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Phospho-IRE1 (Ser724) Rabbit pAb

Catalog # AP53594

Product Information

Primary Accession	O75460
Host	Rabbit
Clonality	Polyclonal Antibody
Calculated MW	109735

Additional Information

Gene ID	2081
Other Names	IRE1b; IRE2p; hIRE2p; IRE1-BETA
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

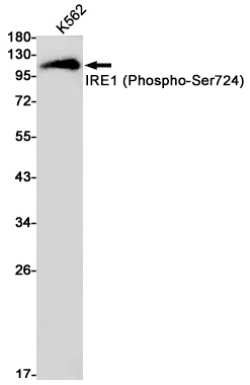
Protein Information

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:19328063, PubMed:21317875, PubMed:28128204, PubMed:30118681, PubMed:36739529, PubMed: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). 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). The endoribonuclease activity is specific for XBP1 mRNA and excises 26 nucleotides from XBP1 mRNA (PubMed:11779464, PubMed:21317875, PubMed:24508390). The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes (PubMed:11779464, PubMed:21317875, PubMed: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, PubMed:28067262).
Cellular Location	Endoplasmic reticulum membrane; Single-pass type I membrane protein
Tissue Location	Ubiquitously expressed. High levels observed in pancreatic tissue.

Background

Swiss-Prot Acc.O75460.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). 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, PubMed:28067262).

Images



Western blot detection of IRE1 (Phospho-Ser724) in K562 cell lysates using IRE1 (Phospho-Ser724) Rabbit pAb(1:1000 diluted).Predicted band size:110kDa.Observed band size:110kDa.

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