Majumder Supplemental Table I
Primers used for RT-PCR

RNA	Primers	Notes
18S rRNA	Forward 5'-TTGACGGAAGGGCACCACCAG-3' Reverse 5'-GCACCACCACCCACGGAATCG-3'	RT-qPCR
ATF4	Forward 5'-GTTTGACTTCGATGCTCTGTTTC-3' Reverse 5'-GGGCTCCTTATTAGTCTCTTGG-3'	RT-qPCR
CHOP	Forward: 5'- CTGGAAGCCTGGTATGAGGAT-3' Reverse: 5'- CAGGGTCAAGAGTAGTGAAGGT-3'	RT-qPCR
DNAJB2	Forward: 5'- GCTTCACATTCACCTTCCGTA-3' Reverse: 5'- CGAGAAGACACCCAAGTCATC-3'	RT-qPCR
XBP1s	Forward: 5'-GAGTCCGCAGCAGGTG-3' Reverse: 5'-GTGTCAGAGTCCATGGGA-3'	RT-qPCR The forward primer spans the splice site
XBP1u	Forward: 5'-GACTATGTGCACCTCTGCAG-3' Reverse: 5'-CTGGGAGTTCCTCCAGACTA-3'	RT-qPCR The forward primer lies within the intron
XBP1	Forward: 5'-ACACGCTTGGGAATGGACAC-3' Reverse: 5'-CCATGGGAAGATGTTCTGGG-3'	for agarose gel analysis
XBP1	Forward: 5'- GGCTGTCTGGCCTTAGAAGA -3' Reverse: 5'- CTGTCAAATGACCCTCCCTG -3'	3'-UTR primers for analysis of total XBP1 by RT-qPCR
XBP1	Forward: 5'-GAATCTTTGTAAAATGATGAAAATTTACTATG-3' Reverse: 5'-TCTGTGTTGCTTTTTTTTTAATTGCAAGGG-3'	Poly(A) tail length assay
XBP1	5'- CCTCTAGACTCGAGCGGCCGC-3'	RT primer for detection of transfected XBP1 (Fig. 3B)

Supplemental Table 2
The turnover of XBP1u mRNA is not affected by the UPR in S/S and A/A cells

	Control	Tg (3 h)
	XBP1u mRNA half-life (h)	
S/S Cells	1.2 ± 0.1	1.1 ± 0.1
A/A Cells	1.3 ± 0.3	1.2 ± 0.3

S/S and A/A cells were cultured for 3 h with or without Tg and the half-life of XBP1u mRNA was determined by RT-qPCR as described in Fig. 1.

Legends for Supplemental Figures

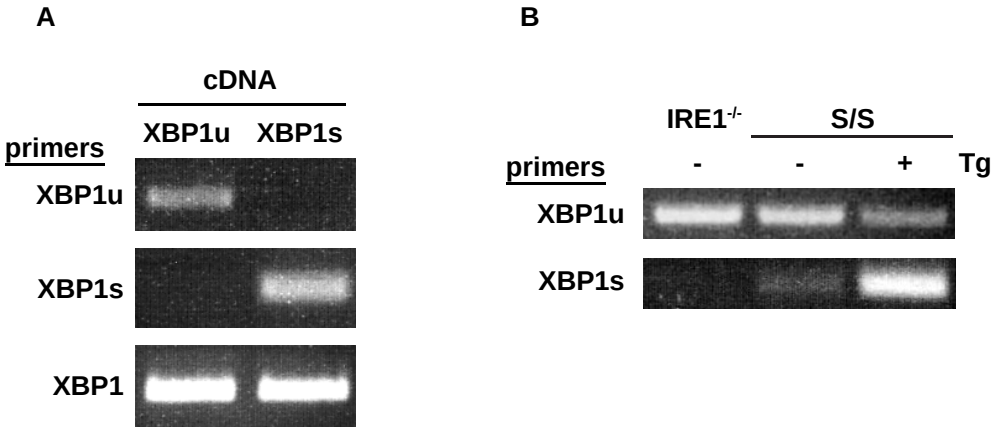
Supplemental Fig 1:

Validation of primers specific for XBP1u, XBP1s, and total XBP1 mRNAs. A. cDNAs encoding XBP1u and XBP1s were amplified using the indicated primers and analyzed by agarose gel electrophoresis. B. $IRE^{-/-}$ and S/S cells were incubated for 3 h with or without Tg as indicated and mRNAs were analyzed by RT-PCR using the indicated primers.

Supplemental Fig. 2

ATF4 and CHOP mRNAs are stabilized during the UPR in a process that does not require decreased translational efficiency. S/S cells were incubated with or without Tg for 3 h. (*Left)* The half-lives of the ATF4 and CHOP mRNAs were determined as in Fig. 1. (*Right*) The distribution of the ATF4 and CHOP mRNAs on polyribosome profiles was analyzed and used to calculate the percentage of the total signal in the polyribosome fraction. *Value from Tg-treated cells is significantly different from the control value ($p<0.05$).

Majumder Supplemental Figure 1



Majumder Supplemental Figure 2