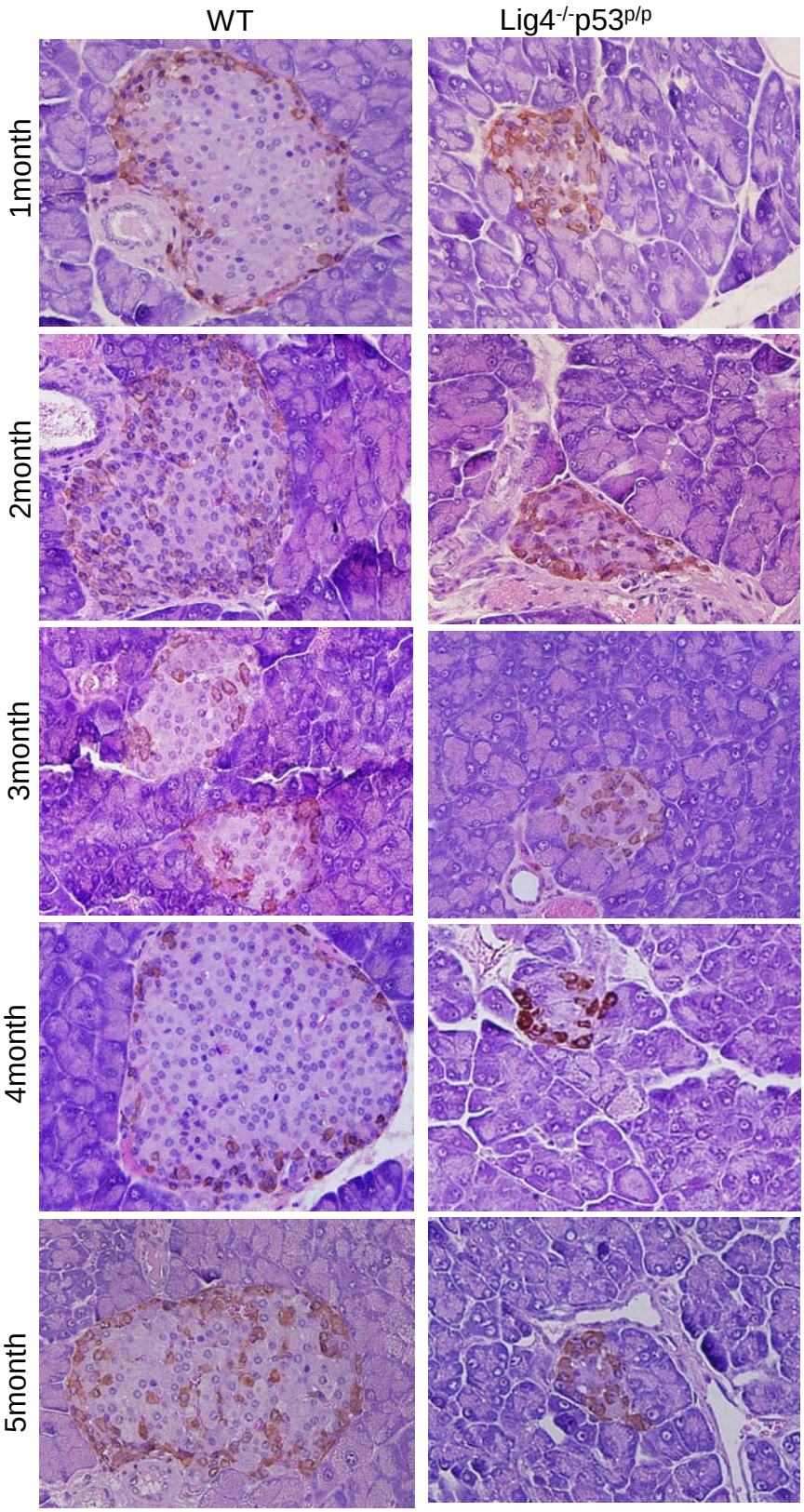

Figure S1. Progressive reduction of pancreatic isletes in Lig4$^{-/-}$p53$^{p/p}$ mice. Representative pancreatic sections from Lig4$^{-/-}$p53$^{p/p}$ and wild-type mice were immunohitochemically stained with anti-glucagon antibody (brown).

