

Supplementary material

Title: Genome-Wide Association Study Identifies Novel and Confirms Established Loci Associated with Serum Lipids Levels in Brazilians

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Fig. S1 TC gene set enrichment analysis

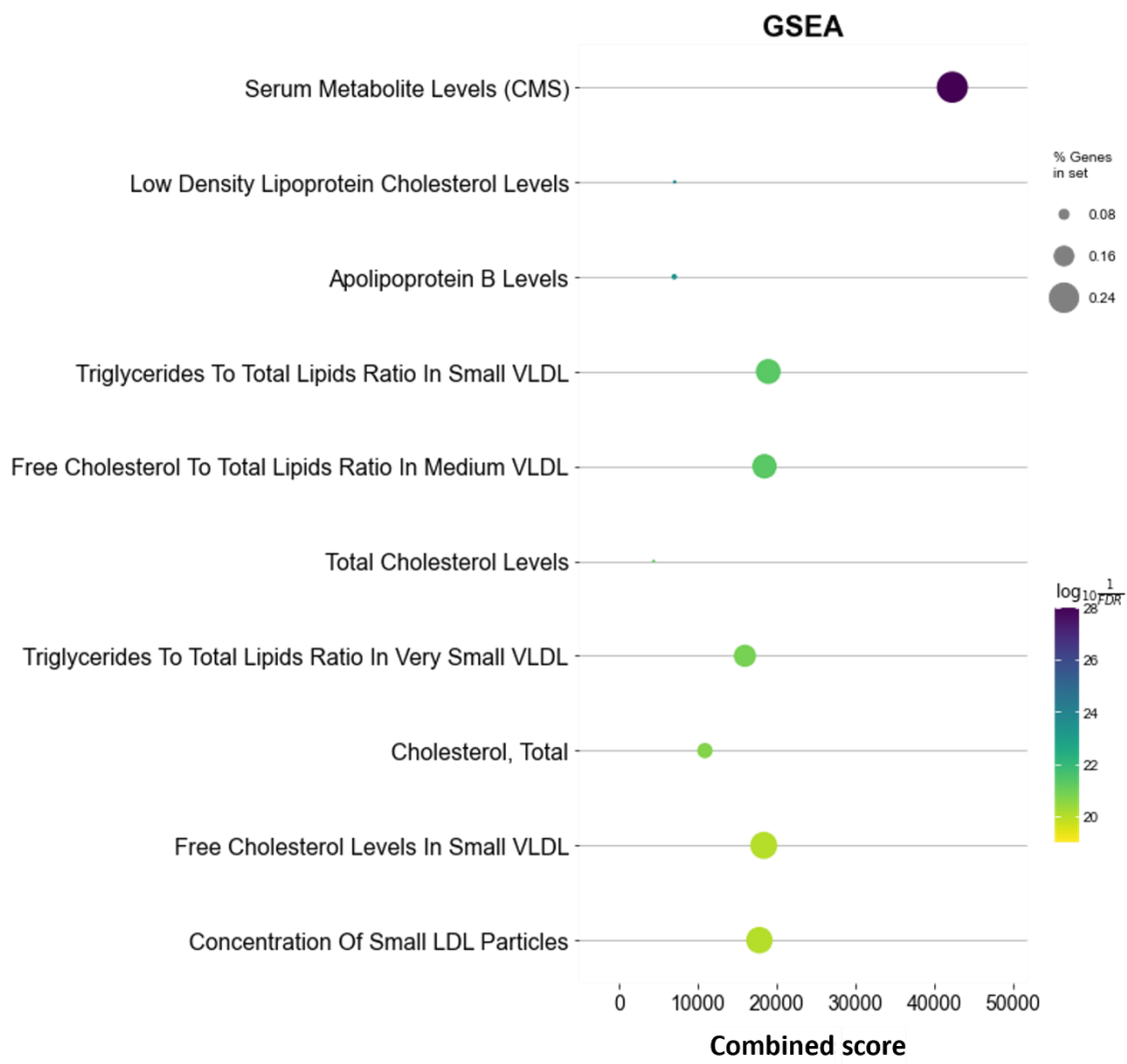


Fig. S2 HDL-C gene set enrichment analysis



