

Goat Anti-ERN1 / IRE1a Antibody
Peptide-affinity purified goat antibody
Catalog # AF1381a**Specification**

Goat Anti-ERN1 / IRE1a Antibody - Product Information

Application	WB
Primary Accession	O75460
Other Accession	NP_001424 , 2081 , 78943 (mouse) , 498013 (rat)
Reactivity	Human
Predicted	Mouse, Rat, Pig, Dog, Cow
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	109735

Goat Anti-ERN1 / IRE1a Antibody - 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, 2.7.11.1, Endoribonuclease, 3.1.26.-, ERN1 (HGNC:3449)

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-ERN1 / IRE1a Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-ERN1 / IRE1a Antibody - 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:<a

[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](http://www.uniprot.org/citations/21317875)). The endoribonuclease activity is specific for XBP1 mRNA and excises 26 nucleotides from XBP1 mRNA (PubMed: [11779464](http://www.uniprot.org/citations/11779464), PubMed: [24508390](http://www.uniprot.org/citations/24508390), PubMed: [21317875](http://www.uniprot.org/citations/21317875)). The resulting spliced transcript of XBP1 encodes a transcriptional activator protein that up-regulates expression of UPR target genes (PubMed: [11779464](http://www.uniprot.org/citations/11779464), PubMed: [24508390](http://www.uniprot.org/citations/24508390), PubMed: [21317875](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/21884936), PubMed: [28067262](http://www.uniprot.org/citations/28067262)).

Cellular Location

Endoplasmic reticulum membrane; Single-pass type I membrane protein

Tissue Location

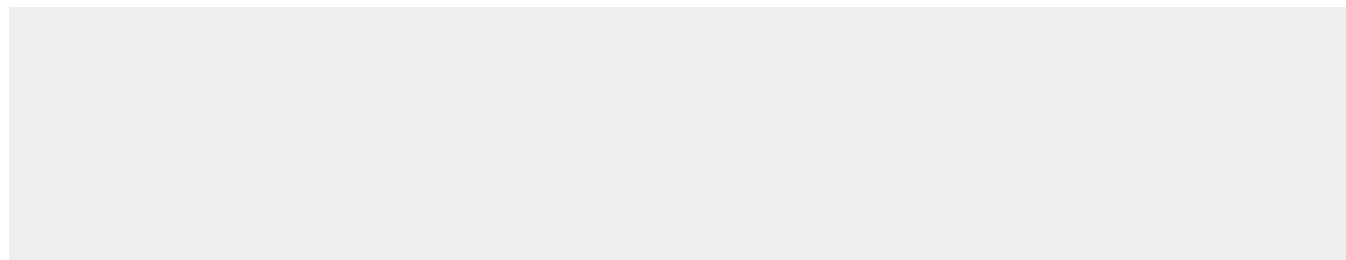
Ubiquitously expressed. High levels observed in pancreatic tissue.

Goat Anti-ERN1 / IRE1a Antibody - 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](#)

Goat Anti-ERN1 / IRE1a Antibody - Images





AF1381a (0.03 µg/ml) staining of Human Pancreas lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-ERN1 / IRE1a Antibody - 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.

Goat Anti-ERN1 / IRE1a Antibody - References

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.

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A crucial role for RACK1 in the regulation of glucose-stimulated IRE1alpha activation in pancreatic beta cells. Qiu Y, et al. Sci Signal, 2010 Jan 26. PMID 20103773.

NR2F1 and IRE1beta suppress microsomal triglyceride transfer protein expression and lipoprotein assembly in undifferentiated intestinal epithelial cells. Dai K, et al. Arterioscler Thromb Vasc Biol, 2010 Mar. PMID 20007910.

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