

Anti-IRE1/ERN1 Antibody Picoband™

Catalog Number: A00683-1

About ERN1

The serine/threonine-protein kinase/endoribonuclease inositol-requiring enzyme 1 (IRE1) is an enzyme that in humans is encoded by the ERN1 gene. This gene encodes the transmembrane protein kinase inositol-requiring enzyme 1. The encoded protein contains two functional catalytic domains, a serine/threonine-protein kinase domain and an endoribonuclease domain. This protein functions as a sensor of unfolded proteins in the endoplasmic reticulum (ER) and triggers an intracellular signaling pathway termed the unfolded protein response (UPR). The UPR is an ER stress response that is conserved from yeast to mammals and activates genes involved in degrading misfolded proteins, regulating protein synthesis and activating molecular chaperones. This protein specifically mediates the splicing and activation of the stress response transcription factor X-box binding protein 1.

Overview

Product Name	Anti-IRE1/ERN1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-IRE1/ERN1 Antibody Picoband™ catalog # A00683-1. Tested in ELISA, Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	O75460

Technical Details

Immunogen	E. coli-derived human IRE1 recombinant protein (Position: R158-L280).
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti- Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml</p> <p>Immunocytochemistry/Immunofluorescence, 2ug/ml</p> <p>Flow Cytometry, 1-3ug/1x10⁶ cells</p> <p>Direct ELISA, 0.1-0.5ug/ml</p>

Anti-IRE1/ERN1 Antibody Picoband™ (A00683-1) Images



Figure 1. Western blot analysis of IRE1 using anti-IRE1 antibody (A00683-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human A549 whole cell lysates,

Lane 2: human SK-OV-3 whole cell lysates,

Lane 3: human PANC-1 whole cell lysates,

Lane 4: rat brain tissue lysates,

Lane 5: mouse brain tissue lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-IRE1 antigen affinity purified polyclonal antibody (Catalog # A00683-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for IRE1 at approximately 170KD. The expected band size for IRE1 is at 110KD.

3 Publications Citing This Product

1. PubMed ID: 10.3892/ol.2013.1651, Endoplasmic reticulum stress in diethylnitrosamine-induced rat liver cancer
2. PubMed ID: 10.1007/s12031-016-0755-2, Role of the Endoplasmic Reticulum Pathway in the Medial Prefrontal Cortex in Post-Traumatic Stress Disorder Model Rats
3. PubMed ID: 10.1038/s41419-020-02930-y, BCAT1 binds the RNA-binding protein ZNF423 to activate autophagy via the IRE1-XBP-1-RIDD axis in hypoxic PSMCs

Visit bosterbio.com/anti-ire1-picoband-trade-antibody-a00683-1-boster.html to see all 3 publications.

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