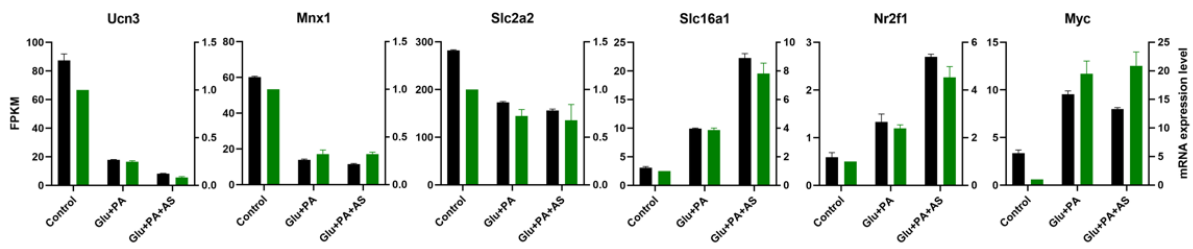
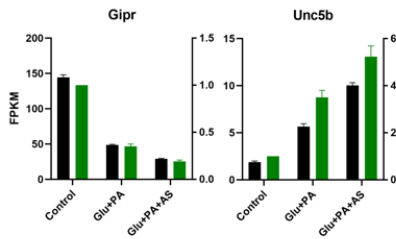


Supplementary Figure 1 Foxo1-inhibition reinforced β -cell dedifferentiation instead of apoptosis. (A) INS-1 cell treated with BSA (control), 25 mmol/L glucose plus 300 μ mol/L palmitic acid (Glu+PA), or 25 mmol/L glucose plus 300 μ mol/L palmitic acid plus 1 μ mol/L AS1842856 (Glu+PA+AS) for 36 h, and western blot of the protein level of cleaved caspase 3 (B) INS-1 cell after 36 h of treatment with BSA, Glu+PA or Glu+PA+AS, and western blot of Akt and p-Akt protein levels.