Fig. S3 LDL-C gene set enrichment analysis

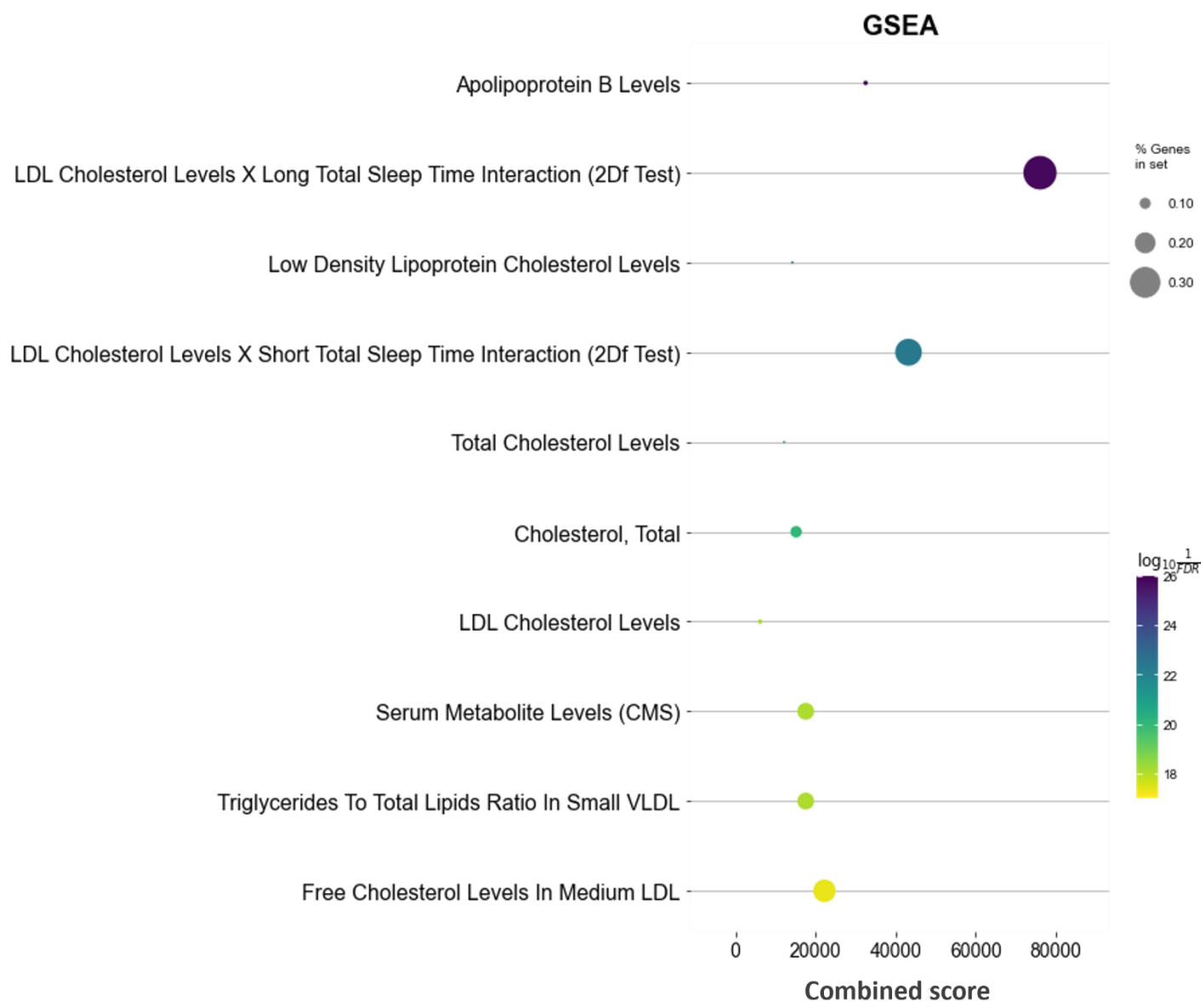


Fig. S4 non-HDL-C gene set enrichment analysis

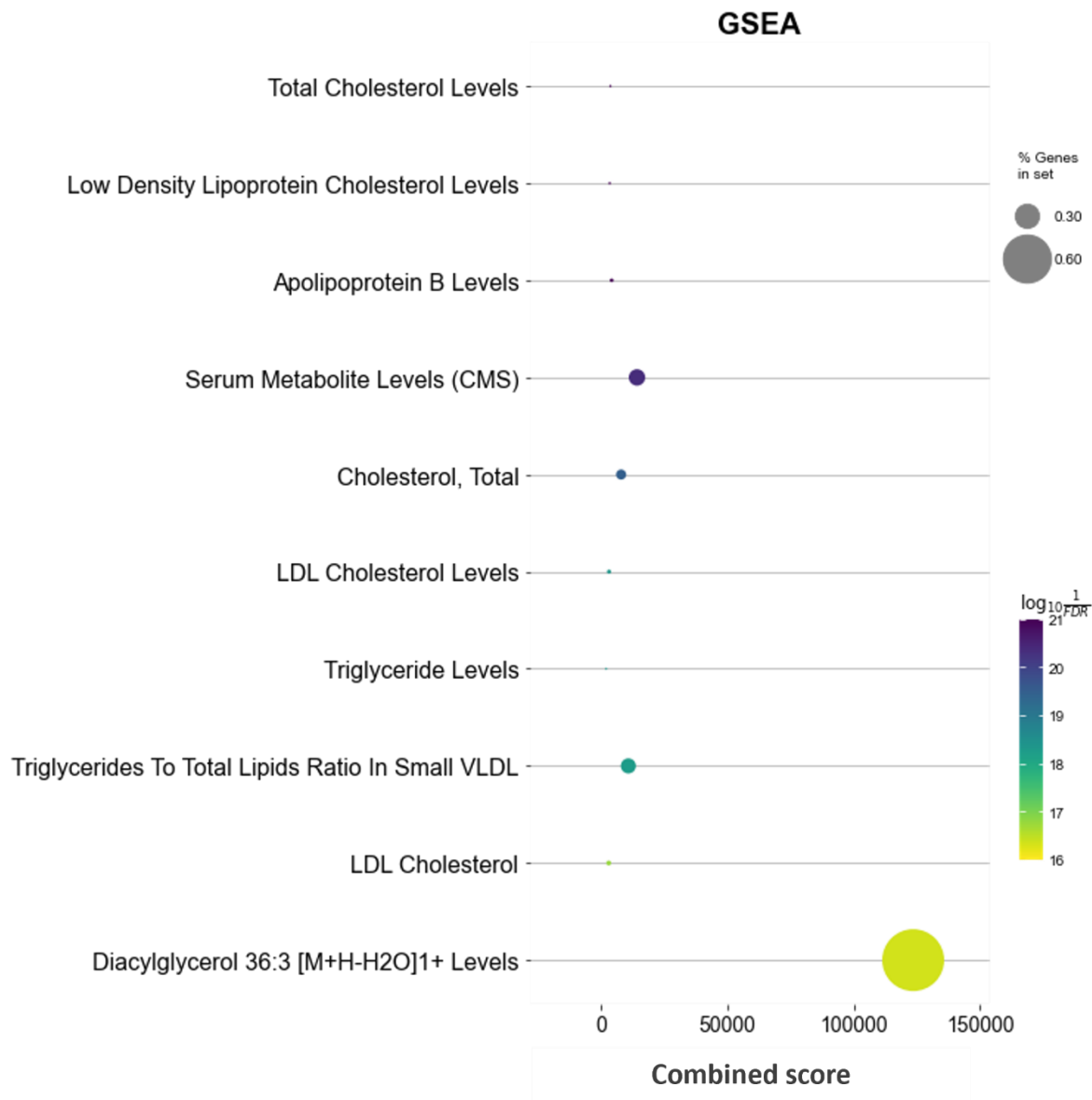


