# abcam

# Product datasheet

# Anti-XBP1 antibody ab37152

★★★★★ 28 Abreviews 146 References 13 Images

Overview

Product name Anti-XBP1 antibody

**Description** Rabbit polyclonal to XBP1

Host species Rabbit

Specificity XBP-1 antibody will recognize both isoforms (non-spliced and spliced) of XBP-1.

Tested applications Suitable for: IHC-P, IHC-Fr, ICC, IHC (PFA fixed), WB, ICC/IF

**Species reactivity** Reacts with: Mouse, Rat, Human

Predicted to work with: Cow

Immunogen Synthetic peptide corresponding to Human XBP1 (N terminal). Synthetic peptide corresponding

to 18 amino acids near to the N terminus of the human XBP1 protein. The immunogen is located

within amino acids 40 - 90. Database link: **P17861** 

(Peptide available as ab39910)

Positive control WB: HepG2 cell lysate, A549 cell lysate. IHC-P: Human liver and non-lesional skin tissue; Mouse

testis and spleen tissue, rat liver tissue. ICC/IF: HepG2 cells.

**General notes**The Life Science industry has been in the grips of a reproducibility crisis for a number of years.

Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets

your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or

 $contact \ our \ Support \ team \ ahead \ of \ purchase. \ Recommended \ alternatives \ for \ this \ product \ can \ be$ 

found below, along with publications, customer reviews and Q&As

**Properties** 

Form Liquid

Storage instructions Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term. Avoid freeze /

thaw cycle.

Storage buffer pH: 7.2

Preservative: 0.02% Sodium azide

Constituent: PBS

Purity Immunogen affinity purified

1

**Clonality** Polyclonal

**Isotype** IgG

#### **Applications**

The Abpromise guarantee Our Abpromise guarantee covers the use of ab37152 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application     | Abreviews         | Notes   |
|-----------------|-------------------|---|
| IHC-P           | <b>★★★★★ (12)</b> | Use a concentration of 5 µg/ml.   |
| IHC-Fr          |                   | Use at an assay dependent concentration. PubMed: 20028872   |
| ICC             |                   | Use a concentration of 10 μg/ml.  |
| IHC (PFA fixed) |                   | Use a concentration of 20 μg/ml.  |
| WB              | <b>★★★★ (11)</b>  | Use a concentration of 0.5 - 2 µg/ml. Predicted molecular weight: 29 kDa.Can be blocked with <u>Human XBP1 peptide (ab39910)</u> . Human samples only. Not batch tested in mouse or rat, please see AbReviews for more information. |
|                 |                   | Use at a concentration of 1 - 2 μg/ml. Predicted molecular weight: 29 kDa (isoform 1) and 40 kD (isoform 2). Can be blocked with<br>VRP1 postide (25/20010)   |
| ICC/IF          | <b>★★★★★</b> (3)  | Use a concentration of 20 µg/ml.  |

| Target | • |
|--------|---|
|--------|---|

**Function** Transcription factor essential for hepatocyte growth, the differentiation of plasma cells, the

immunoglobulin secretion, and the unfolded protein response (UPR). Acts during endoplasmic reticulum stress (ER) by activating unfolded protein response (UPR) target genes via direct binding to the UPR element (UPRE). Binds DNA preferably to the CRE-like element 5'-GATGACGTG[TG]N(3)[AT]T-3', and also to some TPA response elements (TRE). Binds to the

HLA DR-alpha promoter. Binds to the Tax-responsive element (TRE) of HTLV-I.

**Involvement in disease**Genetic variations in XBP1 could be associated with susceptibility to major affective disorder

type 7 (MAFD7) [MIM:612371]. Major affective disorders represent a class of mental disorders

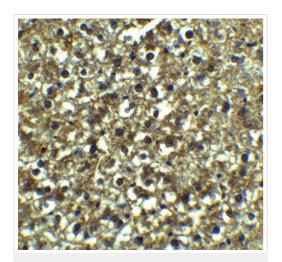
characterized by a disturbance in mood as their predominant feature.

