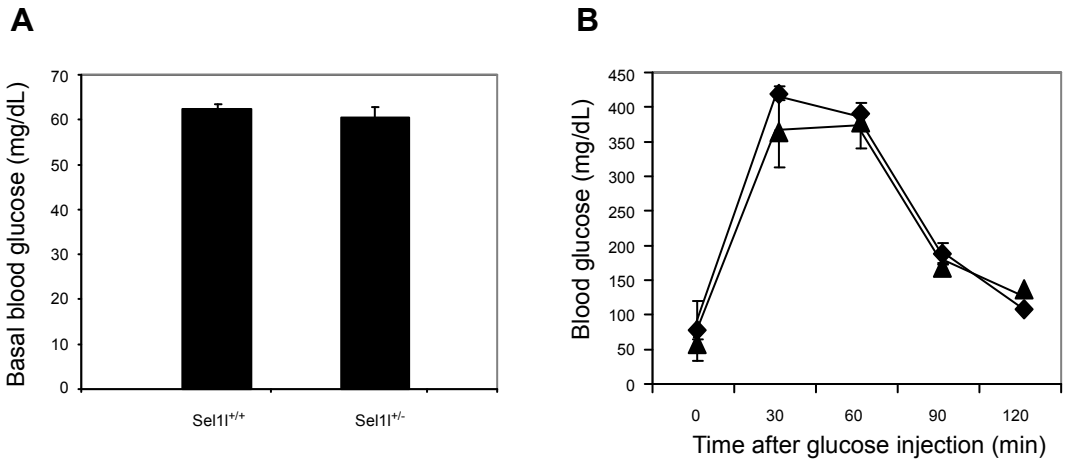


Fig. S1

(A) Basal fasting blood glucose of *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice. Male *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice of 10 weeks of age were fasted 6-8 hours and the blood glucose concentration were determined. (B) GTT of *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice on normal chow. No difference was detected between the two genotypes.

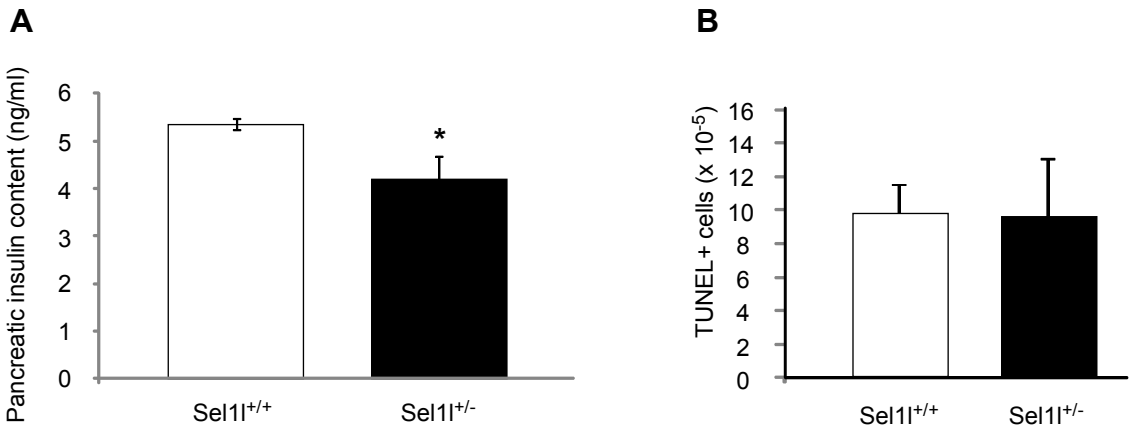


Fig. S2.

(A) Pancreatic insulin content of *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice fed with HFD for 20 weeks. Pancreatic insulin concentrations of *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice were determined as described in the Materials & Methods. The obtained values were normalized with total pancreatic protein concentration. *, $p < 0.05$ *Sel1l*$^{+/-}$ vs *Sel1l*$^{+/+}$ mice. (B) Ratio of apoptotic β-cells in *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice. Apoptosis was determined by TUNEL assay.

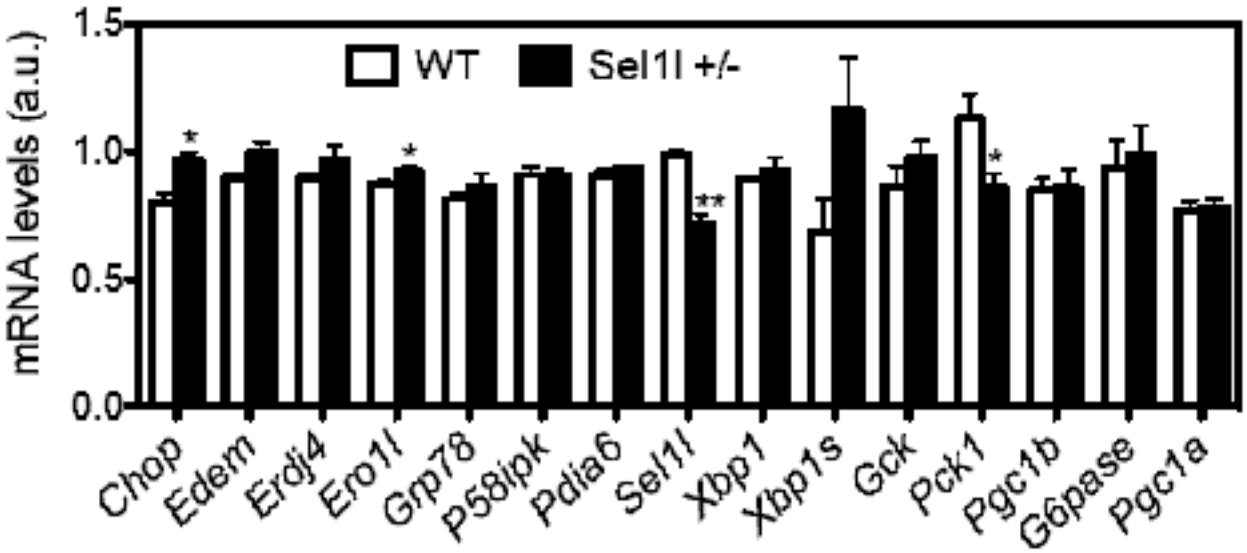


Fig. S3 Real-time PCR analysis of mRNA expression of UPR and other genes in livers of *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice. Male *Sel1l*$^{+/+}$ and *Sel1l*$^{+/-}$ mice of 10 weeks old were fed with HFD for 20 weeks. Liver mRNA expression levels of UPR (Chop, Edem, Erdj4, Ero1l, Grp78/Bip, p58ipk, Pdia6, Sel1l, Xbp1 and Xbp1s) and gluconeogenesis genes (Gck1,Pck1, Pgc1b, G6pase and Pgc1b) were determined by quantitative RT-PCR. *, $p < 0.05$ *Sel1l*$^{+/+}$ (n = 5) vs *Sel1l*$^{+/-}$ (n = 7) mice.