

XBP1 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5088C

Specification

XBP1 Antibody (Center) - Product Information

Application	WB, IHC-P, FC,E
Primary Accession	P17861
Other Accession	O9R1S4 , O35426 , Q3SZZ2
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	28695
Antigen Region	62-91

XBP1 Antibody (Center) - Additional Information

Gene ID 7494

Other Names

X-box-binding protein 1, XBP-1, Tax-responsive element-binding protein 5, XBP1, TREB5, XBP2

Target/Specificity

This XBP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 62-91 amino acids from the Central region of human XBP1.

Dilution

WB~~1:1000
IHC-P~~1:50~100
FC~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

XBP1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

XBP1 Antibody (Center) - Protein Information

Name XBP1 ([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](#)). Modulates the cellular response to ER stress in a PIK3R-dependent manner (PubMed:[20348923](#)). Binds to the cis-acting X box present in the promoter regions of major histocompatibility complex class II genes (PubMed:[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)

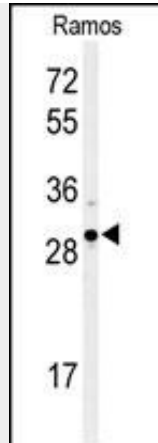
XBP1 Antibody (Center) - Protocols

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

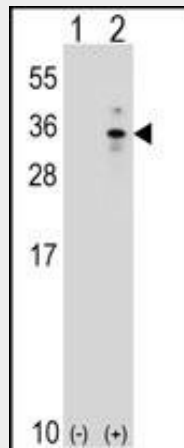
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

XBP1 Antibody (Center) - Images

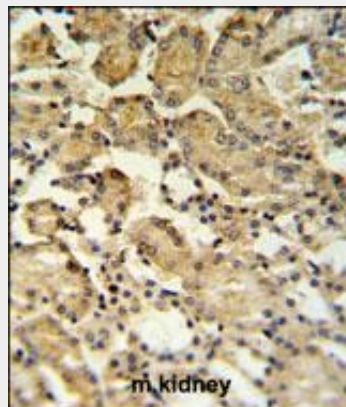




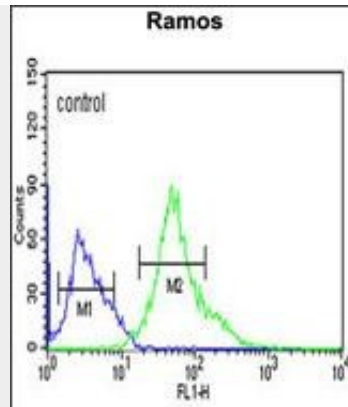
Western blot analysis of XBP1 Antibody (Center) (Cat. #AP5088c) in Ramos cell line lysates (35ug/lane). XBP1 (arrow) was detected using the purified Pab.



Western blot analysis of XBP1 (arrow) using rabbit polyclonal XBP1 Antibody (Center) (Cat. #AP5088c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the XBP1 gene.



XBP1 Antibody (Center) (Cat. #AP5088c) IHC analysis in formalin fixed and paraffin embedded mouse kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the XBP1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



XBP1 Antibody (Center) (Cat. #AP5088c) flow cytometric analysis of Ramos cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

XBP1 Antibody (Center) - Background

XBP1 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.

XBP1 Antibody (Center) - References

Navon, A., et al. FEBS Lett. 584(1):67-73(2010) Guan, D., et al. Mol. Carcinog. 49(1):68-74(2010)
del Pozo, N., et al. Hum. Immunol. 70(11):950-952(2009)