Fig. S5 TG gene set enrichment analysis

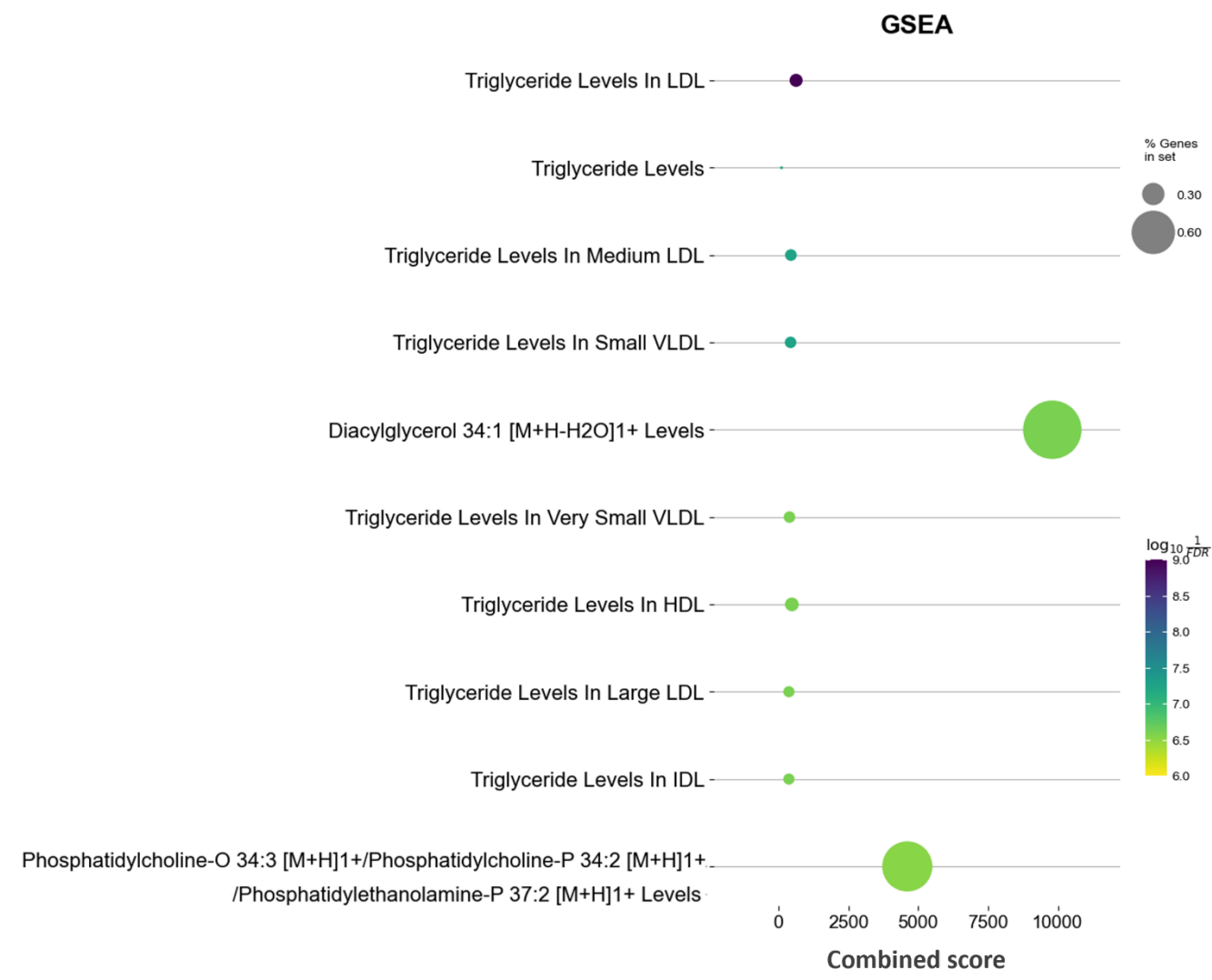


Fig. S6 Violin plots for (a) TC (b) HDL-C, (c) LDL-C, (d) non-HDL-C and (e) TG

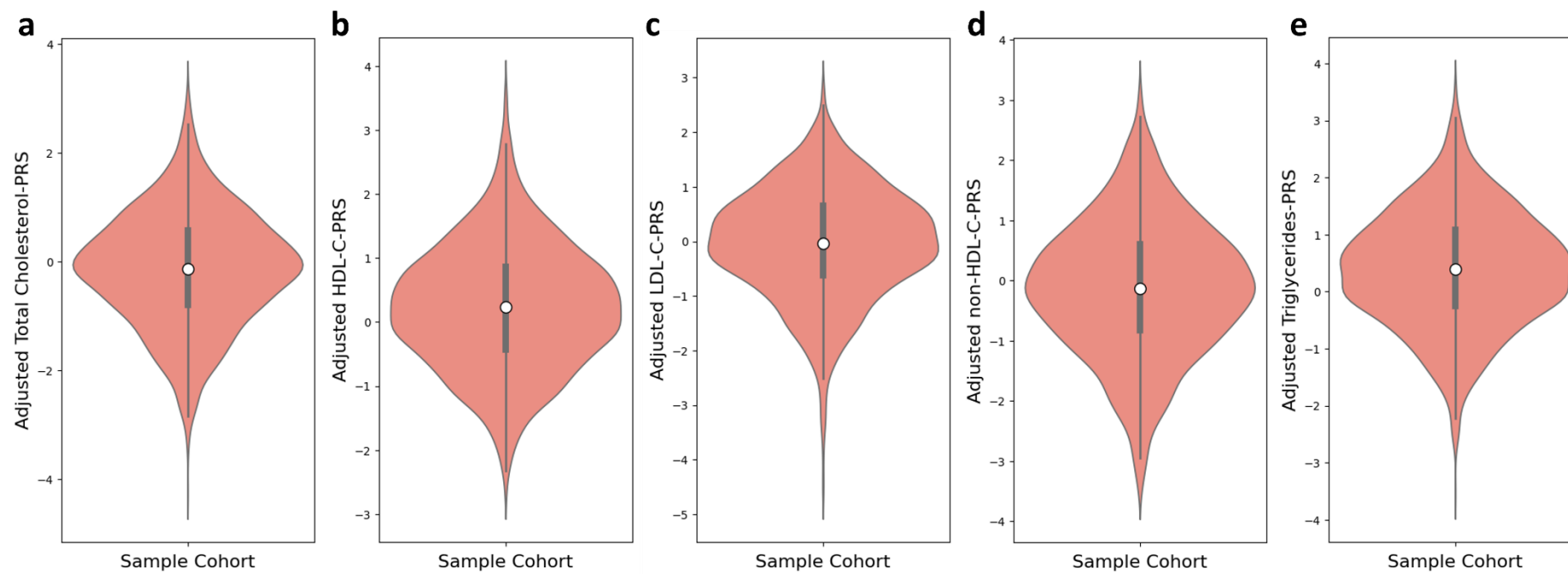


