

Supplementary materials:

To detect changes in cytokine levels related to β cell proliferation, we measured serum total *GLP-1* and *Leptin* levels in mice. Results showed that the serum *GLP-1* significantly increased in HFD-induced mice. *GLP-1* levels also significantly increased in KO-HFD compared to WT-HFD, whereas there was no significant difference between WT and KO groups of mice. Similarly, serum *Leptin* significantly increased in HFD-induced mice, whereas *Leptin* levels significantly decreased in KO-HFD compared to WT-HFD, and there was no significant difference between WT and KO groups of mice.

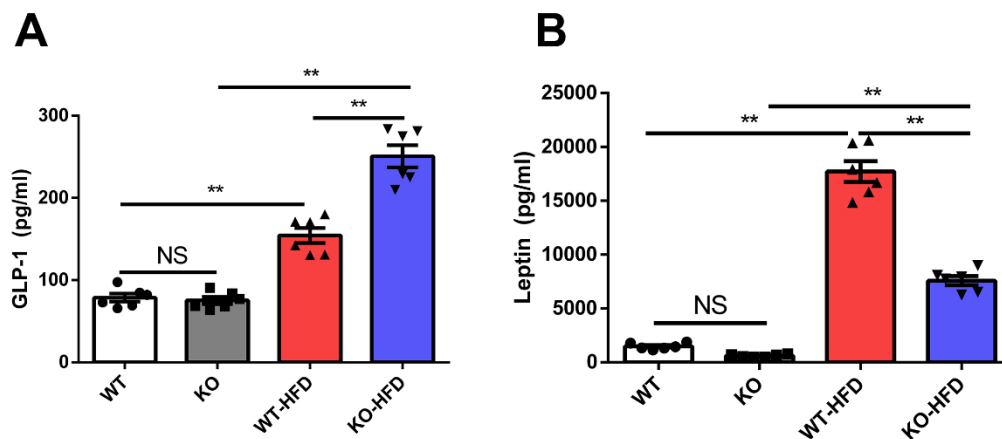


Fig 1. *Txnip* deficiency and HFD increased *GLP-1* and *Leptin* secretion. (A)

HFD-induced *GLP-1* levels in mice significantly increased compared to NC fed mice.

Significant difference in *GLP-1* level for KO-HFD versus WT-HFD mice. No significant differences were observed for the WT and KO groups of mice (n=6); **(B) HFD-induced *Leptin* levels in mice significantly increased compared to NC fed mice. **Significant difference in *Leptin* level for KO-HFD versus WT-HFD mice. No significant differences were observed for the WT and KO groups of mice (n=6). NS, not significant, ** $p < 0.01$.