

# Product Datasheet

## IRP2 Antibody - BSA Free NB100-1798SS

Unit Size: 0.025 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NB100-1798SS**

IRP2 Antibody - BSA Free

Product Information	
Unit Size	0.025 ml
Concentration	1.15 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris-Glycine and 0.15M NaCl

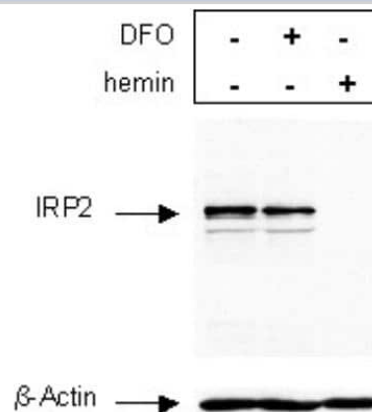
Product Description	
Host	Rabbit
Gene ID	3658
Gene Symbol	IREB2
Species	Human, Mouse
Reactivity Notes	Preliminary results have shown poor reactivity against human protein. Immunogen displays the following percentage of sequence identity for non-tested species: primate (94%) and rat (94%) proteins. Human reactivity reported in scientific literature (PMID: 28888202).
Immunogen	A synthetic peptide made to an internal portion of the murine IRP2 protein sequence (between residues 100-200). [UniProt Q811J3]

Product Application Details	
Applications	Western Blot, Gel Super Shift Assays, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Gel Supershift Assay
Recommended Dilutions	Western Blot 1:500-1:1000, Immunohistochemistry 1:200-1:500, Immunocytochemistry/ Immunofluorescence 1:500, Immunohistochemistry-Paraffin 1:200-1:500, Gel Super Shift Assays reported in scientific literature (PMID 26752519), Gel Supershift Assay

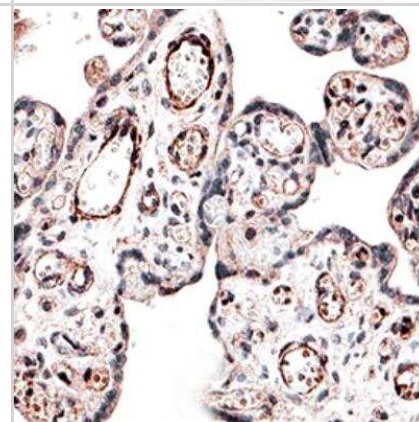


## Images

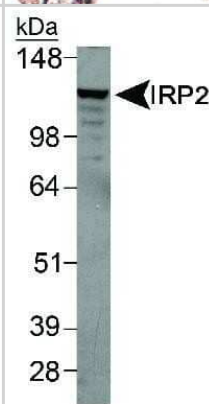
Western Blot: IRP2 Antibody [NB100-1798] - Raw macrophages (mouse) were either left untreated (lane 1) or treated overnight with 100mM DFO (lane 2) or 100mM hemin (lane 3). Proteins extracts were subjected to western blotting using IRP2 or b-actin antibodies diluted 1:500 in TBS-Tween.



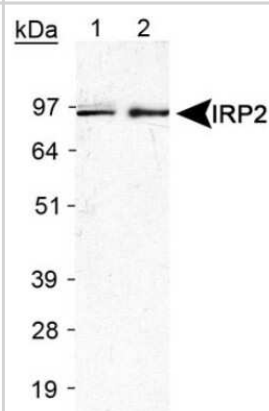
Immunohistochemistry-Paraffin: IRP2 Antibody [NB100-1798] - IHC analysis of a formalin fixed paraffin-embedded (FFPE) human placenta using 1:300 conc. of IRP2 antibody on a Bond Rx autostainer (Leica Biosystems). The assay involved 30 minutes of heat induced antigen retrieval (HIER) using 10mM sodium citrate buffer (pH 9.0) and endogenous peroxidase quenching with peroxide block. The sections were incubated with primary antibody for 15 minutes and Bond Polymer Refine Detection (Leica Biosystems) with DAB was used for signal development followed by counterstaining with hematoxylin. Cytoplasmic staining was observed in villi of endothelial cells.



