

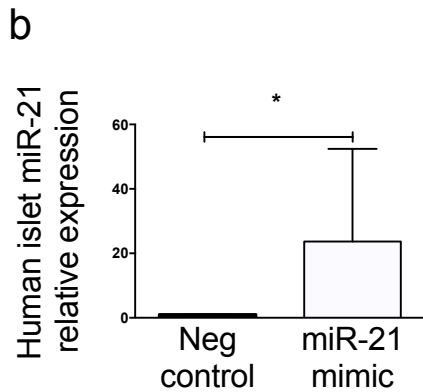
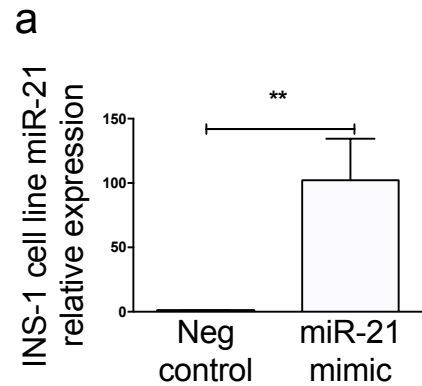
ESM Table 1. Primer Sequences

Target	Primer sequence
miR-21	Hs_miR-21_2 miScript Primer Assay, Qiagen cat# MS00009079
RNU6-1	MystiCq® microRNA qPCR Control Primer RNU6-1, Sigma cat# MIRCP00001
<i>BCL2</i> FW	TGGAGAGCGTCAACAGGGAGA
<i>BCL2</i> RV	CCCAGCCTCCGTTATCCTGG
<i>Bcl-XL</i> FW	GCAGTCAGCCAGAACCCTAT
<i>Bcl-XL</i> RV	GAGATGGGCTCAACCAGTCC
<i>Mcl1</i> FW	AACTGGGGCAGGATTGTGAC
<i>Mcl1</i> RV	CAGTCCCGCTTCGTCCTTAC
<i>Dp5</i> FW	GGACGTGGTCCCTTTCCTTT
<i>Dp5</i> RV	GCAAGCATCTCTCTCCCCTG
<i>Bax</i> FW	ACGGCAACTTCAACTGGGGC
<i>Bax</i> RV	TGATGGTTCTGATCAGCTCGGG
<i>Bid</i> FW	AGCCTCTCGGAGGAAGACAA
<i>Bid</i> RV	GGCCAACAGCATGGTCATTA
<i>Puma</i> FW	GAAGAGCAACATCGACACCG
<i>Puma</i> RV	GTAGGCACCTAGTTGGGCTC
<i>Pdcd4</i> FW	GGATCTGGAGGCGGGCAAC
<i>Pdcd4</i> RV	AAGGCAGTGTTTCAGCTTCAGAT
<i>Atf4</i> FW	GCAGTGTTGCTGTAACGGACA
<i>Atf4</i> RV	CGCTGTTTCAGGAAGCTCATCT
<i>Ddit3</i> FW	CCACCACACCTGAAAGCAGAA
<i>Ddit3</i> RV	AGGTGAAAGGCAGGGACTCA
<i>Hspa5</i> FW	CCACCAGGATGCAGACATTG
<i>HspA5</i> RV	AGGGCCTCCACTTCCATAGA
<i>Xbp1</i> FW	AGCACTCAGACTACGTGCGCCTC
<i>Xbp1</i> RV	CCAGAATGCCCAAAGGATATCAG
spl <i>Xbp1</i> FW	CTGAGTCCGCAGCAGGT
spl <i>Xbp1</i> RV	TGTCAGAGTCCATGGGAAGA

