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## Supplemental information

Title: Genetically engineered pigs manifesting pancreatic agenesis with severe diabetes

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or

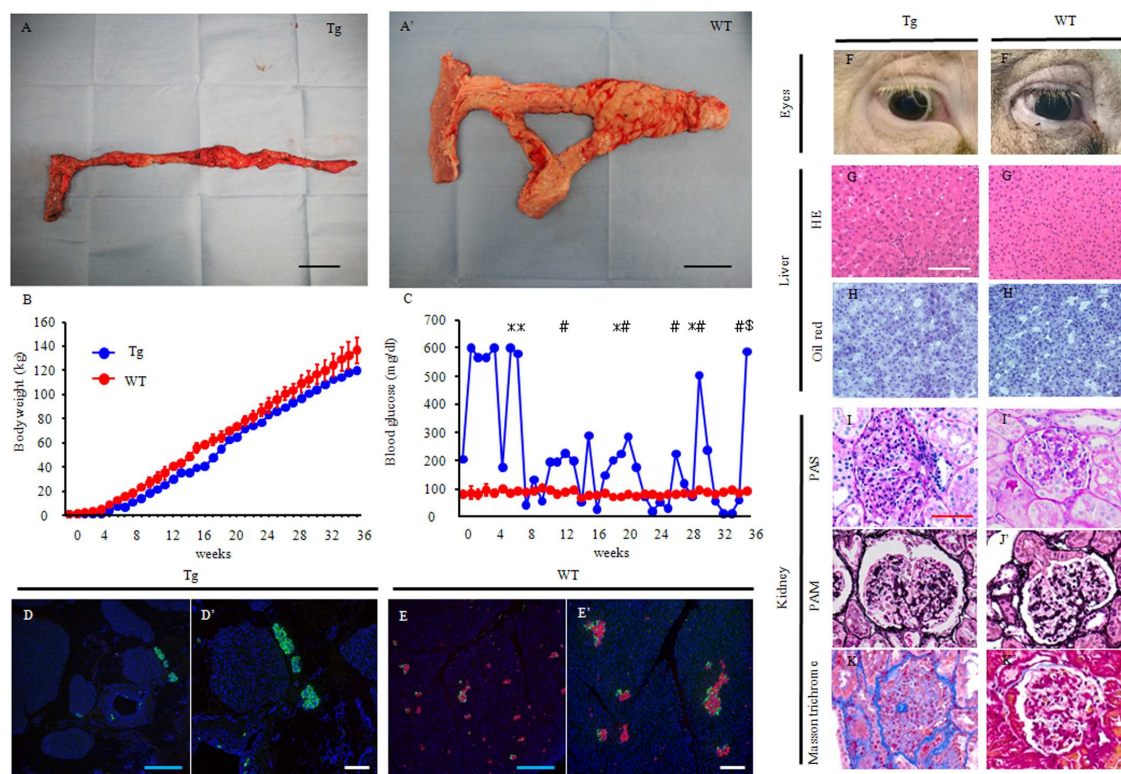
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Supplemental Figure 1. *Pdx1-Hes1* Tg pigs with continuous subcutaneous insulin infusion (CSII). (A, A') Whole pancreas at 36 weeks. Scale bars: 5 cm. (B) Bodyweight at the indicated times. Tg with CSII (blue line; n = 1), WT (red line; n = 2). (C) Blood glucose levels. CSII was attached at 7 weeks. At some point, the needle fell out spontaneously (\*), and infusion errors (#) were also confirmed at some points. The blood glucose rebounded at those points. The equipment was detached at 36 weeks (\$). Blue line: Tg, n = 1; red line: WT, n = 2. Quantitative data are presented as means  $\pm$  SDs. (D, D' and E, E') Endocrine cells. Fluorescence micrographs show the expression of glucagon (cytoplasm; green) and insulin (cytoplasm; red). The nuclei are stained blue with DAPI. (D, D') Tg with CSII. (E, E') WT. Scale bars: blue, 1000  $\mu$ m; white, 100  $\mu$ m. Secondary alterations in Tg pigs with CSII at 36 weeks. (F, F') Eyes. (G, G' and H, H') Liver.

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(H, H') Oil-red O staining. G, G' and H, H' panels are at the same magnification. Scale bar: 100  $\mu\text{m}$ . (I–K, I'–K') Kidneys. (I, I') Periodic acid-Schiff, (J, J') periodic acid-methenamine-silver, and (K, K') Masson-Trichrome staining. I–K and I'–K' panels are at the same magnification. Scale bar: 50  $\mu\text{m}$ . Tg, transgenic pigs; WT, wild-type pigs. Time after birth is indicated as days and weeks.