Datasheet for 600-401-H33

XBP-1 Antibody

Overview

Description:	Anti-XBP-1 (RABBIT) Antibody - 600-401-H33
Item No.:	600-401-H33
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	XBP-1 antibody detects human XBP-1. X box binding protein 1 (XBP-1) is a key protein in the mammalian unfolded protein response (UPR) that protects the cell against the stress of malfolded proteins in the endoplasmic reticulum (ER). Upon sensing unfolded proteins, an ER transmembrane endonuclease and kinase termed IRE1p is activated and excises an intron from XBP-1 mRNA. The spliced XBP-1 mRNA results in a 371 amino acid protein (XBP-1s) which is then translocated to the nucleus where it binds to the regulatory elements of downstream genes. Together with other UPR transcription factors such as ATF6, XBP-1 stimulates the production of ER stress proteins including the ER resident protein chaperones glucose regulated protein (GRP) 78 and GRP94. Anti-XP1 is ideal for investigators involved in enzyme, cell cycle proteins and cancer research.
Synonyms:	TREB5, XBP2
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	XBP1
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide

Immunogen:	XBP-1 Antibody was produced from whole rabbit serum prepared by repeated immunizations with a peptide near the n-terminus of human XBP-1.
Purity/Specificity:	Anti-XBP-1 Antibody was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with XBP-1 with Human and Mouse based on 100% homology with the immunizing sequence. Cross-reactivity with XBP-1 from other sources has not been determined.
Relevant Links:	• NCBI - BAB82982 • UniProtKB - P17861 • GeneID - 7494

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-XBP-1 Antibody is tested for use in ELISA, Western Blot, Immunofluorescence, Immunocytochemistry, and Immunohistochemistry. Expect a band approximately ~28.6kDa using positive control HepG2 whole cell lysates, which also can be used for ICC and IF, or other specific lysates. Western Blot in human samples; Immunofluorescence in human and rat samples; Immunocytochemistry in human samples; Immunohistochemistry in human, mouse, and rat samples. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	20 µg/mL
IHC:	2-5 µg/mL
WB:	0.25-2 µg/mL

Formulation

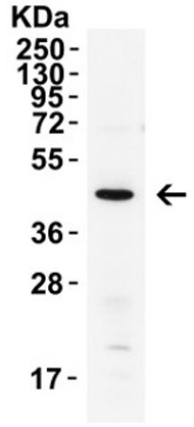
Physical State:	Liquid (sterile filtered)
Concentration:	1 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

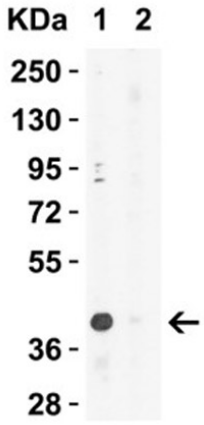
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

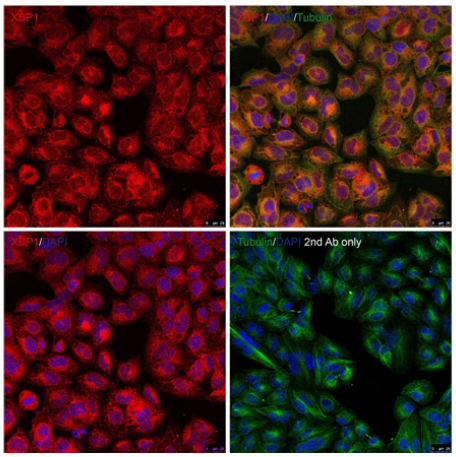
Images



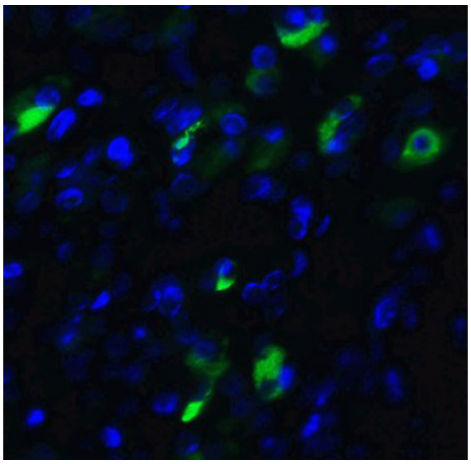
Western Blot
Western Blot Validation of XBP-1.
Load: 15 µg of Mouse Pancreas Tissue lysate per lane.
Primary antibody: anti-XBP-1 at 4µg/mL for 1h at RT in 5% NFDM.
Secondary antibody: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



