0.0146	0.0027	3.590E-08
rs10509251	10	67828436	T	C	0.2200	-0.0093	0.0017	3.610E-08
rs77370942	13	58037032	A	G	0.0751	-0.0147	0.0027	3.650E-08
rs74615093	16	69122043	A	G	0.0772	0.0145	0.0026	3.670E-08
rs4850954	2	101573214	T	C	0.4628	0.0077	0.0014	3.730E-08
rs36120534	20	17438121	T	C	0.1811	0.0100	0.0018	3.770E-08
rs35192107	5	145705669	T	G	0.7621	-0.0091	0.0017	3.770E-08
rs10264573	7	1944591	A	G	0.9446	0.0175	0.0032	3.790E-08
rs628993	11	61539691	A	G	0.1073	0.0128	0.0023	3.830E-08
rs3809169	12	113911532	T	C	0.9128	0.0140	0.0025	3.850E-08
rs62506104	8	31020008	A	G	0.1923	-0.0098	0.0018	3.930E-08
rs911149	20	58214637	T	C	0.2357	0.0091	0.0017	3.930E-08
rs10810145	9	14430692	A	G	0.4144	0.0078	0.0014	4.000E-08
rs7823700	8	42363231	T	C	0.0987	0.0132	0.0024	4.000E-08
rs663251	1	70566021	T	G	0.6532	0.0081	0.0015	4.020E-08
rs1445591	1	72960011	A	G	0.6986	0.0085	0.0015	4.020E-08
rs2718791	3	180931395	T	C	0.6452	-0.0081	0.0015	4.020E-08
rs10128888	12	97799524	A	G	0.3149	-0.0083	0.0015	4.040E-08
rs17732878	17	7362359	T	C	0.7912	-0.0095	0.0017	4.060E-08
rs191903670	3	48578053	A	T	0.9836	0.0335	0.0061	4.080E-08
rs6881733	5	92586991	T	C	0.2870	-0.0086	0.0016	4.080E-08
rs10799615	1	20541370	A	G	0.2525	-0.0089	0.0016	4.110E-08
rs3817923	1	171809211	A	G	0.1133	-0.0121	0.0022	4.110E-08

rs853286	3	64285502	T	G	0.8921	0.0124	0.0023	4.130E-08
rs163229	2	45157163	C	G	0.9775	-0.0260	0.0047	4.130E-08
rs59813324	12	60879673	T	G	0.1983	0.0097	0.0018	4.150E-08
rs2521602	17	42336424	A	G	0.0219	-0.0266	0.0049	4.170E-08
rs2416845	9	124755432	T	C	0.9775	0.0263	0.0048	4.190E-08
rs11592299	10	104225941	A	G	0.1958	0.0097	0.0018	4.190E-08
rs9877225	3	70631590	T	C	0.7617	0.0090	0.0016	4.220E-08
rs1146079	12	62485472	C	G	0.7373	-0.0087	0.0016	4.240E-08
rs78918150	2	117611525	T	C	0.6227	-0.0080	0.0015	4.260E-08
rs10995639	10	65573195	T	C	0.4199	0.0078	0.0014	4.260E-08
rs11076962	16	5811367	T	C	0.7189	0.0086	0.0016	4.290E-08
rs9492774	6	131302489	C	G	0.3692	0.0080	0.0015	4.330E-08
rs9446060	6	69552271	A	G	0.5566	0.0077	0.0014	4.330E-08
rs116386746	2	61018515	C	G	0.0249	0.0249	0.0045	4.350E-08
rs936496	13	36100541	A	G	0.6229	-0.0079	0.0014	4.380E-08
rs78365243	1	211737950	T	C	0.9513	0.0181	0.0033	4.380E-08
rs67661275	11	132662671	A	G	0.9103	0.0134	0.0025	4.400E-08
rs13050131	21	20018118	A	C	0.6647	-0.0081	0.0015	4.400E-08
rs4263475	5	26774142	A	G	0.5814	0.0078	0.0014	4.400E-08
rs10985402	9	124578782	T	G	0.2472	0.0089	0.0016	4.470E-08
rs9821664	3	127003110	A	G	0.2105	0.0094	0.0017	4.520E-08
rs2436760	6	40374288	T	C	0.9717	0.0232	0.0042	4.520E-08
rs11657979	17	32900837	A	G	0.2449	-0.0091	0.0017	4.570E-08
rs73154546	22	34271689	A	C	0.0401	0.0197	0.0036	4.570E-08
rs143148393	14	84896824	T	G	0.0350	-0.0211	0.0039	4.620E-08
rs9844755	3	78440564	A	G	0.3354	0.0083	0.0015	4.640E-08
rs13117856	4	174008759	A	T	0.7054	0.0084	0.0015	4.640E-08
rs12238011	9	14210897	T	C	0.0809	-0.0141	0.0026	4.670E-08
rs76957677	10	105030157	T	C	0.0192	-0.0297	0.0054	4.720E-08
rs7672622	4	157705551	A	G	0.7459	-0.0088	0.0016	4.720E-08
rs115017135	5	26896955	A	C	0.0409	-0.0206	0.0038	4.720E-08
rs1898111	15	47892298	A	G	0.8245	0.0101	0.0018	4.720E-08
rs2252098	20	51620301	T	C	0.4703	-0.0077	0.0014	4.740E-08
rs58950082	7	53857821	T	C	0.7867	0.0095	0.0017	4.770E-08
rs10402747	19	45815248	T	C	0.5175	0.0077	0.0014	4.790E-08
rs56306882	3	70253693	A	G	0.2741	0.0086	0.0016	4.820E-08
rs2569041	5	167510357	T	C	0.5421	0.0077	0.0014	4.850E-08
rs72672052	8	115798424	A	T	0.1753	-0.0101	0.0018	4.870E-08
rs187951956	1	98412713	A	T	0.0154	-0.0315	0.0058	4.870E-08
rs11647188	16	82648514	A	G	0.6066	0.0079	0.0014	4.920E-08
rs73055556	3	28027538	A	G	0.1385	0.0111	0.0020	4.950E-08
rs2055940	4	46997913	A	G	0.3215	0.0082	0.0015	4.950E-08
rs780569	1	4569436	A	T	0.7201	-0.0085	0.0016	4.980E-08

