

sTable 1. The antibodies used in this study

Western blot		
Protein	Catalog number	Diluted ratio
abcam		
TXNIP	ab188865	1:1000
CD36	ab252923	1:1000
Proteintech		
HIC5	10565-1-AP	1:3000
Cell signaling		
CD31	3528S	1:1000
Sigma		
α -SMA	A5228	1:1000
EMD Millipore		
GAPDH	MAB374	1:3000

IHC		
Protein	Catalog number	Diluted ratio
Abcam		
TXNIP	ab188865	50X 2hr
CD31	ab28364	50X
FABP4	ab92501	100X
α -SMA	ab7817	1000X
GFAP	Ab7260	100X
Proteintech		
HIC5	10565-1-AP	50X
AHNAK	16637-1-AP	200X

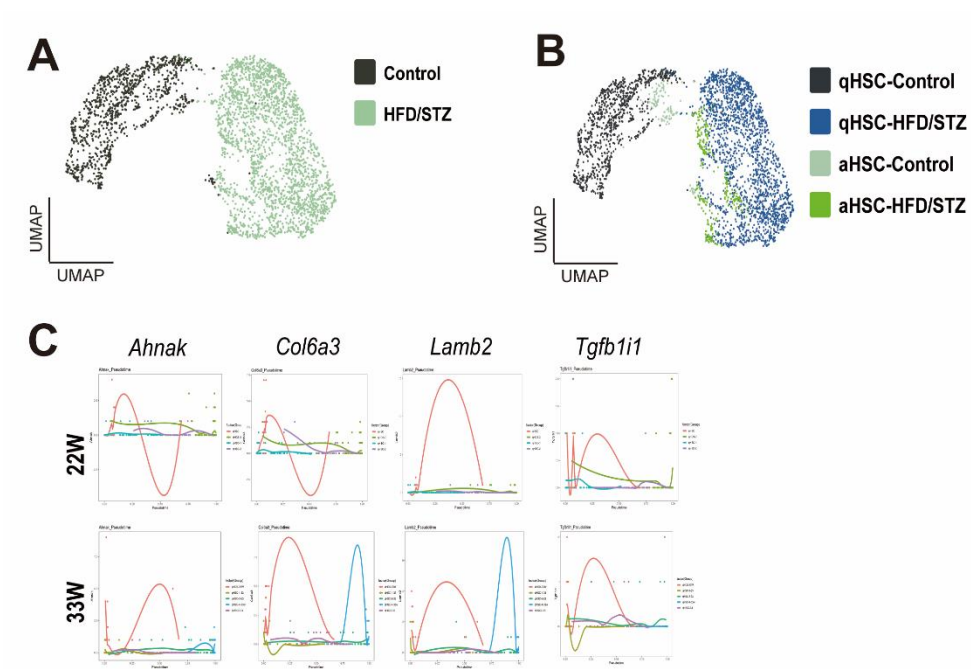


Figure S1. The genes contributed to the HSC activation. (A) UMAP plot of HSCs in control and HFD/STZ mice. (B) The distinction between activated and quiescent HSCs (aHSCs and qHSCs). (C) The gene associated with the activation of HSCs.

