

Phospho-IRE1 (Ser724) Rabbit mAb

Catalog # AP76346

Product Information

ApplicationWB, IPPrimary AccessionQ75460ReactivityHumanHostRabbit

Clonality Monoclonal Antibody

Calculated MW 109735

Additional Information

Gene ID 2081

Other Names ERN1

Dilution WB~~1/500-1/1000 IP~~N/A

Format 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and

0.05% BSA.

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: <u>11175748</u>, PubMed: <u>11779464</u>, PubMed: <u>12637535</u>, PubMed: <u>13328063</u>, PubMed: <u>21317875</u>, PubMed: <u>28128204</u>

PubMed:<u>19328063</u>, PubMed:<u>21317875</u>, PubMed:<u>28128204</u>,

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: <u>21317875</u>). The endoribonuclease activity is specific for XBP1 mRNA

and excises 26 nucleotides from XBP1 mRNA (PubMed: 11779464,

PubMed: <u>21317875</u>, PubMed: <u>24508390</u>). The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression

of UPR target genes (PubMed: 11779464, PubMed: 21317875,

PubMed:<u>24508390</u>). 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).

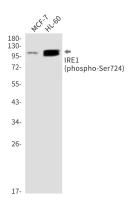
Cellular Location

Endoplasmic reticulum membrane; Single-pass type I membrane protein

Tissue Location

Ubiquitously expressed. High levels observed in pancreatic tissue.

Images



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.