

Table S1. Clinical characteristics and metabolic parameters of 16 surgical patients

Variable	
n (Male/Female)	16 (11/5)
Age (years)	69.1 ± 10.9
BMI (kg/m ²)	22.8 ± 3.5
WC (cm)	72.7 ± 14.2
VAT area (cm ²)	64.0 ± 16.3
SAT area (cm ²)	83.5 ± 14.0
FPG (mmol/L)	5.1 ± 0.5
HbA1c (%)	5.6 ± 0.3
TG (mmol/L)	1.4 [1.0-2.0]
HDL-C (mmol/L)	1.1 ± 0.3
LDL-C (mmol/L)	2.7 ± 0.7
Leptin (ng/mL)	4.7 [2.5-7.7]
Adiponectin (µg/mL)	7.6 [5.3-10.4]
hsCRP (µg/mL)	0.9 [0.4-1.0]
Serum THBS1 (µg/mL)	10.0 [9.4-17.3]

Data are shown as the mean ± SD or median and interquartile ranges.

Table S2. Correlation analyses of adipose *THBS1* expression for metabolic parameters

Variable	SAT <i>THBS1</i> mRNA		VAT <i>THBS1</i> mRNA	
	γ_s	<i>P</i>	γ_s	<i>P</i>
BMI	-0.01	0.966	0.54	0.033*
WC	0.16	0.544	0.54	0.029*
VAT area	-0.35	0.262	0.00	> 0.999
SAT area	-0.39	0.216	0.06	0.854
FPG	-0.16	0.544	-0.01	0.957
HbA1c	-0.29	0.272	-0.19	0.486
TG	-0.09	0.752	0.41	0.114
HDL-C	-0.09	0.735	-0.56	0.024*
LDL-C	-0.26	0.338	-0.24	0.380
Leptin	0.50	0.051	-0.14	0.617
Adiponectin	-0.42	0.103	-0.13	0.633
hsCRP	-0.16	0.560	-0.04	0.880
Serum <i>THBS1</i>	0.06	0.852	0.01	0.970

Spearman's rank correlation coefficient (γ_s) was used to assess the relationships among the study variables. **P* < 0.05 (statistically significant).

Table S3. Baseline characteristics and metabolic parameters of female subjects

Variable	Premenopausal	Postmenopausal	<i>P</i>
n	42	44	
Age (years)	39.1 ± 6.9	60.9 ± 6.8	< 0.001*
BMI (kg/m ²)	32.1 ± 7.9	30.1 ± 5.4	0.177
WC (cm)	99.0 ± 15.4	99.5 ± 13.8	0.864
VAT area (cm ²)	87.4 ± 52.2	108.3 ± 46.3	0.071
SAT area (cm ²)	274.3 ± 123.0	283.6 ± 105.7	0.728
SBP (mmHg)	136.8 ± 21.9	135.1 ± 18.2	0.701
DBP (mmHg)	84.1 ± 13.6	81.1 ± 11.0	0.280
FPG (mmol/L)	5.6 ± 1.5	6.2 ± 1.8	0.104
HbA1c (%)	5.9 ± 1.1	6.5 ± 1.2	0.020*
IRI (pmol/L)	69.6 [37.2-144.5]	69.6 [41.3-102.8]	0.685
HOMA-IR	2.7 [1.3-7.4]	3.0 [1.7-5.2]	0.829
TG (mmol/L)	1.3 [0.7-2.1]	1.4 [1.0-1.9]	0.601
HDL-C (mmol/L)	1.6 ± 0.4	1.6 ± 0.4	0.845
LDL-C (mmol/L)	3.2 ± 0.6	3.3 ± 0.6	0.634
AST (IU/L)	24.3 ± 11.9	25.8 ± 12.1	0.555
ALT (IU/L)	27.8 ± 19.1	28.6 ± 18.9	0.827
γGTP (IU/L)	32.7 ± 21.5	45.4 ± 52.0	0.173
Leptin (ng/mL)	13.9 [7.2-28.2]	17.2 [10.0-23.6]	0.551
Adiponectin (μg/mL)	7.6 [6.1-9.2]	7.83 [4.6-10.7]	0.677
hsCRP (μg/mL)	0.6 [0.3-2.3]	0.91 [0.4-2.5]	0.369
Estradiol (pg/mL)	82.3 ± 83.4	15.9 ± 12.2	< 0.001*
FSH (IU/L)	10.9 ± 18.5	40.2 ± 21.2	< 0.001*
THBS1 (μg/mL)	19.2 [8.6-23.7]	13.7 [5.8-18.8]	0.159

