**Supplemental Figure 1:** KO rats exhibit marked steatosis and enlarged islets compared to WT littermates. H&E stained paraffin sections of liver (A) and pancreas (B) sections from 36 week old male WT and KO rats. Bars = 10 μm

**Supplemental Figure 2:** Leptin deficiency results in increased C-peptide levels. C-peptide levels were measured following an over night fast and an oral gavage of glucose (1.5 g/kg) in 34 week old male and female rats (A). The C-peptide to insulin molar ratio was compared in WT and KO samples (male and female) as a measure of insulin clearance (B). Data are expressed as mean ± SEM. P<0.05 by student’s t-test (n=3-4 per group).
A. C-peptide (pmol/L) over time (mins) for Male KO, Male WT, Female KO, and Female WT.

B. C-peptide: insulin molar ratio over time (mins) for WT and KO.

Significance levels:
- P < 0.05
- P < 0.001