

Supplementary Table S1. Summary characteristics of the final instrumental variables for Lp(a) and T2D

rs	chr	pos	ref	alt	beta Lp(a)	se Lp(a)	pval Lp(a)	af_alt UKBio- bank	f_statistic Lp(a)	nearest_ genes	pval T2D	beta T2D	se T2D	af_alt_ cases FinnGen	af_alt_ controls FinnGen
rs11123	6	160874032	C	T	-0.410	0.007	-1709.0	0.044	3410	SLC22A3	0.252	0.016	0.028	0.0252	0.0250
rs112842440	6	160955713	G	T	-0.030	0.009	-6.5	0.024	10.1	LPA	0.585	0.038	0.033	0.0172	0.0178
rs117945468	6	161001215	G	C	0.190	0.009	-220.1	0.024	434	LPA	0.293	-0.026	0.039	0.0125	0.0123
rs118039278	6	160985526	G	A	1.810	0.006	-50350.0	0.071	100701	LPA	0.735	0.027	0.021	0.0466	0.0486
rs12214416	6	160910517	T	A	-0.360	0.007	-1249.0	0.041	2490	SLC22A3	0.191	0.009	0.020	0.0487	0.0489
rs143053678	6	160934405	G	A	-0.520	0.010	-1440.0	0.025	2872	LPA	0.807	-0.042	0.030	0.0236	0.0229
rs144177163	6	161164290	C	A	-0.360	0.008	-1011.0	0.034	2015	PLG	0.090	-0.006	0.024	0.0347	0.0345
rs145989243	6	160969113	G	A	-0.360	0.026	-1029.0	0.003	200	LPA	0.352	0.054	0.071	0.0037	0.0040
rs147555597	6	160911596	G	A	1.650	0.016	-5426.0	0.008	10836	SLC22A3	0.299	0.030	0.045	0.0094	0.0097
rs187614196	6	161001087	C	T	0.690	0.050	-98.9	0.001	192	LPA	0.012	0.007	0.204	0.0007	0.0007
rs191243877	6	160979083	C	T	-0.310	0.027	-71.0	0.003	137	LPA	0.010	-0.002	0.081	0.0030	0.0030
rs191592502	6	161172374	C	T	-0.260	0.012	-235.3	0.015	464	PLG	0.182	-0.017	0.038	0.0014	0.0142
rs192559810	6	161150306	G	A	-0.430	0.024	-1591.0	0.004	312	PLG	0.368	0.105	0.133	0.0011	0.0012
rs2504925	6	160876394	T	C	0.190	0.003	-1417.0	0.786	2826	SLC22A3	1.261	0.022	0.011	0.8235	0.8256
rs41266385	6	160952333	A	C	0.310	0.006	-1310.0	0.058	2611	LPA	0.020	-0.001	0.025	0.0339	0.0336
rs41269133	6	161087863	T	C	-0.360	0.005	-2324.0	0.082	4639	LPA	0.829	0.018	0.012	0.1470	0.1482
rs41271036	6	161015301	A	G	-0.500	0.013	-736.5	0.013	1465	LPA	0.970	0.038	0.023	0.0369	0.0375
rs4252117	6	161143376	A	G	-0.280	0.003	-3932.0	0.284	7855	PLG	0.242	0.006	0.010	0.2686	0.2697
rs73596816	6	161017363	G	A	0.980	0.008	-8059.0	0.035	16110	LPA	0.112	-0.010	0.036	0.0157	0.0157
rs80145669	6	161022495	G	A	0.250	0.008	-506.2	0.033	1005	LPA	0.294	0.013	0.020	0.0498	0.0501
rs9456544	6	160908853	C	T	-0.250	0.010	-321.2	0.022	636	SLC22A3	1.882	0.055	0.022	0.0396	0.0415
rs9456577	6	161145246	A	C	0.370	0.009	-910.0	0.028	1812	PLG	0.294	0.017	0.026	0.0297	0.0300
rs9457927	6	160910282	A	G	0.910	0.016	-1645.0	0.008	3280	SLC22A3	0.295	-0.028	0.042	0.0110	0.0106