

Figure S1. Genotype identification results: Lane markers 1, 3, 4 for *Trpc6*^{-/-} homozygous mice, 5, 6 for heterozygous mice, 2 for WT mice, 7 for positive control and 8 for negative control. WT, wild type.

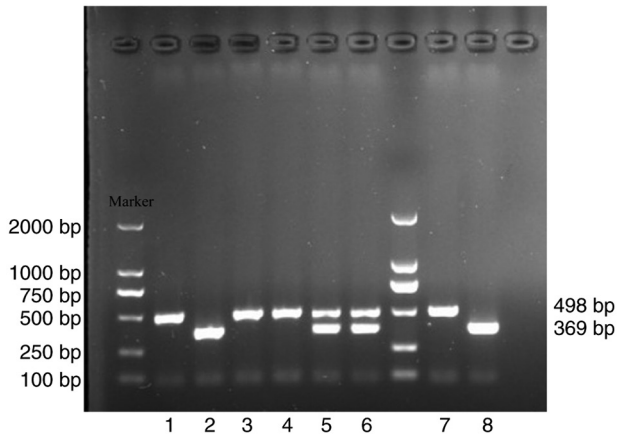


Figure S2. *Trpc6* knockout improves renal function and blood lipid metabolism in T2DM mice. (A) Body weight from 0-16 weeks; (B) Fasting blood glucose levels from 8-16 weeks; (C-D) The level of blood urea nitrogen and creatinine in serum; (E) The level of urinary albumin; (F-I) Levels of TG, TC, HDL-C and LDL-C; (J-K) The level of FFA in serum and renal tissue. Results are expressed as mean \pm SD, n=8-10. *P<0.05 and **P<0.01 vs. WT group; #P<0.05 and ##P<0.01 vs. *Trpc6*^{-/-} group; &P<0.05 and &&P<0.01 vs. WT + HFD + STZ group. T2DM, type-2 diabetes mellitus; TG, triglyceride; TC, total cholesterol; HDL-C, high-density lipoprotein; LDL-C, low density lipoprotein; WT, wild type; HFD, high fat diet; STZ, streptozotocin.