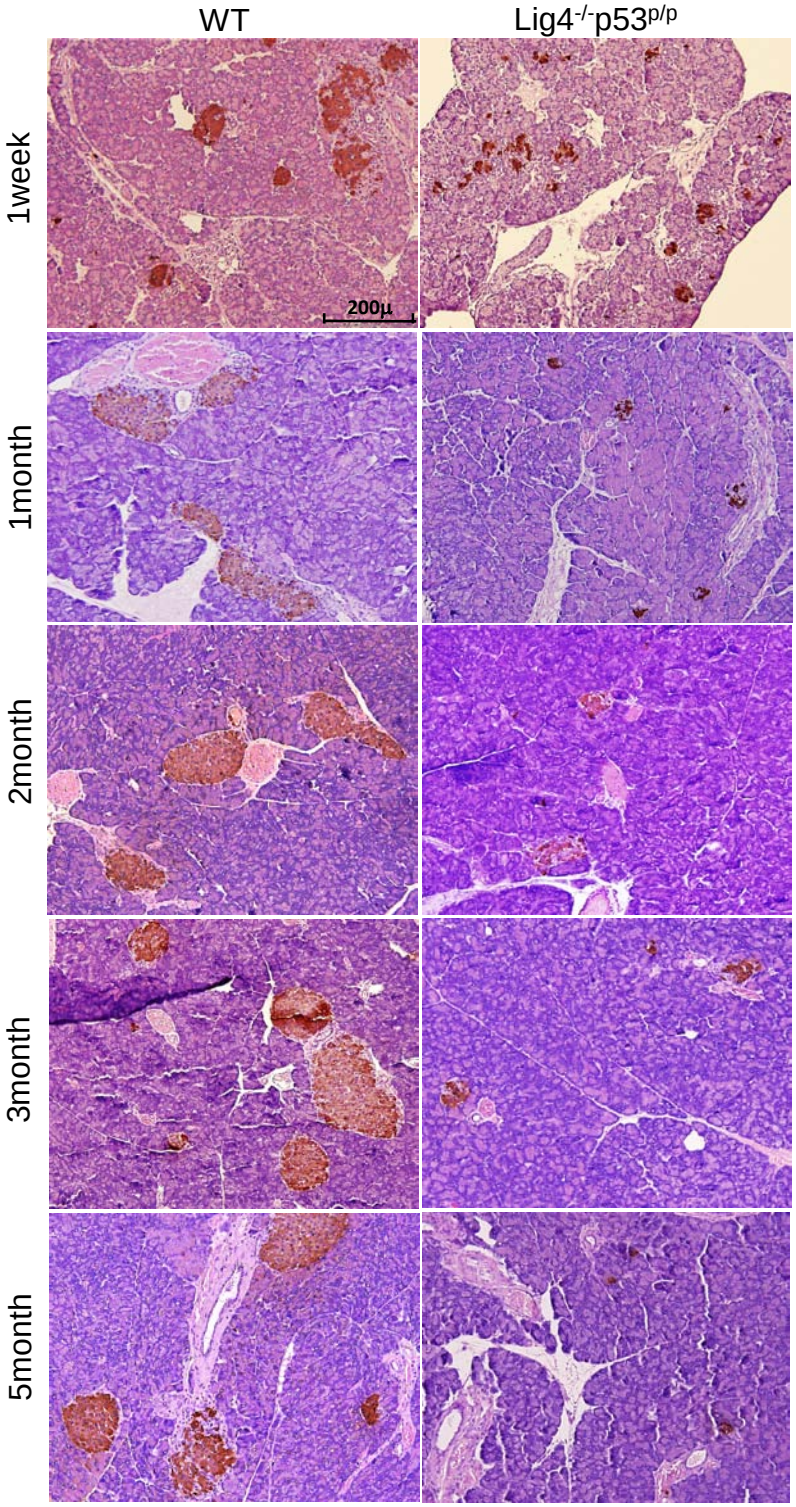

Figure S2. Progressive reduction of pancreatic isletes in Lig4$^{-/-}$p53$^{p/p}$ mice. Representitive pancreatic sections from Lig4$^{-/-}$p53$^{p/p}$ and wild-type mice were stained with anti-insulin antibody (brown).