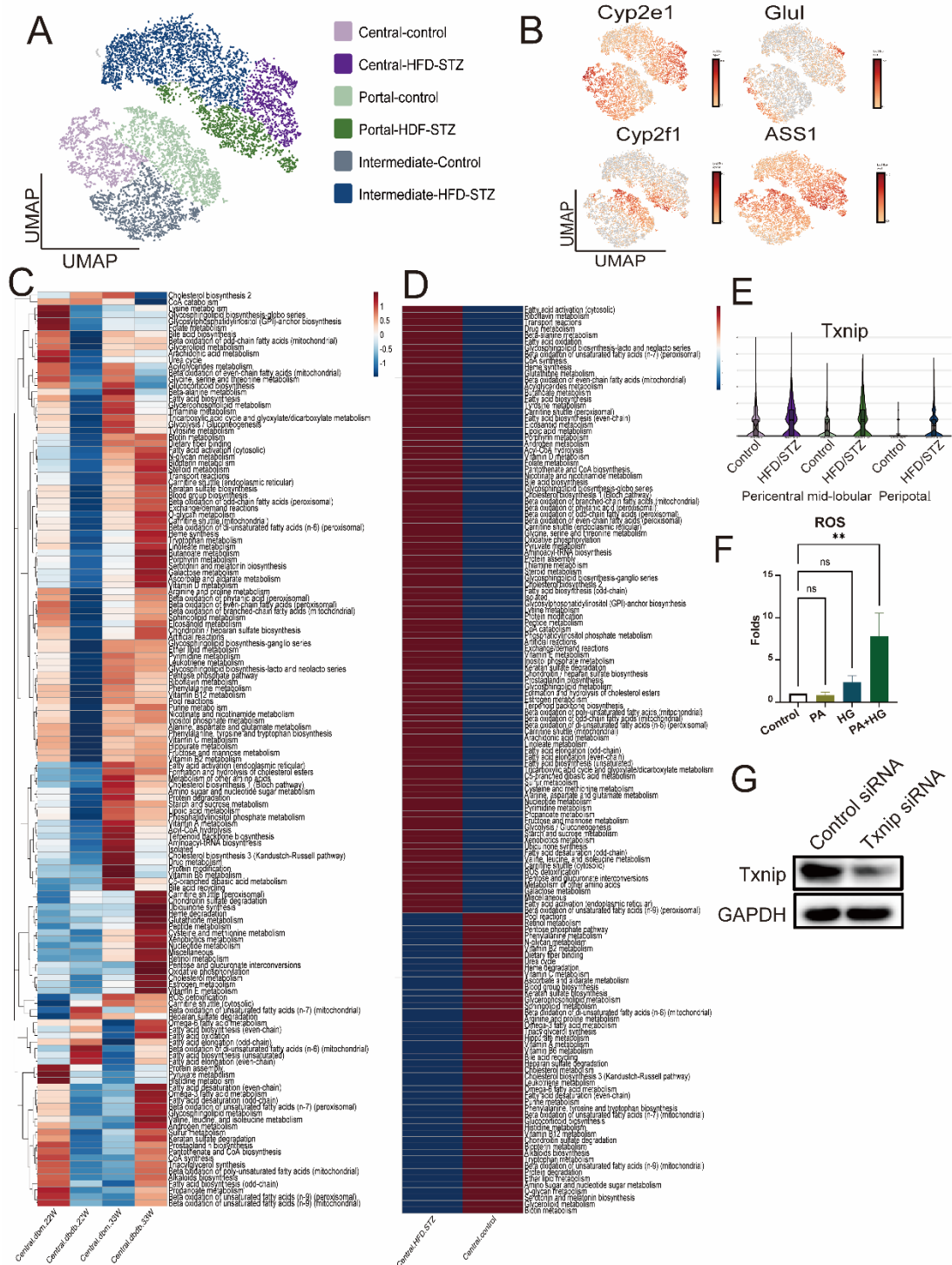


Figure S2. The changes of lipid metabolism of hepatocytes in the HFD/STZ model. (A) UMAP plot of hepatocytes in db/m and db/db mice. (B) The expression of annotation markers. Heatmap represented the change of various metabolism pathways in hepatocytes of db/db mice (C) and mice treated with HFD/STZ (D). (E) The expression of Tnxiap in hepatocytes of mice treated with HFD/STZ. (F) The effect of PA or PA plus HG in the ROS production after 48 h incubation. (G) Knockdown efficacy of Tnxiap siRNA in AML-12 cells.

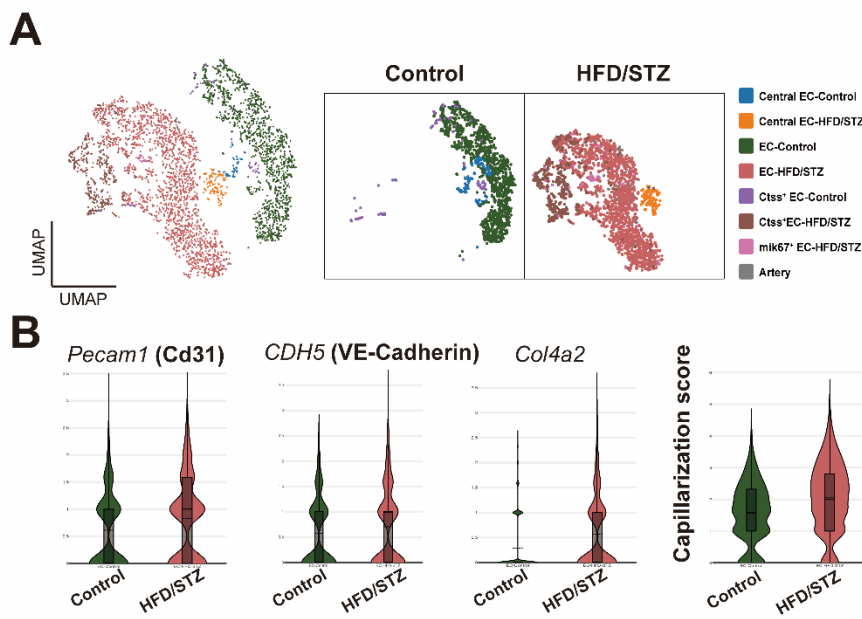


Figure S3. Enhanced capillarization of endothelial cells (ECs) in the livers of diabetic mice using HFD/STZ model. (A) UMAP plot of ECs in control and HFD/STZ mice. (B) The expression of capillarization markers in the cell clusters of liver ECs.