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XBP1 Rabbit pAb

Catalog # AP96906

Product Information

Application	WB, E
Primary Accession	O35426
Other Accession	O35426
Reactivity	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29619
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse XBP1
Epitope Specificity	161-261/261
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the bZIP family. Contains 1 bZIP domain.
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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a transcription factor that regulates MHC class II genes by binding to a promoter element referred to as an X box. This gene product is a bZIP protein, which was also identified as a cellular transcription factor that binds to an enhancer in the promoter of the T cell leukemia virus type 1 promoter. It may increase expression of viral proteins by acting as the DNA binding partner of a viral transactivator. It has been found that upon accumulation of unfolded proteins in the endoplasmic reticulum (ER), the mRNA of this gene is processed to an active form by an unconventional splicing mechanism that is mediated by the endonuclease inositol-requiring enzyme 1 (IRE1). The resulting loss of 26 nt from the spliced mRNA causes a frame-shift and an isoform XBP1(S), which is the functionally active transcription factor. The isoform encoded by the unspliced mRNA, XBP1(U), is constitutively expressed, and thought to function as a negative feedback regulator of XBP1(S), which shuts off transcription of target genes during the recovery phase of ER stress. A pseudogene of XBP1 has been identified and localized to chromosome 5. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	22433
Other Names	TREB-5; TREB5; XBP-1; XBP2; D11Ertd39e; HTF; XBP1_HUMAN; XBP1; Tax-responsive element-binding protein 5 (TREB-5); XBP1_MOUSE; XBP1_RAT;

	Hepatocarcinogenesis-related transcription factor (HTF); X-box binding protein 1
Dilution	WB=1:500-2000,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Xbp1 {ECO:0000250|UniProtKB:P17861, ECO:0000312|MGI:MGI:98970}
Function	Functions as a transcription factor during endoplasmic reticulum stress by regulating the unfolded protein response (UPR). Required for cardiac myogenesis and hepatogenesis during embryonic development and the development of secretory tissues such as exocrine pancreas and salivary gland (PubMed:10425189, PubMed:10652269, PubMed:16362047, PubMed:17612490). Involved in differentiation of B lymphocytes to plasma cells and production of immunoglobulins. Modulates the cellular response to ER stress in a PIK3R-dependent manner. Binds to the cis-acting X box present in the promoter regions of major histocompatibility complex class II genes (By similarity). Involved in VEGF-induced endothelial cell (EC) proliferation and retinal blood vessel formation during embryonic development but also for angiogenesis in adult tissues under ischemic conditions (PubMed:23529610). Also functions as a major regulator of the UPR in obesity-induced insulin resistance and type 2 diabetes for the management of obesity and diabetes prevention (PubMed:15486293).
Cellular Location	Endoplasmic reticulum {ECO:0000250|UniProtKB:P17861}. Note=Colocalizes with ERN1 and KDR in the endoplasmic reticulum in endothelial cells in a vascular endothelial growth factor (VEGF)-dependent manner (By similarity) {ECO:0000250|UniProtKB:P17861} [Isoform 2]: Nucleus. Cytoplasm. Note=Localizes predominantly in the nucleus (PubMed:16332684). Colocalizes in the nucleus with SIRT1 (PubMed:20955178). Translocates into the nucleus in a PIK3R-, ER stress-induced- and/or insulin-dependent manner (PubMed:20348926)
Tissue Location	Isoform 1 and isoform 2 are expressed at higher level in branch curves of vessel walls and in atherosclerotic plaques relative to healthy segments of the same aortas (at protein level) (PubMed:19416856). Expressed in skeletal muscles, plasma cells and pancreatic beta cells (PubMed:17612490). Isoform 1 and isoform 2 are expressed in gonadal adipose tissue. Isoform 1 is expressed in inguinal adipose tissue (PubMed:23623498).

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