

Table S1. Composition of diets used in the study

Composition	2018 Teklad 18% Protein Rodent Diet	Teklad Custom Diet TD. 180456
Protein, % by weight	18.6	17.3
Carbohydrate, % by weight	44.2	41.7
Fat, % by weight	6.2	23.2
Protein, % kcal from	24	15.5
Carbohydrate, % kcal from	58	37.5
Fat, % kcal from	18	46.9
Calorie density (Kcal/g)	3.1	4.4
Cholesterol mg/kg	0	0
Carbohydrate origin	starches	starches
Fat origin	Soybean oil	Soibean oil + Cocoa butter

Table S2. Primers used in RT-qPCR analysis.

Gene	GenBank TM	Primer sequences	PCR product
Aco	NM_017340.2	Forward: 5'-GTGAGGCGCCAGTCTGAAA-3' Reverse: 5'-ACTGCTGGGTTTGAAAATCCA-3'	70 bp
Bip	NM_013083.2	Forward: 5'-TGATAATCAGCCCACCGTAACA-3' Reverse: 5'-CAAATGTACCCAGAAGGTGATTGTC-3'	83 bp
Egr1	NM_012551.3	Forward: 5'-GCACCTGACCACAGAGTCCTTT-3' Reverse: 5'-AGAAGCGGCCAGTATAGGTGA-3'	119 bp
Cd36	NM_031561.2	Forward: 5'-CGTATGGTGTGCTGGACATTG-3' Reverse: 5'-CTTGCATGTAGGAAATGTGGAAGA-3'	79 bp
Chrebpβ	NM_133552.2	Forward: 5'-TGTTCA GCCGAATCTTGTCC -3' Reverse: 5'-TGTTCA GCCGAATCTTGTCC -3'	125 bp
Cpt1a	NM_031559.2	Forward: 5'- TGCAGAACACGGCAAAATGA-3' Reverse: 5'- CCGACCTGAGAGGACCTTGA-3'	70 bp
Dgat2	NM_001012345	Forward: 5'-GGAACCGCAAAGGCTTTGTA-3' Reverse: 5'-GGAATAGGTGGGAACCAGATCA-3'	65 bp
F4/80	NM_001007557.1	Forward: 5'-CAGATGGGGGATGACCACAC-3' Reverse: 5'-AACTCTCCGTGGTGTCA GTG-3'	116 bp
Fas	NM_017332.1	Forward: 5'- CCAACCGGCTCTCTTTCTTCT -3' Reverse: 5'- GGCTAGAGGAGCAGGCTGTGT -3'	72 bp
Fgfr1	NM_024146.2	Forward: 5'-GCACCTGACCACAGAGTCCTTT-3' Reverse: 5'-AGAAGCGGCCAGTATAGGTGA-3'	119 bp
Klb	XM_039092743.1	Forward: 5'- TGAGTCTGTTCTTAAGCCGGAG -3' Reverse: 5'- TGCATTGGGACGGTCTTGTT-3'	140 bp
Leptin	NM_013076.3	Forward: 5'-GGTCACCGGTTTGGACTTCA-3' Reverse: 5'-GGTCTGGTCCATCTTGGACAA-3'	67 bp
Mest	NM_001009617.2	Forward: 5'-GACCCTGAGGTTCCATCGAG -3' Reverse: 5'-ACTGATGTGGTCTCGGCTTG-3'	77 bp
PPary-2	NM_001145366.1	Forward: 5'-AGCTGTGAACCACTAATATCCAAG-3' Reverse: 5'-GGTCCACAGAGCTGATTCCG-3'	123 bp
PCNA	NM_022381.3	Forward: 5'- GCAACTTGGAATCCCAGAACA -3' Reverse: 5'- TCCCGGCATATACGTGCAAA -3'	79 bp

Pnpla3	NM_001282324.1	Forward: 5'- AGTCTCCCTCTCGATCACATCA -3' Reverse: 5'- TGTGAAGAACGGGTGGAGG -3'	94 bp
Tnfa	NM_012675.3	Forward: 5'-ATCCGAGATGTGGAAGTGGC -3' Reverse: 5'-CGATCACCCCGAAGTTCAGTA -3'	151 pb
Xbp1s	NM_001271731.1	Forward: 5'-GAGTCCGCAGCAGGTG-3' Reverse: 5'-CGTCAGAATCCATGGGAA -3'	64 bp

Table S3. Antibodies used in western blot analysis.

Antibody	Reference Number
ACLY	Cell Signaling (# 4332)
AKT	Cell Signaling (# 9272)
P(Ser473)-AKT	Cell Signaling (# 4058)
ATGL	Santa Cruz (sc-365278)
β3-AR	Santa Cruz (sc-515763)
FAS	Santa Cruz (sc-55580)
HSL	Cell Signaling (# 4107)
P(Ser660)-HSL	Cell Signaling (# 4126)
IRE1α	Abcam (ab37073)
p(Ser724)-IRE1α	Abcam (ab48178)
IRS-2	Santa Cruz (sc-1555)
P(Thr197)-PKA C	Cell Signaling (#4781)
PKAα C	Santa Cruz (sc-28315)
PDE3B	Santa Cruz (sc-376823)
PEPCK-C (I-17)	Santa Cruz (sc-74823)
PERK (B-5)	Santa Cruz (sc-377400)
P(Thr982)-PERK	Mybiosouce (MBS9416902)
β-TUBULIN	Sigma-Aldrich (T4026)
UCP1 (A-6)	Santa Cruz (sc-518024)
VINCULIN	Santa Cruz (sc-73614)