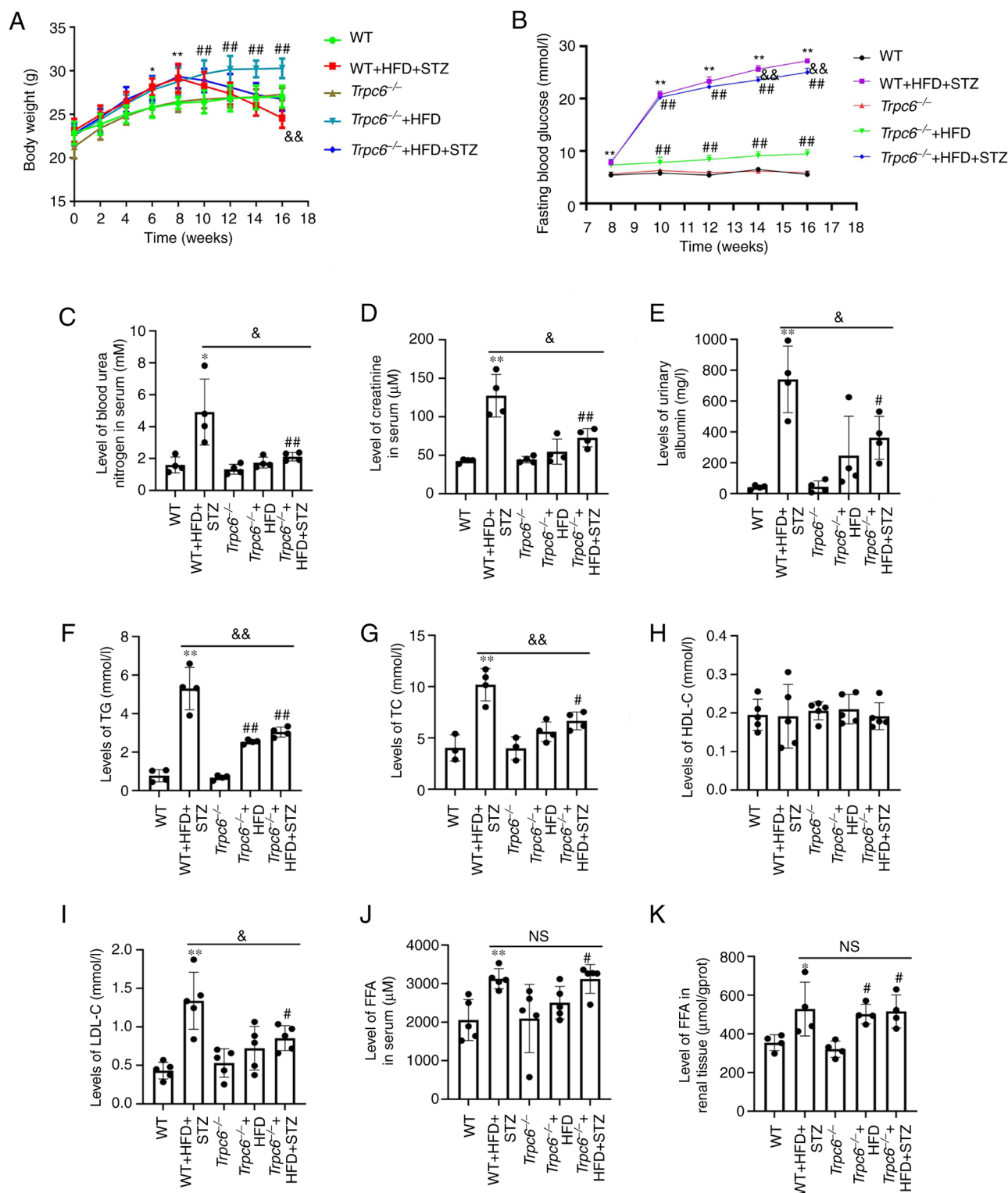


Figure S3. *Trpc6* knockout decreases β -Gal activity in T2DM mice. (A) β -gal staining (magnification, x400; scale bar, 20 μ m); (B) Relative expression of β -gal in renal cortex. Results are expressed as mean \pm SD, n=4. **P<0.01 vs. WT group; ##P<0.01 vs. *Trpc6*^{-/-} group; &&P<0.01 vs. WT + HFD + STZ group. T2DM, type-2 diabetes mellitus; WT, wild type; HFD, high fat diet; STZ, streptozotocin.

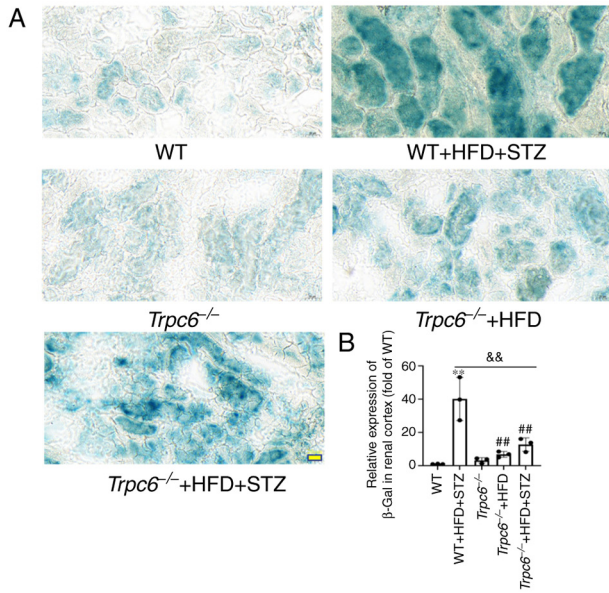


Figure S4. *Trpc6* knockout has no influence on CD36 and p-PLC expressions in T2DM mice. (A) The bands of CD36; PLC, p-PLC and β -actin; (B) Relative expression of CD36; (C) Relative expression of PLC; (D) Relative expression of p-PLC/PLC. Results are expressed as mean \pm SD, n=4. *P<0.05 and **P<0.01 vs. WT group; #P<0.05 vs. *Trpc6*^{-/-} group; NS, not significant. p-, phosphorylated; PLC, phospholipase C; T2DM, type-2 diabetes mellitus; WT, wild type; HFD, high fat diet; STZ, streptozotocin.

