

Anti-XBP-1 Antibody

Catalog Number: A00234-1

About XBP1

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 malformed 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.

Overview

Product Name	Anti-XBP-1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-XBP-1 Antibody (Catalog # A00234-1). Tested in ELISA, WB, ICC, IHC-P, IF applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IF, IHC-P, ICC, WB
Clonality	Polyclonal
Formulation	XBP-1 Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	XBP-1 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	P17861

Technical Details

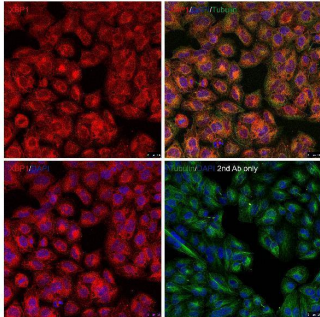
Immunogen	Anti-XBP-1 antibody was raised against a peptide corresponding to 17 amino acids near the amino terminus of human XBP-1. The immunogen is located within amino acids 40 - 90 of XBP-1.
Predicted Reactive Species	Bovine
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL
Purification	XBP-1 Antibody is affinity chromatography purified via peptide column.

Suggested Dilutions

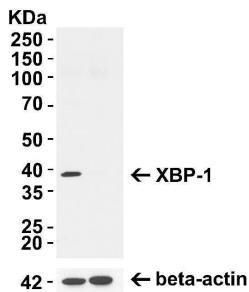
WB: 0.25-2 ug/mL; IF: 20 ug/mL; ICC: 10 ug/mL; IHC: 2-5 ug/mL.

Antibody validated: Western Blot in human samples; Immunofluorescence in human and rat samples; Immunocytochemistry in human samples; Immunohistochemistry in human, mouse, and rat samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.

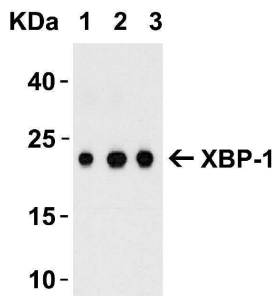
Anti-XBP-1 Antibody (A00234-1) Images



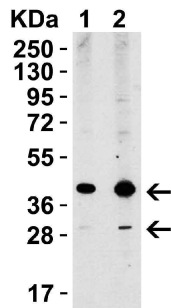
Immunofluorescence Validation of XBP-1 in HeLa Cells
Immunofluorescent analysis of methanol-fixed HeLa cells labeling XBP-1 with A00234-1 at 10 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/1000 dilution (red) and DAPI staining (blue). Alpha tubulin was stained with anti-alpha tubulin antibody following by goat anti-mouse IgG secondary antibody (green). Images were captured with confocal microscopy.



XBP-1 KO Validation in 293T Cells
Loading: 10 ug of lysate
Antibodies: XBP-1 A00234-1, 4 ug/mL and beta-actin 3779-1301, 1ug/mL, 1 h incubation at RT in 5% NFDm/TBST.
Secondary: Goat Anti-Rabbit IgG HRP conjugate at 1:10000 dilution.

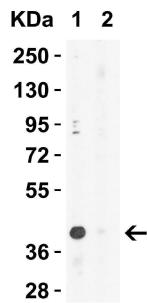
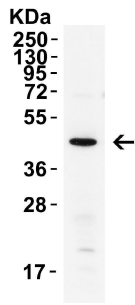


Western Blot Validation with Recombinant Protein Loading:
100 ng of human XBP-1 recombinant protein per lane.
Antibodies: XBP-1 A00234-1 (A: 0.5 ug/mL, B: 1 ug/mL and C: 2 ug/mL), 1h incubation at RT in 5% NFDm/TBST.
Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Observed at around 23kD.

