



HOKKAIDO UNIVERSITY

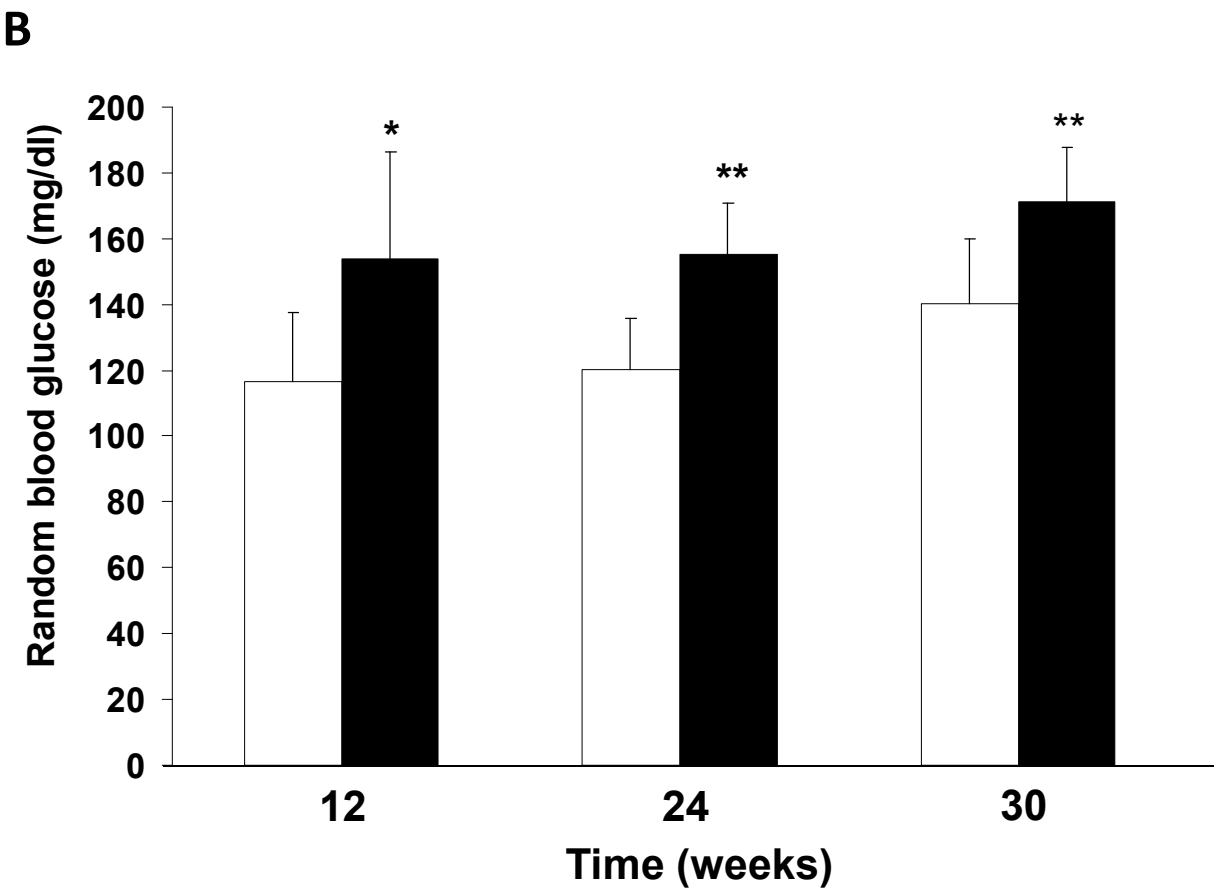
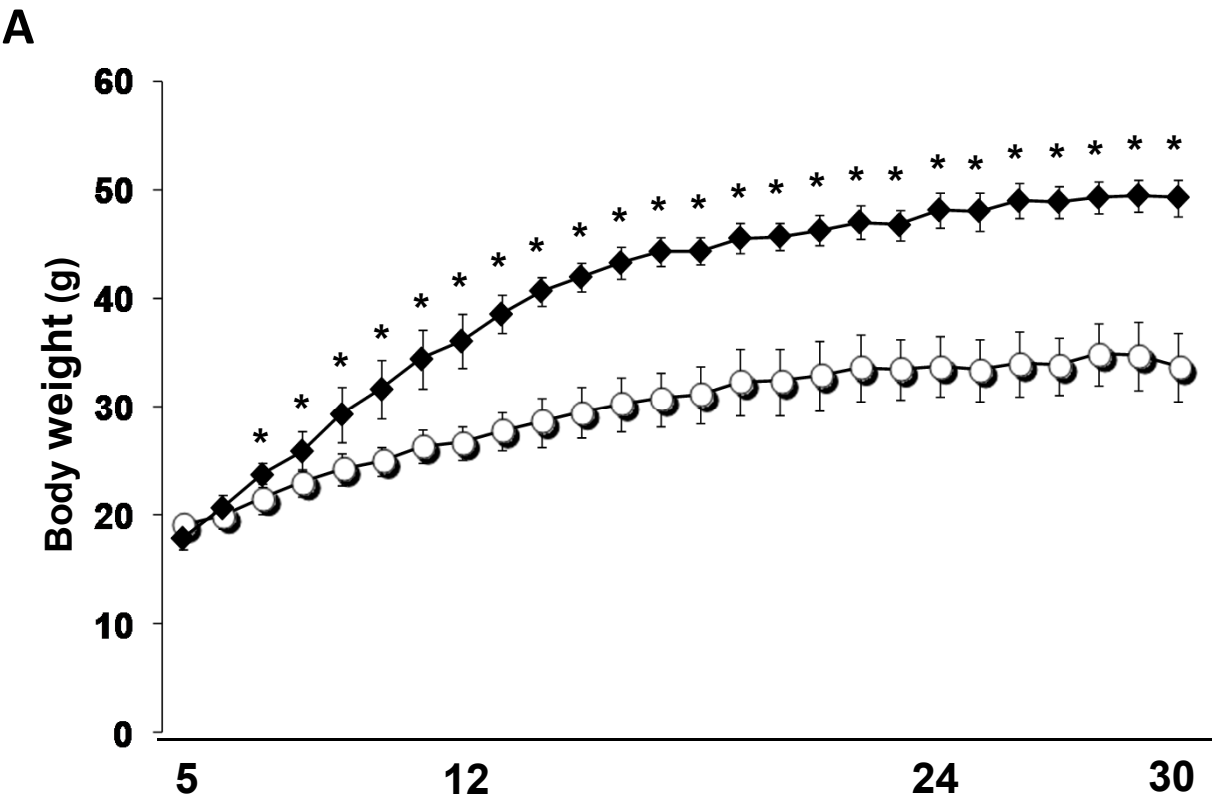
Title	Inhibition of Small Maf Function in Pancreatic β -Cells Improves Glucose Tolerance Through the Enhancement of Insulin Gene Transcription and Insulin Secretion
Author(s)	Nomoto, Hiroshi; Kondo, Takuma; Miyoshi, Hideaki et al.
Citation	Endocrinology, 156(10), 3570-3580 https://doi.org/10.1210/en.2014-1906
Issue Date	2015-10
Doc URL	https://hdl.handle.net/2115/60275
Type	journal article
File Information	supplemental_data.pdf