Supplemental Material

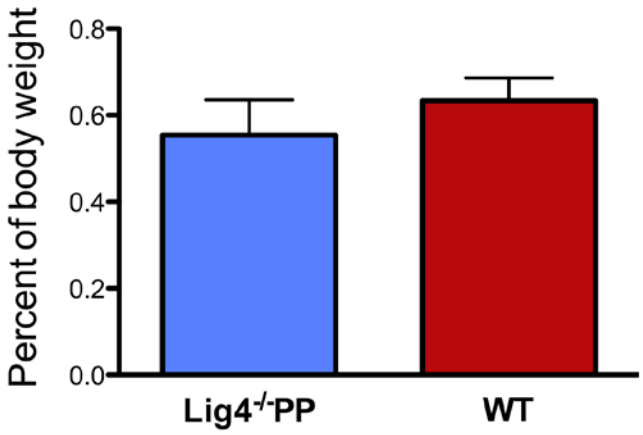

Figure S3. Comparison of ratio of pancreas to body weight in Lig4$^{-/-}$p53$^{p/p}$ and wild-type mice. Lig4$^{-/-}$p53$^{p/p}$ mice are smaller, approximately one third of body weight compare to wild-type littermates. The Lig4$^{-/-}$p53$^{p/p}$ mice have proportional smaller pancreas. There is not significant difference between the ratio of pancreas to body weight between mutant and wild-type mice.

