SUPPLEMENTARY DATA

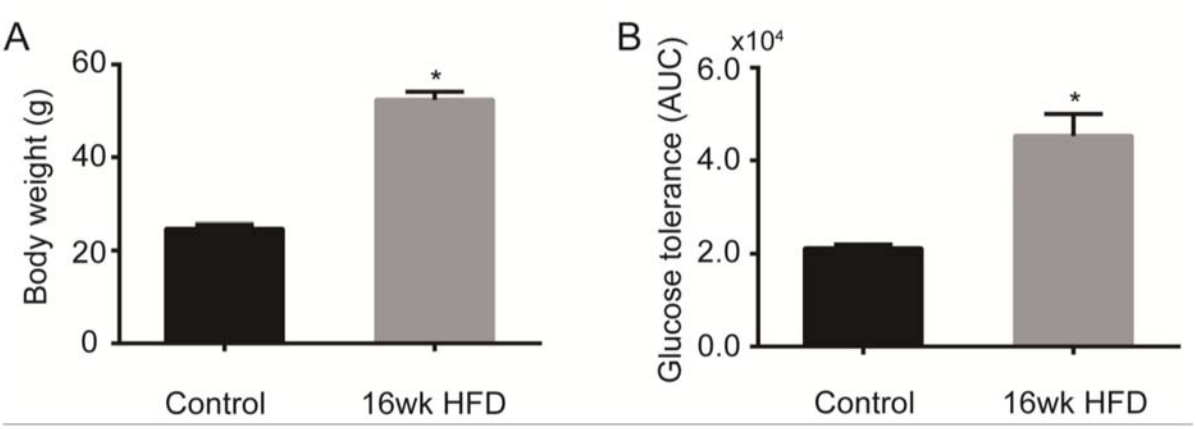
Alterations in β-cell calcium dynamics and efficacy outweigh islet mass adaptation in compensation of insulin resistance and prediabetes onset

Chunguang Chen[1,2,3], Helena Chmelova[1,2,3], Christian M. Cohrs[1,2,3], Julie A. Chouinard[1,2,3], Stephan R. Jahn[1,2,3], Julia Stertmann[1,2,3], Ingo Uphues[4] and Stephan Speier[1,2,3]

[1]Paul Langerhans Institute Dresden (PLID) of Helmholtz Center Munich at the University Clinic Carl Gustav Carus of Technische Universität Dresden, Helmholtz Zentrum München, Neuherberg, Germany.
[2]DFG-Center for Regenerative Therapies Dresden (CRTD), Faculty of Medicine, Technische Universität Dresden, Dresden, Germany.
[3]German Center for Diabetes Research (DZD), München-Neuherberg, Germany.
[4]Boehringer Ingelheim Pharma GmbH & Co. KG, Ingelheim, Germany.

SUPPLEMENTARY DATA

Supplementary Figure 1. Body weight (**A**) and IPGTT (**B**) of female C57BL/6N albino mice fed ND (control) or 16 weeks of HFD prior to assessment of pancreatic beta cell fraction (Fig. 3G).



SUPPLEMENTARY DATA

Supplementary Figure 2. Blood glucose of anesthetized Pdx1CreER-GCaMP3 islet recipient mice immediately before (**A**) and after (ca. 35-40 min) (**B**) intravenous glucose challenge (1g/kg) during *in vivo* imaging of β-cell Ca^{2+}_i dynamics at indicated time points.