



ESM Fig 4. NGN3 expression in control mice at different ages. a.

Immunohistochemistry of a control pancreatic islet showing NGN3 expression and localization relative to PDX-1. Modest nuclear-localized NGN3 signals were found in PDX1-positive beta-cells, while cytoplasmic NGN3 signals were evident in cells surrounding the islet. **b.** Control pancreatic islet showing NGN3 staining relative to GCG-positive cells. Some GCG-positive alpha cells showed nuclear NGN3 signals. **c.** Control islet showing NGN3, PDX-1, and Insulin staining. In a rare occasion when islets were found adjacent to pancreatic ducts, cells with strong cytoplasmic NGN3 signals were found around the ducts and the islets.