

Supplemental figure legend

Suppl. Fig. 1. Pregnancy increases α -cell mass but not through changing α -cell size, neogenesis, and transdifferentiation. a, Individual α -cell areas were determined using the ImageJ software with IF images. At least 6-10 islets per dam were measured. The average α -cell areas of each dam was used for statistical analysis. b, Non-pregnant *Ai9;Gcg^{CreErt2}* reporter mice gavaged with tamoxifen (1 mg per day) for 5 days to label α -cells with tdTomato (RFP). IF was performed using an anti-glucagon antibody (green). Proliferated α -cells were still labeled by RFP, while precursor-differentiated new α -cells were RFP negative (white arrowhead). c, The α -cells were labeled by RFP in *Ai9;Gcg^{iCre}* reporter mice. IF was performed using anti-insulin (GFP) with pancreatic sections from mice before and during pregnancy. Co-expression of RFP and GFP indicates transdifferentiation. The bar is 50 μ m.

Suppl. Fig. 2. GCG promoter-directed Cre expression and changes of blood GLP-1 concentrations of α -null mice. a, The *mTmG;Gcg^{CreErt2}* reporter mice were gavaged with tamoxifen (1 mg per day) for 5 days. Cre expression turned on GFP gene expression and turned off RFP. GFP was observed only in α -cells, intestinal L-cells but not in the brainstem. b, Serum total GLP-1 concentrations were measured using an ELISA kit.