Fig. S7 LocusZoom plot of SNP rs114110602 significantly associated with TC

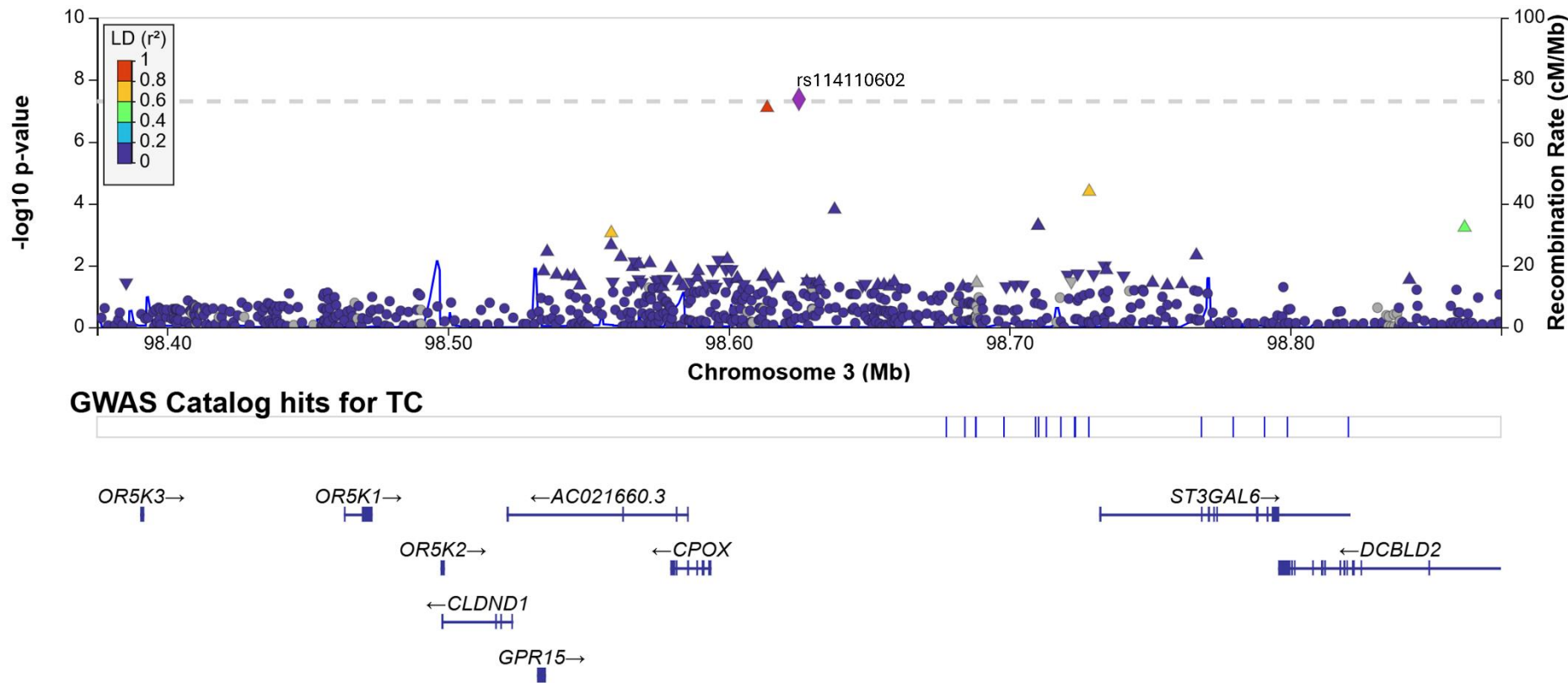


Fig. S8 LocusZoom plot of SNP rs879386239 