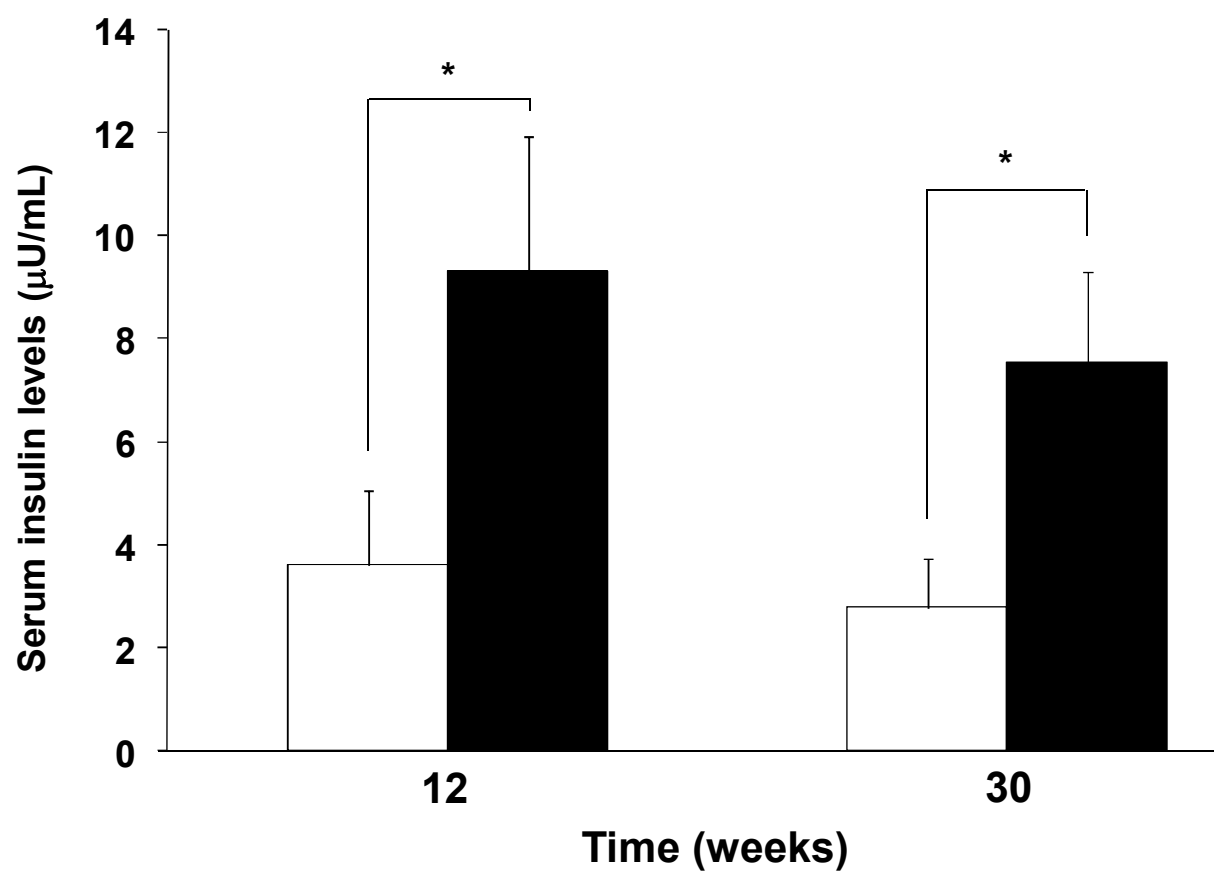
SUPPLEMENTARY DATA

Supplementary Figure 1.

Body weight (A), random blood glucose (B) and serum insulin levels (C) in mice fed on normal diet (white circles and bars) or high-fat diet (black circles and bars) at the indicated weeks of age. Values are expressed as means $\pm$ standard errors. * $p < 0.05$, ** $p < 0.01$.



C



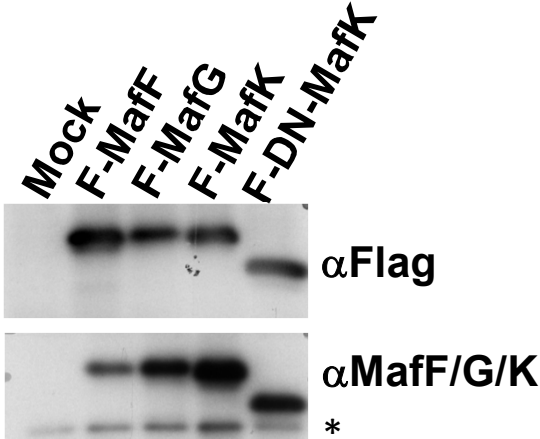
Supplementary Figure 2.

A: Western blotting of extracted proteins from MIN6 cells transfected with Flag-tagged MafF, MafG, MafK or DN-MafK construct.

B: DNA-binding activity to the Maf recognition element (MARE) using a chromatin immunoprecipitation (ChIP) assay using MIN6 cells transfected with the indicated construct.