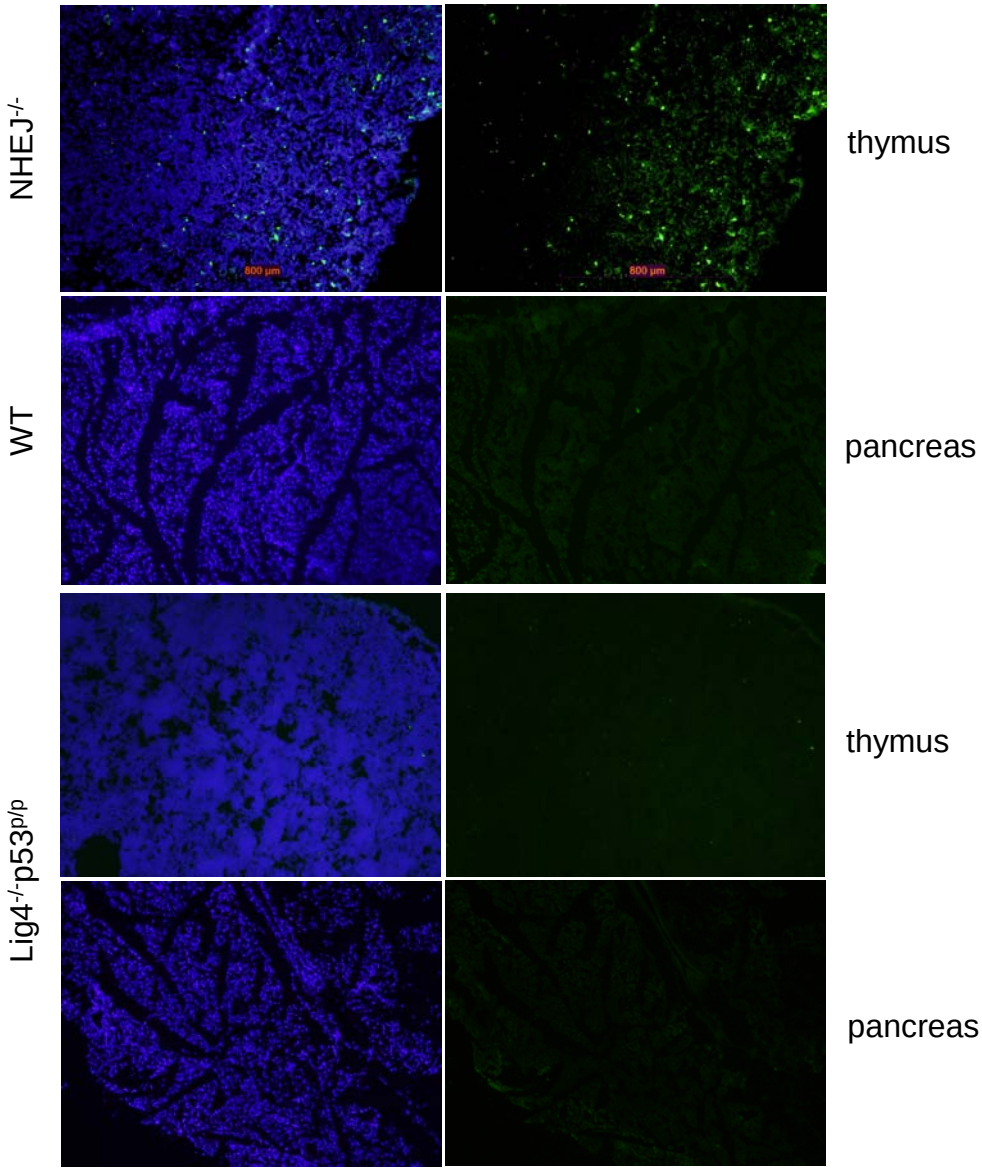

Figure S4. Absence of apoptosis in the Lig4$^{-/-}$p53$^{p/p}$ thymus and pancreas.
Pancreatic sections from mutant and age-matched wild-type mice were analyzed with a TUNEL assay; no apoptotic cells detected pancreas and thymus sections of Lig4$^{-/-}$p53$^{p/p}$. A NHEJ$^{-/-}$ (Artemis deficient) thymus was used as a positive control. Magnification: 10X.

