Supplemental Fig. 1

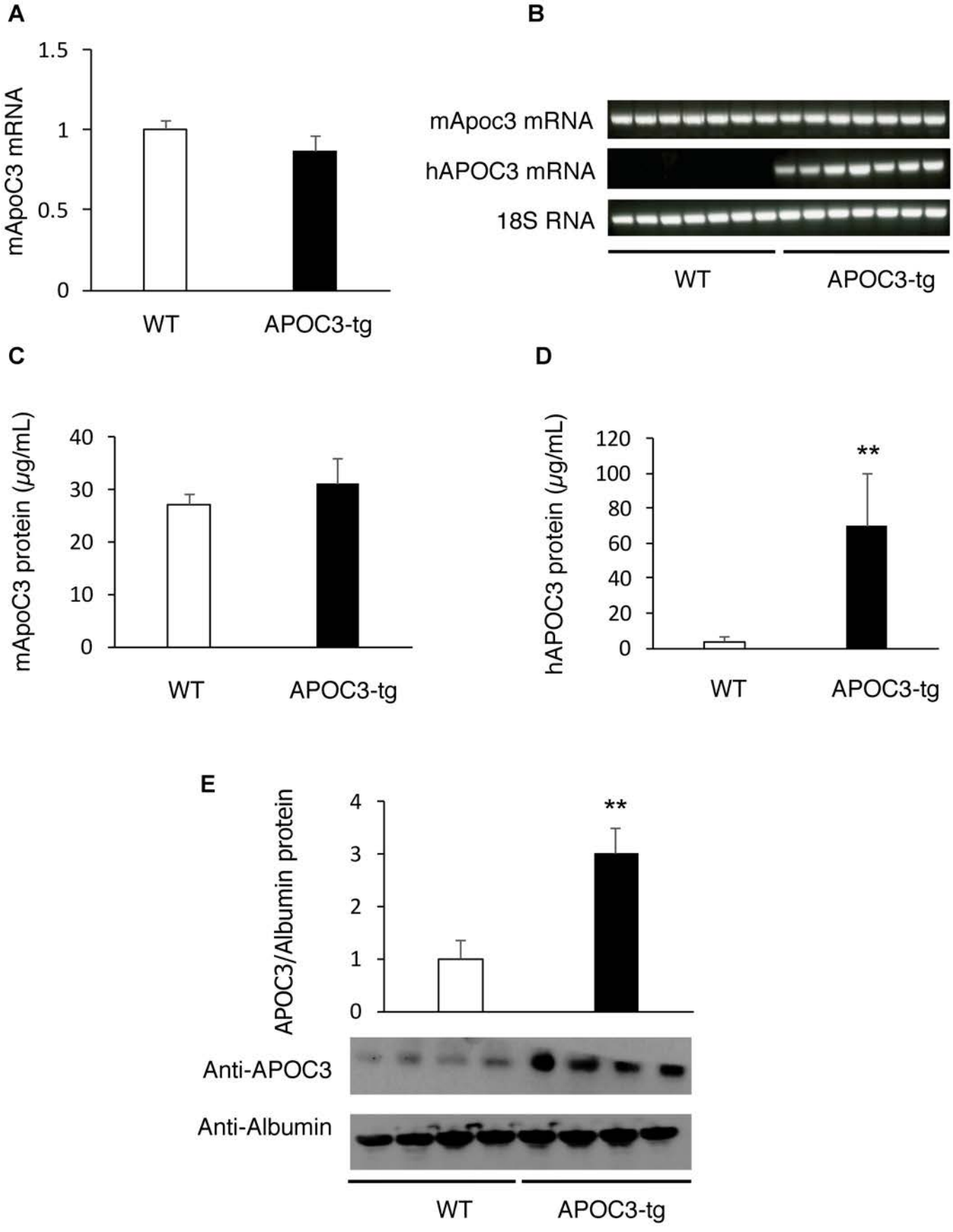

Figure legend

Supplemental Figure 1. Effect of APOC3-tg expression on endogenous ApoC3 production in APOC3-tg mice.

APOC3-tg and WT littermates (male, 6 weeks old, n=5-8/group) were fed a high fat diet for 10 months. Mice were euthanized under non-fasting conditions and liver tissues were subjected to real-time RT-qPCR assay for determining mouse-specific mApoC3 mRNA levels, using 18S RNA as a control (A). After real-time RT-qPCR analysis, the samples were resolved on 1% agarose gel, followed by visualization of the RT-PCR products under the UV light (B). In addition, aliquots of plasma (25 μL) from high fat-fed APOC3-tg and WT mice were subjected to species-specific ELISA assay for determining mouse mApoC3 protein (C) and human hAPOC3 protein (D), respectively. Additional aliquots of plasma at a fixed protein concentration (15 μg) from high fat-fed APOC3-tg and WT mice were subjected to immunoblot assay, using anti-APOC3 antibody that were capable of cross-reacting with both mouse and human APOC3 proteins for determining total plasma APOC3 proteins (E). Anti-albumin antibody was used as a control in this immunoblot assay. $^{**}p<0.001$ vs. WT control.