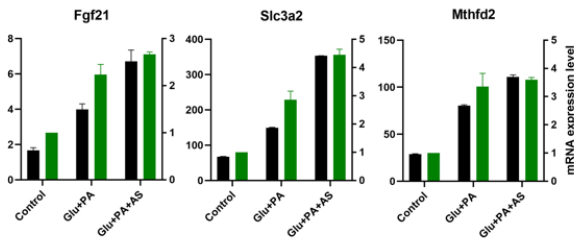
A: Related to cell identity



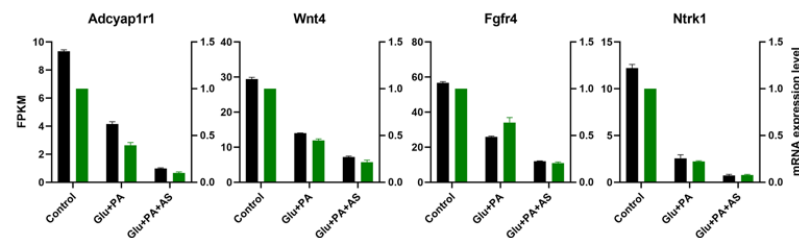
B: Related to development



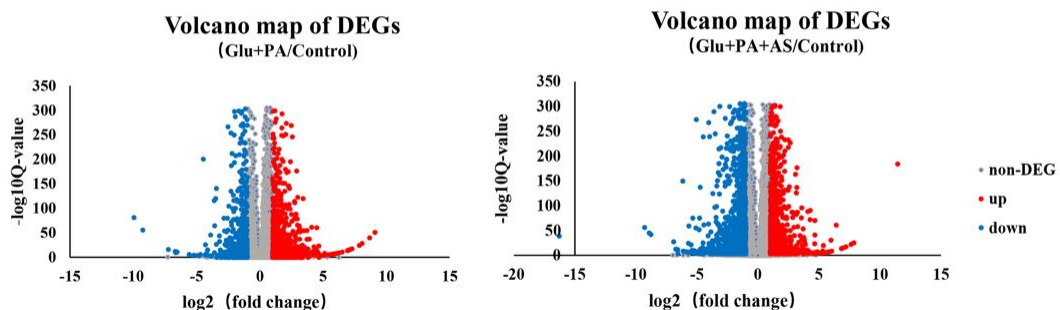
C: Related to metabolism



D: Related to metabolism, development and differentiation

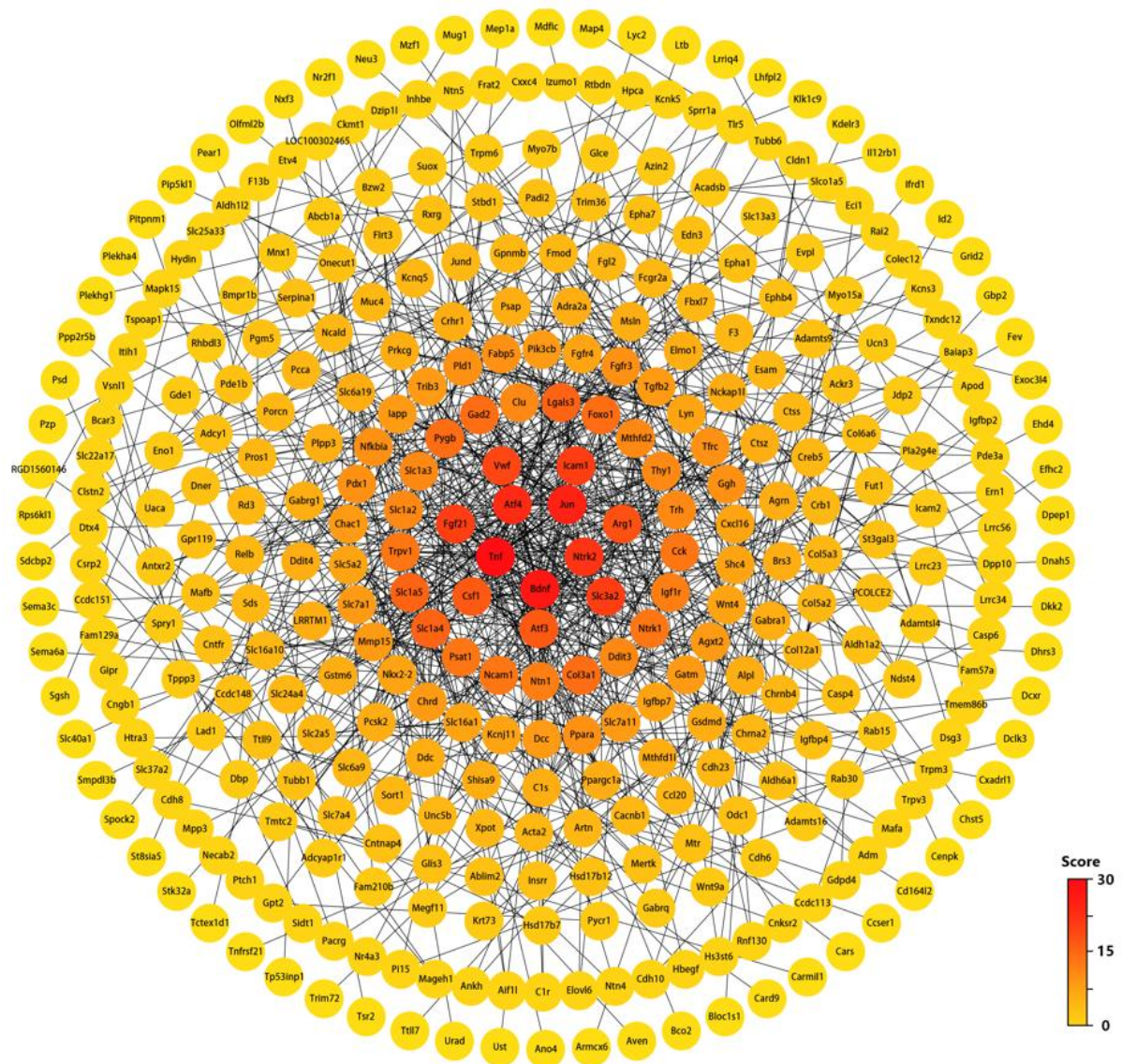


Supplementary Figure 2 Verification of the relative expression level of DEGs by qRT-PCR. Verification of DEGs by qRT-PCR in β -cell identity (A), developmental process (B), metabolism process (C), and development, metabolism process and cell differentiation (D).



Supplementary Figure 3 Volcano plot of differentially expressed genes. Volcano plot of differential expression analysis of Glu+PA *vs* control, and Glu+PA+AS *vs*

control, indicating the association between log-fold changes and p values. Blue indicates down-regulated genes, and red indicates up-regulated genes.



Supplementary Figure 4 PPI network of the enriched 546 DEGs. Different scores of the hub genes are shown as gradual colors (yellow indicates low scores, red indicates high scores).

