Product Datasheet
IRE1 alpha [p Ser724] Antibody - BSA Free
NB100-2323

Unit Size: 0.1 ml
Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

www.novusbio.com  technical@novusbio.com

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Updated 8/8/2023 v.20.1

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IRE1 alpha [p Ser724] Antibody - BSA Free

**Product Information**

<table>
<thead>
<tr>
<th>Category</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Size</td>
<td>0.1 ml</td>
</tr>
<tr>
<td>Concentration</td>
<td>1.0 mg/ml</td>
</tr>
<tr>
<td>Storage</td>
<td>Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.</td>
</tr>
<tr>
<td>Clonality</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>Preservative</td>
<td>0.02% Sodium Azide</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG</td>
</tr>
<tr>
<td>Purity</td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td>Buffer</td>
<td>PBS</td>
</tr>
<tr>
<td>Target Molecular Weight</td>
<td>110 kDa</td>
</tr>
</tbody>
</table>

**Product Description**

**Description**

When detecting phospho-IRE1 Alpha (Ser-724) using NB100-2323, it is recommended to normalize its band intensity/immunoreactivity with total-IRE1 alpha. NB100-2324 and NB110-59971 can be used for the detection of endogenous total IRE1 alpha.

**Host**

Rabbit

**Gene ID**

2081

**Gene Symbol**

ERN1

**Species**

Human, Mouse, Rat, Porcine, Drosophila, Goat, Mammal, Monkey, Primate, Rabbit, Golden Syrian Hamster

**Reactivity Notes**


**Specificity/Sensitivity**

NB100-2323 IRE1 alpha [p Ser724] Antibody detects IRE-1 alpha when phosphorylated at Ser724 residue.

**Immunogen**

This IRE1 alpha [p Ser724] antibody was raised against a synthetic peptide surrounding the phosphorylated serine 724 of the human IRE1 alpha protein. [Swiss-Prot #O75460]

**Notes**

Take a look at IRE1 alpha Antibody Sampler Pack [NBP2-50067] if you want to try 25ug aliquots of phospho-IRE1 alpha (Ser724) Antibody [NB100-2323SS] and total IRE1 alpha Antibody [NB100-2324SS] before purchasing 100ug full vials.

**Product Application Details**

**Applications**

Western Blot, ELISA, Immunoblotting, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, In vitro assay, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP), Knockdown Validated

**Recommended Dilutions**

Application Notes


Images

P-Ire1a activation correlates with WFS1 cell expression. Cryosections of retina from 12 month old Wfs1+/+ and Wfs1-/- mouse were immunostained with anti-P-Ire1a antibody (red). DAPI was used for staining of cell nuclei (blue). RPE, retinal pigment epithelium; ONL, outer nuclear layer; INL, inner nuclear layer, RGC, retinal ganglion cells. Scale bars=50 um. Image collected and cropped by CiteAb from the following publication (//doi.org/10.1371/journal.pone.0097222) licensed under a CC-BY license.

Hepatic ER stress markers with cachexia progression. ER stress markers Bip, IRE1a, ATF6p50 and CHOP were examined in the liver of non, pre and severely cachectic mice. (n = 6-8 per group, p < 0.05) Dotted line indicates levels of Non-cachectic mice. Non = Non-Cachectic Apc Min/+ Sev = severely cachectic Apc Min/+; * denotes significantly different from Non-cachectic Apc Min/+ Image collected and cropped by CiteAb from the following publication (//doi.org/10.1371/journal.pone.0119888) licensed under a CC-BY license.

IRF-1 plays a central role in ER stress-mediated modulation of VCAM-1 expression by TGRL. HAEC were conditioned for 4 hr with TNFa (0.3 ng/ml) E: CHOP knockdown decreased TNFa-induced VCAM-1 expression. n=4. **P<0.01 vs. siCtrl+TNFa. Shown are representative blots from 3 independent experiments with similar results. Image collected and cropped by CiteAb from the following publication (//doi.org/10.1371/journal.pone.0078322) licensed under a CC-BY license.
Analysis using HRP conjugate of NB100-2323. Detection of phosphorylated IRE-1 alpha using NB100-2323. 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.

Analysis of anti-IRE1 alpha (pSer724) using Lot AN and AO of NB100-2323. 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.

Regulation of the unfolded protein response by KLF15. Western analysis of UPR activity in WT versus KLF15-/- primary hepatocytes. Hepatocytes were isolated from standard chow-fed 4-month-old male WT and KLF15-/- mice. Two individual experiments were performed in triplicate; each lane indicates a technical replicate. Image collected and cropped by CiteAb from the following publication (//doi.org/10.1371/journal.pone.0077851) licensed under a CC-BY license.

HeLa cell lysate, 20 ug. Antibody at 1:1000, 1% skim milk in TBST, overnight incubation at 4C. WB image submitted by a verified customer review.
Detection in Min6 cells which were treated with different concentrations of glucose for 3 hours prior to lysates preparation.

<table>
<thead>
<tr>
<th>Glucose (mM)</th>
<th>0</th>
<th>5</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-Ire1α</td>
<td></td>
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</tbody>
</table>

IRE1 (pS724) was detected in immersion fixed paraffin-embedded sections of human spleen using Rabbit Anti-Human IRE1 (pS724) polyclonal Antibody (Catalog # NB100-2323) 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.
Publications


Moellmann J, Krueger K, Wong DWL et al. 2,8-Dihydroxyadenine-induced nephropathy causes hexosylceramide accumulation with increased mTOR signaling, reduced levels of protective SirT3 expression and impaired renal mitochondrial function Biochimica et biophysica acta. Molecular basis of disease 2023-08-01 [PMID: 37536502] (WB, Mouse)


Nguyen KNY Examination of Endoplasmic Reticulum Stress, the Unfolded Protein Response and Autophagy in Iron Overload-Induced Insulin Resistance Thesis 2023-01-01 (WB, Rat)

Espina M, Di Franco N, Brañas-Navarro M et al. The GRP78-PERK axis contributes to memory and synaptic impairments in Huntington's disease R6/1 mice Neurobiology of disease 2023-07-11 [PMID: 37442396] (WB, Mouse)

Details:
Dilution: 1:1000

Mun SH, Lee CS, Kim HJ et al. Marchf6 E3 ubiquitin ligase critically regulates endoplasmic reticulum stress, ferroptosis, and metabolic homeostasis in POMC neurons Cell reports 2023-07-25 [PMID: 37421621] (IHC, Mouse)


Wang W, Hawkridge AM, Ma Y et al. Ubiquitin-like protein 5 is a novel player in the UPR-PERK arm and ER stress-induced cell death The Journal of biological chemistry 2023-06-12 [PMID: 37315790] (WB, Mouse)

Kim J, Youn I, Seo E, Kim C Protective effects of Allium macrostemon extract on adipose tissue and liver dysregulation induced by high-fat diet and bisphenol A in C57BL/6 mice Research Square 2023-06-27 (WB, Mouse)


liu x, Huang S, Wan C et al. Melatonin Attenuates Scopolamine-induced Cognitive Dysfunction through SIRT1/IRE1/?/XBP1 pathway Research Square 2023-04-20 (WB, IHC, Mouse)

Yu J, Shen S, Yan Y et al. Iodide Excess Inhibits Thyroid Hormone Synthesis Pathway Involving XBP1-Mediated Regulation Nutrients 2023-02-09 [PMID: 36839245] (WB, Mouse)

More publications at http://www.novusbio.com/NB100-2323
Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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