



Supplementary Figure 1 Duodenal jejunal bypass surgery improved glucose homeostasis in type 2 diabetes mellitus rats. A: Fasting blood glucose; B: The area under the curve of oral glucose tolerance test; C: The percentage of HbA1c to hemoglobin; D: Homeostatic model assessment of insulin resistance index values of rats; E: Homeostatic model assessment of insulin sensitivity index values of rats; F: Fasting serum insulin measured by ELISA. ^a $P < 0.05$, ^b $P < 0.01$, ^c $P < 0.001$. T2DM: Type 2 diabetes mellitus; TJB: Duodenal jejunal bypass; OGTT: Oral glucose tolerance test; HOMA-IR: Homeostatic model assessment of insulin resistance; HOMA-ISI: Homeostatic model assessment of insulin sensitivity index.

Supplementary Table 1 Primary antibodies used in the study

Antibody	Immunizing antigen	Host species	Applications/dilution	Source/cat No.
GFAP	Recombinant full-length protein corresponding to human GFAP. Isotype 1 expressed in and purified from <i>E. coli</i>	Rabbit	WB 1:1000 IF 1:1000	Abcam/ab278054
C-fos	Recombinant full-length protein corresponding to human C-fos aa 1 to the C-terminus. Purified from <i>E. coli</i>	Rabbit	WB 1:1000 IHC 1:1000	Abcam/ab208942
BDNF	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers	Rabbit	WB 1:1000	Abcam/ab108319
HO-1	KLH conjugated synthetic peptide corresponding to mouse HMOX1	Mouse	WB 1:1000 IF 1:1000	Servicebio/GB12104
GLP-1R	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers	Rabbit	WB 1:1000	Abcam/ab218532

IL-6	KLH conjugated synthetic peptide corresponding to mouse IL-6	Rabbit	WB 1:500	Servicebio/GB11117
NF-κB	KLH conjugated Synthetic phosphopeptide corresponding to human NF-κB p65 (S536)	Rabbit	WB 1:600	Servicebio/GB113882
p-NF-κB	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser536 of human NF-κB p65	Rabbit	WB 1:1000	Cell Signaling Technology/No. 3033
Nrf2	Recombinant protein corresponding to human NRF2	Rabbit	WB 1:1000 IF 1:1000	Servicebio/GB113808
Caspase-3	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding the cleavage site of human caspase 3. Antibodies are purified by protein A and peptide	Rabbit	WB 1:1000	Cell Signaling Technology/No. 9662

affinity chromatography

Cleaved-caspase-3	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino-terminal residues adjacent to (Asp175) in human caspase-3	Rabbit	WB 1:1000	Cell Signaling Technology/No. 9661
BCL-2	Recombinant protein corresponding to human Bcl-2	Mouse	WB 1:1000	Servicebio/GB124830
Ki67	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers	Rabbit	IF 1:250	Abcam/ab16667
GAPDH	KLH conjugated synthetic peptide corresponding to mouse GAPDH	Rabbit	WB 1:1000	Servicebio/GB15004

GLP-1R: Glucagon-like peptide 1 receptor.

Supplementary Table 2 The sequences of primers used in this study

Gene	Forwards primers (5'-3')	Reverse primers (5'-3')
TNF- α	GCATGATCCGAGATGTGGAAGCTGG	CGCCACGAGCAGGAATGAGAAG
IL-6	GGTGTTCCTGCTGCCTTCC	GTTCTGAAGAGGTGAGTGGCTGTC
IL-1 β	CTCACAGCAGCATCTCGACAAGAG	CACACTAGCAGGTCGTCATCATCC
NF- κ B	TGTGGTGGAGGACTTGCTGAGG	AGTGCTGCCTTGCTGTTCTTGAG
GFAP	TCGTGTGGATCTGGAGAGGAAGG	AGAGCCGCTGTGAGGTCTGG
Caspase-3	GTACAGAGCTGGACTGCGGTATTG	AGTCGGCCTCCACTGGTATCTTC
Bcl-2	ACGGTGGTGGAGGAACTCTTCAG	GGTGTGCAGATGCCGGTTCAG
C-fos	TTGGAGCCGGTCAAGAACATTAGC	CCAGTCTGCTGCATAGAAGGAACC

BDNF	TGGA ACTCGCAATGCCGAACTAC	TCCTTATGAACCGCCAGCCAATTC
GLP-1R	TCCTTCATCCTCCGAGCACTGTC	CACGCCTTCCACCAGCAACC
Nrf2	GCCTTCCTCTGCTGCCATTAGTC	TGCCTTCAGTGTGCTTCTGGTTG
HO-1	CAGACAGAGTTTCTTCGCCAGAGG	TGTGAGGACCCATCGCAGGAG
GAPDH	GACATGCCGCCTGGAGAAAC	AGCCCAGGATGCCCTTTAGT
