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ERN1 Mouse Monoclonal Antibody

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Catalog # AP94836

Product Information

Application	WB, IHC-P, E
Primary Accession	O75460
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	109735

Additional Information

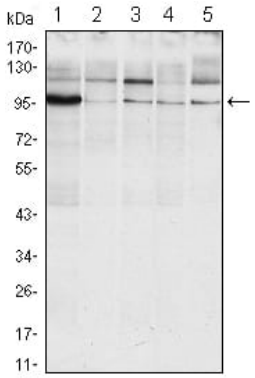
Gene ID	2081
Other Names	IRE1; IRE1P; IRE1a; hIRE1p; FLJ30999; MGC163277; MGC163279; ERN1
Dilution	WB~~1：500-1：2000 IHC-P~~1:200-1:1000 E~~N/A
Storage Conditions	-20℃

Protein Information

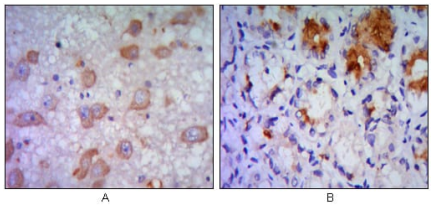
Name	ERN1 (HGNC:3449)
Function	Serine/threonine-protein kinase and endoribonuclease that acts as a key sensor for the endoplasmic reticulum unfolded protein response (UPR) (PubMed:11175748, PubMed:11779464, PubMed:12637535, PubMed:19328063, PubMed:21317875, PubMed:28128204, PubMed:30118681, PubMed:36739529, 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.

Images



Western blot analysis using ERN1 mouse mAb against Raji (1), A431 (2), Jurkat (3), Hela(4) and HEK293 (5) cell lysate.



Immunohistochemical analysis of paraffin-embedded human brain tissue (A) and stomach tissue (B), showing cytoplasmic localization using ERN1 mouse mAb with DAB staining.