significantly associated with HDL-C

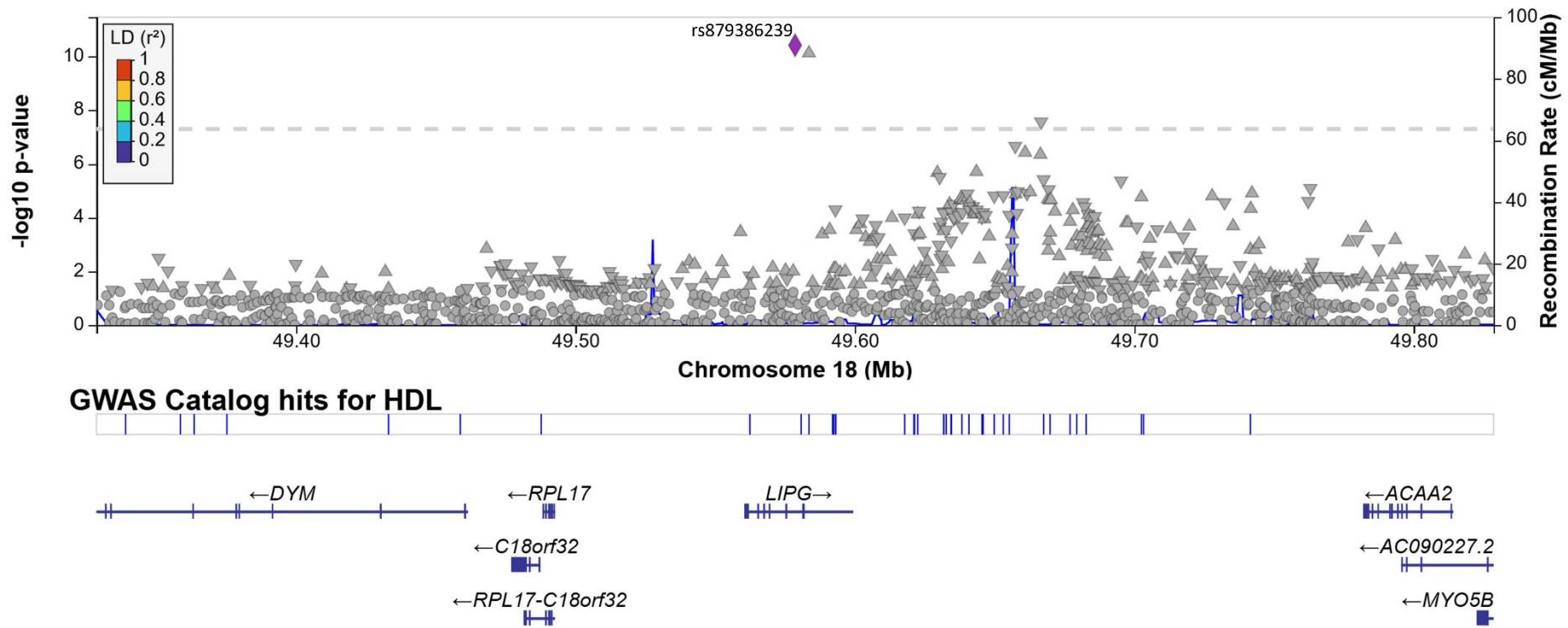


Fig. S9 Ancestry estimation of training and test samples included in the study inferred by ADMIXTURE

