

Circulating Apolipoprotein L1 is associated with insulin resistance-induced abnormal lipid metabolism

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Supplementary Table S1 Univariable linear regression analysis of characteristics relative to log ApoL1 in non-diabetic volunteers

characteristic	B	standard deviation error	standardized coefficients	p value
log age (year)	-0.022	0.095	-0.021	0.819
male	0.066	0.021	0.269	< 0.01**
habitual drinker	0.035	0.024	0.131	0.144
current smoker	0.030	0.029	0.094	0.298
log waist circumference (cm)	0.805	0.160	0.412	< 0.001***
log BMI (kg/m ²)	0.752	0.142	0.430	< 0.001***
systolic BP (mmHg)	0.002	0.001	0.233	< 0.01**
diastolic BP (mmHg)	0.003	0.001	0.268	< 0.01**
Total-C (mg/dL)	0.001	0.001	0.104	0.248
LDL-C (mg/dL)	0.001	0.001	0.236	< 0.01**
log HDL-C (mg/dL)	-0.556	0.108	-0.421	< 0.001***
log TG (mg/dL)	0.262	0.051	0.416	< 0.001***
log γGTP (U/L)	0.136	0.033	0.342	< 0.001***
log albumin (g/dL)	0.575	0.425	0.121	0.178
uric acid (mg/dL)	0.028	0.007	0.343	< 0.001***
eGFR (ml/min)	0.001	0.001	-0.023	0.799
FBS (mg/dL)	0.004	0.001	0.299	< 0.001***
log insulin (μU/mL)	0.105	0.046	0.205	< 0.05*
log adiponectin (μg/mL)	-0.216	0.050	-0.362	< 0.001***
log U-Alb/Cr (mg/gCr)	0.024	0.033	0.066	0.463
log U-8OHdG/Cr (mg/gCr)	-0.053	0.062	-0.077	0.399

ApoL1, apolipoproteinL1; BMI, body mass index; BP, blood pressure; Total-C, total cholesterol; LDL-C, low-density lipoprotein cholesterol; HDL-C, high-density lipoprotein cholesterol; TG, triglyceride; γGTP, γ-glutamyltransferase; eGFR, estimated glomerular filtration rate; FBS, fasting blood sugar; U-Alb/Cr, urine albumin to creatinine ratio; U-8OHdG/Cr, urine 8-Hydroxy-2'-Deoxyguanosine to creatinine ratio.

Supplementary Table S2 Baseline characteristics of low and high ApoL1 groups

	low ApoL1	high ApoL1	<i>p value</i>
N	5	5	
age (year)	38.8±7.7	35.0±5.0	n.s.
male, n (%)	5 (100.0)	5 (100.0)	n.s.
waist circumference (cm)	76.2±7.8	90.4±9.6	< 0.05*
BMI (kg/m ²)	20.6±1.1	26.2±3.3	< 0.01**
Systolic BP (mmHg)	118.0±6.0	114.4±3.2	n.s.
Diastolic BP (mmHg)	74.2±5.0	76.0±8.4	n.s.
Total-C (mg/dL)	187.0±10.8	218.4±92.8	n.s.
LDL-C (mg/dL)	97.4±27.0	145.2±93.5	n.s.
HDL-C (mg/dL)	76.0±17.9	46.8±8.3	< 0.05*
TG (mg/dL)	58.0±24.3	175.2±66.3	< 0.05*
γGTP (U/L)	28.8±12.4	64.6±44.8	n.s.
albumin (g/dL)	4.6±0.3	4.6±0.3	n.s.
uric acid (mg/dL)	6.3±0.5	6.4±1.8	n.s.
eGFR (ml/min)	83.7±8.4	93.3±11.0	n.s.
FBS (mg/dL)	97.4±6.7	106.4±15.9	n.s.
insulin (μU/mL)	3.1 (2.3-3.4)	10.6 (6.6-24.3)	< 0.05*
adiponectin (μg/mL)	11.0±1.0	6.1±1.0	< 0.01**
ApoL1 (μg/mL)	24.2±3.3	42.6±9.9	< 0.01**

