

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

Specification

Goat Anti-ERN1 / IRE1a Antibody - Product Information

Application	WB, E
Primary Accession	O75460
Other Accession	NP_001424 , 2081 , 78943 (mouse) , 498013 (rat)
Reactivity	Human
Predicted	Mouse, Rat, Pig, Dog
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)

Dilution

WB~~1:1000
E~~N/A

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: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.

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 Thiazolidinedione-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.

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. *Mol Med*, 2010 Jul-Aug. PMID 20379614.

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.

Gene-centric association signals for lipids and apolipoproteins identified via the HumanCVD BeadChip. Talmud PJ, et al. *Am J Hum Genet*, 2009 Nov. PMID 19913121.