Supplemental Table 1. Plasma lipid profiles in WT and APOC3-tg mice on regular chow

Sex	Male		Female	
Genotype	*WT*	*APOC3-tg*	*WT*	*APOC3-tg*
Body weight (g)	38±1.3	40±1.4	27±1.4	28±1.8
Plasma TG (mg/dL)	128±8	691±79 [a]	103±17	470±65 [a]
Plasma cholesterol (mg/dL)	98±6	191±22 [a]	118±11	244±17 [a]
Plasma NEFA (mmol/L)	0.63±0.06	1.27±0.23 [b]	0.5±0.04	1.0±0.17 [b]
Hepatic TG content (mg/g protein)	221±24	247±37	193±23	205±33
Hepatic cholesterol content (mg/g protein)	69±4	71±3	58±2	59±3

Plasma TG, cholesterol and NEFA levels were determined after 16-h fasting in APOC3-tg and WT littermates at 7 months of age (male, n=8/group and female, n=5/group). Mice were euthanized under non-fasting conditions and liver tissues were procured for the determination of hepatic TG and cholesterol contents. [a] $p<0.001$ and [b] $p<0.05$ vs. WT control.

Supplemental Table 2. Primers for real-time quantitative RT-PCR assay

Name	Nucleotide sequence
ApoB reverse	TGCGGACGCCGTTACTGCTG
ApoB reverse	CAGATTTGGGGGACCTCCAG
Mttp forward	CGAGCCAGTGGGCATAGAAA
Mttp reverse	AAAGCCCTGGTCTCTTCTGC
ACOX1 forward	TCCCGATCTGCGCAAGGAGC
ACOX1 reverse	CTGGTGAAGCAAGGTGGGCA
CPT1 forward	GCACTGCAGCTCGCACATTACAA
CPT1 reverse	CTCAGACAGTACCTCCTTCAGGAAA
PPAR-α forward	CCTGAACATCGAGTGTCGAATAT
PPAR-α reverse	GGTCTTCTTCTGAATCTTGCAGCT
SREBP-1c forward	GGAGCCATGGATTGCACATT
SREBP-1c reverse	GCTTCCAGAGAGGAGGCCAG
ACC forward	TGACAGACTGATCGCAGAGAAAG
ACC reverse	TGGAGAGCCCCACACACA
FAS forward	GCTGCGGAAACTTCAGGAAAT
FAS reverse	AGAGACGTG TCACTCCTGGACTT
PPAR-γ forward	GGAATCAGCTCTGTGGACCT
PPAR-γ reverse	TGAGGCCTGTTGTAGAGCTG
PGC-1β forward	GCTCTCGTCCTTCTTCCTCA
PGC-1β reverse	GTAAGCGCAGCCAAGAGAG
F4/80 forward	TGGATAGGTCAGGCATGGAG
F4/80 reverse	GCCTAGGCAAGTTTTGGCTG
TNFα forward	CATGATCCGGGACGTGGAAC
TNFα reverse	TGGTGGTTTGCTACGACGTG
IL-1β forward	GCAACTGTTCCTGAACTCAA
IL-1β reverse	AGAAGGTGCTCATGTCCTCA
IL-10 forward	TGGCTGATCCCTTTGCCTTT
IL-10 reverse	GCTGCAGAAGACTCTGGGTAG
IL-6 forward	CACTTCACAAGTCGGAGGCT
IL-6 reverse	CCAGACAGGAAAGGAACCCC
APOC3 forward	CAGCCCCGGACGCTCCTCAC
APOC3 reverse	CGACTCAATAGCTGGAGTTG
hAPOC3 forward	CAGCCCAGTCCTACCCCAG
hAPOC3 reverse	GCAAGGAAGTGTCCTGTGAG
INS-1 forward	CTTGCCCTCTGGGAGCCCA
INS-1 reverse	TGAAGGTCCCCGGGGCTTC
INS-2 forward	CTTCCTCTGGGAGTCCCAC
INS-2 reverse	CACCTGCTCCCGGGCCTCCA
GK forward	TGGATGACAGAGCCAGGATGG
GK reverse	ACTTCTGAGCCTTCTGGGGTG
Glut2 forward	TCAGAAGACAAGATCACCGG
Glut2 reverse	GTGAGCAGATCCTTCAGTCT
PDX-1 forward	AGCAGTACTACGCGGCCACA
PDX-1 reverse	GCACTTCGTATGGGGAGATG
NeuroD forward	GATCGTCACTATTCAGAACC
NeuroD reverse	CCTCTAGATCCTCATCTTCC
FoxA2 reverse	CTGGGAGCCGTGAAGATGGA

FoxA2 reverse	TGAGCCGCTCATGCCCGCCA
IRS-1 forward	GCGAGCCCTCCGGATACC
IRS-1 reverse	GTGTAGAGAGCCACCAGGTGC
IRS-2 forward	AGCAGAAGCACGGCCACAA
IRS-2 reverse	TGCTCGTTCTCCGCCGCTA
18S RNA forward	AAACGGCTACCACATCCAAG
18S RNA reverse	CCTCCAATGGATCCTCGTTA

All nucleotide sequences are in 5'-to-3' orientation and were purchased from Integrated DNA Technologies (Coralville, IA). All primers are complementary to the corresponding genes in mice, except for the hAPOC3 primers that are complementary to human APOC3 cDNA.