

**Supplemental table 1.** Sequences of the primers and TaqMan® probes.

Gene (GenBank accession number)	Oligonucleotide sequence (5'-3')
<i>Tnc</i> (NM_011607)	
Forward	AAGAGCCAGCAAGCCACAAC
Reverse	ACAGCAGAAACACCAATCCCATA
TaqMan® Probe	FAM-ACCACACTCACAGGTCTAAGGCCCGG-TAMRA
<i>Tnf</i> (NM_013693)	
Forward	CCAGACCCTCACACTCAGATCAT
Reverse	ACTCCAGCTGCTCCTCCACTT
TaqMan® Probe	FAM-CCTGTAGCCACGTCGTAGCAAACCA-TAMRA
<i>Hif1a</i> (NM_010431)	
Forward	TACCACACTGAGGTTGGTTACTGT
Reverse	AACTAGCCGAGGAAGAACTATGAACA
TaqMan® Probe	FAM- AACATGGAAGGTATTGCACTGCACAGGC-TAMRA
<i>Col6a3</i> (NM_001243008)	
Forward	TGATGGCACCTCTCAGGACTCT
Reverse	TTGTCGGAGCCATCCAAAAG
TaqMan® Probe	FAM-CCACGGAAGTTCACGTAA-TAMRA
<i>Col6a1</i> (NM_009933)	
Forward	CACCTGGGCCAGATGAGTGT
Reverse	CCAGCACGAAGAGGATGTCAA
TaqMan® Probe	FAM-AAATGTGCTCCTGCTGTGA-TAMRA
<i>Colla1</i> (NM_007742)	
Forward	TGTCCCAACCCCCAAAGAC
Reverse	GGTCCCTCGACTCCTACATCTTC
TaqMan® Probe	FAM-CTGCCCCGGAAGAATACGTATCACCAAACCTC-TAMRA
<i>Itgax</i> (NM_021334)	
Forward	CTGGACTTTGTTAAAGCTGTGATGAG
Reverse	GACGTGGAGATGAAGTTGTTGAAA
TaqMan® Probe	FAM-CCTAGCACACACGGTTCTCCCTGATGCA-TAMRA
<i>Cd44</i> (NM_009851)	
Forward	AGAGCCGGAAGAAGACGAAAAC
Reverse	TCCACCTCTTCTTGCATCTTTAGC
TaqMan® Probe	FAM-CCACGGAAGTTCACGTAA-TAMRA

<i>Emr1</i> (NM_010130)		
Forward	CAAGATTCTCTTCCTCACCGGTAT	
Reverse	GCAGGCGAGGAAAAGATAGTGTAG	
TaqMan <sup>®</sup> probe	FAM-CAACCAGACGGCTTGTGCCATCATT-TAMRA	
<i>Tlr4</i> (NM_021297)		
Forward	TGATGGCACCTCTCAGGACTCT	
Reverse	TTGTCGGAGCCATCCAAAAG	
TaqMan <sup>®</sup> Probe	FAM-CACCCAGCTGGCAGAGGCATACTTGT-TAMRA	
<i>Mmp9</i> (NM_013599)		
Forward	CCAAAGACCTGAAAACCTCCAA	
Reverse	GCCCCGGGTGTAACCATAGC	
TaqMan <sup>®</sup> Probe	FAM-CCACCCAGCTGGCAGAGGCATACTTGT-TAMRA	
<i>Acta2</i> (NM_009338)		
Forward	GGCCACACGAAGCTGTTATAG	
Reverse	GTATCCGATAGAACACGGCATCA	
TaqMan <sup>®</sup> Probe	FAM-CATGGAAAAGATCTGGC-TAMRA	
<i>Spp1</i> (NM_009632)		
Forward	TTTGCCGTTTGGCATTGC	
Reverse	TGGGTGCAGGCTGTAAAGCT	
TaqMan <sup>®</sup> Probe	FAM- TCCTCCCTCCCGGTGAAAGT-TAMRA	
<i>Tgfb</i> (NM_011480)		
Forward	TCCCAAGAGCCCTGCACTT	
Reverse	TCCCAAGAGCCCTGCACTT	
TaqMan <sup>®</sup> Probe	FAM- TTGACACGTTTCTTCCTGAGCAGCGC -TAMRA	