Supplementary Table 3 Pleiotropy tested by MR- Egger intercept

	Egger intercept	Se	*P* value
Amount			
All	9.15E-05	8.63E-04	0.92
Women	2.13E-03	1.06E-03	0.05
Men	-2.22E-03	1.04E-03	0.03
Nonsmoker	-4.93E-04	9.85E-04	0.62
Current or past smokers	1.01E-03	1.05E-03	0.34
Lower income	3.73E-04	1.19E-03	0.75
Higher income	3.97E-04	9.65E-04	0.68
Lower education year	2.36E-04	1.08E-03	0.83
Higher education year	3.38E-05	9.85E-04	0.97
Red wine			
All	-1.15E-04	4.07E-04	0.78
Women	4.32E-04	5.15E-04	0.40
Men	-6.11E-04	5.50E-04	0.27
Nonsmoker	-8.84E-04	4.76E-04	0.06
Current or past smokers	7.37E-04	5.70E-04	0.20
Lower income	-3.51E-04	5.89E-04	0.55
Higher income	2.69E-04	5.07E-04	0.60
Lower education year	-3.68E-04	5.33E-04	0.49
Higher education year	8.63E-05	5.19E-04	0.87
White wine/champagne			
All	3.63E-04	3.58E-04	0.31
Women	5.93E-05	5.17E-04	0.91
Men	6.71E-04	4.45E-04	0.13
Nonsmoker	1.89E-04	4.47E-04	0.67
Current or past smokers	5.35E-04	5.07E-04	0.29
Lower income	6.92E-04	5.04E-04	0.17
Higher income	3.57E-04	4.78E-04	0.46
Lower education year	5.45E-04	4.72E-04	0.25
Higher education year	1.49E-04	4.73E-04	0.75
Fortified			
All	2.93E-04	1.30E-04	0.02
Women	4.89E-04	1.97E-04	0.01
Men	1.08E-04	1.60E-04	0.50
Nonsmoker	1.92E-04	1.81E-04	0.29
Current or past smokers	3.59E-04	1.73E-04	0.04
Lower income	2.17E-04	2.23E-04	0.33
Higher income	2.46E-04	1.68E-04	0.14
Lower education year	4.77E-04	1.84E-04	0.01
Higher education year	1.14E-04	1.75E-04	0.51
Beer			
All	1.33E-04	3.69E-04	0.72
Women	2.99E-06	2.96E-04	0.99
Men	2.06E-04	6.03E-04	0.73
Nonsmoker	7.46E-05	4.01E-04	0.85
Current or past smokers	3.58E-04	4.99E-04	0.47
Lower income	-3.60E-04	5.47E-04	0.51
Higher income	5.63E-04	4.40E-04	0.20
Lower education year	2.07E-04	4.60E-04	0.65
Higher education year	1.03E-04	4.39E-04	0.81
Spirits			
All	4.76E-04	3.35E-04	0.15
Women	6.92E-04	4.21E-04	0.10
Men	2.80E-04	4.67E-04	0.55
Nonsmoker	1.43E-04	3.72E-04	0.70
Current or past smokers	9.57E-04	4.85E-04	0.05

Continued

Lower income	8.39E-04	5.28E-04	0.11
Higher income	2.94E-05	4.13E-04	0.94
Lower education year	6.48E-04	4.71E-04	0.17
Higher education year	3.06E-04	4.18E-04	0.46
Frequency			
All	2.20E-04	6.67E-04	0.74
Women	1.37E-03	8.25E-04	0.10
Men	-1.10E-03	7.61E-04	0.15
Nonsmoker	1.18E-04	7.48E-04	0.88
Current or past smokers	4.06E-04	8.20E-04	0.62
Lower income	9.88E-04	8.72E-04	0.26
Higher income	1.14E-04	7.30E-04	0.88
Lower education year	5.75E-04	8.16E-04	0.48
Higher education year	-1.52E-04	7.63E-04	0.84
Alcohol taken with meals			
All	2.32E-04	1.21E-03	0.85
Women	2.71E-04	1.59E-03	0.86
Men	2.41E-04	1.48E-03	0.87
Nonsmoker	-1.24E-03	1.51E-03	0.41
Current or past smokers	1.17E-03	1.55E-03	0.45
Lower income	-5.24E-04	1.63E-03	0.75
Higher income	1.23E-03	1.61E-03	0.45
Lower education year	5.20E-04	1.51E-03	0.73
Higher education year	-3.62E-04	1.60E-03	0.82

Reference

1 Lee JJ, Wedow R, Okbay A, *et al*. Gene discovery and polygenic prediction from a genome-wide association study of educational attainment in 1.1 million individuals. *Nat Genet* 2018;**50**:1112–21. doi:10.1038/s41588-018-0147-3