A

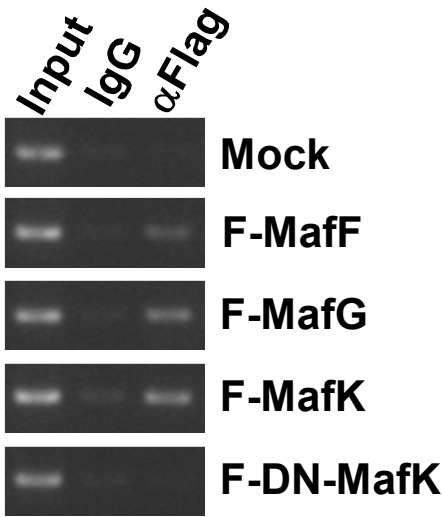
Western blotting



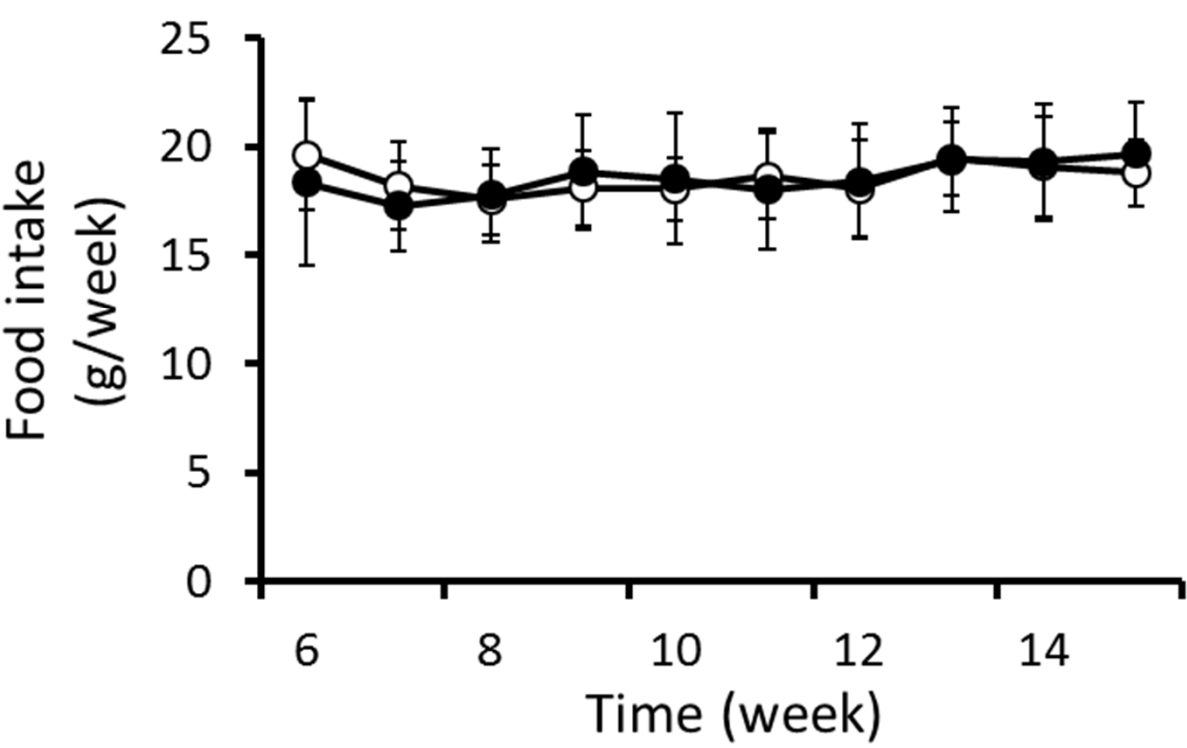
* Endogenous MafF/G/K

B

ChIP assay



Supplementary Figure 3.
Food intake of wild-type (white circle) and dominant-negative MafK transgenic mice (black circle) under the high-fat diet (HFD) condition at the indicated weeks of age (n = 10 for each). Values are expressed as means $\pm$ standard errors.



Supplementary Figure 4. Morphology of pancreatic beta cells.

A: Representative image of insulin staining. Pancreas from the wild-type (Wt) mice are shown in the left panel, while those from the dominant-negative MafK (DN-MafK) transgenic (Tg) mice are shown in the right panel.

B: Quantification of beta cell mass. The percent area of insulin-positive cells relative to the whole pancreas from the high-fat diet (HFD)-fed mice ($n = 8$ for each group, Wt = white bars, Tg = black bars). The beta cell mass is not significantly different.

