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antibody and ELISA experts

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Anti-IRE1p ERN1 Antibody

Catalog Number: A00683

About ERN1

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.

Overview

Product Name	Anti-IRE1p ERN1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-IRE1p ERN1 Antibody (Catalog # A00683). Tested in ELISA, WB, ICC, IF, IHC-P applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IF, IHC-P, ICC, WB
Clonality	Polyclonal
Formulation	IRE1p Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	IRE1p antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	O75460

Technical Details

Immunogen	Anti-IRE1p antibody was raised against a peptide corresponding to 16 amino acids near the carboxy terminus of human IRE1P. The immunogen is located within the last 50 amino acids of IRE1p.
Predicted Reactive Species	Rabbit
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL
Purification	IRE1p Antibody is affinity chromatography purified via peptide column.

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Suggested Dilutions	WB: 0.5-2 ug/mL; ICC: 1 ug/mL; IF: 2-20 ug/mL; IHC: 2 ug/mL. Antibody validated: Western Blot in human, mouse and rat samples; Immunocytochemistry in mouse samples; Immunofluorescence in human, mouse and rat samples; Immunohistochemistry in human and rat samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.

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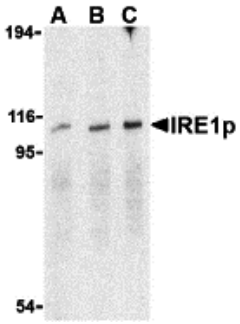
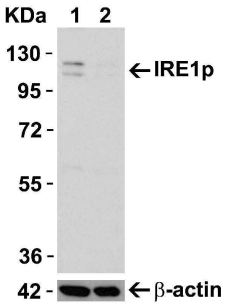
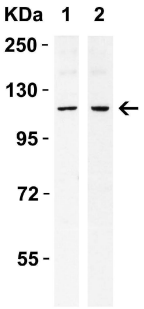
Anti-IRE1p ERN1 Antibody (A00683) Images



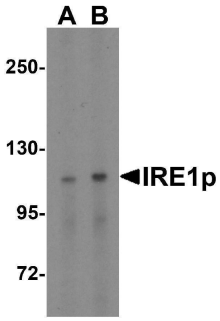
Western Blot Validation in Mouse A20 Cell Lysate Loading: 15 ug of lysates per lane. Antibodies: IRE1p A00683 (A: 0.5 ug/mL, B: 1 ug/mL, C: 2 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



KO Validation in HeLa Cells Loading: 10 ug of WT cell lysates (lane 1) or IRE1P KO cell lysates (lane 2). Antibodies: IRE1P A00683 (0.5 ug/mL) and beta-actin (1 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Western Blot Validation in Human Cell Lines Loading: 15 ug of lysates per lane. Antibodies: IRE1p A00683 (0.4 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: Caco-2, Lane2: SK-N-SH



Western Blot Validation in Rat Brain Tissue Lysate Loading: 15 ug of lysates per lane. Antibodies: IRE1p A00683 (A: 0.5 ug/mL, B: 1 ug/mL), 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

Immunofluorescence Validation of IRE1p in Mouse A20 Cells Immunofluorescent analysis of 4% paraformaldehyde-fixed A20 Cells labeling IRE1P with A00683 at 2 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red).

