

Supplementary Table 1. Primer pairs used for quantitative RT-PCR.

Gene	NCBI	Forward	Reverse
28S	NR_003279.1	AAACTCTGGTGGAGGTCCTCGT	CTTACCAAAGTGGCCCACTA
ApoC2 (apoCII)	NM_009895.3	CTGCTGGGCACGGTGCAGGG	TGCTCATGGCCGCCGAGCTT
ApoA5 (apoAV)	NM_080434	TGGCTGCAGTCATCACTTGG	GTTCTCCTGTGCCAGCTTCTG
Srebp1c (Srebp1c)	NM_11480	ATCGGCGCGGAAGCTGTCTGGGG	ATAGGGGGCGTCAAACAGG
Acaca (Acc1)	NM_133360	CGACAAGTGCAGAGTGAGATTC	CATACTGATCTGCCAAGACCTG
Fasn (Fas)	NM_007988	CAGGCCACTATACTACCCAAGA	ACAGGTACACTTTTCCGCTCAC
Scd1	NM_009127	AGAAGCTGGTGATGTTCCAGAG	CAGAGTGTATCGCAAAGAGGTG
Ppara	NM_011144	ATCGCGTACGGCAATGGCTTTA	CAGGCCGATCTCCACAGCAAATTA
Cpt1a	NM_013495	CATCATGACTATGCGCTACTC	CAGTGTGTGCATGCGTTGG
Acacb (Acc2)	NM_133904	CGACAAGTGCAGAGTGAGATTC	CATACTGATCTGCCAAGACCTG
Ucp1	NM_009463.2	CTGCCAGGACAGTACCCAAG	TTTTTCAGCTGTTCAAAGCACA
Dio2 (D2)	NM_010050.2	GAAGGGCTGCGCTGTGTCTGGA	GCCCCATCAGCGGCTCTCTCCGA
Gcg (Proglucagon)	NM_008100	ATTGCCAAACGTCATGATGA	GCGGACTTCTTCTGGGAAGT
Pcsk1 (PC1/3)	NM_013628	GTGACGTGGGCTGAACAACAGTAT	TGTGTGATTCCACTCCAAGCCA
ProGIP	NM_008119	CCTCCTGGAAGAGCTAAGAA	TGAAAGTCCCTCTGCGTAC

Supplementary Table 2. Influence of FXR-deficiency in ob/ob mice on intestinal gene expression after treatment with colestevlam.

Ten week old FXR^{+/+}ob/ob and FXR^{-/-}ob/ob mice were administered 2% colestevlam mixed in the diet or plain diet for three weeks (n=13/group). Gene expression was measured by qPCR in the intestine. Values are means±SEM. Differences between genotypes or treatment groups were calculated by Mann-Whitney test (*compares genotypes of the same treatment group; \$ compares treatment groups of the same genotype; *or \$<0.05, **<0.01).

Gene	FXR ^{+/+} ob/ob control	FXR ^{+/+} ob/ob treated	FXR ^{-/-} ob/ob control	FXR ^{-/-} ob/ob treated
Proglucagon	1.00 ± 0.24	1.63 ± 0.37	4.23 ± 0.66**	2.31 ± 0.25\$
PC1/3	1.00 ± 0.13	2.01 ± 0.35\$	1.57 ± 0.20	2.18 ± 0.24
ProGIP	1.00 ± 0.03	0.38 ± 0.04**\$	0.43 ± 0.08*	0.27 ± 0.03

Supplementary Figure 1. Lipidomics analysis of lipid classes in adipose tissue of FXR-deficient lean and ob/ob mice. Lipidomics analysis was performed in white adipose tissue of six week old FXR^{+/+}ob/ob (white bars), FXR^{-/-}ob/ob mice (black bars) as well as lean FXR^{+/+} and FXR^{-/-} littermates. Content of **A.** total phospholipids, **B.** total sphingomyelins and **C.** total triglycerides. Values are means±SEM. Differences between genotypes were calculated by 1way-ANOVA and Student’s t-test (*compares the effect of leptin-deficiency; ***<0.001).