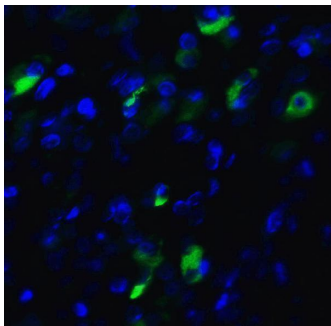


Western Blot Validation of XBP-1 in HepG2 Cells
Loading: 15 ug of HepG2 cell lysate
Antibodies: XBP-1 A00234-1, 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane1: 1 ug/mL Lane2: 2 ug/mL

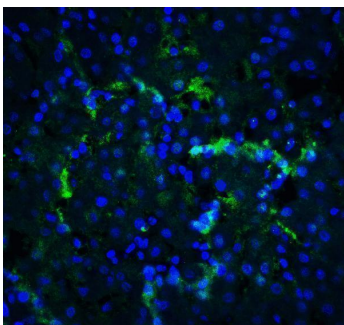
Western Blot Validation in Mouse Pancreas Tissue
Loading: 15 ug of lysates per lane. Antibodies: XBP-1, A00234-1 (4 ug/mL), 1h incubation at RT in 5% NFDm/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



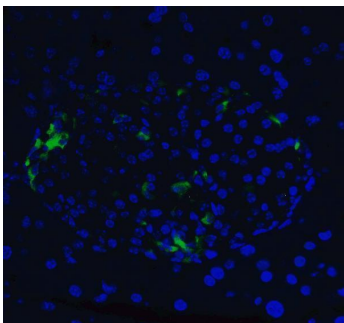
Western Blot Validation in Rat Liver Tissue Lysate Loading: 15 ug of lysates per lane. Antibodies: XBP-1 A00234-1 (1 ug/mL), 1h incubation at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. (1) the absence and (2) the presence of blocking peptide



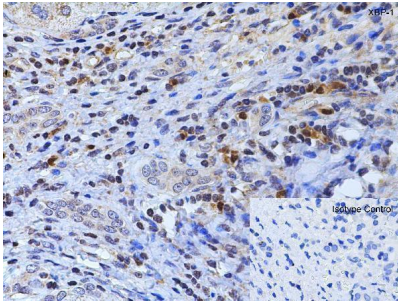
Immunofluorescence Validation of XBP-1 in Human Pancreas Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed human pancreas tissue labeling XBP-1 with A00234-1 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



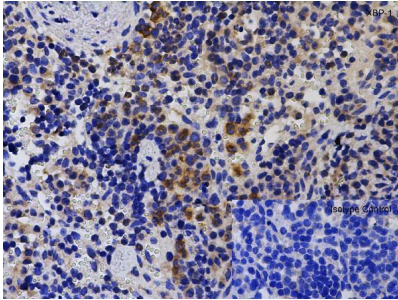
Immunofluorescence Validation of XBP-1 in Human Liver Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed Human Liver Tissue labeling XBP-1 with A00234-1 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



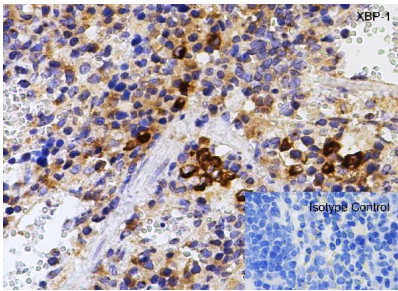
Immunofluorescence Validation of XBP-1 in Mouse Pancreas Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed mouse pancreas tissue labeling XBP-1 with A00234-1 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI staining (blue).



Immunohistochemistry Validation of XBP-1 in Human Liver Tissue
Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-XBP-1 antibody (A00234-1) at 1 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 XBP-1 in Mouse Spleen Tissue
Immunohistochemical analysis of paraffin-embedded mouse spleen tissue using anti-XBP-1 antibody (A00234-1) at 1 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 XBP-1 in Rat Spleen Tissue
Immunohistochemical analysis of paraffin-embedded rat spleen tissue using anti-XBP-1 antibody (A00234-1) at 1 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.

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Anti-XBP-1 Antibody

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