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Product datasheet for TA336286

IRE1 (ERN1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ChIP, ELISA, ICC/IF, IHC, Immunoblotting, IP, WB
Recommended Dilution:	Western Blot: 1:500 - 1:1000, Knockdown Validated, Immunocytochemistry/ Immunofluorescence: 1:10 - 1:500, Chromatin Immunoprecipitation (ChIP), Immunoblotting, In vitro assay, Immunohistochemistry-Paraffin: 1:10 - 1:500, Immunohistochemistry-Frozen: 1:10 - 1:500, ELISA: 1:100 - 1:2000, Immunohistochemistry: 1:10 - 1:500, Immunoprecipitation: 1:10 - 1:500
Reactivity:	Human, Mouse, Rat, Rabbit (Does not react with: Primate)
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide surrounding the phosphorylated serine 724 of the human IRE1 alpha protein. [Swiss-Prot #O75460]
Formulation:	PBS, 0.01% Sodium Azide. Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	endoplasmic reticulum to nucleus signaling 1
Database Link:	NP_001424 Entrez Gene 78943 MouseEntrez Gene 498013 RatEntrez Gene 2081 Human O75460
Background:	IRE1 acts as the sensor of unfolded proteins in the ER that initiates transmittance of the unfolded protein signal from the ER to the nucleus by splicing XBP1 mRNA converting it into a potent unfolded-protein response transcriptional activator. It is a transmembrane protein that has both serine-threonine kinase and endoribonuclease activities. mutants are viable, but IRE1 is essential for viability under stress conditions that cause unfolded proteins to accumulate in the ER.

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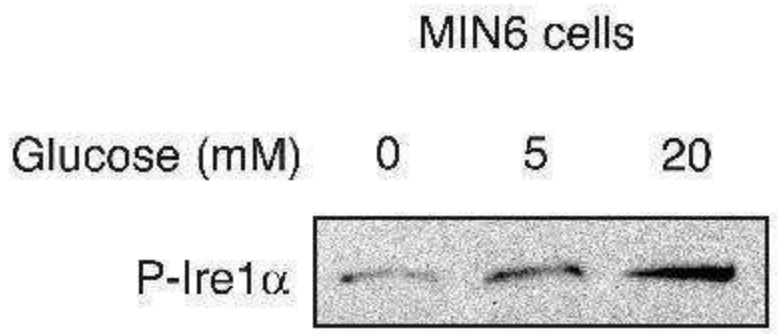
Synonyms: hIRE1p; IRE1; IRE1a; IRE1P

Note: This IRE1 pS724 antibody is useful for Western blot, ELISA, and Immunohistochemistry paraffin embedded sections.(PMID: 19264902) Use in Immunohistochemistry-Frozen reported in scientific literature (PMID 24823368)

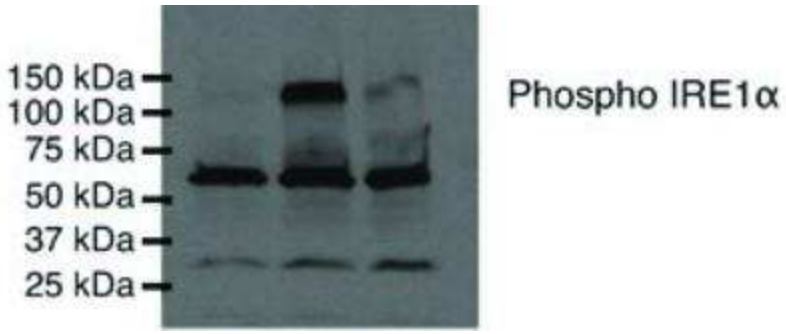
Protein Families: Protein Kinase, Transmembrane

Protein Pathways: Alzheimer's disease

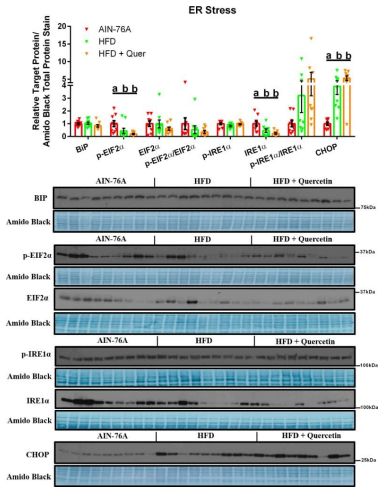
Product images:



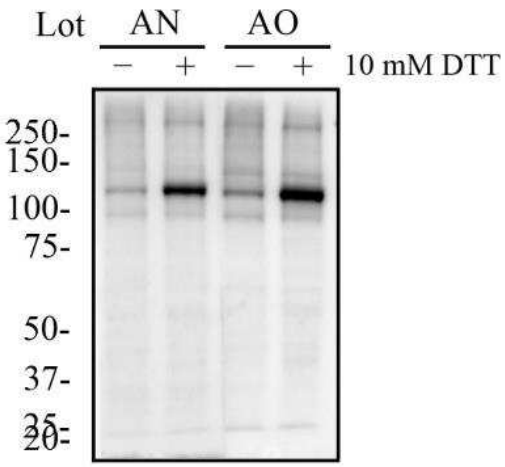
Detection in Min6 cells which were treated with different concentrations of glucose for 3 hours prior to lysates preparation.



