

IRE1 α (371-560): sc-4488 WB

BACKGROUND

The accumulation of unfolded proteins within the endoplasmic reticulum (ER) of yeast and mammalian cells activates the unfolded protein response (UPR) pathway and leads to the transcription of ER-specific genes involved in protein folding. The activation of the UPR requires the ER transmembrane kinase IRE1p (for inositol-requiring and ER-to-nucleus signaling protein). IRE1 α and IRE1 β are two mammalian homologs of the yeast IRE1p. These related proteins localize to the ER lumen and contain both a short transmembrane domain that spans the ER membrane and a cytosolic Ser/Thr kinase domain. IRE1 activation involves the oligomerization and trans-phosphorylation of the cytosolic portion of the proteins, which then potentiates its intrinsic kinase activity and, in turn, stimulates transcription of UPR-targeted genes. In response to stress, sensors for the ER mammalian cells activate IRE1 α and IRE1 β , which then results in the phosphorylation of JNK (Jun N-Terminal Kinase) and the activation of the cellular MAP kinase pathway.

REFERENCES

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SOURCE

IRE1 α (371-560) is expressed in *E. coli* as a 48 kDa tagged fusion protein corresponding to amino acids 371-560 of IRE1 α of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

IRE1 α (371-560) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

IRE1 α (371-560) is suitable as a Western blotting control for sc-20790.

RESEARCH USE

For research use only, not for use in diagnostic procedures.