

XPB1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1388a**Specification**

XPB1 Antibody - Product Information

Application	WB
Primary Accession	P17861
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	28kDa KDa

Description

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 XPB1(S), which is the functionally active transcription factor. The isoform encoded by the unspliced mRNA, XPB1(U), is constitutively expressed, and thought to function as a negative feedback regulator of XPB1(S), which shuts off transcription of target genes during the recovery phase of ER stress. A pseudogene of XPB1 has been identified and localized to chromosome 5.

Immunogen

Purified recombinant fragment of human XPB1 expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

XPB1 Antibody - Additional Information

Gene ID 7494

Other Names

X-box-binding protein 1 {ECO:0000303|PubMed:2321018, ECO:0000312|HGNC:HGNC:12801}, XPB-1, Tax-responsive element-binding protein 5, TREB-5, X-box-binding protein 1, cytoplasmic form, X-box-binding protein 1, luminal form, XPB1 (HGNC:12801)

Dilution

WB~~1/500 - 1/2000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small

aliquots to prevent freeze-thaw cycles.

Precautions

XPB1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

XPB1 Antibody - Protein Information

Name XPB1 ([HGNC:12801](#))

Function

Functions as a transcription factor during endoplasmic reticulum (ER) 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 (By similarity). Involved in terminal differentiation of B lymphocytes to plasma cells and production of immunoglobulins (PubMed: [11460154](http://www.uniprot.org/citations/11460154)). Modulates the cellular response to ER stress in a PIK3R-dependent manner (PubMed: [20348923](http://www.uniprot.org/citations/20348923)). Binds to the cis-acting X box present in the promoter regions of major histocompatibility complex class II genes (PubMed: [8349596](http://www.uniprot.org/citations/8349596)). 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. Functions also as a major regulator of the UPR in obesity-induced insulin resistance and type 2 diabetes for the management of obesity and diabetes prevention (By similarity).

Cellular Location

Endoplasmic reticulum. Note=Colocalizes with ERN1 and KDR in the endoplasmic reticulum in endothelial cells in a vascular endothelial growth factor (VEGF)-dependent manner (PubMed:23529610) [Isoform 2]: Nucleus. Cytoplasm {ECO:0000250|UniProtKB:O35426}. Note=Localizes predominantly in the nucleus. Colocalizes in the nucleus with SIRT1. Translocates into the nucleus in a PIK3R-, ER stress-induced- and/or insulin-dependent manner (By similarity). {ECO:0000250|UniProtKB:O35426}

Tissue Location

Expressed in plasma cells in rheumatoid synovium (PubMed:11460154). Over-expressed in primary breast cancer and metastatic breast cancer cells (PubMed:25280941). Isoform 1 and isoform 2 are expressed at higher level in proliferating as compared to confluent quiescent endothelial cells (PubMed:19416856)

XPB1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

XPB1 Antibody - Images

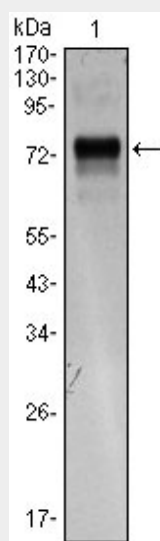


Figure 1: Western blot analysis using XBP1 mouse mAb against XBP1(AA: 1-160)-hIgGfc transfected HEK293 cell lysate.

XBP1 Antibody - References

1. J Biol Chem. 2009 May 29;284(22):14904-13.
2. Neoplasia. 2009 May;11(5):436-47.
3. Clin Cancer Res. 2009 Jun 1;15(11):3834-41.