

Monoglyceride lipase deficiency affects hepatic cholesterol metabolism and lipid-dependent gut transit in ApoE^{-/-} mice

Supplementary Materials

Primer sequences used for qPCR

Abcg1-fwd:
5'-GACGCTGACTATAAGAGAGACC-3',
Abcg1-rev:
5'-GGAGTTGCTCAGGACCTTCTTG-3';
Abcb1a-fwd:
5'-AATGTTTCGTTATGCAGGTTGGC-3',
Abcb1a-rev:
5'-TGGCTCTTTTATCGGCCTCAC-3';
Abcg5-fwd:
5'-AGAGGGCCTCATCAACAGA-3',
Abcg5-rev:
5'-CTGACGCTGTAGGACACATGC-3';
Abcg8-fwd:
5'-CTGTGGAATGGGACTGTACTTC-3',
Abcg8-rev:
5'-GTTGGACTGACCACTGTAGGT-3';
Acat2-fwd: 5'-GATGGTCTGACAGATGCCTT-3',
Acat2-rev: 5'-AGCACTGGCACAATCTCTT-3';
Acc1-fwd:
5'-GGACTTGGAGCAGAGAACCTTCG-3',
Acc1-rev:
5'-CAAGCTGGTTGTTGGAGGTGTA-3';
Acc2-fwd:
5'-CGCTCACCAACAGTAAGGTGG-3',
Acc2-rev: 5'-GCTTGGCAGGGAGTTCCTC-3';
Asbt-fwd: 5'-GTACAATGGTGGAGCACAGC-3',
Asbt-rev: 5'-GTGCCTGGATCATTGAACCC-3';
Bsep-fwd:
5'-GAACATGACAAACGGAACAAGC-3',
Bsep-rev: 5'-CCCAGTGATTACCCACAACCTT-3';
Cb1r-fwd: 5'-AAGTCGATCTTAGACGGCCTT-3',
Cb1r-rev:
5'-TCCTAATTTGGATGCCATGTCTC-3';
Cb2r-fwd: 5'-ACGGTGGCTTGGAGTTCAAC-3',
Cb2r-rev: 5'-GCCGGGAGGACAGGATAAT-3';
Cd36-fwd: 5'-GCAGGTCTATCTACGCTGTG-3',
Cd36-rev: 5'-GGTTGTCTGGATTCTGGAGG-3';
Cpt1a-fwd: 5'-CTCCGCCTGAGCCATGAAG-3',
Cpt1a-rev: 5'-CACCAGTGATGATGCCATTCT-3';
Cyclophilin A-fwd:
5'-GAGCTGTTTGCAGACAAAGTTC-3',
Cyclophilin A-rev:
5'-CCCTGGCACATGAATCCTGG-3';
Cyp7a1-fwd:
5'-GGGCATCTCAAGCAAACACCATTC-3',
Cyp7a1-rev:
5'-CGGGACTGATCTAGAGGGGGACAC-3';
Cyp8b1-fwd:
5'-CCTCTGGACAAGGGTTTTGTG-3',
Cyp8b1-rev: 5'-GCACCGTGAAGACATCCCC-3';
Cyp27a1-fwd:
5'-CTTCATCGCACAAGGAGAGC-3',
Cyp27a1-rev:
5'-ATGGCTTCCAAGGCAAGGTG-3';
Dgat1-fwd: 5'-TCCGCCTCTGGGCATTC-3',
Dgat1-rev: 5'-GAATCGGCCCAATCCA-3';
Dgat2-fwd:
5'-AGTGGCAATGCTATCATCATCGT-3',
Dgat2-rev:
5'-TCTTCTGGACCCATCGGCCCCAGGA-3';
Fabp1-fwd:
5'-ATGAACTTCTCCGGCAAGTACC-3',
Fabp1-rev: 5'-GGTCCTCGGGCAGACCTAT-3';
Fas-fwd:
5'-GAAGCCGAACACCTCTGTGCAGT-3',
Fas-rev: 5'-CTCCTTGCTGCCATCTGTATTG-3';
HmgCoAr-fwd:
5'-CTATTGCACCGACAAGAAGCCT-3',
HmgCoAr-rev:
5'-GCCATCACAGTGCCACATACAA-3';
Ldlr-fwd: 5'-CATGTCTGTCACTGTGTCAGTCC-3',
Ldlr-rev: 5'-CTTGTCCAAGCTGATGCACTCC-3';
Lrp1-fwd:
5'-ACTATGGATGCCCTAAAACCTTG-3',
Lrp1-rev: 5'-GCAATCTCTTTCACCGTCACA-3';
Mttp-fwd: 5'-GTCAACAGAGAGGGCAGAGAAG-3',
Mttp-rev: 5'-CTAGCCAAGCCTCTCTTGAG-3';
Npc1l1-fwd:

5'-TGTCCTCCGCCTTATACAATGG-3',

Npc1l1-rev:

5'-CCTTGGTGATAGACAGGCTACTG-3';

Osta-fwd: 5'-CCGCAGCCCAGCTCCTGAG-3',

Osta-rev:

5'-TGCAGAGCTACTCCAGATCAGA-3';

Ost β -fwd: 5'-GTCCAGGGCCAGAAACATCTC-3',

Ost β -rev: 5'-TCCTTCTCAGGAGGAACATGCT-3';

Scd1-fwd:

