

Supplemental Files

Genetic and pharmacological inhibition of GCN2 ameliorates hyperglycemia
and insulin resistance in type 2 diabetic mice

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Table S1. Information for antibodies and reagents

Reagent or Resource	Source	Identifier
Antibodies		
Rabbit monoclonal [EP1391Y] to Heme Oxygenase 1	Abcam	Cat# ab52947
Mouse monoclonal [A180] to NQO1	Abcam	Cat# ab28947
Rabbit mAb to Fatty Acid Synthase (C20G5)	Cell Signaling Technology	Cat# 3180
Rabbit Polyclonal to GCN2	Cell Signaling Technology	Cat# 3302
Rabbit Polyclonal to p-AKT (Thr308)	Cell Signaling Technology	Cat# 13038
Rabbit Polyclonal to AKT	Cell Signaling Technology	Cat# 9272
Rabbit Polyclonal to β -Tubulin	Cell Signaling Technology	Cat# 2146
Rabbit Polyclonal to NRF2	Proteintech	Cat# 16396-1-AP
Rabbit Polyclonal to GLUT2	Signalway Antibody	Cat# 45050
Rabbit Polyclonal to GCK	Signalway Antibody	Cat# 53975
Rabbit Polyclonal to PDHB	Signalway Antibody	Cat# 30766
Rabbit Polyclonal to PYGL	Signalway Antibody	Cat# 39121
Rabbit polyclonal to CD36	Sino Biological Inc	Cat# 80263-T48
Rabbit polyclonal to Cidea	Sino Biological Inc	Cat# 100879-T32

Table S2. The quantitative real-time PCR primer information

Genes name	Accession	Primers	Sequences (5'-3')	Length (bp)
<i>Acox1</i>	NM_001271898.	Forward	5'-TGTCTCGCTCCGCTCATAGG -3'	436
	1	Reverse	5'- ACATGGAGTAATTGAGGCCAACA - 3'	
<i>CD36</i>	NM_001159555.	Forward	5'-CCTGCAAATGTCAGAGGAAA-3'	92
	1	Reverse	5'-GCGACATGATTAATGGCACA-3'	
<i>Cidea</i>	NM_007702.2	Forward	5'- AGAAGGTCCTACTGACCCCC -3'	266
		Reverse	5'- ACCCGGTGTCCATTCTGTC -3'	
<i>Dgat1</i>	NM_010046.3	Forward	5'- ATGGACTCTCCAGTTGACGC -3'	318
		Reverse	5'- TCGCACCTCGTCCTCTTCTA -3'	
<i>Fasn</i>	NM_007988.3	Forward	5'- CTCCACAGCTCTTCCAGTGAG -3'	246
		Reverse	5'- TCTCTAGAGGGCTTGACCA -3'	
<i>Fsp27</i>	NM_001301295.	Forward	5'- GGGAGGTCCAACACAATCCAA-3'	222
	1	Reverse	5'- CTCCAAGCTGTGAGCCATGA-3'	
<i>Pparγ</i>	NM_001127330.	Forward	5'- GCGGAAGAAGAGACCTGGG -3'	116
	2	Reverse	5'- GTGTGACTTCTCCTCAGCCC -3'	
<i>Scd1</i>	NM_009127.4	Forward	5'- CGCTGGCACATCAACTTCAC-3'	162
		Reverse	5'- AGGAACTCAGAAGCCCAAAGC -3'	
<i>18S</i>	NR_003278.3	Forward	5'-AGGAATTGACGGAAGGGCACCAC-	327
		Reverse	3'	
			5'-GTGCAGCCCCGGACATCTAAGG-3'	

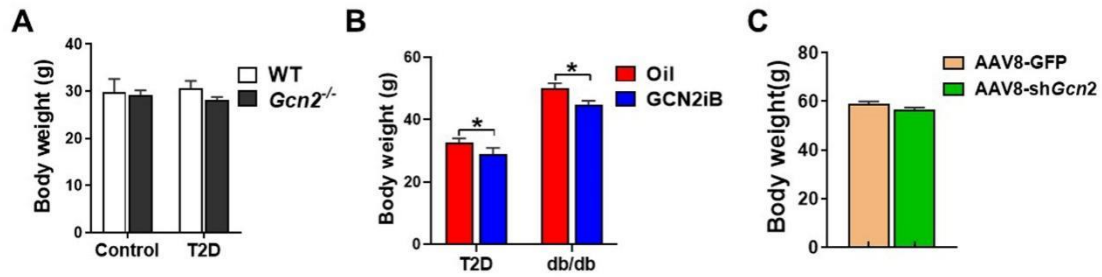


Figure S1. Effect of GCN2 inhibition on bodyweight of type 2 diabetic mice.

(A) Type 2 diabetes (T2D) was induced in wild type (WT) and *Gcn2*^{-/-} mice with a high-fat diet (HFD) plus low-dose strepto-zotocin (STZ) injection. At the end of the experiments, body weight was recorded. (B) After treatment with oil or GCN2iB (3 mg/kg, every other day) for 6 weeks, bodyweight of HFD plus low-dose STZ injection-induced T2D mice and db/db mice were recorded. (C) After tail intravenous injection of AAV8-GFP or AAV8-sh*Gcn2* for 4 weeks, the bodyweight of db/db mice were recorded. N=5; values represent the mean \pm SD;

* indicates $p < 0.05$.