

**Supplementary Table 2.** List of instrumental SNPs to calculate the effect estimates of LDL level for PD

Instrumental SNP	Effect allele	CHR	Gene	Exposure (LDL)			Proxy-SNP used	Outcome (PD)		
				Beta	SE	MAF		Beta	SE	MAF
rs1034601	T	12	<i>CUX2</i>	-1.383	0.256	0.401	Yes	0.000	0.128	0.405
rs1053878	A	9	<i>ABO</i>	2.779	0.288	0.249	No	0.082	0.201	0.245
rs10987824	A	9	<i>FAM102A</i>	1.783	0.323	0.182	Yes	-0.051	0.112	0.205
rs11134475	A	5	<i>TIMD4, HAVCR1</i>	-1.786	0.296	0.233	Yes	0.033	0.172	0.232
rs12740374	T	1	<i>CELSR2</i>	-6.085	0.530	0.059	No	-0.118	0.176	0.062
rs3846661	A	5	<i>HMGCR</i>	-2.827	0.249	0.477	Yes	0.018	0.136	0.482
rs6129731	A	20	<i>TOP1</i>	-1.894	0.321	0.188	Yes	-0.026	0.142	0.184
rs737337	C	19	<i>DOCK6</i>	-1.798	0.278	0.278	No	0.052	0.175	0.279
rs7394579	G	11	<i>FADS1, FADS2</i>	-1.827	0.268	0.315	Yes	-0.070	0.079	0.318
rs7412	T	19	<i>APOE</i>	-16.330	0.505	0.064	No	-0.084	0.194	0.065
rs7588415	A	2	<i>LOC101928271, APOB, C2orf43</i>	-2.488	0.377	0.124	No	-0.119	0.104	0.119

SNP, single nucleotide polymorphism; LDL, low-density lipoprotein cholesterol; PD, Parkinson's disease; SE, standard error; MAF, minor allele frequency; CHR, chromosome.