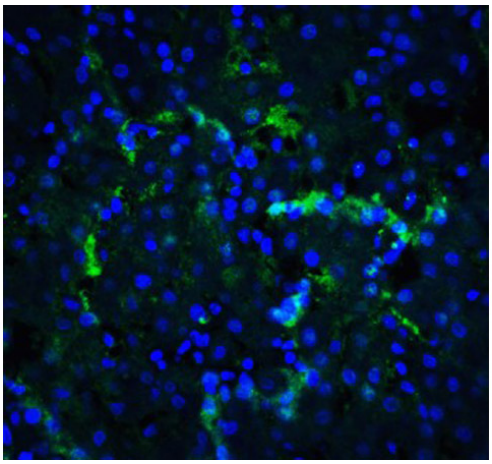
Western Blot
Western Blot Validation of XBP-1.
Load: 15 µg of Rat Liver Tissue Lysate per lane.
Primary antibody: anti-XBP-1 at 1µg/mL in Lane 1 the absence and Lane 2 the presence of blocking peptide for 1h at RT in 5% NFDM.
Secondary antibody: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



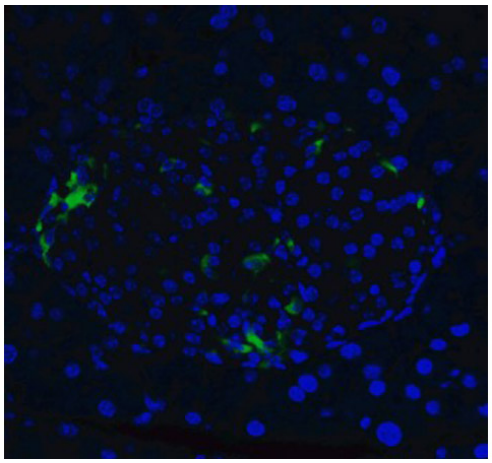
Immunofluorescence Microscopy
Immunofluorescence Validation of XBP-1.
Cell: HeLa Cells.
Fixation: methanol-fixed.
Primary Antibody: Anti-XBP-1 at 10 µg/mL.
Secondary: goat anti-rabbit IgG secondary antibody at 1:1000 dilution (red) and DAPI staining (blue). Alpha tubulin was stained with anti-alpha tubulin antibody following by goat anti-mouse IgG secondary antibody (green). Images were captured with confocal microscopy.



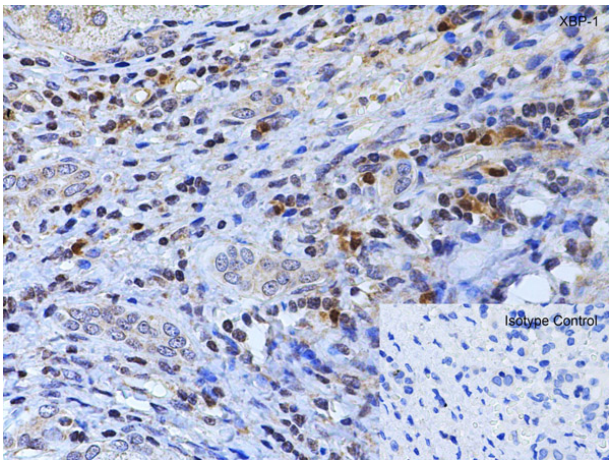
Immunofluorescence Microscopy
Immunofluorescence Validation of XBP-1.
Tissue: Human Pancreas Tissue.
Fixation: 4% paraformaldehyde-fixed.
Primary Antibody: anti-XBP-1 at 20 µg/mL.
Secondary: goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI staining (blue).



Immunofluorescence Microscopy
Immunofluorescence Validation of XBP-1.
Tissue: Human Liver Tissue.
Fixation: 4% paraformaldehyde-fixed.
Primary Antibody: Anti-XBP-1 at 20 µg/mL
Secondary: goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI staining (blue).

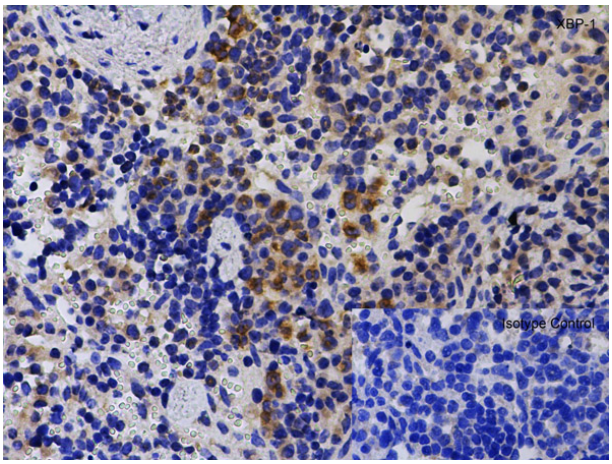


Immunofluorescence Microscopy
Immunofluorescence Validation of XBP-1.
Tissue: Mouse Pancreas Tissue.
Fixation: 4% paraformaldehyde-fixed.
Primary Antibody: anti-XBP-1 at 20 µg/mL.
Secondary: goat anti-rabbit IgG secondary antibody at 1:500 dilution (green) and DAPI staining (blue).



