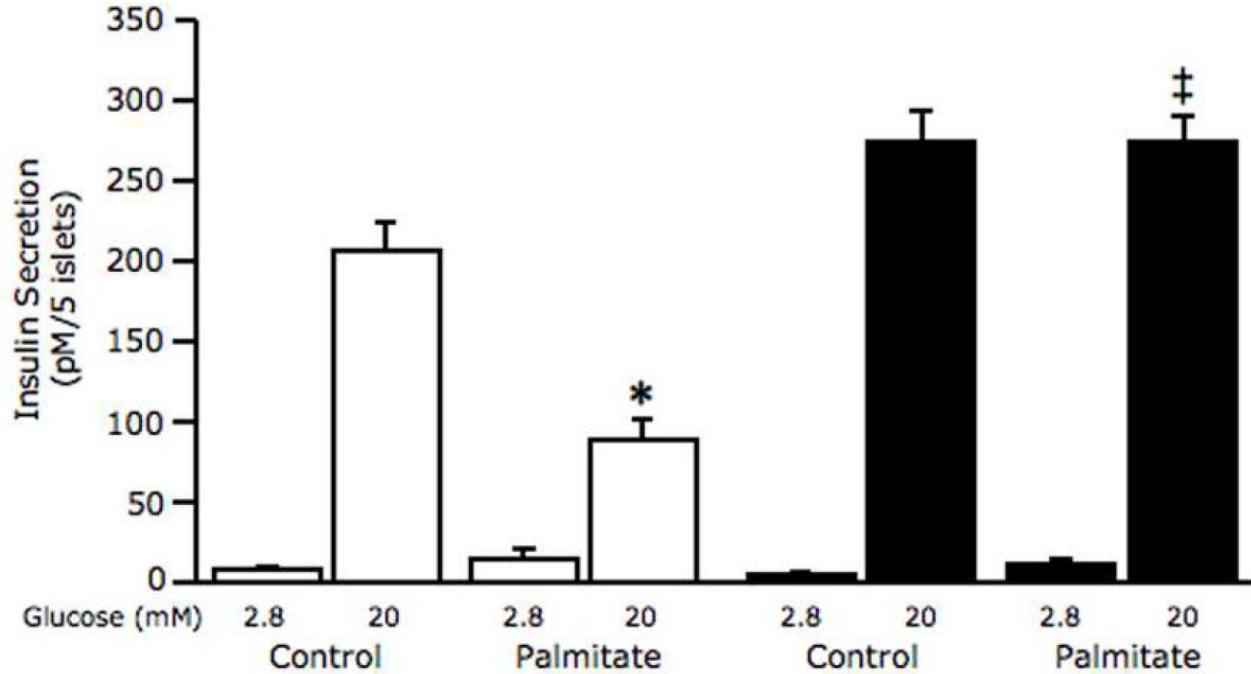


SUPPLEMENTARY DATA

**Supplementary Figure 1.** Islets from C57BL/6.NEP<sup>-/-</sup> but not C57BL/6.NEP<sup>+/+</sup> littermate mice are protected against palmitate-induced reductions in glucose-stimulated insulin secretion. Insulin secretion was assessed in response to 2.8 mM and 20 mM glucose after 48 h culture of islets in the absence or presence of 1 mM palmitate. White bars, C57BL/6.NEP<sup>+/+</sup> islets; black bars, C57BL/6.NEP<sup>-/-</sup> islets. Data are mean ± SEM; n=4. \*p<0.05 vs Control, ‡p<0.05 vs C57BL/6.NEP<sup>+/+</sup>.



## SUPPLEMENTARY DATA

**Supplementary Figure 2.** Representative pancreas sections from mice after 12-weeks on a low or high fat diet. Paraffin-embedded pancreas sections from C57BL/6 (A, low fat; B, high fat) and C57BL/6.NEP<sup>-/-</sup> (C, low fat; D, high fat) mice were costained with guinea pig polyclonal anti-insulin antibody (1:1000, #I8510; Sigma, St. Louis, MO, USA) to visualize  $\beta$  cells and mouse monoclonal anti-glucagon antibody (5  $\mu$ g/ml, #G2654; Sigma, St. Louis, MO, USA) to visualize  $\alpha$  cells, followed by incubation with Alexa 488-conjugated goat anti-guinea pig and Cy3-conjugated goat anti-mouse immunoglobulins. Sections were counterstained with Hoechst 33258 to visualize cell nuclei. Green, insulin; red, glucagon; blue, nuclei. Scale bar = 100  $\mu$ m (all panels correspond with the scale bar in A).

