Supplementary Figure 1

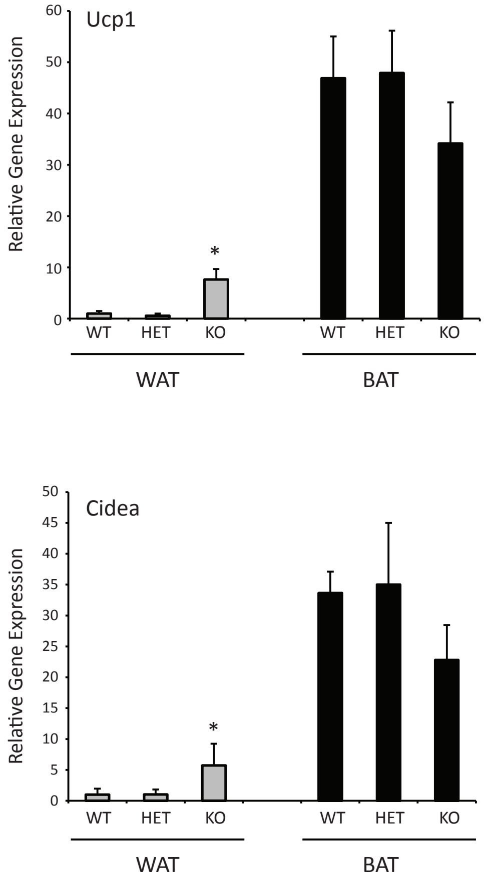
A) **Ucp1 and Cidea gene expression in white and brown adipose tissues.** Gene expression was determined in subcutaneous white adipose tissue (WAT) and interscapular brown adipose tissue (BAT). Tissues were collected from wild type (WT), RIP140-/+ and RIP140-/- mice. Expression is presented relative to WT WAT. *p<0.05 Student's t test in comparision to WT for each tissue.

B) **RIP140 protein expression in RIP140-transgenic white adipose tissue.** Protein extracts from subcutaneous white adipose tissue from wild type (WT) and RIP140 transgenic (TG) mice were separate by SDS-PAGE, transferred to PVDF membrane and exposed to anti-RIP140 (6D7) or anti-b-actin antibody (Abcam). Bands were visualised with ECL2 (Thermo Scientific Pierce).

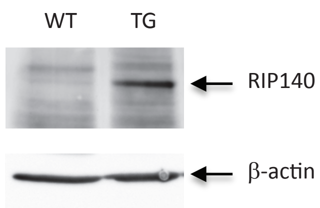
Supplementary Figure 2

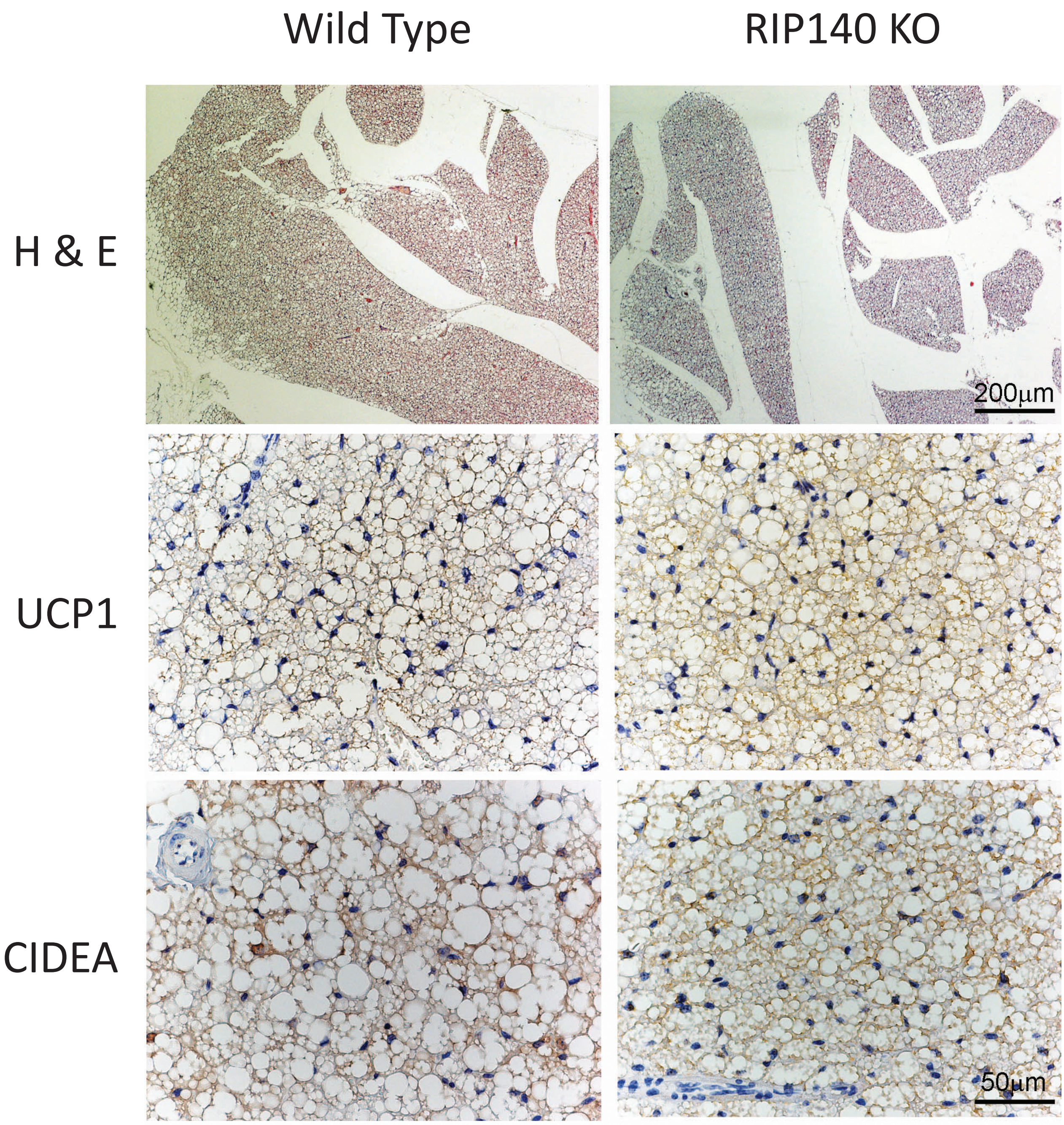
Histology of RIP140 Knockout Brown Adipose Tissue. Representative images of hematoxylin and eosin (H&E) staining performed on brown adipose tissue (BAT) sections from wild type and RIP140 knockout (KO) mice (top row). UCP1 (middle row) and CIDEA staining (lower row) did not showed clear differences in BAT obtained from wild type in comparison to KO mice. Scale bar 200µm apply to H & E and 100µm to middle and lower panels.