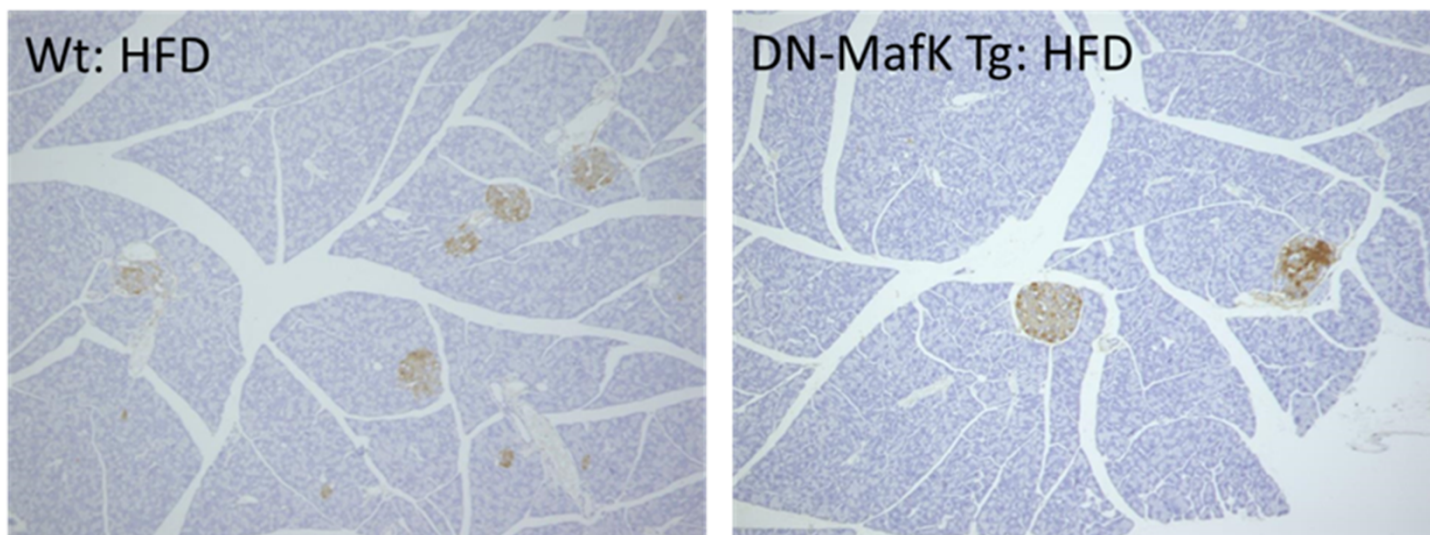
C: Immunohistochemical staining with antibody against proliferative cell nuclear antigen (PCNA; red), insulin (green), and DAPI (blue).

D: The percent area of PCNA-positive cells relative to the insulin-positive islet cells ($n = 6$ for each group, Wt = white bars, Tg = black bars).

