

Phospho-IRE1 (S724) Antibody
Rabbit mAb
Catalog # AP90608**Specification****Phospho-IRE1 (S724) Antibody - Product Information**

Application	WB
Primary Accession	O75460
Clonality	Monoclonal
Other Names	
ERN1, ER to nucleus signalling 1, Inositol-requiring enzyme 1, Inositol-requiring protein 1, Ire1-alpha, IRE1a, HIRE1p, IRE1, Inositol-requiring 1, IRE1P;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	109735 Da

Phospho-IRE1 (S724) Antibody - Additional Information

Dilution	WB~~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Phospho-IRE1 (S724)
Description	Senses unfolded proteins in the lumen of the endoplasmic reticulum via its N-terminal domain which leads to enzyme auto-activation. The active endoribonuclease domain splices XBP1 mRNA to generate a new C-terminus, converting it into a potent unfolded-protein response transcriptional activator and triggering growth arrest and apoptosis.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Phospho-IRE1 (S724) Antibody - Protein Information**Name** ERN1 ([HGNC:3449](#))**Function**

Serine/threonine-protein kinase and endoribonuclease that acts as a key sensor for the endoplasmic reticulum unfolded protein response (UPR) (PubMed:11175748, PubMed:11779464, PubMed:12637535, PubMed:12637535).

[19328063](http://www.uniprot.org/citations/19328063), PubMed: [21317875](http://www.uniprot.org/citations/21317875), PubMed: [28128204](http://www.uniprot.org/citations/28128204), PubMed: [30118681](http://www.uniprot.org/citations/30118681), PubMed: [36739529](http://www.uniprot.org/citations/36739529), PubMed: [9637683](http://www.uniprot.org/citations/9637683)). 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](http://www.uniprot.org/citations/21317875)). Accumulation of misfolded proteins 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](http://www.uniprot.org/citations/21317875)). The endoribonuclease activity is specific for XBP1 mRNA and excises 26 nucleotides from XBP1 mRNA (PubMed: [11779464](http://www.uniprot.org/citations/11779464), PubMed: [21317875](http://www.uniprot.org/citations/21317875), PubMed: [24508390](http://www.uniprot.org/citations/24508390)). The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes (PubMed: [11779464](http://www.uniprot.org/citations/11779464), PubMed: [21317875](http://www.uniprot.org/citations/21317875), PubMed: [24508390](http://www.uniprot.org/citations/24508390)). Acts as an upstream signal for ER stress-induced GORASP2-mediated unconventional (ER/Golgi-independent) trafficking of CFTR to cell membrane by modulating the expression and localization of SEC16A (PubMed: [21884936](http://www.uniprot.org/citations/21884936), PubMed: [28067262](http://www.uniprot.org/citations/28067262)).

Cellular Location

Endoplasmic reticulum membrane; Single-pass type I membrane protein

Tissue Location

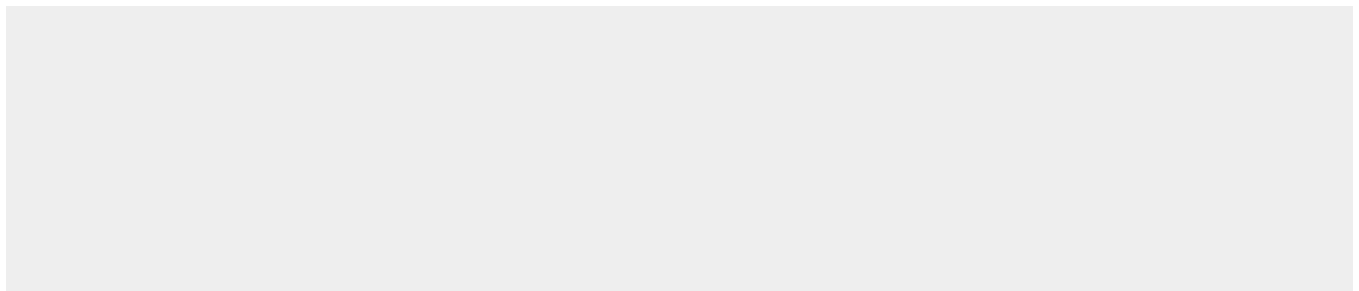
Ubiquitously expressed. High levels observed in pancreatic tissue.

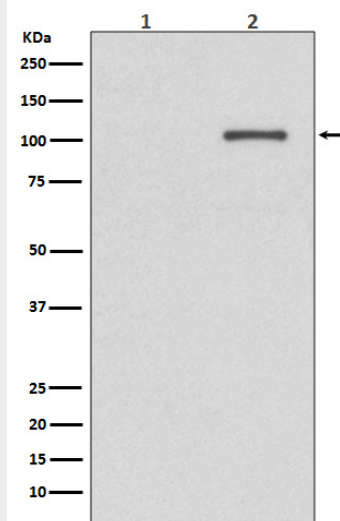
Phospho-IRE1 (S724) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-IRE1 (S724) Antibody - Images





Western blot analysis of Phospho-IRE1 (S724) expression in (1) K562 cell lysate treated with AP; (2) Untreated K562 cell lysate.