

Product Datasheet

DRP1 Antibody NB110-55237SS

Unit Size: 0.025 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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NB110-55237SS

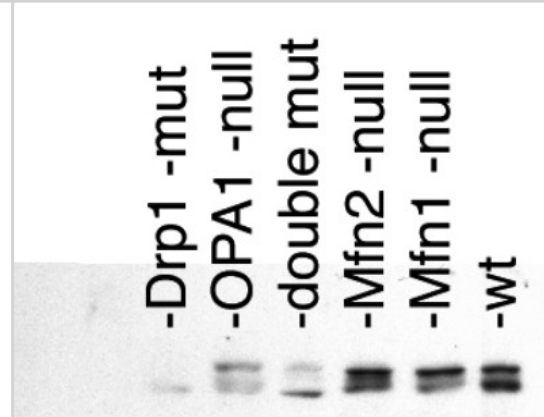
DRP1 Antibody

Product Information	
Unit Size	0.025 ml
Concentration	1 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Purity	Immunogen affinity purified
Buffer	Tris-glycine, 150 mM NaCl
Product Description	
Host	Rabbit
Gene ID	10059
Gene Symbol	DNM1L
Species	Human, Mouse, Rat
Species Reactivity	Human and mouse. Rat reactivity reported in scientific literature (PMID: 23658809). 100% sequence identity with monkey and hamster.
Immunogen	A synthetic peptide made to an N-terminal region within residues 1-100 of the human DRP1 protein. [Swiss-Prot# O00429]
Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Immunocytochemistry/Immunofluorescence 1:50-1:400, Immunohistochemistry 2.5 ug/ml, Immunohistochemistry-Paraffin 2.5 ug/ml, Immunoprecipitation, Simple Western 1:50, Western Blot 1:500
Application Notes	This DRP1 antibody is useful for Immunohistochemistry-paraffin embedded sections, Immunocytochemistry/Immunofluorescence and Western blot analysis where a band is seen at ~81 kDa. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. In ICC/IF, cytoplasmic staining was observed in HeLa cells. In Simple Western only 10-15 uL of the recommended dilution is used per data point. Use in Immunoprecipitation reported in scientific literature (PMID 25299344)

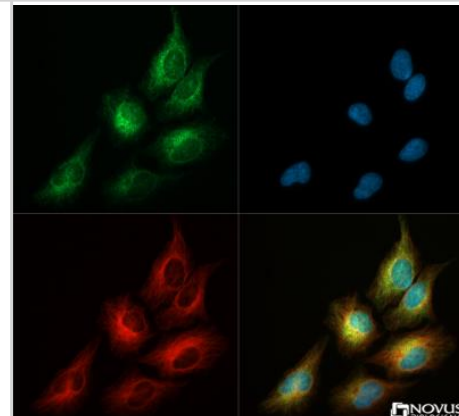


Images

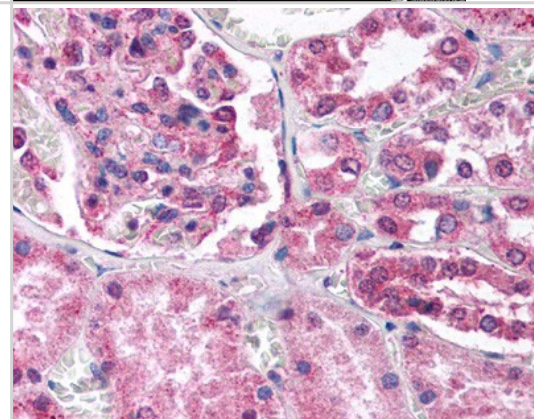
Western Blot: DRP1 Antibody [NB110-55237] - Staining of DRP-1 in mouse embryonic fibroblast post-nuclear extracts. Image courtesy of D. Chan California Institute of Technology.