Data are shown as the mean ± SD or median and interquartile ranges. Groups were compared by Welch's *t*-test or the Mann-Whitney U test. **P* < 0.05.

Table S4. Characteristics and metabolic parameters of the study subjects before and after 6-month weight reduction therapy

Variable	Male		Female	
	Baseline	6 months	Baseline	6 months
n	34		44	
Age (years)	51.3 ± 13.0		52.1 ± 13.7	
BMI (kg/m ²)	29.0 ± 6.3	28.1 ± 6.1*	30.3 ± 5.6	29.4 ± 5.1*
WC (cm)	98.1 ± 14.1	95.7 ± 14.2*	98.0 ± 12.1	96.4 ± 13.0
VAT area (cm ²)	121.1 ± 53.2	99.9 ± 46.0*	103.1 ± 51.5	85.8 ± 38.7*
SAT area (cm ²)	246.0 ± 113.7	243.1 ± 130.2	294.9 ± 100.4	280.2 ± 92.2
FPG (mmol/L)	6.1 ± 1.5	5.7 ± 1.3	6.4 ± 1.9	6.0 ± 2.0*
HbA1c (%)	6.2 ± 1.4	5.9 ± 0.8	6.6 ± 1.4	6.4 ± 1.4
IRI (pmol/L)	43.2 [32.4-75.0]	39.0 [32.4-75.6]	69.9 [40.8-119.9]	59.7 [43.1-88.8]*
HOMA-IR	2.1 [1.5-3.4]	1.9 [1.3-2.9]	3.1 [1.8-6.8]	2.4 [1.7-4.0]*
TG (mmol/L)	1.1 [0.8-1.8]	1.1 [0.8-1.5]	1.3 [0.9-2.1]	1.1 [0.7-1.5]*
HDL-C (mmol/L)	1.4 ± 0.4	1.3 ± 0.2	1.6 ± 0.4	1.6 ± 0.4
LDL-C (mmol/L)	2.8 ± 0.7	2.7 ± 0.6	3.2 ± 0.6	3.1 ± 0.6
AST (IU/L)	23.6 ± 10.4	21.5 ± 5.5	23.0 ± 8.2	21.9 ± 7.2
ALT (IU/L)	32.1 ± 24.2	25.4 ± 10.0	26.3 ± 14.3	22.3 ± 10.2*
γGTP (IU/L)	42.0 ± 34.2	37.3 ± 24.7	47.4 ± 52.1	38.3 ± 39.6*
Leptin (ng/mL)	6.3 [3.3-11.6]	4.6 [2.6-7.1]*	13.7 [9.2-20.4]	12.7 [6.5-17.9]*
Adiponectin (μg/mL)	6.2 [5.1-9.1]	6.9 [5.4-10.9]	7.8 [5.3-9.5]	7.6 [5.9-10.8]
hsCRP (μg/mL)	0.6 [0.3-1.0]	0.3 [0.2-0.9]	0.8 [0.3-2.1]	0.5 [0.3-1.3]
THBS1 (μg/mL)	14.1 [9.6-17.5]	17.3 [13.3-19.7]	18.1 [13.6-23.3]	15.6 [13.6-18.6]

Data are shown as the mean ± SD or median and interquartile ranges. Groups were compared by the paired *t*-test or Wilcoxon signed-rank test. **P* < 0.05 vs. baseline data.