Sequence similarities Belongs to the bZIP family.

Contains 1 bZIP domain.

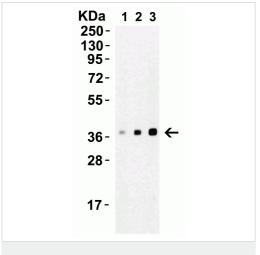
Cellular localization Nucleus.

## **Images**



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-XBP1 antibody (ab37152)

Immunohistochemical analysis of paraffin-embedded Rat Liver Tissue using ab37152 at 5  $\mu$ g/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 antirabbit lgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Western blot - Anti-XBP1 antibody (ab37152)

Lane 1: Anti-XBP1 antibody (ab37152) at 0.25 µg/ml

Lane 2: Anti-XBP1 antibody (ab37152) at 0.5 µg/ml

Lane 3: Anti-XBP1 antibody (ab37152) at 1 µg/ml

All lanes: A549 cell lysate

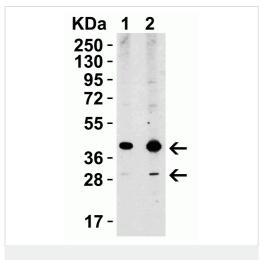
Lysates/proteins at 15 µg per lane.

#### Secondary

All lanes: Goat anti-rabbit lgG HRP conjugate at 1/10000 dilution

Predicted band size: 29 kDa

1h incubation at RT in 5% NFDM/TBST.



Western blot - Anti-XBP1 antibody (ab37152)

**Lane 1 :** Anti-XBP1 antibody (ab37152) at 1  $\mu$ g/ml

Lane 2: Anti-XBP1 antibody (ab37152) at 2 µg/ml

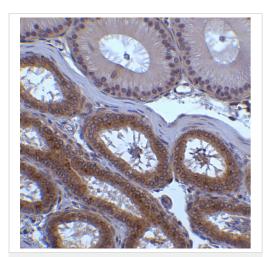
All lanes: HepG2 cell lysate

Lysates/proteins at 15 µg per lane.

#### **Secondary**

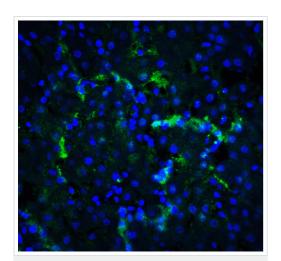
All lanes: Goat anti-rabbit IgG HRP conjugate at 1/10000 dilution

Predicted band size: 29 kDa



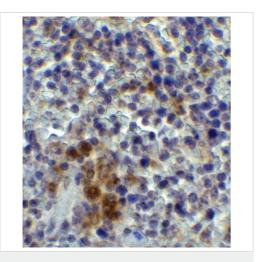
Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-XBP1 antibody (ab37152)

Immunohistochemistry of mouse testis cells labeling XBP1 with Anti-XBP1 antibody (ab37152) at 2µg/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  $4^{o}\text{C}$ . A goat antirabbit lgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



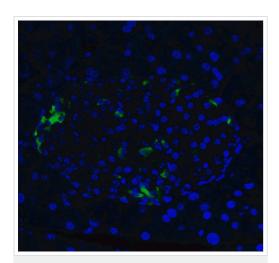
Immunohistochemistry (PFA fixed) - Anti-XBP1 antibody (ab37152)

Immunohistochemistry of human liver tissue labeling XBP1 with Anti-XBP1 antibody (ab37152) at  $20\mu g/ml$ . followed by goat antirabbit lgG secondary antibody at 1/500 dilution (green). DAPI staining (Blue).