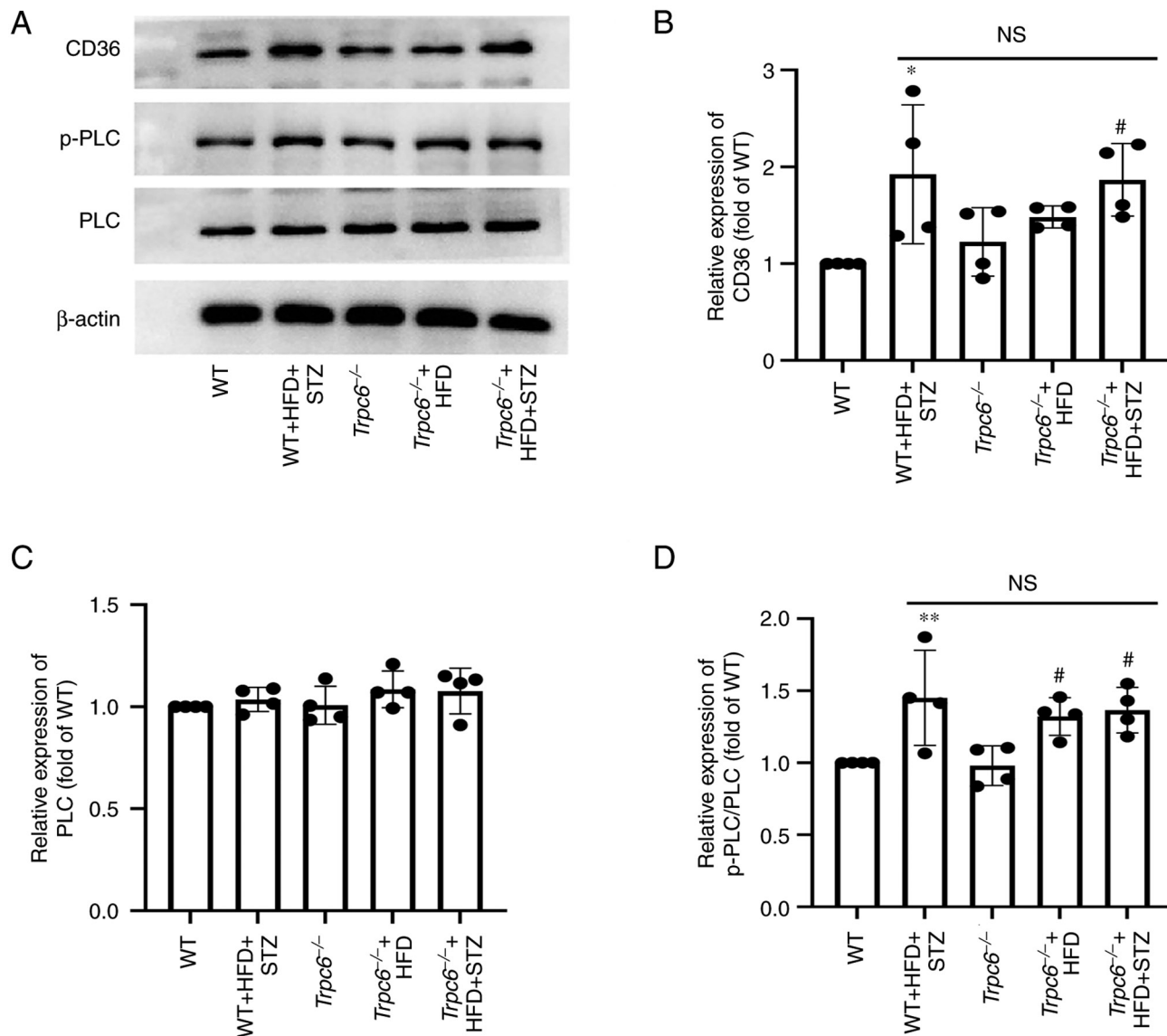


Figure S5. *Trpc6* knockout has no influence on renal lipid deposition in T2DM mice. (A) Deposition of lipids in the kidney (Nile red staining, magnification, x400; scale bar, 20 μ m). (B) The positive areas of lipid deposition. Results are expressed as mean \pm SD, n=3, **P<0.01 vs. WT group; ##P<0.01 vs. *Trpc6*^{-/-} group; NS, not significant. T2DM, type-2 diabetes mellitus; WT, wild type; HFD, high fat diet; STZ, streptozotocin.

