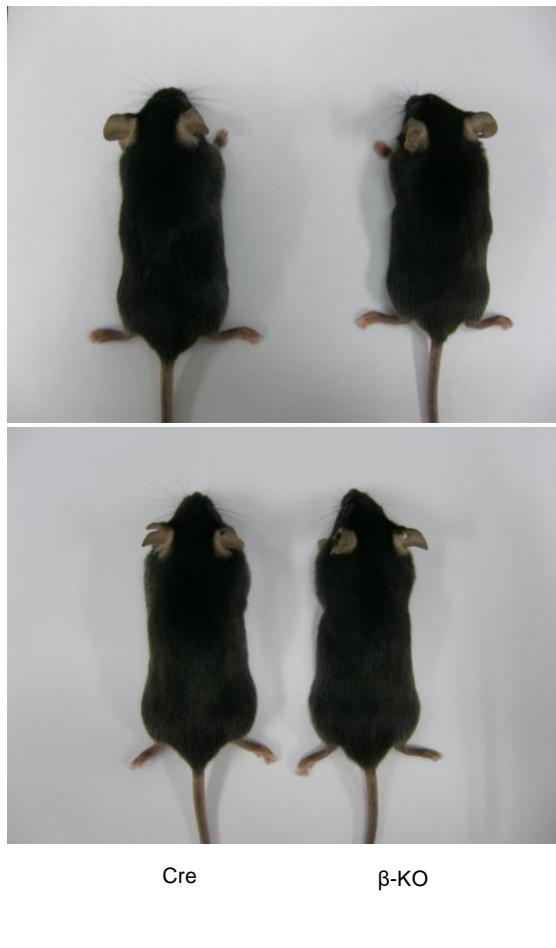


**Supplementary Table 1. Primer and probe sequences for quantitative real-time PCR.**

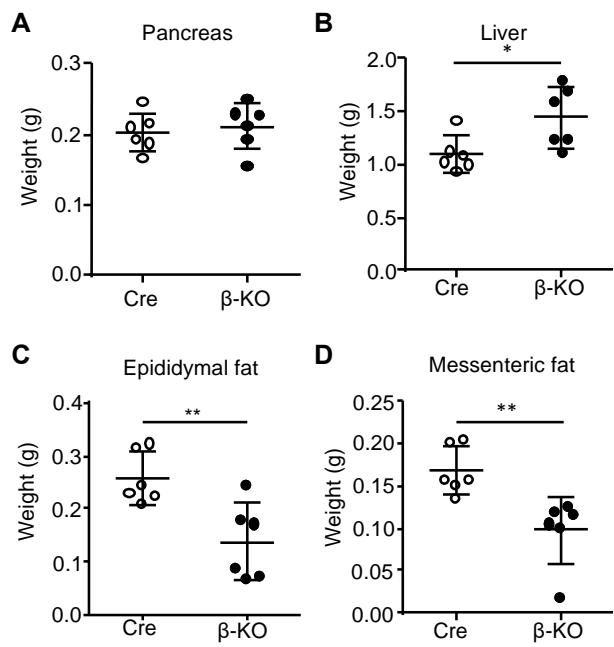
Gene	Forward	Reverse	Probe
<i>Actb</i>	CGATGCCCTGAGGCTTT	TGGATGCCACAGGATTCCA	CCAGCCTCCTCTT
<i>Hmgcr</i>	CGTCATTCAATTCCCTCGACAAA	AGCAGAAAAAAGGGCAAAGCT	AACTGACAGGCTTAAAT
<i>Srebf1c</i>	TGGATTGCACATTGAAGACATG	GGCCCAGGAAGTCACTGT	CAGCTCATCAACAACCA
<i>Ppara</i>	TGCAACTTCTCAATGTAGCCT	AATGCCTTAGAACTGGATGACA	AATTGCTGTGGAGATCGGCCTGG
<i>Mtp</i>	GCTCCCTCAGCTGGTGGAT	CAGGATGGCTCTAGCGAGTCT	ACCTCTGCTCAGACTC
<i>Apob</i>	CGTGGGCTCCAGCATTCTA	TCACCAGTCATTCTGCCTTTG	CCAATGGTCGGGCAC
<i>Abca1</i>	TGCCACTTCGAATAAACGC	GGAGTTGGATAACGGAAGCA	ATGCCGTCTGCAGGAA
<i>Abcg1</i>	TCGAATTCAAGGACCTTCC	CCACTGTTGAATTCCCAGA	TGGTGGAAAGAAGAAAG
<i>Srebf2</i>	CCGGTCCTCCATCAACGA	TGGCATCTGTCCCCATGACT	AAAATCATAGAGTTGAAGGACT
<i>Lldr</i>	AGGCTGTGGGCTCCATAGG	TGCGGTCCAGGGTCATCT	TATCTGCTCTTCACCAACC
<i>Pcsk9</i>	TTGCAGCAGCTGGAACTT	CCGACTGTGACCTCTGGA	ACGACGCCTGCCTCTACTCCCCAG
<i>Ins2</i>	TCCACCCAGCTCCAGTT	TTTGTCAAGCAGCACCTTG	ACACACCAGGTAGAGAGCCTCCA
<i>Pdx1</i>	CCCTTCCCGTGGATGAAATC	GAATTCCCTCTCCAGCTCCAG	ACAAGAGGACCCGTACTGCCTACA
<i>Ngn3</i>	GAAAAGGTTGTTGTCTCTGG	ACTGACCTGCTGCTCTCA	CGCCATCCTAGTTCTCCGACTC
<i>Neurod1</i>	ACACTCATCTGCCAGCTTG	AGATCGTCACTATTCAAGAACCTT	AGCCCGCTCTCGCTGTATGATTT
<i>Mafa</i>	GCCAACCTCTCGTATTCTCCT	AGTCGTGCCGCTTCAAG	ACTTCTCGCTCTCCAGAATGTGCC
<i>Glut2</i>	GTCACTATGCTCTGGTCTCTG	CAAGAGGGCTCCAGTCATG	TTTGATCCTCCAAGTTGTCCCCGA
<i>Mafb</i>	ACTAACGCTGCAACTCTCAAG	ACCTAGACCTCCCCATAACTAC	ACCATTAAGTCTCCCTGCTCTCCAGA
<i>Arx</i>	CCACGTTCACCAAGTTACCAAG	TCAGGTCCAGCCTCATGG	ACGCACTACCCGTACGTCTTCAC
<i>Hmgcs</i>	GCCGTGAACTGGTCGAA	GCATATAGCAATGTCTCCTGCAA	CTCTTGGATGGACGATAT
<i>Fdf1</i>	CCAACCTCAATGGGTCTGTCCT	TGGCTTAGCAAAGTCTTCCAAC	CAGAAAACAATATCATTG
<i>Nr1h3</i>	GCTCTGCTCATTGCCATCAG	TGTTGCAGCCTCTACTTGGA	CTGCAGACCGGCCA
<i>Nr1h2</i>	AAGCAGGTGCCAGGGTTCT	TGCATTCTGTCGTGGTTGT	ATTGAGATCATGTTGCTAGAA
<i>Lpl*</i>	Mm00434764_m1		

