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ERN1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17747b

Specification

ERN1 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	O75460
Other Accession	NP_001424.3
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 (HGNC:3449)

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

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:21317875, PubMed:28128204, PubMed:9637683, PubMed: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). 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

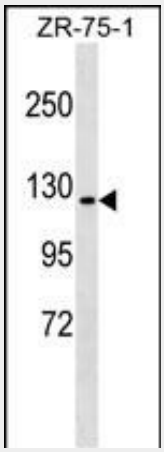
Tissue Location
Ubiquitously expressed. High levels observed in pancreatic tissue.

ERN1 Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- 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) :