



Figure S1. **DRP1 is essential for the differentiation of brown adipose tissue SVF cells.** (A) Representative images of the SVF cells differentiated to beige adipocytes in the presence or absence of 10 μ M Mdivi-1 and stained with the mitotracker Green FM. Scale bars = 75 μ m. (B) Immunoblots for DRP1 in primary mouse SVF cells from brown adipose tissue of C57BL6 that were differentiated into brown adipocytes. (C) Representative images of the SVF cells from brown adipose tissue differentiated to brown adipocytes in the presence or absence of 10 μ M Mdivi-1 added from day 0 of differentiation. Scale bars = 500 μ m.

Table S1. Primer sequence details

Gene	Forward (5'-3')	Reverse (5'-3')
<i>Cox1</i>	TAGCCCATGCAGGAGCATCA	TGGCTGGGGGTTTCATGTTGA
<i>Cox2</i>	ACCTGGTGAACACTACGACTGCT	CCTAGGGAGGGGACTGCTCA
<i>ATP6</i>	TGGCATTAGCAGTCCGGCTT	ATGGTAGCTGTTGGTGGGCT
<i>ND2</i>	GCCTGGAATTCAGCCTACTAGC	GGCTGTTGCTTGTGTGACGA
<i>UCP1</i>	GGCCTCTACGACTCAGTCCA	TAAGCCGGCTGAGATCTTGT
<i>PGC-1</i>	CCCTGCCATTGTTAAGACC	TGCTGCTGTTCTGTTTTTC
<i>DIO2</i>	CATGCTGACCTCAGAAGGGC	CCCAGTTTAACCTGTTTGTAGGCA
<i>Cidea</i>	ATCACAACCTGGCCTGGTTACG	TACTACCCGGTGTCCATTCT
<i>Prdm16</i>	CAGCACGGTGAAGCCATTC	GCGTGCATCCGCTTGTG
<i>Dnm1</i>	TAGTGGGCAGGGACCTTCTT	TGCTTCAACTCCATTTTCTTCTCC
<i>Mfn2</i>	CAGCAAGTTGACATCACCCG	ACCAGCCAGCTTTATTCTCTGA
<i>Mff</i>	AAGTGGCTCTCACCCCTAGCA	TGCCCCACTCACCAAATGT
<i>Opa1</i>	TTGCCAGTTTAGCTCCCGAC	CCAGGTGAACCTGCAGTGAA
<i>PPARγ</i>	AGGCGAGGGCGATCTTGACAG	AATTCGGATGGCCACCTCTTTG
<i>C/EBPα</i>	AAACAACGCAACGTGGAGAC	TGTCCAGTTCACGGCTCAG
<i>C/EBPβ</i>	GGTTTTCGGGACTTGATGCA	CAACAACCCCGCAGGAAC
<i>β-actin</i>	TATTGGCAACGAGCGGTTCC	GGCATAGAGGTCTTTACGGATGT

Table S2. Antibody catalog number and source

Name	Catalogue Number	Source	Dilutions used
Actin	66009-1-Ig	Proteintech	1:5000
DRP1	611112	BD transduction laboratories	1:1000
MFF	84580T	Cell Signaling Technology	1:1000
MFN2	11925T	Cell Signaling Technology	1:1000
Opal	80471T	Cell Signaling Technology	1:1000
PGC-1 α	ab54481	Abcam	1:1000
PPAR γ	# 2430	Cell Signaling Technology	1:1000
SDHA	5839	Cell Signaling Technology	1:1000
Tom20	42406S	Cell Signaling Technology	1:1000
UCP1	PA1-24894	Invitrogen	1:1000
Prdm16	NBP1-77096	Novus Biologicals	1:1000
HSP60	# 4870	Cell Signaling Technology	1:1000
C/EBP α	# 2295	Cell Signaling Technology	1:1000