\*These primers were supplied by Applied Biosystems.



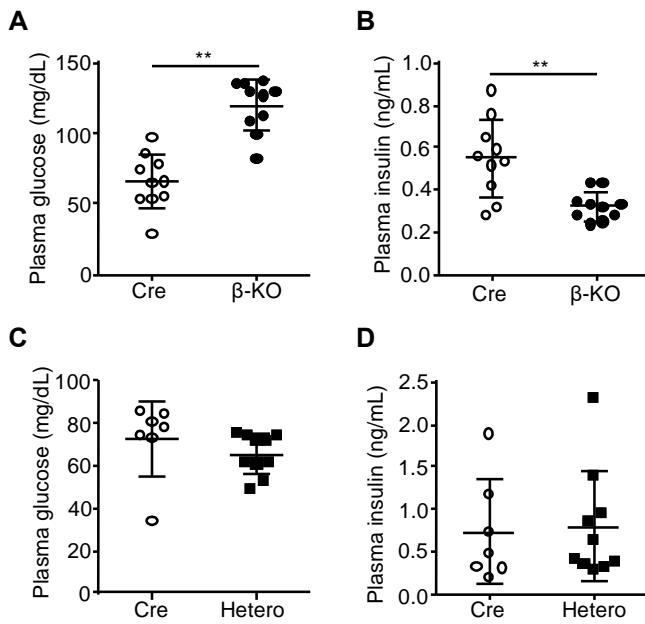
**Supplementary Figure 1. Gross appearance of the mice.**

Gross appearance of either Cre or  $\beta$ -KO mice at 5 weeks of age (top) and 10 weeks (bottom).



