

Datasheet for 600-401-HB9S**Ire1 Antibody****Overview**

Description:	Anti-IRE1 (RABBIT) Antibody - 600-401-HB9S
Item No.:	600-401-HB9S
Size:	25 µL
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background: Inositol-requiring enzyme 1 (IRE1) or ERN1 (Endoplasmic Reticulum To Nucleus Signaling 1) is a Serine/threonine-protein kinase and endoribonuclease that acts as a key sensor for the endoplasmic reticulum unfolded protein response (UPR). In unstressed cells, the endoplasmic reticulum luminal domain is maintained in its inactive monomeric state by binding to the endoplasmic reticulum chaperone HSPA5/BiP. 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. The endoribonuclease activity is specific for XBP1 mRNA and excises 26 nucleotides from XBP1 mRNA. The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes. Diseases associated with ERN1 include Chromosome 6Pter-P24 Deletion Syndrome and Alzheimer Disease. Anti-IRE1 Antibody is useful for researchers interested in Neuroscience research.

Synonyms: Rabbit Anti-Ern1 Antibody, Rabbit Anti-Endoplasmic Reticulum To Nucleus Signaling 1 Antibody, Rabbit Anti-IRE1 Antibody, Endoplasmic Reticulum To Nucleus Signaling 1, Serine/Threonine-Protein Kinase/Endoribonuclease IRE1, Inositol-Requiring Protein 1, Inositol-Requiring Enzyme 1, ER To Nucleus Signalling 1, Ire1-Alpha, HIRE1p, IRE1a, IRE1, Endoplasmic Reticulum-To-Nucleus Signaling 1, Protein Kinase/Endoribonuclease, Inositol-Requiring 1, IRE1P

Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Ern1
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Ire1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal portion of mouse Ire1 conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against mouse Ire1. This product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with the antigen based on 100% homology with the immunizing sequence to human.
Relevant Links:	<ul style="list-style-type: none">• UniProtKB - Q9EQY0• GeneID - 78943• NCBI - NP_076402.1

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-Ire1 Antibody has been tested in ELISA, Western Blot, Immunofluorescence, and Immunohistochemistry. Expect a band in mouse for isoform 1 at ~110.2kDa and 2 at ~45.3kDa, and in human at ~109.7 kDa in western blot using appropriate lysates or tissues. Positive control used: Mouse brain tissue in Western Blot; SCLC-21H cells in IF; and Human stomach tissue in IHC.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000-1:50,000
IF:	10 µg/ml
IHC:	1:100
WB:	1:1000

Formulation

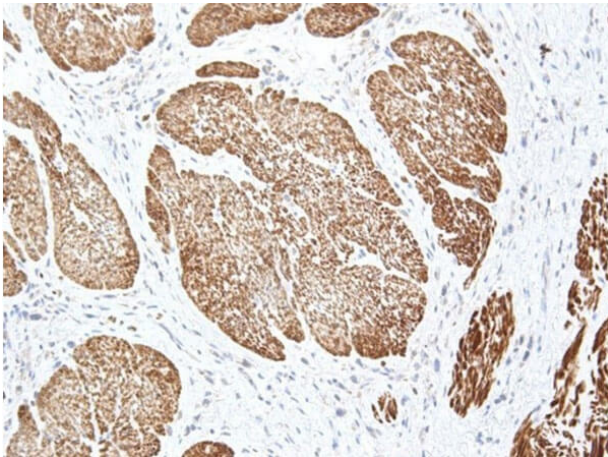
Physical State:	Liquid (sterile filtered)
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Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

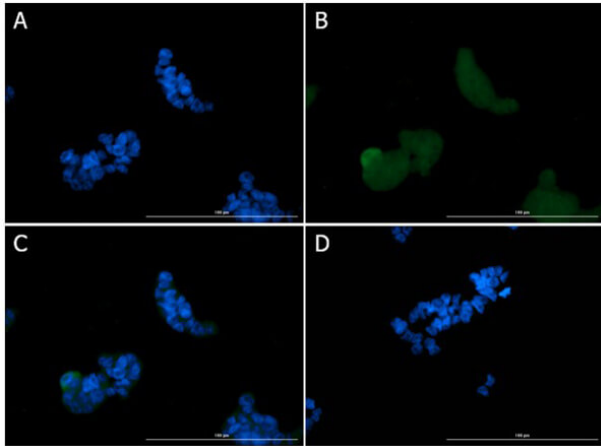
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



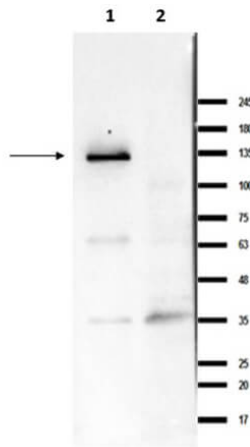
Immunohistochemistry

Immunohistochemistry of Rabbit Anti-Ire1 Antibody. Tissue: Human stomach tissue. Antigen Retrieval: HIER. Fixative: none. Primary Antibody: Anti-Ire1 at 1:100 at RT. Secondary Antibody: Anti-Rabbit ready-to-use at RT. Counter stain: Hematoxylin. Magnification: 40X. Analysis Results: specific strong staining in cytoplasm and membrane of glandular cells were observed in stomach tissue.



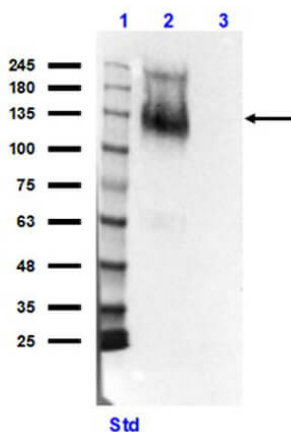
Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Ire1 Antibody. Cells: SCLC-21H Cells. Fixative: 4% PFA. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-Ire1 at 10 μ g/mL overnight at RT. Secondary Antibody: Donkey Anti-Rabbit IgG DyLight™488 (p/n 611-741-127) at 5 μ g/mL for 1hr at RT. Nuclear Counterstain: DAPI. Staining: (A) DAPI, (B) Anti-Ire1 + DyLight™488, (C) Merge A+B, (D) secondary only. Expected localization: endoplasmic reticulum, nuclear and punctate cytoplasmic.



Western Blot

Western Blot of Rabbit Anti-Ire1 Antibody. Lane 1: IRE1 overexpressing HEK293T C-MYC/DDK tagged lysate (10 ug) [+]. Lane 2: HEK293T empty vector lysate (10ug) [-]. Markers: Opal Prestained Molecular Weight (p/n MB-210-0500). Primary Antibody: Anti-Ire1 at 1:1000 overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP (p/n 611-103-122) at 1:70,000 for 1hr at RT. Block: BlockOut Buffer (p/n MB-073). Predicted MW: ~135kDa overexpressing conditions. Observed MW: ~35kDa, ~135kDa. Exposure: 15sec.



Western Blot

Western Blot of Rabbit Anti-Ire1 Antibody. Lane 1: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 2: Mouse brain normal tissue lysate (p/n W10-000-T004) [+]. Lane 3: C2C12 lysate (p/n W10-001-GL7). Load: 35 μ g lysate/lane. Primary Antibody: Anti-Ire1 at 1:1000 overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP (p/n 611-103-122) at 1:70,000 for 1hr at RT. Block: 5% BLOTTO (p/n B501-0500). Predicted MW: ~110kDa endogenous. Observed MW: ~135kDa. Exposure: 10sec.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.