

1 Table S1. Characteristics of the genotyped SNPs.

SNP	BP	Major allele	Minor allele	Location	MAF Hapmap	MAF Normal-weight	HW P-value
rs13236941	94793756	G	A	5' UTR	0.153	0.124	0.324
rs757158	94793464	G	A	5' UTR	0.408	0.353	0.431
rs705382	94793157	G	C	5' UTR	0.297	0.294	0.128
rs854573	94792799	A	G	5' UTR	0.195	0.206	0.834
rs854572	94792632	G	C	5' UTR	0.441	0.376	0.166
rs854571	94792555	G	A	5' UTR	0.267	0.243	1.000
rs705379	94791831	A	G	5' UTR	0.409	EA	EA
rs854566	94786685	G	A	Intron 1	0.117	0.147	0.518
rs705378	94784507	C	A	Intron 2	0.374	0.407	0.641
rs854560	94784020	A	T	Missense, Exon 3	0.397	0.407	0.641
rs3917527	94778194	A	G	Intron 5	0.050	0.034	1.000
rs662	94775382	A	G	Missense, Exon 6	0.358	0.288	0.861
rs854552	94765860	A	G	3' UTR	0.268	0.189	0.203
rs854551	94765613	G	A	3' UTR	0.203	0.138	0.150
rs3735590	94765431	G	A	3' UTR	0.051	0.045	1.000
rs854550	94765178	G	A	3' UTR	0.216	0.136	0.141

2 BP: base pair position; CHISQ: Chi-square statistic; EA: excluded from analysis; HW:

3 Hardy Weinberg; MAF: minor allele frequency.

4

5 Table S2. PON1 activities of normal-weight and obese volunteers.

	Normal-weight		Obese		<i>P</i> ‡
	Mean*	SEM†	Mean*	SEM†	
Lactonase (kU/l)	8.91	0.15	8.58	0.16	0.124
Arylesterase (kU/l)	127.28	1.92	125.25	2.21	0.488
Diazoxyonase (U/l)	8.06	0.14	8.15	0.15	0.645
Paraoxyonase (U/l)	184.56	59.58-632.01	146.33	24.91-576.55	0.973

6 *Median shown for paraoxyonase activity. †Range shown for paraoxyonase activity. ‡Student's t-
7 test *P* value shown for diazoxyonase, lactonase and arylesterase; Mann-Whitney U test *P* value
8 shown for paraoxyonase

9 Table S3. Associations between the rs854566, Q192R and L55M SNPs and the anthropometric measurements as well as biomarkers for insulin
 10 resistance, oxidative stress and obesity.

	rs854566		Q192R		L55M	
	β (95% CI)	<i>P</i>	β (95% CI)	<i>P</i>	β (95% CI)	<i>P</i>
Weight (kg)	-3.03 (-5.58, -0.48)	0.020	-0.41 (-2.57, 1.75)	0.712	-0.27 (-2.28, 1.73)	0.789
BMI	-1.32 (-2.43, -0.21)	0.020	-0.25 (-1.18, 0.69)	0.608	-0.18 (-1.05, 0.69)	0.691
BMI Z-score	-0.536 (-0.934, -0.137)	0.009	-0.154 (-0.492, 0.184)	0.371	0.015 (-0.300, 0.330)	0.924
WC (cm)	-4.36 (-8.74, 0.02)	0.052	-1.34 (-5.05, 2.36)	0.478	0.14 (-3.30, 3.56)	0.936
SBP (mmHg)	-0.21 (-3.15, 2.72)	0.886	0.92 (-1.55, 3.42)	0.464	-1.34 (-3.62, 0.95)	0.252
DBP (mmHg)	-1.55 (-3.98, 0.88)	0.213	1.02 (-1.05, 3.09)	0.335	-0.98 (-2.88, 0.91)	0.312
Glucose (mg/dl)	0.28 (-1.05, 1.56)	0.683	0.59 (-0.52, -1.70)	0.299	-0.19 (-1.23, 0.84)	0.712
Insulin (mU/l)	-0.89 (-2.05, 0.27)	0.133	-0.18 (-1.16, 0.79)	0.711	0.23 (-0.68, 1.14)	0.619
QUICKI	0.007 (-0.001, 0.014)	0.096	-0.002 (-0.008, 0.004)	0.753	0.0003 (-0.005, 0.006)	0.957
HOMA-IR	-0.14 (-0.38, 0.09)	0.096	-0.02 (-0.23, 0.18)	0.662	0.06 (-0.13, 0.24)	0.959
Total cholesterol (mg/dl)	1.47 (-4.22, 7.16)	0.751	-0.93 (-5, 72, 3.86)	0.499	-0.81 (-5.26, 3.64)	0.950
TAG (mg/dl)	-3.56 (-9.72, 2.60)	0.258	-0.48 (-5.67, 4.71)	0.856	-0.81 (-5.64, 4.01)	0.741
HDL-c (mg/dl)	1.08 (-1.79, 3.95)	0.461	0.21 (-2.20, 2.63)	0.862	-0.72 (-2.97, 1.52)	0.529
LDL-c (mg/dl)	0.20 (-4.69, 5.09)	0.936	-0.49 (-4.60, 3.61)	0.813	0.26 (-3.56, 4.08)	0.893
ApoA1 (mg/dl)	-1.06 (-6.28, 4.17)	0.692	0.74 (-3.68, 5.16)	0.742	0.45 (-3.64, 4.55)	0.828
ApoB (mg/dl)	-0.56 (-4.06, 2.94)	0.754	0.53 (-2.42, 3.48)	0.725	-0.45 (-3.19, 2.28)	0.746
FABP-4 (ng/ml)	-1.70 (-5.62, 2.22)	0.378	0.88 (-2.74, 4.50)	0.635	-1.06 (-4.21, 2.09)	0.511
Adiponectin (mg/l)	0.83 (-1.38, 3.03)	0.464	0.83 (-1.38, 3.03)	0.464	-0.39 (-2.13, 1.34)	0.657