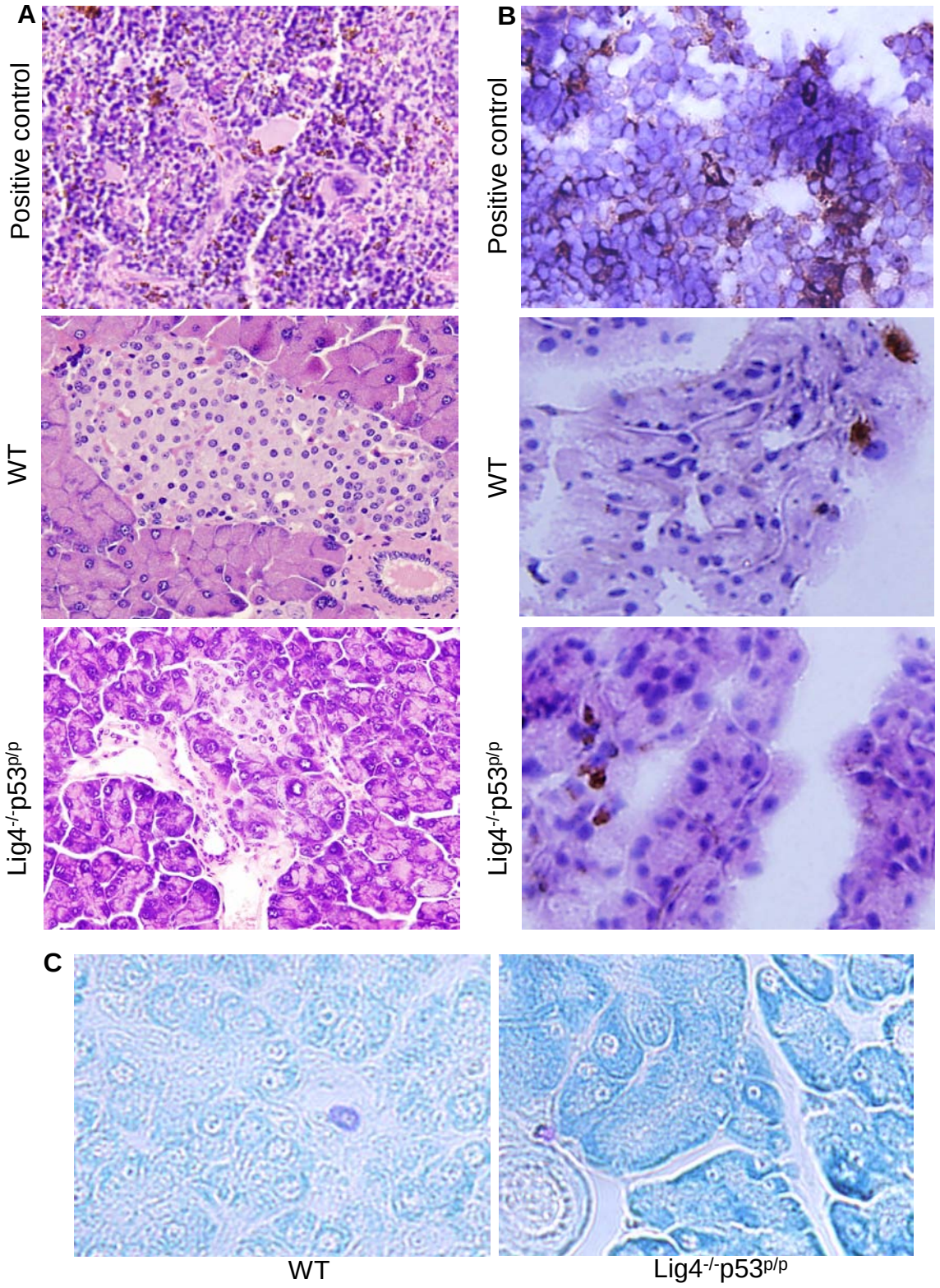

Figure S5. Islet depletion is not due to innate immunity.
Pancreatic sections from mutant and age-matched wild-type mice were stained using anti-CD11b antibody (A), with wild-type spleen section as a positive control, and anti-F4-80 (B) with wild-type bone marrow cells as a positive control. Toludine blue staining for mast cells (C) showing very few infiltration cells in frozen sections. Magnification: 40X.

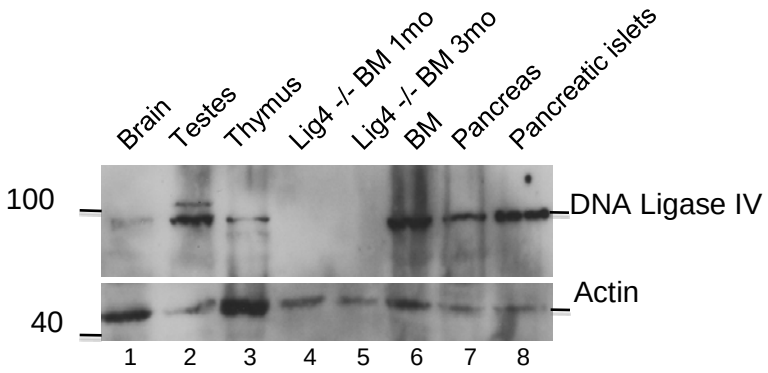

Figure S6. Western blot analysis of DNA ligase IV in Lig4$^{-/-}$p53$^{p/p}$ and wild-type mice. High level of DNA ligase IV is detected in wild-type pancreatic islets, as compatible to the level detected in testes. Pancreatic islets were purified according to a protocol by Gregory L. Szot, Pavel Koudria, Jeffrey A. Bluestone (2007) Murine Pancreatic Islet Isolation. JoVE. 7. http://www.jove.com/index/details.stp?id=255