10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# XBP1 Antibody (C-term) Blocking peptide

**Synthetic peptide**
**Catalog # BP12798b**

## Specification

### XBP1 Antibody (C-term) Blocking peptide - Product Information

Primary Accession P17861

### XBP1 Antibody (C-term) Blocking peptide - Additional Information

**Gene ID** 7494

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

**Format**
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

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

**Precautions**
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### XBP1 Antibody (C-term) Blocking peptide - 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:<a href="http://www.uniprot.org/citations/11460154" target="_blank">11460154</a>). Modulates the cellular response to ER stress in a PIK3R-dependent manner (PubMed:<a href="http://www.uniprot.org/citations/20348923" target="_blank">20348923</a>). Binds to the cis-acting X box present in the promoter regions of major histocompatibility complex class II genes (PubMed:<a href="http://www.uniprot.org/citations/8349596" target="_blank">8349596</a>). 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 (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

## XBP1 Antibody (C-term) Blocking peptide - Images

## XBP1 Antibody (C-term) Blocking peptide - Background

This gene encodes a transcription factor that regulatesMHC class II genes by binding to a promoter element referred to asan X box. This gene product is a bZIP protein, which was alsoidentified as a cellular transcription factor that binds to anenhancer in the promoter of the T cell leukemia virus type 1promoter. It may increase expression of viral proteins by acting asthe DNA binding partner of a viral transactivator. It has beenfound that upon accumulation of unfolded proteins in theendoplasmic reticulum (ER), the mRNA of this gene is processed toan active form by an unconventional splicing mechanism that ismediated by the endonuclease inositol-requiring enzyme 1 (IRE1).The resulting loss of 26 nt from the spliced mRNA causes aframe-shift and an isoform XBP1(S), which is the functionallyactive transcription factor. The isoform encoded by the unsplicedmRNA, XBP1(U), is constitutively expressed, and thought to functionas a negative feedback regulator of XBP1(S), which shuts offtranscription of target genes during the recovery phase of ERstress. A pseudogene of XBP1 has been identified and localized tochromosome 5.

## XBP1 Antibody (C-term) Blocking peptide - References

Sudarshan, S.R., et al. Biochem. Biophys. Res. Commun. 399(4):617-622(2010)Thorpe, J.A., et al. Cell Stress Chaperones 15(5):497-508(2010)Bagratuni, T., et al. Blood 116(2):250-253(2010)Sawada, T., et al. J. Mol. Cell. Cardiol. 48(6):1280-1289(2010)Lee, J.H., et al. Exp. Mol. Med. 42(5):386-394(2010)