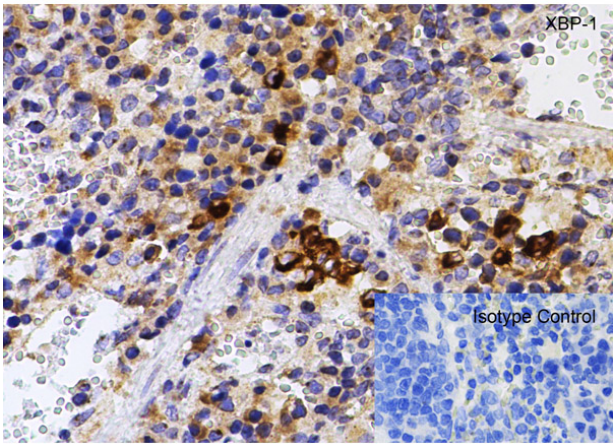
Immunohistochemistry
Immunohistochemistry of XBP-1.
Tissue: Mouse Testis Tissue.
Fixation: paraffin-embedded, formaldehyde and blocked with 10% serum for 1 h at RT.
Antigen retrieval: heat mediation with a citrate buffer (pH6).

Primary Antibody: anti-XBP-1 antibody at 2 µg/ml overnight at 4 °C.
Secondary: goat anti-rabbit IgG H&L (HRP) at 1:250. Counter stained with Hematoxylin.

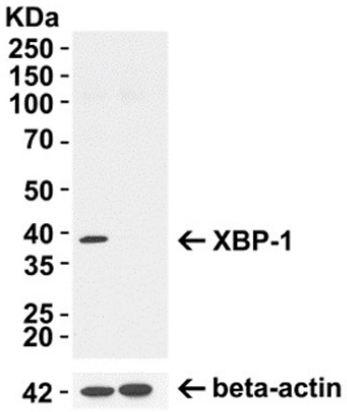


Immunohistochemistry
Immunohistochemistry Validation of XBP-1.
Tissue: Mouse Spleen Tissue.
Fixation: paraffin-embedded, formaldehyde and blocked with 10% serum for 1 h at RT.
Antigen retrieval: heat mediation with a citrate buffer (pH6).

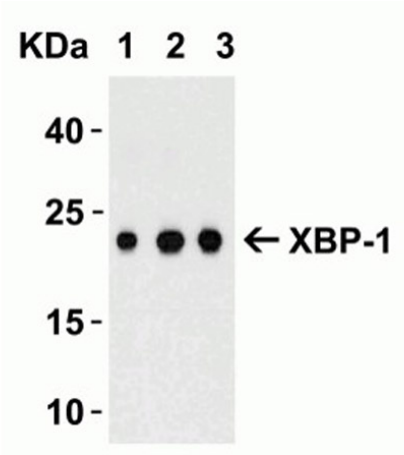
Primary Antibody: anti-XBP-1 antibody at 1 µg /ml overnight at 4 °C.
Secondary: goat anti-rabbit IgG H&L (HRP) at 1:250. Counter stained with Hematoxylin.



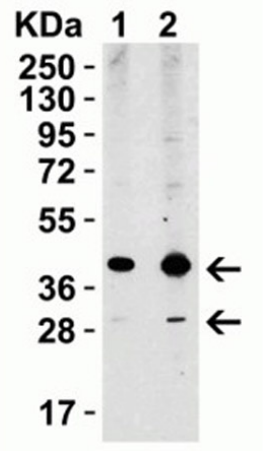
Immunohistochemistry
Immunohistochemistry Validation of XBP-1.
Tissue: Rat Spleen Tissue.
Fixation: paraffin-embedded, formaldehyde and blocked with 10% serum for 1 h at RT.
Antigen retrieval: was by heat mediation with a citrate buffer (pH6).
Primary Antibody: anti-XBP-1 antibody at 1 µg /mL overnight at 4°C.
Secondary: goat anti-rabbit IgG H&L (HRP) at 1:250. Counter stained with Hematoxylin.



Western Blot
KO Validation Western Blot of XBP-1.
Load: 10 µg of 293T cell lysate.
Primary antibody: anti-XBP-1 at 4µg/mL and beta-actin at 1µg/mL for 1h at RT in 5% NFDM/TBST.
Secondary: Goat Anti-Rabbit IgG HRP conjugate at 1:10000 dilution.



Western Blot
Western Blot Validation with Recombinant Protein.
Load: 100 ng of human XBP-1 recombinant protein per lane.
Primary antibody: Anti-XBP-1 at (Lane A: 0.5 µg/mL, B: 1 µg/mL and C: 2 µg/mL) for 1h at RT in 5% NFDM/lane.
Secondary antibody: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Observed at around 23kD.



Western Blot
Western Blot Validation of XBP-1.
Load: 15 µg of HepG2 cell lysate per lane.
Primary antibody: XBP-1 at (Lane1: 1µg/mL, Lane2: 2µg/mL) for 1h at RT in 5% NFDM.
antibody: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

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.