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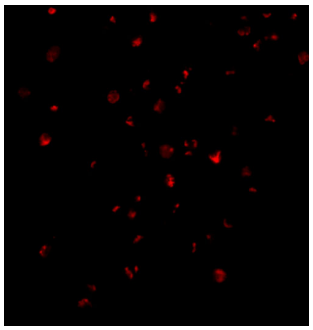
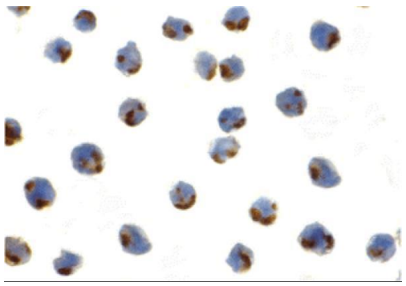
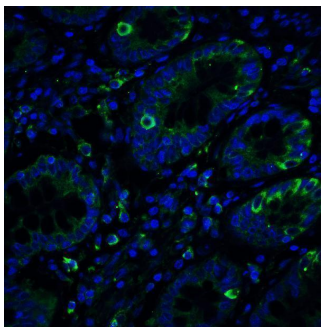
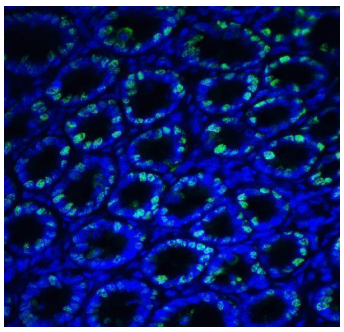




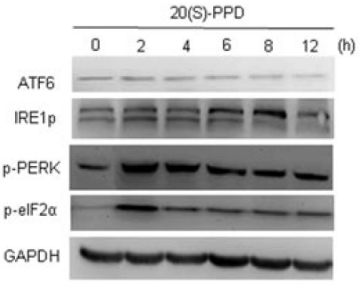
Immunocytochemistry Validation of IRE1p in Mouse A20 Cells Immunocytochemical analysis of A20 cells using anti-IRE1p antibody (A00683) at 1 ug/ml. Cells was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4˚C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunofluorescence Validation of IRE1p in Human Small Intestine Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed Human Small Intestine Tissue labeling IRE1p with A00683 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



Immunofluorescence Validation of IRE1p in Rat Small Intestine Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed Rat Small Intestine Tissue labeling IRE1p with A00683 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



Induced Expression Validation of IRE1p in human umbilical vein endothelial cells (HUVECs) (Wang et al., 2019) IRE1p expression was examined by Western blot analysis with anti-IRE1p antibodies (A00683). IRE1p was increased in HUVEC cells treated with 10 uM 20(S)-PPD for 6 to 8 hours compared with control cells.

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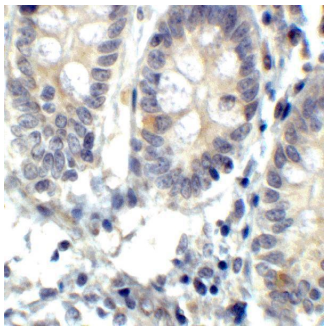
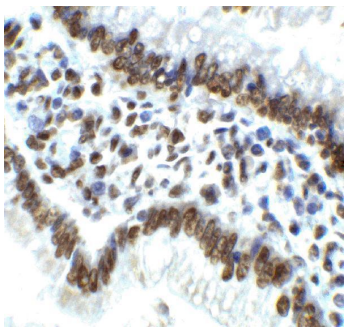


Immunohistochemistry Validation of IRE1p in Human Small Intestine Tissue Immunohistochemical analysis of paraffin-embedded Human Small Intestine Tissue using anti-IRE1P antibody (A00683) at 2 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4˚C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunohistochemistry Validation of IRE1p in Rat Small Intestine Tissue Immunohistochemical analysis of paraffin-embedded Rat Small Intestine Tissue using anti-IRE1P antibody (A00683) at 2 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4˚C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.

1 Publications Citing This Product

1. PubMed ID: 32552877, Chen KY,Chen YJ,Cheng CJ,Jhan KY,Wang LC.Excretory/secretory products of Angiostrongylus cantonensis fifth-stage larvae induce endoplasmic reticulum stress via the Sonic hedgehog pathway in mouse astrocytes.Parasit Vectors.2020 Jun 18;13(1):317.doi:10.1186/s13071-020-04189-w.PMID:32552877;PMCID:PMC7301976.

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