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*Tnc*: tenascin C; *Tnf*, tumor necrosis factor  $\alpha$ ; *Hifa*: hypoxia inducible factor 1,  $\alpha$  subunit; *Colla1*, collagen, type I,  $\alpha 1$ ; *Col6a1*, collagen, type VI,  $\alpha 1$ ; *Col6a3*, collagen, type VI,  $\alpha 3$ ; *Itgax*, integrin  $\alpha$  X (Cd11c); *Cd44*, Cd44 antigen; *Emr1*, egf-like module containing, mucin-like *Tlr4*: Toll like receptor 4; *Mmp9*, matrix metalloproteinase 9; *Acta2*, actin,  $\alpha 2$ ; *Spp1*, secreted phosphoprotein 1; *Tgfb1*, transforming growth factor,  $\beta 1$ .

**Supplemental table 2.** Metabolic characteristics of 12-week-old experimental animals.

	Wild type	<i>ob/ob</i> + PBS	<i>ob/ob</i> + leptin	<i>ob/ob</i> pair-fed
Body weight (g)	24.0 ± 0.4	44.9 ± 1.5 <sup>***</sup>	24.8 ± 0.9 <sup>††,##</sup>	35.3 ± 1.0 <sup>*</sup>
Liver weight (g)	1.04 ± 0.02	3.15 ± 0.12 <sup>***</sup>	1.12 ± 0.08 <sup>††,##</sup>	1.30 ± 0.04 <sup>**</sup>
FFA (mmol/L)	0.74 ± 0.08	1.07 ± 0.06 <sup>***</sup>	0.77 ± 0.07 <sup>*,##</sup>	1.60 ± 1.6 <sup>*</sup>
TG (mg/dL)	66.3 ± 4.4	97.3 ± 5.3 <sup>**</sup>	82.8 ± 11.0 <sup>**,†,#</sup>	147.9 ± 8.4
Glycerol (mg/dL)	0.025 ± 0.001	0.036 ± 0.001 <sup>***</sup>	0.013 ± 0.003 <sup>**,††,##</sup>	0.044 ± 0.006 <sup>†, **</sup>
Glucose (mg/dL)	83 ± 5	410 ± 42 <sup>***</sup>	175 ± 23 <sup>**,††</sup>	169 ± 17 <sup>††, **</sup>
Insulin (ng/mL)	0.42 ± 0.04	9.66 ± 0.61 <sup>***</sup>	0.45 ± 0.08 <sup>*,††, #</sup>	2.58 ± 0.57 <sup>†, *</sup>
HOMA	1.6 ± 0.2	172.3 ± 21.5 <sup>***</sup>	3.81 ± 1.1 <sup>*,††, #</sup>	20.9 ± 5.8 <sup>††</sup>
Adiponectin (mg/mL)	22.6 ± 4.1	16.6 ± 0.9 <sup>***</sup>	39.5 ± 1.6 <sup>*,††</sup>	37.0 ± 2.1 <sup>*</sup>

FFA, free fatty acids; HOMA, homeostasis model assessment; TG, triacylglycerols. Data are mean ± SEM (n=4-5 per group). Differences between groups were analyzed by Kruskal-Wallis followed by Mann Whitney's *U* tests. \**P*<0.05, \*\**P*<0.01 vs wild type mice. †*P*<0.05, ††*P*<0.01 vs vehicle-treated *ob/ob* mice. #*P*<0.05, ##*P*<0.01 vs pair-fed *ob/ob* mice.