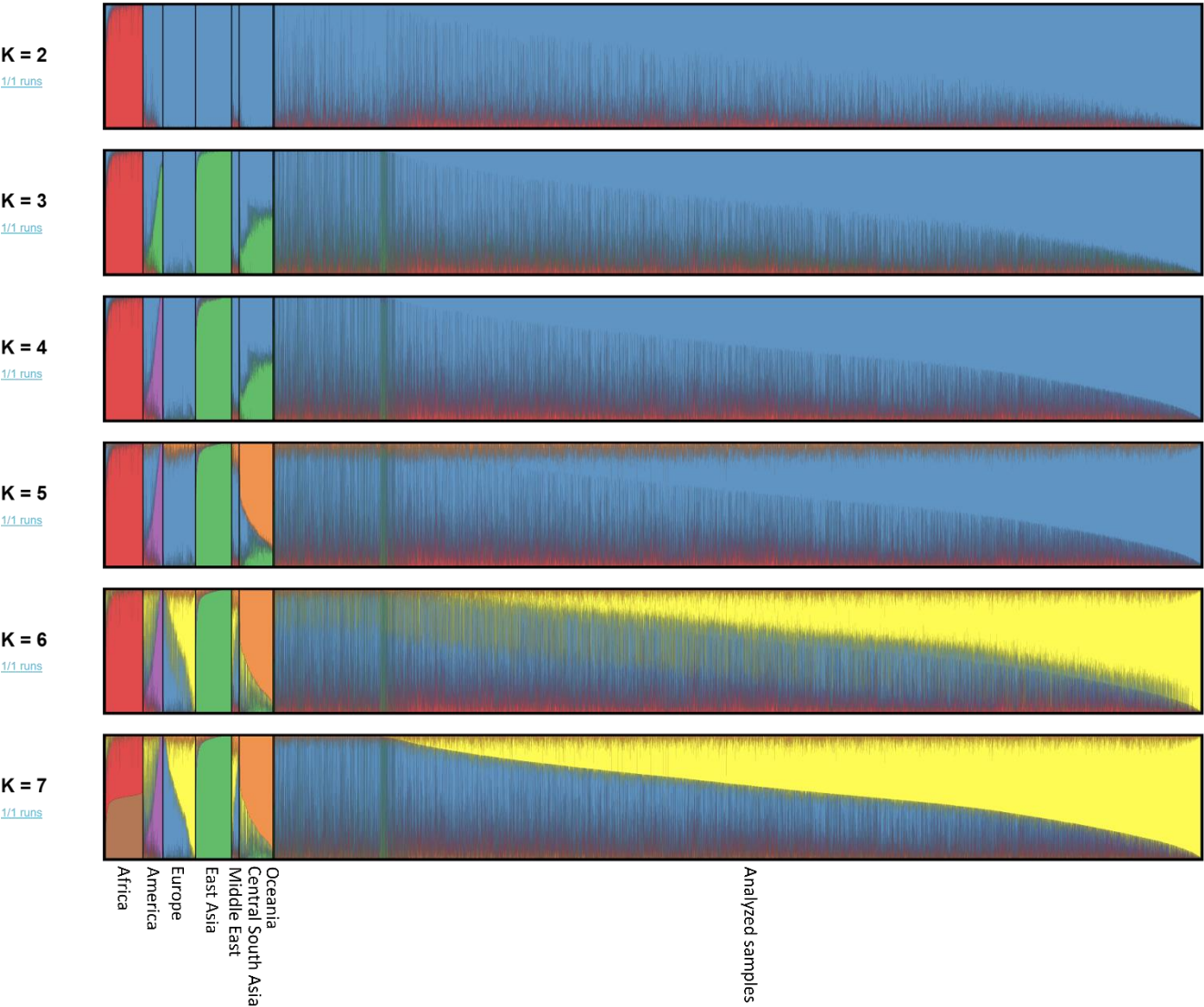


Table S1 Sample characteristics of the test and validation sets, by sex and case-control status

