



Supplementary Fig. 1. Mitochondria-associated endoplasmic reticulum (ER) membrane (MAM) formation and high PDZ domain-containing 8 (PDZD8) expression were observed in the pancreas islets of high-fat diet (HFD)-induced diabetes. (A) The blood-glucose level in normocaloric diet (NCD) and HFD mice. (B) The fasting blood-glucose of NCD and HFD mice. (C) The insulin level in NCD and HFD mice. (D, E) The MAM in  $\beta$ -cells was measured using the transmission electron microscopy (TEM). The red arrows point to MAM. (F) The PDZD8 expression in islet tissues was detected using immunohistochemical staining. (G) The mRNA expression of PDZD8 in islet tissues was tested by quantitative real-time polymerase chain reaction. (H) The protein expression of PDZD8 and MAM-related proteins (inositol 1,4,5-triphosphate receptor type 1 [IP3R1], glucose-regulated protein 75 [GRP75], and voltage-dependent anion-selective channel 1 [VDAC1]) in islet tissues was detected by Western blotting. M, mitochondria; PDI, protein disulfide isomerase; COX IV, cytochrome c oxidase 4.  $^{a}P$ <0.05.