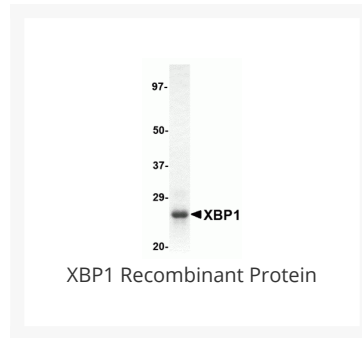




XBP1 Recombinant Protein

Cat. No.: 95-109



Ψ Specifications

SPECIES:	Human
SOURCE SPECIES:	E. coli
SEQUENCE:	aa 2 - 160
FUSION TAG:	Fusion Partner: N-terminal His-tag
TESTED APPLICATIONS:	ELISA, WB
APPLICATIONS:	This recombinant protein can be used for WB and ELISA. For research use only.
PREDICTED MOLECULAR WEIGHT:	25 kDa (Calculated)

Ψ Properties

PURITY:	~95%
PHYSICAL STATE:	Liquid
BUFFER:	1X PBS containing 0.1% SDS
STORAGE CONDITIONS:	Store in working aliquots at -70 °C. Avoid freeze/thaw cycles. When working with proteins care should be taken to keep recombinant protein at a cool and stable temperature.

OFFICIAL SYMBOL:	XBP1
ALTERNATE NAMES:	XBP-1 Antibody : XBP2, TREB5, XBP-1
ACCESSION NO.:	BAB82982
PROTEIN GI NO.:	18148382
GENE ID:	7494

Background and References

BACKGROUND:	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) (1). 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 (3,4).
REFERENCES:	1) Yoshida H, Matsui T, Yamamoto T, et al. XBP1 mRNA is induced by ATF6 and spliced by IRE1p in response to ER stress to produce a highly active transcription factor. <i>Cell</i> 2001; 107:881-91.
	2) Calton M, Zeng H, Urano F, et al. IRE1 couples endoplasmic reticulum load to secretory capacity by processing the XBP-1 mRNA. <i>Nature</i> 2002; 415:92-6.
	3) Haze K, Yoshida H, Yanagi H, et al. Mammalian transcription factor ATF6 is synthesized as a transmembrane protein and activated by proteolysis in response to endoplasmic stress. <i>Mol. Cell. Biol.</i> 1999; 10:3787-99.
	4) Little E, Ramakrishnan M, Roy B, et al. The glucose-regulated proteins (GRP78 and GRP94): functions, gene regulation, and applications. <i>Crit. Rev. Eukaryot. Gene Expr.</i> 1994; 4:1-18.

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