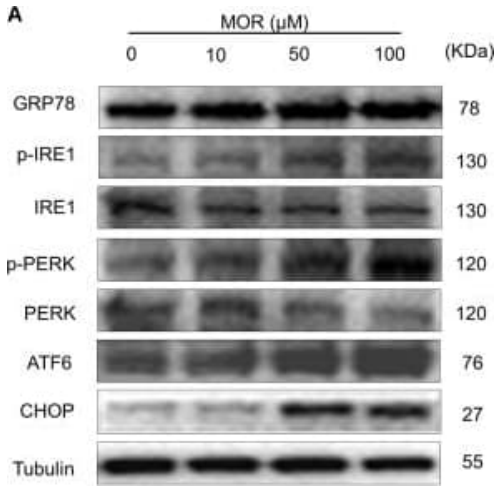
Analysis using HRP conjugate of TA336286. Detection of phosphorylated IRE-1 alpha using TA336286. Lane 1: COS-7 untransfected Lane 2: COS-7 expressing wild-type IRE1 alpha Lane 3: COS-7 expressing kinase-dead IRE1 alpha. Theoretical molecular weight: 110 kDa.



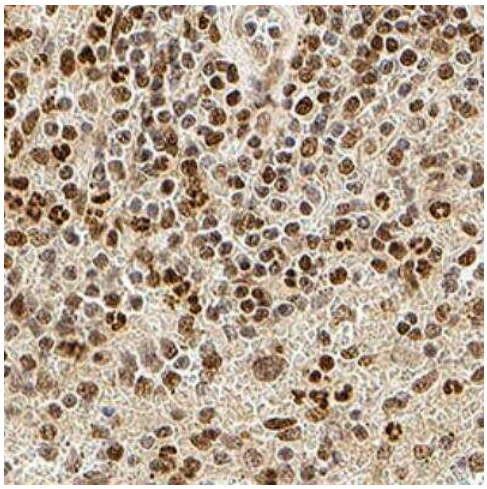
Hepatic ER Stress.Representative hepatic western blots of BiP, phosphorylated (Ser51), total EIF2α and phosphorylated:total EIF2α, phosphorylated (Ser724), total IRE1α and phosphorylated:total IRE1α, and CHOP (n = 9). Diets not sharing a common letter differ significantly from one another (P≤.05).



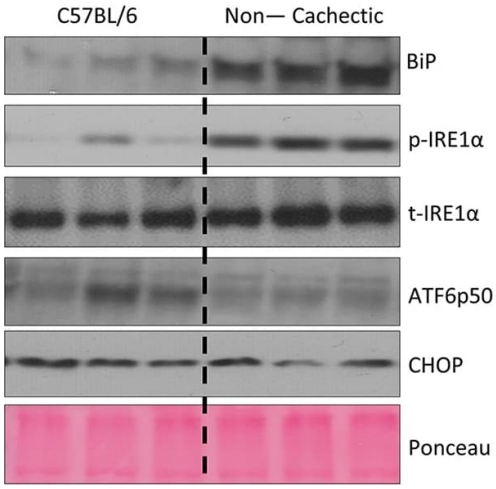
Analysis of anti-IRE1 alpha (pSer724) using Lot AN and AO of TA336286. HeLa cells were treated (+) or untreated (-) with 10 mM DTT for 60 min to activate the UPR. Total protein was separated on a 7.5% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% BSA in TBST. The membrane was probed with 2.0 ug/ml antibody in 5% BSA, and detected with an anti-rabbit HRP secondary antibody using chemiluminescence. Theoretical molecular weight: 110 kDa.



Morphine suppressed 6-OHDA-induced ER stress through activation of UPR. (A,B) Morphine induced UPR in SH-SY5Y cells. Protein levels of GRP78, p-IRE1α, IRE1α, p-PERK, PERK, ATF6, CHOP and Tubulin in SH-SY5Y cells were analyzed (A) and quantified (B) by western blot. ∗P < 0.05, ∗∗P < 0.01, ∗∗∗P < 0.001 vs. control.



IRE1 (pS724) was detected in immersion fixed paraffin-embedded sections of human spleen using Rabbit Anti-Human IRE1 (pS724) polyclonal Antibody (Catalog # TA336286) at 1:300 for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the perinuclear cytoplasm in splenocytes.



Effect of cancer on ER stress markers.Bip1, IRE-1, ATF-6 p50 and CHOP expression in the liver of non—cachectic ApcMin/+ mice (N = 6 per group), compared to healthy C57BL/6 mice. Dotted line on the western blot indicates two different sections of the same gel. Values are expressed as Mean ± SE. * denotes significantly different from the healthy C57BL/6 mice as analyzed by a pre—planned t—test. $p < 0.05$.