IRE1α (H-190): sc-20790

**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). IRE1α and IRE1β 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 transphosphorylation 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 IRE1α and IRE1β, which then results in the phosphorylation of JNK (Jun N-terminal kinase) and the activation of the cellular MAP kinase pathway.

**CHROMOSOMAL LOCATION**

Genetic locus: ERN1 (human) mapping to 17q23.3; Ern1 (mouse) mapping to 11 E1.

**SOURCE**

IRE1α (H-190) is a rabbit polyclonal antibody raised against amino acids 371-560 of IRE1α of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

IRE1α (H-190) is available conjugated to agarose (sc-20790 AC), 500µg/0.25 ml agarose in 1 ml, for IP.

**APPLICATIONS**

IRE1α (H-190) is recommended for detection of IRE1α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1,000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IRE1α (H-190) is also recommended for detection of IRE1α in additional species, including equine, canine and bovine.

Suitable for use as control antibody for IRE1α siRNA (h): sc-40705, IRE1α siRNA (m): sc-40706, IRE1α shRNA Plasmid (h): sc-40705-SH, IRE1α shRNA Plasmid (m): sc-40706-SH, IRE1α shRNA (h) Lentiviral Particles: sc-40705-V and IRE1α shRNA (m) Lentiviral Particles: sc-40706-V.

Molecular Weight of IRE1α: 120 kDa.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

- **IRE1α (H-190): sc-20790. Western blot analysis of IRE1α expression in DU 145 whole cell lysate.**
- **IRE1α (H-190): sc-20790. Immunofluorescence staining of methanol-fixed IMR-32 cells showing cytoplasmic localization.**
- **IRE1α (H-190): sc-20790. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine pancreas and islet cells.**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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