Leptin (µg/l)	-2.33 (-4.96, 0.30)	0.083	-1.53 (-3.75, 0.68)	0.176	0.89 (-1.19, 2.97)	0.401
ox-LDL (mg/l)	0.161 (-0.361, 0.684)	0.545	-0.157 (-0.600, 0.286)	0.487	0.207 (-0.202, 0.616)	0.322
Vitamin A (µg/ml)	-0.006 (-0.02, 0.007)	0.382	-0.007 (-0.017, 0.004)	0.212	0.004 (-0.006, 0.014)	0.404
α-tocopherol(µg/ml)	-0.08 (-0.46, 0.30)	0.669	0.06 (-0.26, 0.38)	0.715	-0.06 (-0.36, 0.23)	0.672
β-carotene (µg/ml)	0.01 (-0.007, 0.03)	0.220	-0.01 (-0.02, 0.01)	0.190	0.002 (-0.01, 0.01)	0.833
TAC (mM Trolox)	-0.08 (-0.24, 0.08)	0.349	0.08 (-0.06, 0.21)	0.277	0.08 (-0.05, 0.20)	0.248
hsCRP (mg/l)	-0.23 (-1.01, 0.56)	0.571	-0.36 (-1.02, 0.30)	0.289	0.20 (-0.41, 0.80)	0.522
MMP-9 (µg/l)	4.55 (-7.72, 16.83)	0.467	-1.88 (-12.19, 8.42)	0.720	0.27 (-9.33, 0.87)	0.957
MPO (µg/l)	-2.21 (-7.06, 2.65)	0.374	1.55 (-2.53, 5.63)	0.458	-0.79 (-4.58, 3.01)	0.685
Active PAI-1 (µg/l)	-1.54 (-3.20, 0.11)	0.069	0.81 (-0.59, 2.20)	0.258	0.08 (-1.22, 1.38)	0.905
Total PAI-1 (µg/l)	-2.44 (-5.80, 0.92)	0.159	1.42 (-1.39, 4.24)	0.223	-0.21 (-2.84, 2.43)	0.814

11 DBP: diastolic blood pressure; FABP-4: fatty-acid-binding protein 4; HDL-C: high-density lipoprotein cholesterol; HOMA-IR: homeostasis
12 model assessment for insulin resistance; hsCRP: high-sensitivity C-reactive protein; LDL-C: low-density lipoprotein cholesterol; ox-LDL:
13 oxidized LDL; SBP: systolic blood pressure; TAC: total antioxidant capacity; QUICKI: quantitative insulin sensitivity check index; WC: waist
14 circumference. Insulin, cholesterol and HOMA-IR were logarithmically transformed, and QUICKI was inversely transformed to reach a normal
15 distribution. β: variable change per minor allele, adjusted by sex and age under the additive model.