

Table SI. gRNA sequences.

gRNA	Sequence, 5'-3'
sgRNA1	AGGGTACAATTACACCTGTG
sgRNA2	ACCTACAGATGAGGCCAGGG
sgRNA3	GGAGACAAGGATGACCCCGA
sgRNA4	ACAGAATTAGGGACCTAGAG

gRNA, guide RNA.

Table SII. Primer sequences used to identify mouse genotypes..

Genotype	Primer	Sequence, 5'-3'	Product size
<i>PLIN5</i> knockout	F1	ATTTGAACTCATCCTCGTCCCAC	WT: 1,530 bp;
	R1	TAGTACCATGTCTGATGGCTGCTG	targeted: ~737 bp
Wild Type(WT)	F1	CTGTGCCCTGATGTAAGTGTTC	WT: 462 bp;
	R1	AGCATAAACCGTGTGGTGGTG	targeted: 0 bp

F, forward; *PLIN5*, perilipin 5; R, reverse; WT, wild-type. targeted, mutant allele.

Table SIII. PCR system for identifying mouse genotypes.

Segment.	PCR component	Volume, μ l
1	2X Taq Master Mix, Dye Plus (cat. no. P112-03; Vazyme Biotech Co., Ltd.)	12.5
2	ddH ₂ O	9.5
3	Forward primer (10 pmol/ μ l)	1
4	Reverse primer (10 pmol/ μ l)	1
5	DNA (~100 ng/ μ l)	1

Table SIV. PCR program for identify mouse genotypes.

Segment	Temperature, °C	Time	Cycle
1	95	5 min	1x
2	98	30 sec	20x
3	65	30 sec	
4	72	45 sec	
5	98	30 sec	20x
6	55	30 sec	
7	72	45 sec	
8	72	5 min	1x
9	10	Hold	1x

Table SV. Sequences of the primers used for quantitative polymerase chain reaction.

Gene	Sequene (5'-3')
<i>GAPDH</i>	
Forward	AGGTCGGTGTGAACGGATTTG
Reverse	TGTAGACCATGTAGTTGAGGTCA
<i>PLIN5</i>	
Forward	GAAGTGGGCACAGTGGAGG
Reverse	AAAGAGTGTTTCATAGGCGAGAT
<i>GPX4</i>	
Forward	GCCTGGATAAGTACAGGGGTT
Reverse	CATGCAGATCGACTAGCTGAG
<i>MYC</i>	
Forward	ATGCCCTCAACGTGAACTTC
Reverse	GTCGCAGATGAAATAGGGCTG
<i>LTF</i>	
Forward	CCGCTCAGTTGTGTCAAGAAA
Reverse	CATGGCATCAGCTCTGTTTGT
<i>ATF3</i>	
Forward	GAGGATTTTGCTAACCTGACACC
Reverse	TTGACGGTAACTGACTCCAGC
<i>GDPD5</i>	
Forward	AGCCCCTGCAATACTACGAG
Reverse	CCCCACCAAAGTAGAGCCAG
<i>PRCI</i>	
Forward	CAGATGAGTCTATCACATGCCTG
Reverse	CCTCGGTTCTTTGTAGCCTCT
<i>FSCN1</i>	
Forward	GACTGCGAAGGTCGCTACC
Reverse	CTGATCGGTCTCTTCATCCTGA
<i>PLIN2</i>	
Forward	TCCACTGTCCACCTGATTGA
Reverse	TGGCATGTAGTCTGGAGCTG
<i>CHOP</i>	
Forward	GTCACACGCACATCCCAA
Reverse	GTTCTTCCTTGCTCTCCTCCTC
<i>CHAC1</i>	
Forward	CTGTGGATTTTCGGGTACGG
Reverse	CCCCTATGGAAGGTGTCTCC

ATF3, activating transcription factor 3; *CHAC1*, cation transport regulator-like protein 1; *CHOP*, C/EBP homologous protein; F, forward; *FSCN1*, fascin actin-bundling protein 1; *GDPD5*, glycerophosphodiester phosphodiesterase domain containing 5; *GPX4*, glutathione peroxidase 4; *LTF*, lactotransferrin; *PLIN*, perilipin; *PRCI*, protein regulator of cytokinesis 1; R, reverse.

Table SVI. Antibodies used for western blotting.

Antibody	Supplier	Cat. no.	Dilution
GAPDH	Proteintech Group, Inc.	10494-1-AP	1:5,000
ATF3	Zen-Bio, Inc.	R26444	1:500
CHOP	Shanghai Abways Biotechnology Co., Ltd.	CY6694	1:1,000
CHAC1	Proteintech Group, Inc.	15207-1-AP	1:2,000
α -tubulin	Proteintech Group, Inc.	11224-1-AP	1:5,000
GPX4	Shanghai Abways Biotechnology Co., Ltd.	CY6959	1:1,000
PLIN5	Proteintech Group, Inc.	26951-1-AP	1:2,000
Goat anti-rabbit	Proteintech Group, Inc.	SA00001-2	1:5,000

ATF3, activating transcription factor 3; CHAC1, cation transport regulator-like protein 1; CHOP, C/EBP homologous protein; GPX4, glutathione peroxidase 4; PLIN5, perilipin 5.

Table SVII. shRNA sequences.

Gene	Sequence, 5'-3'
shNC	TTCTCCGAACGTGTCACGT
shATF3	AGACGAGAGGAACCTCTTTAT

ATF3, activating transcription factor 3; NC, negative control; sh, short hairpin.