SUPPLEMENTARY INFORMATION

Pax4 Defines an Expandable β-Cell Subpopulation in the Adult Pancreatic Islet

Petra I. Lorenzo1,*, Esther Fuente-Martín1, Thierry Brun2, Nadia Cobo-Vuilleumier1, Carmen María Jimenez-Moreno1, Irene de Gracia Herrera Gomez1, Livia López Noriega1, José Manuel Mellado-Gil1, Alejandro Martin-Montalvo1, Bernat Soria3, 4 and Benoit R. Gauthier1,*

1Pancreatic Islet Development and Regeneration Unit and 3Cellular Therapy of Diabetes Mellitus and its Complications, Department of Stem Cells, CABIMER-Andalusian Center for Molecular Biology and Regenerative Medicine, Seville, Spain; 2Department of Cell Physiology and Metabolism, University of Geneva, Geneva, Switzerland and 3CiBERDEM, Instituto Carlos III, Madrid, Spain

* Corresponding authors:
  Benoit R. Gauthier, PhD. e-mail: benoit.gauthier@cabimer.es
  Petra I. Lorenzo, PhD. e-mail: petra.lorenzo@cabimer.es

Pancreatic Islet Development and Regeneration Unit
Department of Stem Cells, CABIMER
Av. Américo Vespucio, Parque Científico y Tecnológico Cartuja 93
41092 Sevilla
Supplementary Figure S1. GFP expression predominantly co-localizes with β-cells in adult islets. 

a) Immunohistochemistry analysis of paraffin sections from adult pPax4-Cre-IRES-Egfp mice pancreas. Representative microscopy images for co-immunofluorescent labeling of GFP (green) with the β-cell marker PDX1 (pink). Nuclei counterstaining was performed using DAPI (blue).

b) Quantification of the percentage of Pdx1+ cells that co-express GFP (average ± SE). Sections from 5 animals with an average of 15 islets and 1400 cells per sections were used for quantifications.
Supplementary Figure S2. Pax4 is not re-expressed in α-cells. pPax4-Cre-IRES-Egfp mice were injected (i.p.) with STZ (200mg/kg body weight) to induce β-cell apoptosis and pancreas extracted 24 hours post treatment. a) Immunofluorescent detection of GFP (green), INSULIN (red), and GLUCAGON (cyan) as well as DAPI nuclear staining (blue) in pancreas sections of STZ treated and non-treated (Ctrl) animals. b) Quantification of the percentage of GFP/PAX4+ cells among insulin+, or glucagon+ cells (average ± SE). Sections from 7 animals with an average of 10 islets and 1000 cells per sections were used for quantifications.