

**ERN1 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP17747b****Specification**

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**ERN1 Antibody (C-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O75460</a>
Other Accession	<a href="#">NP_001424.3</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	109735
Antigen Region	828-857

**ERN1 Antibody (C-term) - 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 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=3449" target="\_blank">HGNC:3449</a>)

**Target/Specificity**

This ERN1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 828-857 amino acids from the C-terminal region of human ERN1.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**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**

ERN1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**ERN1 Antibody (C-term) - 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](#), PubMed:[11779464](#), PubMed:[12637535](#), PubMed:[19328063](#), PubMed:[21317875](#), PubMed:[28128204](#), PubMed:[30118681](#), PubMed:[36739529](#), PubMed:[9637683](#)). 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](#)). 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:[21317875](#), PubMed:[24508390](#)). The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes (PubMed:[11779464](#), PubMed:[21317875](#), PubMed:[24508390](#)). 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

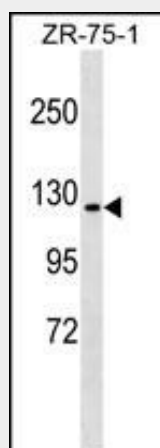
**Tissue Location**

Ubiquitously expressed. High levels observed in pancreatic tissue.

**ERN1 Antibody (C-term) - 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](#)

**ERN1 Antibody (C-term) - Images**

ERN1 Antibody (C-term) (Cat. #AP17747b) western blot analysis in ZR-75-1 cell line lysates

(35ug/lane). This demonstrates the ERN1 antibody detected the ERN1 protein (arrow).

#### **ERN1 Antibody (C-term) - Background**

The protein encoded by this gene is the ER to nucleus signalling 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) - 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) :