A


Ucp1
Relative Gene Expression
60
50
40
30
20
10
0
*
WT
HET
KO
WT
HET
KO
WAT
BAT
Cidea
Relative Gene Expression
50
45
40
35
30
25
20
15
10
5
0
*
WT
HET
KO
WT
HET
KO
WAT
BAT

B


WT
TG
RIP140
β-actin


Wild Type
RIP140 KO
H & E
UCP1
CIDEA
200μm
50μm

Supplementary Table 1. Sequences of primers used for Q-RT-PCR

	Forward Primer (5' to 3')	Reverse Primer (5' to 3')
ACC1	TGTCCACCCAAGCATTTCTTC	CATCCAACACCAGTTCAGTATACGT
ACC2	ACTTTGACCTGACCGCTGTG	CTGAGTGCCGGATAATGGC
aP2	ACACCGAGATTTCCTTCAAACTG	CCATCTAGGGTTATGATGCTCTTCA
Bmp8b	ACCCCGCAGCCTCACTTGGACC	TGGCTCCTGGTAGCCCAGGGT
Cd137	CGTGCAGAACTCCTGTGATAAC	GTCCACCTATGCTGGAGAAGG
Cidea	AAGCTTCAAGGCCGTGTTA	CTGTAGCTGTGCCCTGGTTA
Cpt1b	ACCACATCCGCCAAGCA	TTCCTCAGCTGTCTGTCTTGGA
Elovl6	TGTGCTCAGCAAAGCACCCGA	TGTGGTGGTACCAGTGCAGGA
Ehmt1	GGCACCTTTGTCTGCGAATAC	AGAACCGAGCGTCAATGCAG
FAS	TGCGGAAACTTCAGGAAATGT	AGAGACGTGTCACTCCTGGACTT
Gpd1	GCAAGATCTGTGACCAGCTCAA	GCCCTCGTCTACCCCCTTAA
Gpd2	CCACGGTGGTGTGCGATAC	AGGGCTTCTTTCACCATCCTATACT
Gpr120	ACATTGGATTGGCCCAACCGCA	TCCGCGATGCTTTCGTGATCTGT
Gyk	TCCAACATCAAAGCCATTGGT	AGAGGCTCTCCGGTGACCTT
HSL	CGAGACAGGCCTCAGTGTGA	TCTGGGTCTATGGCGAATCG
L19	GGAAAAAGAAGGTCTGGTTGGA	TGATCTGCTGACGGGAGTTG
LETM1	CCCGGGCCATGTACCTCCCA	CCTGGGCCTCCTTTGCCACA
Pdk4	TGACTCAAAGACGGGAAACC	ACTGGTCGCAGAGCATCTTT
PGC-1a	CCCTGCCATTGTTAAGACC	TGCTGCTGTTCCTGTTTTC
Plin5	TCCTGCCCGTCAAAGGGATCTGA	GGACATTCTGCTGTGTGGCGCT
PPARa	GCGTACGGCAATGGCTTTAT	GAACGGCTTCCTCAGGTTCTT
PPARγ	GTGCCAGTTTCGATCCGTAGA	GGCCAGCATCGTGTAGATGA
Prdm16	CAGCACGGTGTACCCAT	CCGGTGCATCCGGTTGTC
Ptgds	GGCTCCTGGACACTACACCTACA	ATAGTTGGCCTCCACCACTGA
Rgs7	CCAGTGTGTTCTCCGGGTAGA	ATGGGCAGCCATTAGCGTTCCC
RIKEN9	TTGGCCCTGGAGGCAAGGGG	TGGGAACCCTGAAGGACCCCA
RIP140	TCAAAAGCCACACCATACCC	TCGTCTCCACTGCTGTCATC
SCD1	GTACGACTGGGCCCGAGAT	TGAGGGTCGGCGTGTGT
Slc27a2	TGTATGGCGTGCCTGTGCCA	GAGGCCTCGCGTAACTGGGC
ß3AR	ATCGTGTCCGCTGCCGT	ATCTGCCCCTACACGCCAC
Ucp1	ACTGCCACACCTCCAGTCATT	CTTTGCCTCACTCAGGATTGG
Tmem26	ACCCTGTCATCCCACAGAG	TGTTTGGTGGAGTCCTAAGGTC
Tbx1	GGCAGGCAGACGAATGTTC	TTGTCATCTACGGGCACAAAG