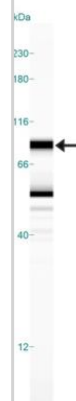
Immunocytochemistry/Immunofluorescence: DRP1 Antibody [NB110-55237] - DRP1 antibody (1:50) was tested in HeLa cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red). Image objective 40x.



Immunohistochemistry: DRP1 Antibody [NB110-55237] - Staining of renal tubular epithelium and visceral epithelial cells of glomeruli in Human kidney cortex. 40X magnification.



Simple Western: DRP1 Antibody [NB110-55237] - Simple Western lane view shows a specific band for DRP1 in 0.5 mg/ml of Human Brain lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Publications

Fu J, Yu Hm, Chiu Sy et al. Disruption of SUMO-Specific Protease 2 Induces Mitochondria Mediated neurodegeneration. PLoS Genet. 2014 Oct 01 [PMID: 25299344] (WB, IHC, IP, Mouse)

Montaigne D, Marechal X, Coisne A et al. Myocardial Contractile Dysfunction is Associated with Impaired Mitochondrial Function and Dynamics in Type 2 Diabetic but not in Obese Patients. Circulation. 2014 Jun 13 [PMID: 24928681] (WB, Human)

Stavru F, Palmer AE, Wang C et al. Atypical mitochondrial fission upon bacterial infection. Proc Natl Acad Sci U S A. 2013 Oct 1 [PMID: 24043775] (ICC/IF, Human)

Wappler EA, Institoris A, Dutta S et al. Mitochondrial Dynamics Associated with Oxygen-Glucose Deprivation in Rat Primary Neuronal Cultures. PLoS One 2013 May 2 [PMID: 23658809] (WB, Rat)

Manczak M, Sesaki H, Kageyama Y, Reddy PH. Dynamin-related protein 1 heterozygote knockout mice do not have synaptic and mitochondrial deficiencies Biochim Biophys Acta 2012 Feb 23 [PMID: 22387883] (WB, Mouse)

Rehman J, Zhang HJ, Toth PT, Zhang Y, Marsboom G, Hong Z, Salgia R, Husain AN, Wietholt C, Archer SL. Inhibition of mitochondrial fission prevents cell cycle progression in lung cancer. FASEB J;26(5):2175-86. 2012 May. [PMID: 22321727] (IHC, WB, Human)

Cheng Z, Guo S, Copps K et al. Foxo1 integrates insulin signaling with mitochondrial function in the liver. Nat Med;15(11):1307-11. 2009 Nov. [PMID: 19838201] (WB, Mouse)

Courchesne SL, Karch C, Pazyra-Murphy MF, Segal RA. Sensory Neuropathy Attributable to Loss of Bcl-w. J. Neurosci. 31(5):1624-1634. 2011 Feb 2. [PMID: 21289171] (WB, Mouse)

Calkins M, Manczak M, Mao P et al. Impaired mitochondrial biogenesis, defective axonal transport of mitochondria, abnormal mitochondrial dynamics and synaptic degeneration in a mouse model of Alzheimer's disease. Hum Mol Genet. 2011 Aug 25. [PMID: 21873260]

Marsboom G, Toth PT, Ryan JJ, Hong Z, Wu X, Fang YH, Thenappan T, Piao L, Zhang HJ, Pogoriler J, Chen Y, Morrow E, Weir EK, Rehman J, Archer SL. Dynamin-related protein 1-mediated mitochondrial mitotic fission permits hyperproliferation of vascular smooth muscle cells and offers a novel therapeutic target in pulmonary hypertension. Circ Res;110(11):1484-97. 2012 May 25. [PMID: 22511751] (WB, IHC, ICC/IF, Human)



Procedures

Protocol specific for DRP1 Antibody (NB110-55237)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 25 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted 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 three 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.

****Note:** Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

Immunocytochemistry/Immunofluorescence Protocol for DRP1 Antibody (NB110-55237)

Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.





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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.

For more information on our guarantee, please visit www.novusbio.com/guarantee.