5'-TTCTTGCATACACTCTGGTGC-3',

Scd1-rev: 5'-CGGGATTGAATGTTCTTGTTCGT-3';

Srb1-fwd:

5'-TTTGGAGTGGTAGTAAAAAGGGC-3',

Srb1-rev:

5'-TGACATCAGGGACTCAGAGTAG-3';

Srebp1-fwd:

5'-CCATCGACTACATCCGCTTCTT-3',

Srebp1-rev:

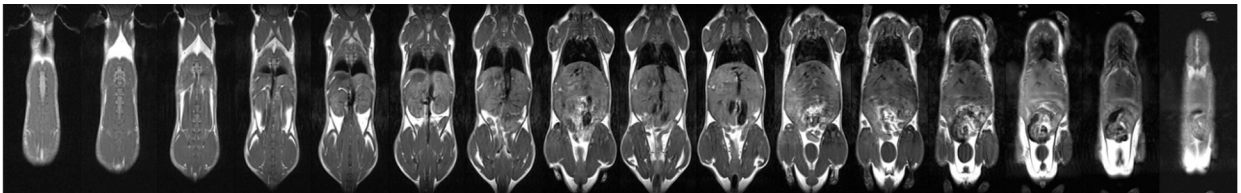
5'-ACTTCGTAGGGTCAGGTTCTC-3';

Srebp2-fwd:

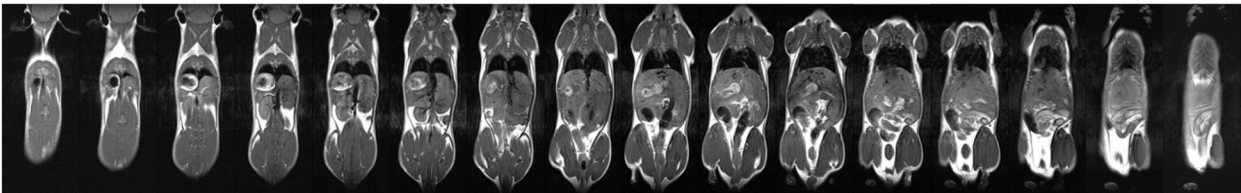
5'-AAGTCCTGCAGCCTCAAGTG-3',

Srebp2-rev: 5'-CTGCCATCTGTCTTCAGCGT-3'.

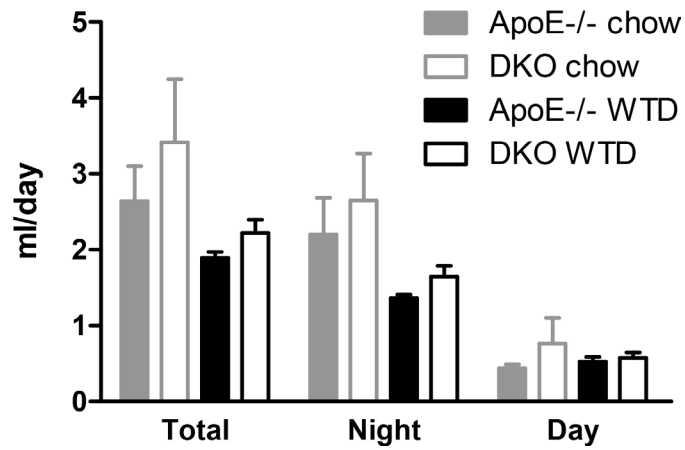
ApoE^{-/-}



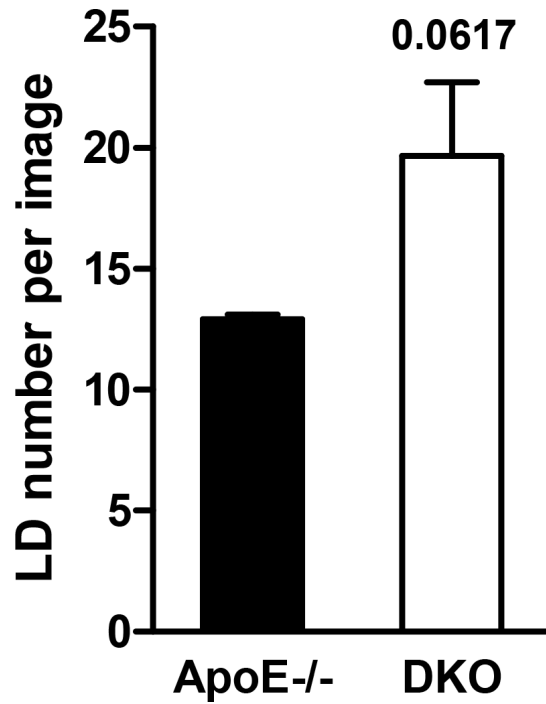
DKO



Supplementary Figure 1: Unchanged body fat in DKO mice. Representative images of cross-sectional MRI scan of female ApoE^{-/-} and DKO mice after 9 weeks of WTD feeding. Bright areas represent adipose tissue.



Supplementary Figure 2: Comparable water consumption in ApoE^{-/-} and DKO mice. Water consumption of mice on chow and WTD was monitored by automated sensors in TSE Phenomaster during three consecutive days ($n = 4-5$). Data represent means + SD.



Supplementary Figure 3: Increased LD counts in livers of DKO mice. Mice were fed with WTD and fasted for 16 h before liver isolation. The numbers of LDs per image were counted from 94 electron micrographs and total surface of 30,530 μm^2 per genotype. Data represent means + SD.