

SUPPLEMENTARY DATA

**Supplementary Table 1.** Primer sequences utilized for qPCR evaluation of gene expression

Gene	Gene Bank (Accession Number)	Forward	Reverse
<i>C/EBP<math>\alpha</math></i>	NM_007678.3	AGAAGTCGGTGGACAAGAACAGCA	GCGTTGTTTGGCTTTATCTCGGCT
<i>Adiponectin</i>	NM_009605.4	GCACTGGCAAGTTCTACTGCAACA	AGAGAACGGCCTTGTCTTCTTGA
<i>PPAR<math>\gamma</math></i>	NM_011146.3	ACATAAAGTCCTTCCCGCTGACCA	AAATTCGGATGGCCACCTCTTTGC
<i>FABP4</i>	NM_024406.2	ATGAAATCACCGCAGACGACAGGA	TGTGGTCGACTTTCATCCCACTT
<i>PRDM16</i>	NM_027504.3	AGATGAACCAGGCATCCACTCGAA	ACTTCCCGGCTAAGCTGTCATCAT
<i>PGC1<math>\alpha</math></i>	NM_008904.2	TCACCCTCTGGCCTGACAAATCTT	TTTGATGGGCTACCCACAGTGCT
<i>UCP1</i>	NM_009463.3	TCTTCTCAGCCGGAGTTTCAGCTT	ACCTTGGATCTGAAGGCGGACTTT
<i>CIDEA</i>	NM_007702.2	TCAGACCTTAAGGGACAACACGCA	TTCTTTGGTTGCTTGCAGACTGGG
<i>FGF21</i>	NM_020013.4	CTCCACATGAGAGCTAGAACAC	CTGATATCCAGGGCGAAGTAAG
<i>HDAC9</i>	NM_001271386.1	AGGATGATGATGCCTGTGGTGGAT	GAGTTGTGCTTGATGCTGCCTTGT
<i>ARBP</i>	NM_007475.5	AGCTGAAGCAAAGGAAGAGTCGGA	ACTTGGTTGCTTTGGCGGGATTAG

**Supplementary Table 2.** Fasting Serum Lipids in HDAC9<sup>+/+</sup> and HDAC9<sup>-/-</sup> mice

	Chow Diet		High Fat Diet	
	+/+ ( <i>n</i> = 6)	-/- ( <i>n</i> = 6)	+/+ ( <i>n</i> = 6)	-/- ( <i>n</i> = 6)
Cholesterol (mg/dL)	105.5 ± 13.5	105.5 ± 13.4	162.5 ± 11.0*	151.7 ± 19.7
Triglyceride (mg/dL)	59.5 ± 3.2	59.7 ± 6.5	84.8 ± 6.4*	85.7 ± 12.5
NEFA (moles/L)	0.578 ± 0.20	0.563 ± 0.13	0.367 ± 0.15	0.367 ± 0.04

Data are means ± SEM; \*P<0.05 differences between diets, no significant differences between genotypes.

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**Supplementary Figure 1.** Adiponectin (A) and PPAR $\gamma$  (B) mRNA levels in subcutaneous (SQ) and epididymal (Epi) adipose tissues of wild-type (+/+) and HDAC9 knockout (-/-) mice maintained on CD and HFD; \*P<0.05 compared to +/+ CD, #P<0.05 compared to +/+ HFD.