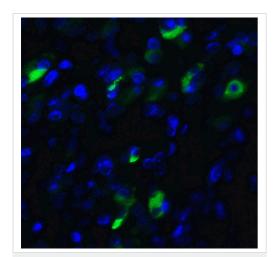
Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-XBP1 antibody (ab37152)

Immunohistochemistry of mouse spleen cells labeling XBP1 with Anti-XBP1 antibody (ab37152) at 2µg/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  $4^{o}\text{C}$ . A goat antirabbit lgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



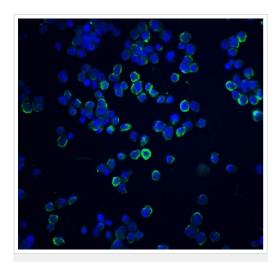
Immunohistochemistry (PFA fixed) - Anti-XBP1 antibody (ab37152)

Immunohistochemistry of mouse pancreas tissue labeling XBP1 with Anti-XBP1 antibody (ab37152) at 20 $\mu$ g/ml. followed by goat anti-rabbit lgG secondary antibody at 1/500 dilution (green). DAPI staining (Blue).



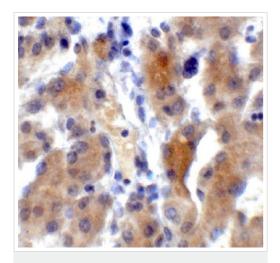
Immunohistochemistry (PFA fixed) - Anti-XBP1 antibody (ab37152)

Immunohistochemistry of human pancreas tissue labeling XBP1 with Anti-XBP1 antibody (ab37152) at  $20\mu g/ml$ . followed by goat anti-rabbit lgG secondary antibody at 1/500 dilution (green). DAPI staining (Blue).



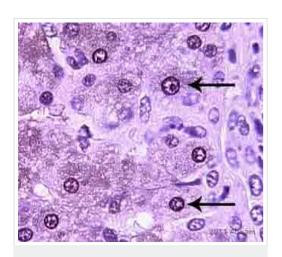
Immunocytochemistry/ Immunofluorescence - Anti-XBP1 antibody (ab37152)

Immunocytochemistry of HepG2 cells labeling XBP1 with Anti-XBP1 antibody (ab37152) at 20µg/ml. Blue: DAPI staining.



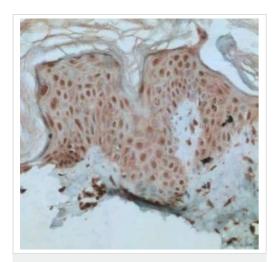
Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-XBP1 antibody (ab37152)

Immunohistochemistry (Formalin-fixed paraffin embedded sections) of human liver tissue labeling XBP1 with Anti-XBP1 antibody (ab37152) at  $5\mu g/ml$ .



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-XBP1 antibody (ab37152) Image courtesy of an anonymous Abreview.

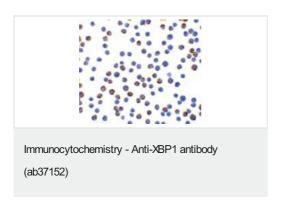
ab37152 staining XBP1 in human liver tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and a heat mediated antigen retrieval step was performed using Citrate-EDTA antigen retrieval buffer and microwave. Heating was performed in the microwave 3 minutes on high until boiling, 6 minutes on 20% power. Samples were then blocked for 15 minutes at 27°C followed by incubation with the primary antibody at a 1/100 dilution for 12 hours at 4°C. An undiluted HRP-conjugated rat polyclonal was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-XBP1 antibody (ab37152)
Image from Ren Yunqing et.al., PLoS Genet. 2009
June; 5(6): e1000523 (Fig 6C).

tissue sections by Immunohistochemistry (Formalin/ PFA fixed paraformaldehyde tissue sections). A biotin labelled secondary was used at 1/100 dilution. Diaminobenzidine (DAB) was used for staining development in a ABC staining Kit and the sections were counterstained with haematoxylin.

ab37152 at 1/200 dilution staining XBP1 in human non-lesional skin



Immunocytochemistry of XBP-1 in HepG2 cells with ab37152 at 10 ug/mL

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