



**Figure W1.** Developmental overexpression of Shh ligand leads to pancreatic malformation. In *Pdx1-Cre;LSL-mShh* mice, uniform perinatal lethality was observed. Necropsy confirmed the presence of a malformed pancreas with marked mesenchymal expansion and mucinous metaplasia of remnant ducts. Hematoxylin and eosin stains; A and B are  $\times 10$  and  $\times 20$  images from a single pancreas.