ARG55114
anti-IRE1a antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes IRE1a
Tested Reactivity	Hu, Ms, Rat
Tested Application	ELISA, ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	IRE1a
Species	Human
Immunogen	Synthetic peptide (16 aa) within the last 50 aa of Human IRE1a protein.
Conjugation	Un-conjugated
Alternate Names	Ire1-alpha; Serine/threonine-protein kinase/endoribonuclease IRE1; IRE1a; Endoplasmic reticulum-to-nucleus signaling 1; EC 3.1.26.-; IRE1; Inositol-requiring protein 1; IRE1P; EC 2.7.11.1; hIRE1p

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
ICC/IF	1 - 2 µg/ml
WB	0.5 - 2 µg/ml

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Positive Control: A-20 Cell Lysate

Properties

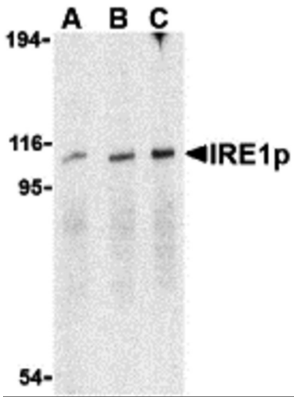
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

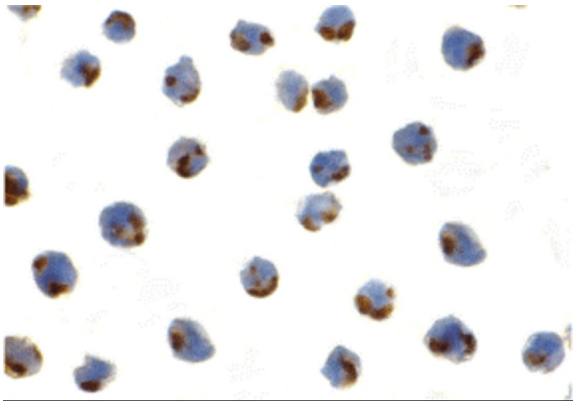
Database links	GeneID: 2081 Human GeneID: 78943 Mouse Swiss-port # O75460 Human Swiss-port # Q9EQY0 Mouse
Gene Symbol	ERN1
Gene Full Name	endoplasmic reticulum to nucleus signaling 1
Background	IRE1p Antibody: Accumulation of malfolded proteins in the endoplasmic reticulum (ER) activates the unfolded protein response (UPR) and the upregulation of the ER molecular chaperones GRP78 and GRP 94. These proteins are normally bound to ER transmembrane proteins such as IRE1p and ATF6 but ER stress causes their dissociation. This allows IRE1p, a serine-threonine protein kinase to transduce the unfolded protein signal from the ER to the nucleus. IRE1p also has an endoribonuclease activity that is required to splice X-box binding protein (XBP1) mRNA converting it to a potent UPR transcriptional activation. Depletion of IRE1p through the expression of a dominant negative form of IRE1p has no effect on transfected cells, but cell death via apoptosis occurs under stress conditions that cause unfolded proteins to accumulate in the ER. Two alternatively spliced transcript variants encoding different isoforms have been found for this gene.
Function	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. [UniProt]
Research Area	Cell Biology and Cellular Response antibody; Cell Death antibody; Gene Regulation antibody; Signaling Transduction antibody
Calculated Mw	110 kDa
PTM	Autophosphorylated. ADP-ribosylated by PARP16 upon ER stress, which increases both kinase and endonuclease activities.

Images



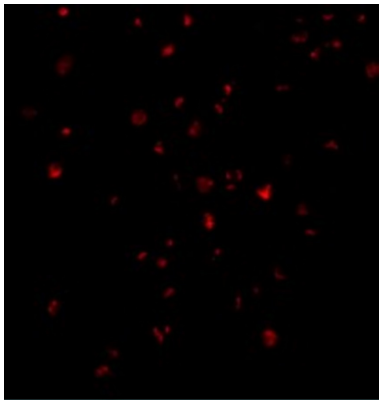
ARG55114 anti-IRE1a antibody WB image

Western blot: A-20 cell lysate stained with ARG55114 anti-IRE1a antibody at (A) 0.5, (B) 1 and (C) 2 ug/ml dilution.



ARG55114 anti-IRE1a antibody ICC/IF image

Immunocytochemistry: A-20 cells stained with ARG55114 anti-IRE1a antibody at 1 ug/ml dilution.



ARG55114 anti-IRE1a antibody ICC/IF image

Immunofluorescence: A20 cells stained with ARG55114 anti-IRE1a antibody at 2 ug/ml dilution.