



**Supplementary Figure 1 Hyperoside promotes Nrf2 nuclear translocation in HG-treated HK-2 cells.** <sup>a</sup> $P < 0.05$ . Scale bar = 50  $\mu$ m. Representative immunofluorescence images showing Nrf2 subcellular localization (green) and nuclear counterstaining with DAPI (blue) in HK-2 cells treated with normal glucose (NG), high glucose (HG, 30 mmol/L), or HG combined with hyperoside (50  $\mu$  mol/L) for 24 h. The nuclear/cytoplasmic Nrf2 fluorescence intensity ratio was quantified using ImageJ software. Data are expressed as mean  $\pm$  SD ( $n = 3$ ).

**Supplementary Table 1 Primer sequence**

<b>Gene name</b>	<b>Forward primer (5'→3')</b>	<b>Reverse primer (5'→3')</b>
Nrf2 (NFE2L2)	CACATCCAGTCAGAAACCAGTGG	GGAATGTCTGCGCCAAAAGCTG
SLC7A11 (xCT)	TCCTGCTTTGGCTCCATGAACG	AGAGGAGTGTGCTTGCGGACAT
GPX4	ACAAGAACGGCTGCGTGGTGAA	GCCACACACTTGTGGAGCTAGA
$\beta$ -actin (ACTB)	CACCATTGGCAATGAGCGGTTC	AGGTCTTTGCGGATGTCCACGT