

Supplementary Table S1. Primer sequences for PCR and RT-qPCR analyses

Primer name	Sequence (from 5' to 3')	Product size (bp)
Leptin		
Forward	TCC CAG GGA GGA AAA TGT GCT	219
Reverse	TGA CAT GTT TCT CAG ACT CTG GTT	
PPAR γ		
Forward	GAG TTC ATG CTT GTG AAG GAT GCA AGG	80
Reverse	CAT ACT CTG TGA TCT CTT GCA CG	
C/EBP α		
Forward	GTG GAC AAG AAC AGC AAC GAG TAC	71
Reverse	GGA ATC TCC TAG TCC TGG CTT GC	
FAS		
Forward	GAT CCT GGA ACG AGA ACA CGA TCT GG	128
Reverse	AGA CTG TGG AAC ACG GTG GTG GAA CC	
aP2		
Forward	GAA CCT GGA AGC TTG TCT CCA GTG GAT	72
Reverse	GCT CTT CAC CTT CCT GTC GTC TGC	
GLUT4		
Forward	GCT TTG TGG CCT TCT TTG AGA	67
Reverse	CTG AAG AGC TCT GCC ACA ATG	
Insulin receptor		
Forward	AAT GGG ACC ACT GTA TGC ATC TT	84
Reverse	TCG TCC GGC ACG TAC ACA	
PYGL		
Forward	CCA GAA TAA AAC CAA CGG GAT TA	88
Reverse	TCC AAT TTT CTC CGC TAT CAA GTC	
Phosphoglucomutase		
Forward	GGA GCT ACT CTC TGG TCC AAA CA	76
Reverse	CTT TAC GTA CGG TCC CAC AAC TC	
G6PC3		
Forward	CCA GTT CCC TTC TTC TTG TGA GA	71
Reverse	GAG CTG CGC CTG TGA TCA	
β -actin		
Forward	TGG AAT CCT GTG GCA TCC ATG AAA C	349
Reverse	TAA AAC GCA GCT CAG TAA CAG TCC G	

Abbreviations: PPAR γ ; peroxisome-proliferator activator receptor γ , C/EBP α ; CCAAT/enhancer binding protein α , FAS; fatty acid synthase, aP2; adipocyte protein 2, GLUT4; Glu transporter type 4, PYGL; glycogen phosphorylase L, G6PC3; Glu-6-phosphatase catalytic subunit 3.

Supplementary Table S2. Definition of the NAFLD score

Criteria	Definition	Score
Steatosis		
Grade	< 5%	0
	5% ~ 33%	1
	> 33%~66%	2
	> 66%	3
Location	Zone 3	0
	Zone 1	1
	Azonal	2
	Panacinar	3
Microvesicular steatosis	Absent	0
	Present	1
Inflammation		
Lobular inflammation	No foci	0
	< 2 foci per 200× field	1
	2-4 foci per 200× field	2
	> 4 foci per 200× field	3
Microgranulomas	Absent	0
	Present	1
Large lipogranulomas	Absent	0
	Present	1
Portal inflammation	None to minimal	0
	Greater than minimal	1
Ballooning	None	0
	Few ballooned cells	1
	Many/prominent ballooned cells	2

Abbreviation: NAFLD; Non-alcoholic fatty liver disease.

Supplementary Table S3. List of antibodies for Western blot assay

Antibody name	Sequence (from 5' to 3')	Dilution ratio
anti-ATGL antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-HSL antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-p-HSL antibody	Invitrogen, Carlsbad, CA, USA	1:1,000
anti-perilipin antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-p-perilipin antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-AMPK antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-p-AMPK antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-GLUT4 antibody	Invitrogen, Carlsbad, CA, USA	1:1,000
anti-insulin receptor β	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-IRS-1 antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-p-IRS-1 antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-PI3K antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-p-PI3K antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-Akt antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti-p-Akt antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000
anti- β -actin antibody	Cell Signalling Technology Inc., Danvers, MA, USA	1:1,000

Abbreviations: ATGL; Adipose triglyceride lipase, HSL; hormone-sensitive lipase, AMPK; 5' AMP-activated protein kinase, GLUT4; Glu transporter type 4, IRS-1; insulin receptor substrate 1, PI3K; phosphatidylinositol 3-kinase, Akt; protein kinase B.