Set	Trait	Group	Sex	N	Age(mean $\pm$ SD)	mg/dL (mean $\pm$ SD)
Test	TC	Cases	Female	539	44.40 $\pm$ 13.14	235.25 $\pm$ 29.64
			Male	414	43.66 $\pm$ 12.44	235.30 $\pm$ 31.03
		Controls	Female	473	39.81 $\pm$ 13.03	171.77 $\pm$ 18.43
			Male	478	41.12 $\pm$ 14.80	168.72 $\pm$ 21.85
	HDL-C	Cases	Female	54	41.04 $\pm$ 14.05	35.71 $\pm$ 3.16
			Male	267	40.81 $\pm$ 12.68	33.43 $\pm$ 5.13
		Controls	Female	942	42.17 $\pm$ 13.74	63.53 $\pm$ 14.68
			Male	632	41.03 $\pm$ 12.87	51.90 $\pm$ 9.90
	LDL-C	Cases	Female	34	47.47 $\pm$ 11.81	215.73 $\pm$ 31.41
			Male	59	41.90 $\pm$ 11.55	230.95 $\pm$ 66.61
		Controls	Female	931	41.37 $\pm$ 13.45	117.33 $\pm$ 30.88
			Male	768	41.18 $\pm$ 13.54	124.14 $\pm$ 30.43
	non-HDL-C	Cases	Female	231	44.87 $\pm$ 12.96	191.34 $\pm$ 28.99
			Male	271	42.43 $\pm$ 11.38	194.16 $\pm$ 32.50
		Controls	Female	513	39.28 $\pm$ 12.31	122.87 $\pm$ 22.48
			Male	406	41.66 $\pm$ 15.52	123.97 $\pm$ 23.28
	TG	Cases	Female	167	46.91 $\pm$ 17.08	211.26 $\pm$ 78.76
			Male	269	43.29 $\pm$ 11.40	230.33 $\pm$ 90.20
		Controls	Female	839	41.31 $\pm$ 13.30	85.21 $\pm$ 29.09
			Male	617	40.51 $\pm$ 13.54	92.90 $\pm$ 28.45
Validation	TC	Cases	Female	445	44.01 $\pm$ 13.21	232.91 $\pm$ 29.00
			Male	413	42.22 $\pm$ 11.52	234.52 $\pm$ 36.46
		Controls	Female	423	38.00 $\pm$ 12.72	172.28 $\pm$ 19.17
			Male	433	40.16 $\pm$ 14.48	169.15 $\pm$ 21.97
	HDL-C	Cases	Female	57	42.12 $\pm$ 13.25	35.01 $\pm$ 3.55
			Male	235	40.71 $\pm$ 12.81	33.31 $\pm$ 5.18
		Controls	Female	856	42.09 $\pm$ 14.15	63.44 $\pm$ 14.78
			Male	551	40.88 $\pm$ 12.88	51.50 $\pm$ 9.77
	LDL-C	Cases	Female	34	49.65 $\pm$ 12.04	216.67 $\pm$ 30.54
			Male	48	44.19 $\pm$ 14.01	215.69 $\pm$ 36.51
		Controls	Female	833	40.69 $\pm$ 12.99	116.16 $\pm$ 31.92
			Male	709	41.33 $\pm$ 13.07	120.71 $\pm$ 31.69
	non-HDL-C	Cases	Female	214	44.48 $\pm$ 13.84	188.68 $\pm$ 26.30
			Male	247	41.72 $\pm$ 12.44	197.95 $\pm$ 35.87
		Controls	Female	485	38.96 $\pm$ 12.02	121.96 $\pm$ 23.14
			Male	325	40.24 $\pm$ 14.28	122.94 $\pm$ 23.37
	TG	Cases	Female	150	45.28 $\pm$ 14.56	225.43 $\pm$ 104.43
			Male	255	42.95 $\pm$ 12.60	225.73 $\pm$ 86.81
		Controls	Female	771	41.47 $\pm$ 13.08	84.89 $\pm$ 28.88
			Male	530	40.43 $\pm$ 13.34	94.51 $\pm$ 28.30

Table S2 External GWAS summary statistics (last accessed on April 25, 2025)

Ancestry	Trait	GWAS summary statistics
African	TC	https://www.ebi.ac.uk/gwas/studies/GCST90278113
	HDL-C	https://www.ebi.ac.uk/gwas/studies/GCST90278113
	LDL-C	https://www.ebi.ac.uk/gwas/studies/GCST90278113
	Non-HDL-C	https://www.ebi.ac.uk/gwas/studies/GCST90239670
	TG	https://www.ebi.ac.uk/gwas/studies/GCST90278113
East Asian	TC	https://www.nature.com/articles/s41588-021-00931-x
	HDL-C	https://www.nature.com/articles/s41588-021-00931-x
	LDL-C	https://www.nature.com/articles/s41588-021-00931-x
	Non-HDL-C	https://www.ebi.ac.uk/gwas/studies/GCST90239670
	TG	https://www.ebi.ac.uk/gwas/studies/GCST90239670
European	TC	https://www.nealelab.is/uk-biobank
	HDL-C	https://www.nealelab.is/uk-biobank
	LDL-C	https://www.nealelab.is/uk-biobank
	Non-HDL-C	https://www.ebi.ac.uk/gwas/studies/GCST90239670
	TG	https://www.nealelab.is/uk-biobank