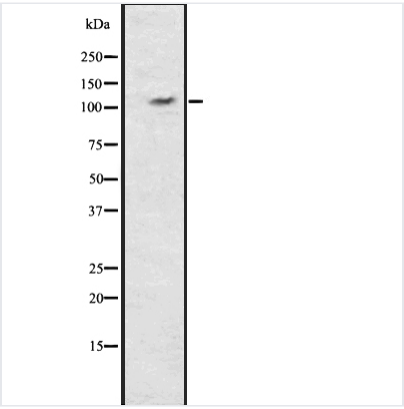
IRE1 Antibody

PRODUCT OVERVIEW

Product Name	IRE1, Antibody
Full Product Name	IRE1 Antibody
Product Gene Name	anti-IRE1 antibody
Molecular Weight	6,649 Da
OMIM	604033
3D Structure	ModBase 3D Structure for O75460
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for anti-IRE1 antibody	MBS8517086 is an antibody targeting IRE1. Also known as IRE1 Antibody.
Other Notes	Small volumes of anti-IRE1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-IRE1 antibody
Western blot analysis IRE1 using COLO205 whole cell lysates

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IRE1. It may not necessarily be applicable to this product.

NCBI GI #	153946421
NCBI GeneID	2081
NCBI Accession #	NP_001424.3
UniProt Primary Accession #	O75460
UniProt Secondary Accession #	Q59EE2; A1L457; A8K8N8; A8MXS7
UniProt Related Accession #	O75460
GenBank Nucleotide #	NM_001433.4
NCBI Official Full Name	serine/threonine-protein kinase/endoribonuclease IRE1

NCBI Official Synonym Full Names	endoplasmic reticulum to nucleus signaling 1
NCBI Official Symbol	ERN1
NCBI Official Synonym Symbols	IRE1; IRE1P; IRE1a; hIRE1p
UniProt Protein Name	Serine/threonine-protein kinase/endoribonuclease IRE1
UniProt Synonym Protein Names	Endoplasmic reticulum-to-nucleus signaling 1
Protein Family	Serine/threonine-protein kinase/endoribonuclease
UniProt Gene Name	ERN1
UniProt Synonym Gene Names	IRE1a
NCBI Protein Information	serine/threonine-protein kinase/endoribonuclease IRE1
NCBI Summary for IRE1	This gene encodes the transmembrane protein kinase inositol-requiring enzyme 1. The encoded protein contains two functional catalytic domains, a serine/threonine-protein kinase domain and an endoribonuclease domain. This protein functions as a sensor of unfolded proteins in the endoplasmic reticulum (ER) and triggers an intracellular signaling pathway termed the unfolded protein response (UPR). The UPR is an ER stress response that is conserved from yeast to mammals and activates genes involved in degrading misfolded proteins, regulating protein synthesis and activating molecular chaperones. This protein specifically mediates the splicing and activation of the stress response transcription factor X-box binding protein 1. [provided by RefSeq, Aug 2017]
UniProt Comments for IRE1	Serine/threonine-protein kinase and endoribonuclease that acts as a key sensor for the endoplasmic reticulum unfolded protein response (UPR) (PubMed:11779464, PubMed:11175748, PubMed:12637535, PubMed:9637683, PubMed:21317875). In unstressed cells, the endoplasmic reticulum luminal domain is maintained in its inactive monomeric state by binding to the endoplasmic reticulum chaperone HSPA5/BiP (PubMed:21317875). Accumulation of misfolded protein in the endoplasmic reticulum causes release of HSPA5/BiP, allowing the luminal domain to homodimerize, promoting autophosphorylation of the kinase domain and subsequent activation of the endoribonuclease activity (PubMed:21317875). The endoribonuclease activity is specific for XBP1 mRNA and excises 26 nucleotides from XBP1 mRNA (PubMed:11779464, PubMed:24508390, PubMed:21317875). The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes (PubMed:11779464, PubMed:24508390, PubMed:21317875).
Research Articles on IRE1	**1.** Three branches of the Unfolded Protein Response (UPR) have been described, including the activation of the inositol-requiring enzyme 1 (IRE1), the pancreatic ER kinase (PKR)-like ER kinase (PERK), and the activating transcription factor 6 (ATF6).
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