

Supplementary Materials

Table S1. General Information about genotyping assay.

Gene	Name	SNP ID	Location	Catalog number	Contetext Sequence [VIC/FAM]
<i>FABP2</i>	Fatty acid binding protein 2	rs1799883	Chr.4:119320747	4351379 C___761961_10	AACAACCTCAATGTTTCGAAAAG[C/T]GCTTGATTCTTTGACTGTG AATTTA
<i>PPARG</i>	Peroxisome proliferator-activated receptor gamma	rs1801282	Chr.3:12351626	4362691 C___1129864_10	AACCTCTGGGAGATTCTCTATTGAC[C/G]CAGAAAGCGATTCTTC ACTGATAC
<i>LPL</i>	Lipoprotein Lipase	rs13702	Chr.8:19966981	4351379 C___9639448_10	GGAACCTCTGGCTCCGAAAAAATTG[C/T]TATATATATCAAGGATG TTCTGGCT
<i>APOA5</i>	Apolipoprotein A5	rs662799	Chr.11:116792991	4351379 C___2310403_10	GAGCCCCAGGAAGCTGGAGCGAAAGT[A/G]AGATTGCCCCATGAG GAAAAGCTG
<i>APOA1</i>	Apolipoprotein A1	rs670	Chr.11:116837697	4351379 C___2679585_20	GCTGGGAGGCTGATAAGCCCAGCCC[C/T]GGCCCTGTT- GCTGCTCACTGGTCCT
<i>APOC3</i>	Apolipoprotein C3	rs5128	Chr.11:116832924	4351379 C___8907537_1_	AAGTCCACCTGCCTATCCATCCTGC[C/G]AGCTCCTGGGTCTG- CAATCTCCA
<i>APOE</i>	Apolipoprotein E	rs7412	Chr.19:44908822	4351379 C___904973_10	CCGCGATGCCGATGACCTGCAGAAG[C/T]GCCTGGCAGTGAC- CAGGCCGGGGC
		rs429358	Chr.19:44908684	4351379 C___3084793_20	GCTGGGCGCGGACATGGAGGACGTG[C/T]GCGGCCGCTGGTGCA GTACCGCGG
<i>ABCA1</i>	ATP binding cassette transporter 1	rs9282541	Chr.9:104858554	4351379 C___11720861_10	GGCTTCAGGATGTCCATGTTGGAAC[A/G]AAGTACTCGCTCTGCTG CAGCCAGT
<i>CETP</i>	Cholesteryl ester transfer protein	rs708272	Chr.16:56962376	4351379 C___9615318_10	CTGAGACCCAGAATCACTGGGGTTC[A/G]AGTTAGGGTTCAGATCT GAGCCAGG
<i>LIPC</i>	Lipase C. Hepatic	rs1800588	Chr.15:58431476	4351379 C___8757333_30	GCTTCTTCGTGAGCTCCTTTTGACA[C/T]GGGGGTGAAGGGTTTCT GCACCAC

SNP Genotyping/ TaqMan Assays ThermoFisher Scientific: <https://www.thermofisher.com>.

Table S2. Genotypic frequencies (GF) of the study population vs. reported in database.

Gene	SNP	Alleles	MAF ¹	MAF Reported	HWE
<i>LIPC</i>	rs1800588	C/T	0.472 (T)	0.461(T)	0.915
<i>LPL</i>	rs13702	T/C	0.260 (C)	0.278 (C)	0.968
<i>FABP2</i>	rs1799883	G/A	0.252 (A)	0.260 (A)	0.906
<i>ABCA1</i>	rs9282541	C/T	0.068 (T)	0.120 (T)	0.838
<i>CETP</i>	rs708272	G/A	0.412 (A)	0.467 (A)	0.997
<i>PPARG</i>	rs1801282	C/G	0.132 (G)	0.113(G)	0.811
<i>APOA5</i>	rs662799	T/C	0.156 (C)	0.160 (C)	1.000
<i>APOC3</i>	rs5128	C/G	0.184 (G)	0.172 (G)	0.764
<i>APOA1</i>	rs670	G/A	0.272 (A)	0.300 (A)	0.730
<i>APOE</i>	rs429358	T/C	0.124 (C)	0.079 (C)	0.674
	rs7412	C/T	0.040 (T)	0.018 (T)	0.984

MAF¹: Minor Allele Frequency regarding this study population; MAF Reported from 1000 Genomes and the International HapMap project databases. HWE: Hardy-Weinberg equilibrium; HWE is expressed as *p* value.

Table S3. Genotype codifications of single specific SNPs statistically associated with TGs and VLDL-c decrease by diets.

STANDARD DIET									NUTRIGENETIC DIET								
<i>LPL rs13702</i>									<i>LIPC rs1800588</i>								
Δ TGs				Δ VLDL					Δ TGs				Δ VLDL				
n	Mean	Std error	<i>p</i> value	n	Mea n	Std error	<i>p</i> value		n	Mean	Std error	<i>p</i> value	n	Mea n	Std error	<i>p</i> value	
Risk (TC + CC)	2	90.50	34.50	0.08	2	18.00	7.00	0.08	Risk (CT+ TT)	12	73.42	26.72	0.006	12	14.75	5.32	0.006
Non risk (TT)	34	9.26	10.80		34	1.91	2.15		Non risk (CC)	30	16.40	6.70		30	3.33	1.35	
<i>APOA1 rs670</i>																	
Δ TGs				Δ VLDL													
n	Mean	Std error	<i>p</i> value	n	Mea n	Std error	<i>p</i> value										
Risk (GA+ AA)	4	-44.0	30.46	0.56	4	-8.75	6.06	0.55									
Non risk (GG)	32	21.0	10.98		32	4.25	2.18										

Data presented as mean \pm Standard error. Bold numbers indicate $p < 0.05$. Δ TGs: delta of triglycerides; Δ VLDL: delta of very-low density lipoprotein cholesterol.