SANTA CRUZ BIOTECHNOLOGY, INC.

XBP-1 (M-186): sc-7160

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

The X-box binding protein-1 (XBP-1 or hXBP-1), also designated tax-responsive element-binding protein 5 (TREB5) in mouse and human, or hepatocarcinogenesis-related transcription factor (HTF) in rat, belongs to the basic region/leucine zipper (bZIP) family of transcription factors. XBP-1 was first characterized as a protein that binds to the HLA-DRα promoter in B cells. XBP-1 recognizes the cAMP responsive element (CRE) in enhancers of human T cell leukemia virus and major histocompatibility complex class II genes and activates transcription of these genes. It is expressed at high levels in developing bone and its levels are modulated during osteoblast development, suggesting a role in regulation of expression of osteoblast-specific genes. In addition to binding to CRE sequences, XBP-1 has been shown to bind to TPA response elements (TREs).

CHROMOSOMAL LOCATION

Genetic locus: XBP1 (human) mapping to 22q12.1; Xbp1 (mouse) mapping to 11 A1.

SOURCE

XBP-1 (M-186) is a rabbit polyclonal antibody raised against amino acids 76-263 of XBP-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-7160 X, 200 µg/0.1 ml.

APPLICATIONS

XBP-1 (M-186) is recommended for detection of XBP-1U and XBP-1S isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for XBP-1 siRNA (h): sc-38627, XBP-1 siRNA (m): sc-38628, XBP-1 shRNA Plasmid (h): sc-38627-SH, XBP-1 shRNA Plasmid (m): sc-38628-SH, XBP-1 shRNA (h) Lentiviral Particles: sc-38627-V and XBP-1 shRNA (m) Lentiviral Particles: sc-38628-V.

XBP-1 (M-186) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of XBP-1U isoform: 29 kDa.

Molecular Weight (observed) of XBP-1U isoform: 24-32 kDa.

Molecular Weight (predicted) of XBP-1S isoform: 40 kDa.

Molecular Weight (observed) of XBP-1S isoform: 54-56 kDa.

Positive Controls: BJAB nuclear extract: sc-2145.

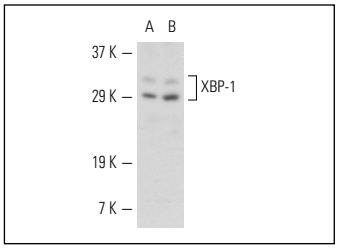
RESEARCH USE

For research use only, not for use in diagnostic procedures.

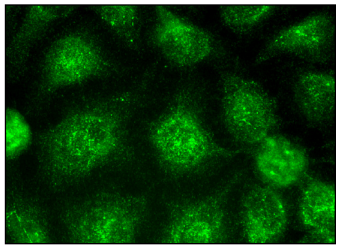
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



XBP-1 (M-186): sc-7160. Western blot analysis of XBP-1 expression in BJAB (**A**) and Ramos (**B**) nuclear extracts.



XBP-1 (M-186): sc-7160. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

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3. Liu, L., et al. 2012. ER stress response during the differentiation of H9 cells induced by retinoic acid. Biochem. Biophys. Res. Commun. 417: 738-743.
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5. Damiano, F., et al. 2013. hnRNP A1 mediates the activation of the IRES-dependent SREBP-1a mRNA translation in response to endoplasmic reticulum stress. Biochem. J. 449: 543-553.
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