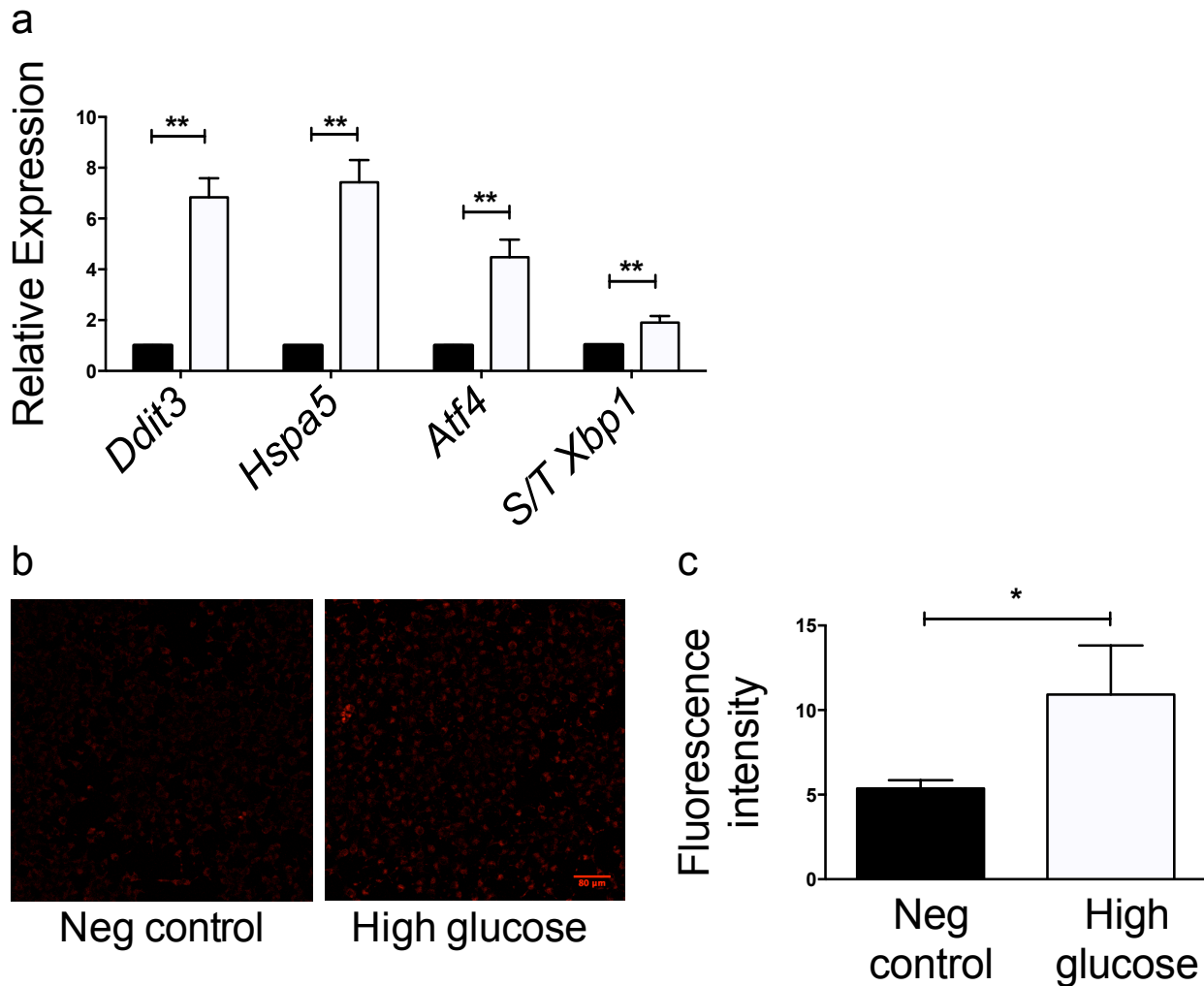
FW-forward, RV-reverse

ESM Table 2. Antibody Table

Target	Dilution	Company	Catalog Number
Rabbit anti- BCL2	1:750	Cell Signaling	2876
Rabbit anti- PDCD4	1:750	Cell Signaling	9535
Rabbit anti- Cleaved caspase 3	1:750	Cell Signaling	9664
Mouse anti- Actin	1:10000	MP Biomedicals	691002
Donkey anti-mouse	1:10000	LICOR Biosciences	926-32212
Donkey anti-rabbit	1:10000	LICOR Biosciences	926-32223



ESM Fig. 1 miR-21 expression after miR-21 mimic transfection. Relative expression of miR-21 was quantified in **(a)** INS-1 cells and **(b)** human islets after 48 hour transfection with miR-21 mimics. $n=4$ * $p \leq 0.05$; ** $p \leq 0.01$



ESM Fig. 2 Verification of treatment effects for tunicamycin and high glucose. **(a)** Effective treatment of INS-1 cells with tunicamycin (white bars) compared to controls (black bars) was verified via qPCR, revealing increased expression of ER stress genes. $n=4$. **(b)** Oxidative stress induction by high glucose treatment was verified using fluorescent detection of ROS generation. Representative images are shown. **(c)** Fluorescence quantification. $n=3$. $*p \leq 0.05$; $**p \leq 0.01$