

ERN1 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP17747b**Specification**

ERN1 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [O75460](#)**ERN1 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 2081**Other Names**

Serine/threonine-protein kinase/endoribonuclease IRE1, Endoplasmic reticulum-to-nucleus signaling 1, Inositol-requiring protein 1, hIRE1p, Ire1-alpha, IRE1a, Serine/threonine-protein kinase, Endoribonuclease, 3126-, ERN1 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=3449)
HGNC:3449

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.

ERN1 Antibody (C-term) Blocking Peptide - Protein Information**Name** ERN1 ([HGNC:3449](#))**Function**

Serine/threonine-protein kinase and endoribonuclease that acts as a key sensor for the endoplasmic reticulum unfolded protein response (UPR) (PubMed:[11175748](http://www.uniprot.org/citations/11175748), PubMed:[11779464](http://www.uniprot.org/citations/11779464), PubMed:[12637535](http://www.uniprot.org/citations/12637535), PubMed:[21317875](http://www.uniprot.org/citations/21317875), PubMed:[28128204](http://www.uniprot.org/citations/28128204), PubMed:[9637683](http://www.uniprot.org/citations/9637683), PubMed:[30118681](http://www.uniprot.org/citations/30118681)). In unstressed cells, the endoplasmic reticulum luminal domain is maintained in its inactive monomeric state by binding to the endoplasmic reticulum chaperone HSPA5/BiP (PubMed:[21317875](http://www.uniprot.org/citations/21317875)). Accumulation of misfolded proteins in the endoplasmic reticulum causes release of HSPA5/BiP, allowing the luminal domain to homodimerize, promoting autophosphorylation of the kinase

domain and subsequent activation of the endoribonuclease activity (PubMed:21317875). The endoribonuclease activity is specific for XBP1 mRNA and excises 26 nucleotides from XBP1 mRNA (PubMed:11779464, PubMed:24508390, PubMed:21317875). The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes (PubMed:11779464, PubMed:24508390, PubMed:21317875). Acts as an upstream signal for ER stress-induced GORASP2-mediated unconventional (ER/Golgi-independent) trafficking of CFTR to cell membrane by modulating the expression and localization of SEC16A (PubMed:21884936, PubMed:28067262).

Cellular Location

Endoplasmic reticulum membrane; Single-pass type I membrane protein

Tissue Location

Ubiquitously expressed. High levels observed in pancreatic tissue.

ERN1 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

ERN1 Antibody (C-term) Blocking Peptide - Images**ERN1 Antibody (C-term) Blocking Peptide - Background**

The protein encoded by this gene is the ER to nucleussignalling 1 protein, a human homologue of the yeast Ire1 gene product. This protein possesses intrinsic kinase activity and an endoribonuclease activity and it is important in altering gene expression as a response to endoplasmic reticulum-based stress signals.

ERN1 Antibody (C-term) Blocking Peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Li, H., et al. Proc. Natl. Acad. Sci. U.S.A. 107(37):16113-16118(2010) Auf, G., et al. Proc. Natl. Acad. Sci. U.S.A. 107(35):15553-15558(2010) Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Gupta, S., et al. PLoS Biol. 8 (7), E1000410 (2010) :