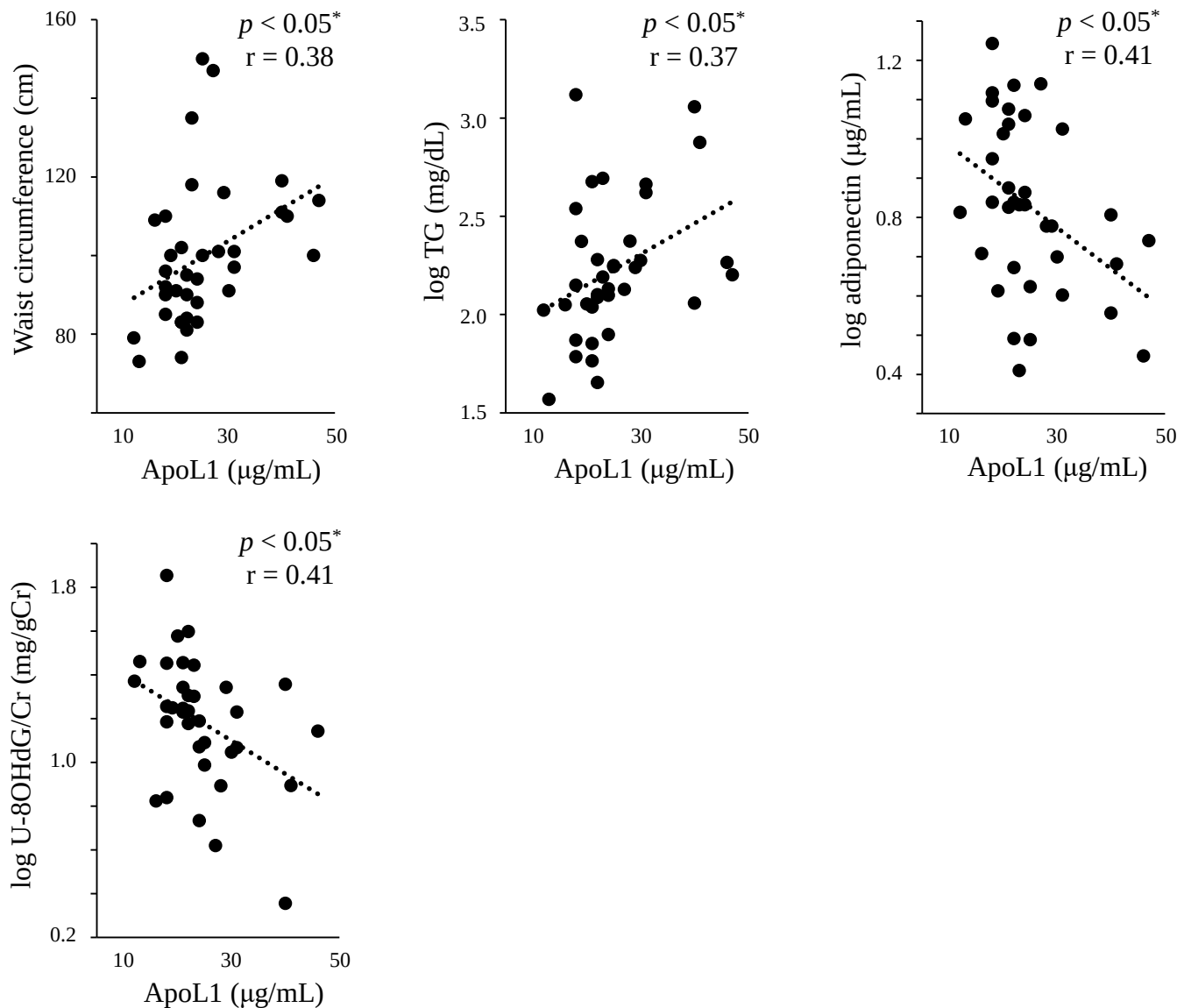
Data are presented as mean ± standard deviation, as number (%) or as median (interquartile range) if skewed. *P* value was calculated with student's *t*-test in parametric variables or Mann -Whitney's U test was used in non-parametric variables. BMI, body mass index; BP, blood pressure; Total-C, total cholesterol; LDL-C, low-density lipoprotein cholesterol; HDL-C, high-density lipoprotein cholesterol; TG, triglyceride; γGTP. γ-glutamyltransferase; eGFR, estimated glomerular filtration rate; FBS, fasting blood sugar; ApoL1, apolipoproteinL1.

Supplementary Table S3 Cholesterol and triglyceride levels in lipoprotein fractions of low and high ApoL1 groups

	Cholesterol (mg/mL)			Triglyceride (mg/mL)		
	low ApoL1	high ApoL1	<i>p</i> value	low ApoL1	high ApoL1	<i>p</i> value
VLDL	29.1±15.9	112.2±47.2	< 0.01**	77.5±59.8	432.5±165.2	< 0.01**
large LDL	252.8±74.7	288.7±189.3	n.s.	53.9±18.3	75.8±20.2	n.s.
small LDL	204.9±57.6	290.4±113.5	n.s.	29.6±6.6	48.9±11.3	< 0.05*
large HDL	171.6±67.5	66.4±13.2	< 0.05*	16.0±10.2	17.3±6.6	n.s.
small HDL	157.7±24.2	111.2±11.9	< 0.01**	12.2±4.3	27.9±12.9	< 0.05*
very small HDL	63.0±9.7	41.5±5.7	< 0.01**	6.0±4.7	11.0±5.3	n.s.

Data are presented as mean ± standard deviation. *P* value was calculated with student’s *t*-test. VLDL-C, VLDL-TG, small LDL-TG and small HDL-TG were significantly higher, and large HDL-C, small HDL-C, very small HDL-C were significantly lower in high ApoL1 group. VLDL, very low-density lipoprotein; LDL, low-density lipoprotein; HDL, high-density lipoprotein; C, cholesterol; TG, triglyceride.

Supplementary Figure S1 Correlation of serum ApoL1 levels and clinical characteristics in T2DM



Scatter plot of serum ApoL1 levels relative to waist circumference, log TG, log adiponectin and log U-8OHdG/Cr in all patients with T2DM. ApoL1 presented the positive correlation with waist circumference and log TG, and the negative correlation with log adiponectin and log U-8OHdG/Cr. *P* value is calculated with peason's correlation coefficient test. T2DM, type2 diabetes mellitus; TG, triglyceride; U-8OHdG/Cr, urine 8-Hydroxy-2'-Deoxyguanosine to creatinine ratio.