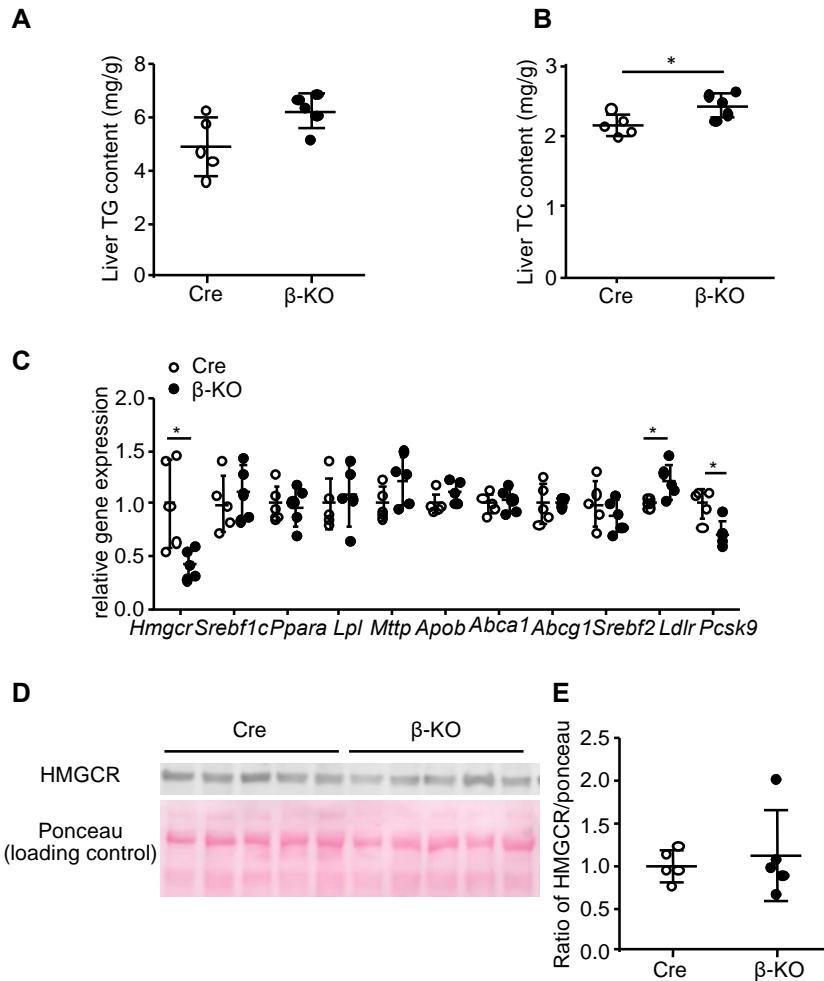
### Supplementary Figure 2. Tissue weights.

Weight of (A) pancreas, (B) liver, (C) epididymal fat and (D) mesenteric fat was measured in 10-week-old Cre or  $\beta$ -KO mice (each group, n = 6). White circles, Cre; black circles,  $\beta$ -KO. Data are presented as mean  $\pm$  SD. \*P<0.05 and \*\*P<0.01.



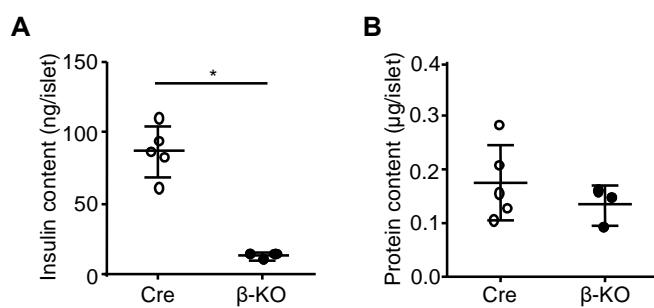
**Supplementary Figure 3. Plasma levels of glucose and insulin in female mice and mice heterozygous for the disrupted allele for *Hmgcr*.**

(A) Fasting plasma glucose and (B) insulin levels of Cre or β-KO mice at 5 weeks of age (each group, n = 10). (C) Fasting plasma glucose and (B) insulin levels of Cre (n=7) and heterozygous mice (n=10) at 10 weeks of age. White circles, Cre; black circles, β-KO; black squares, heterozygotes. Data are presented as mean ± SD. \*P<0.05 and \*\*P<0.01.



**Supplementary Figure 4. Lipid content, mRNA expression and Western blot for Hmgcr in the liver.**

(A) Liver TG and (B) TC content was measured in 5-week-old Cre or β-KO mice (each group, n = 5). (C) Expression of genes related to cholesterol and fatty acid metabolism in liver from 5-week-old Cre or β-KO mice (each group, n = 5). (D) Immunoblot analyses for HMGCR in the liver at 5 weeks of age (each group, n = 5). Ponceau stain was used as a loading control. (E) Ratio of HMGCR/ponceau. White circles, Cre; black circles, β-KO. Data are presented as mean ± SD. \*P<0.05.



### Supplementary Figure 5. The insulin contents of islets.

(A)Insulin content per islet and (B) protein content per islet isolated from Cre (n=5) and  $\beta$ -KO (n=3) mice at 5 weeks of age. White circles, Cre; black circles,  $\beta$ -KO. Data are presented as mean  $\pm$  SD.

\*P<0.05.