Product Name: Phospho-IRE1 (S724) (4K17) Rabbit Monoclonal Antibody
Catalog #: AMRe05925

Summary

Production Name	Phospho-IRE1 (S724) (4K17) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Purification	Affinity purification

Immunogen

Gene Name	ERN1
Alternative Names	ERN1, ER to nucleus signalling 1, Inositol-requiring enzyme 1, Inositol-requiring protein 1, Ire1-alpha, IRE1a, HIRE1p, IRE1, Inositol-requiring 1, IRE1P;
Gene ID	2081.0
SwissProt ID	O75460.A synthetic phosphopeptide corresponding to residues surrounding Ser724 of human IRE1

Application

Dilution Ratio	WB: 1:1000-1:5000
Molecular Weight	110kDa

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Background

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. 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, PubMed:28128204). 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: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).

Research Area

Image Data

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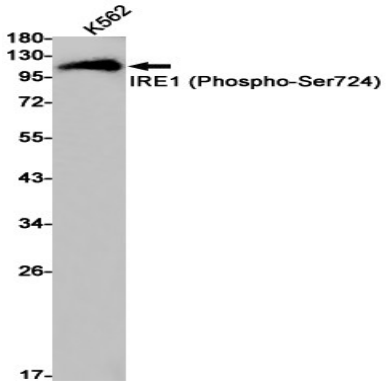

Western blot detection of IRE1 (Phospho-Ser724) in K562 cell lysates using IRE1 (Phospho-Ser724) antibody(1:1000 diluted).

Note

For research use only.