Western Blot: IRP2 Antibody [NB100-1798] - Detection of IRP2 in mouse liver lysate.



Western Blot: IRP2 Antibody [NB100-1798] - Detection of IRP2 in RAW 264.7 lysate using NB100-1798. Lane 1: Lot B Lane 2: Lot C



## Publications

- Zhuanzhuan Liu, Hanying Wang, Zhiwei Zhang, Yulu Ma, Qiyue Jing, Shenghai Zhang, Jinzhi Han, Junru Chen, Yaoyao Xiang, Yanbo Kou, Yanxia Wei, Lu Wang, Yugang Wang, Igor C. Almeida Fam96a is essential for the host control of *Toxoplasma gondii* infection by fine-tuning macrophage polarization via an iron-dependent mechanism PLOS Neglected Tropical Diseases 2024-05-07 [PMID: 38713713]
- Cheng Z, Akatsuka S, Li GH et al. Ferroptosis resistance determines high susceptibility of murine A/J strain to iron-induced renal carcinogenesis Cancer Science 2022-01-01 [PMID: 34699654] (Immunohistochemistry, Western Blot)
- Ito F, Kato K, Yanatori I Et al. Ferroptosis-dependent extracellular vesicles from macrophage contribute to asbestos-induced mesothelial carcinogenesis through loading ferritin Redox biology 2021-10-21 [PMID: 34700146] (Human)
- Jiang Z, Wang Z, Chen L et al. Artesunate induces ER-derived-ROS-mediated cell death by disrupting labile iron pool and iron redistribution in hepatocellular carcinoma cells American journal of cancer research 2021-03-01 [PMID: 33791148] (WB, Human)
- Masaldan S, Clatworthy SAS, Gamell C et al. Iron accumulation in senescent cells is coupled with impaired ferritinophagy and inhibition of ferroptosis Redox Biol 2017-09-01 [PMID: 28888202] (WB, Human)
- Cloonan SM, Glass K, Laucho-Contreras ME et al. Mitochondrial iron chelation ameliorates cigarette smoke-induced bronchitis and emphysema in mice. Nat Med 2016-02-01 [PMID: 26752519] (WB, GS, Mouse)
- Regan RF, Chen M, Li Z et al. Neurons lacking iron regulatory protein-2 are highly resistant to the toxicity of hemoglobin. Neurobiol Dis 2008-08-01 [PMID: 18571425] (Mouse)
- Whitnall M, Rahmanto YS, Huang ML et al. Identification of nonferritin mitochondrial iron deposits in a mouse model of Friedreich ataxia Proc Natl Acad Sci U S A 2012-11-20 [PMID: 23169664] (WB, Mouse)
- Yoshihara D, Fujiwara N, Kato S, Sakiyama H, Eguchi H, Suzuki K. Alterations in renal iron metabolism caused by a copper/zinc-superoxide dismutase deficiency. Free Radic Res. 2012-04-10 [PMID: 22435664] (WB, Mouse)
- Masaratana P, Patel N, Latunde-Dada GO, Vaulont S, Simpson RJ, McKie AT. Regulation of iron metabolism in Hamp (-/-) mice in response to iron-deficient diet. Eur J Nutr. 2012-01-13 [PMID: 22241739] (WB, Mouse)



## Procedures

### Western Blot protocol for IRP2 Antibody (NB100-1798)

IRP2 Antibody:

Western Blot Protocol

1. Perform SDS-PAGE (4-12%) on samples to be analyzed, loading 50 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Rinse membrane with dH<sub>2</sub>O and then stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% non-fat dry milk + 1% BSA in TBS for 2 hours at room temperature.
6. Rinse the membrane in dH<sub>2</sub>O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
7. Dilute the rabbit anti-IRP2 primary antibody (NB 100-1798) in blocking buffer and incubate 1 hour at room temperature.
8. Rinse the membrane in dH<sub>2</sub>O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
9. Apply the diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions (Pierce's ECL).

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.





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### **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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