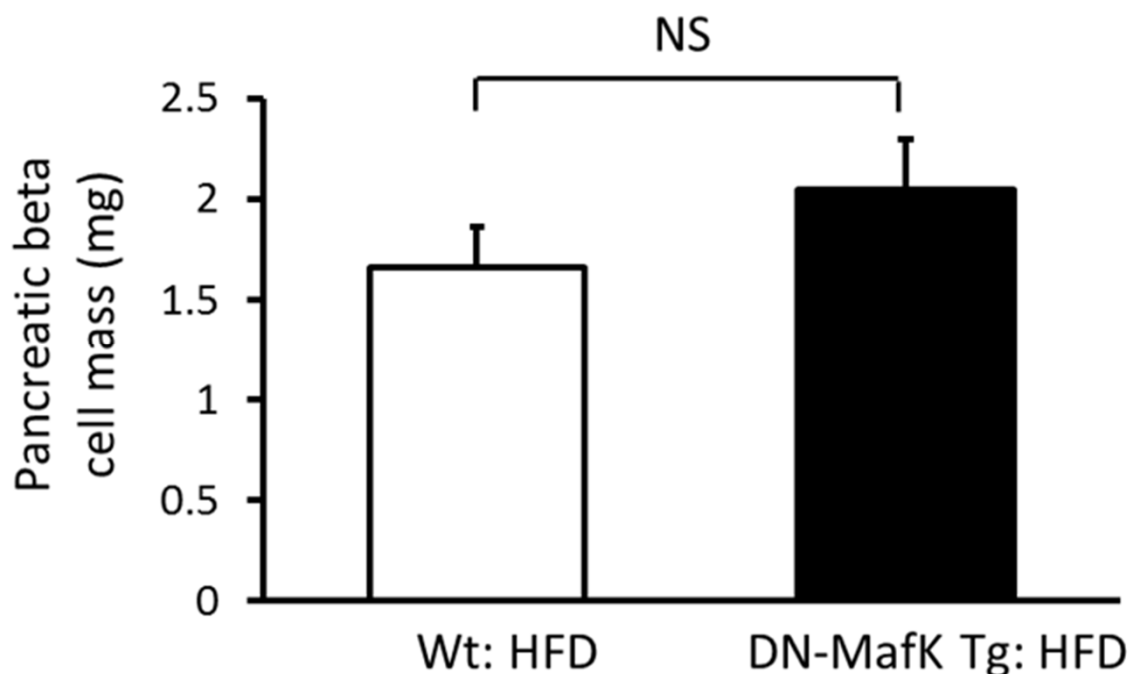
Proliferation of beta cells is the same in the HFD-fed Wt and Tg mice.

Values are expressed as means $\pm$ standard errors.

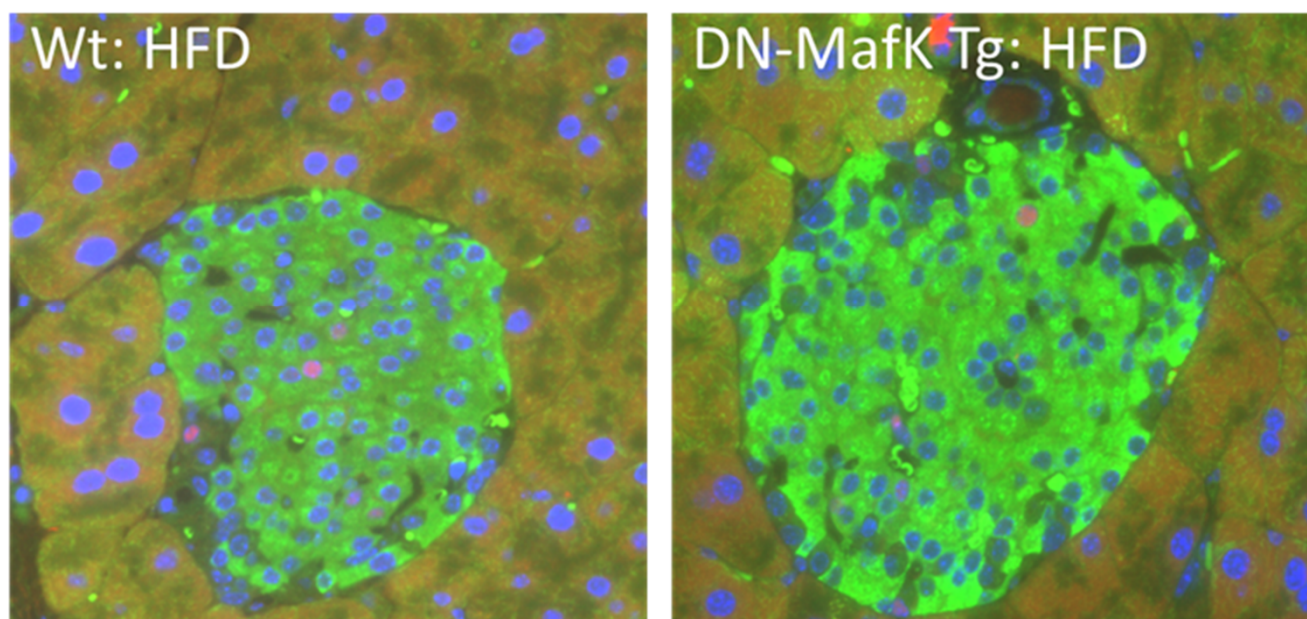
A



B



C



D

