Product Datasheet

OPA1 Antibody (1E8-1D9) - BSA Free
NBP1-71656

Unit Size: 0.1 ml

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

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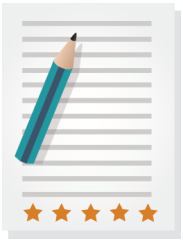
Updated 2/7/2023 v.20.1



NBP1-71656

OPA1 Antibody (1E8-1D9) - BSA Free

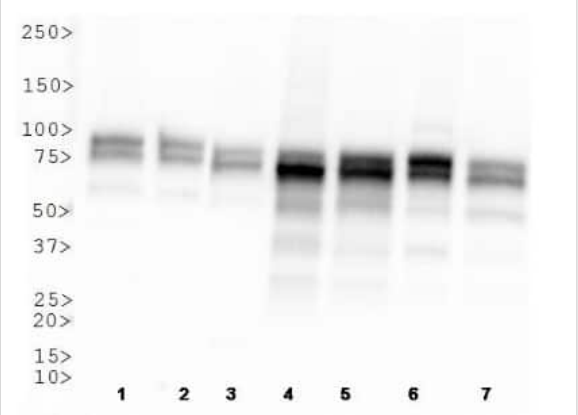
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	1E8-1D9
Preservative	0.02% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS

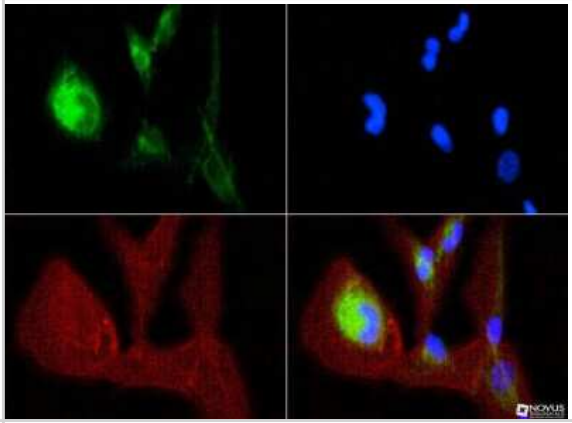
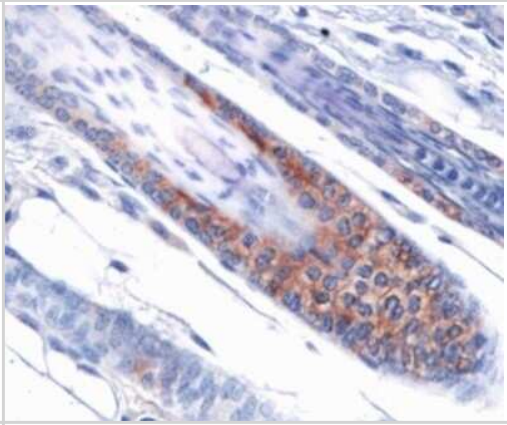
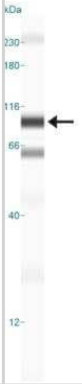
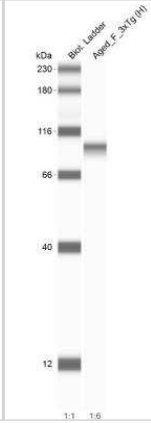
Product Description	
Host	Mouse
Gene ID	4976
Gene Symbol	OPA1
Species	Human, Mouse, Rat, Bovine, Chinese Hamster
Immunogen	Human OPA1 [Swiss-Prot# O60313].

Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:1000, Simple Western 1:25, Immunohistochemistry 1:100, Immunocytochemistry/ Immunofluorescence 1:50, Immunohistochemistry-Paraffin 1:100
Application Notes	In Western blot, multiple protein isoforms can be seen at ~90, 80 and 65 kDa. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

Western Blot: OPA1 Antibody (1E8-1D9) [NBP1-71656] - Analysis of OPA1 expression in 1) HeLa 2) MEF 3) HepG2 4) A431 5) CHO 6)PC12 and 7) Ntera2 whole cell lysates using NBP1-71656.



Immunocytochemistry/Immunofluorescence: OPA1 Antibody (1E8-1D9) [NBP1-71656] - OPA1 antibody was tested in ARPE-19 cells with FITC (green). Nuclei and actin were counterstained with DAPI (blue) and Phalloidin (red).	
Immunohistochemistry: OPA1 Antibody (1E8-1D9) [NBP1-71656] - Analysis of OPA1 on mouse skin using NBP1-71656.	
Simple Western: OPA1 Antibody (1E8-1D9) [NBP1-71656] - Image shows a specific band for OPA1 in 1.0 mg/mL of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Simple Western: OPA1 Antibody (1E8-1D9) - BSA Free [NBP1-71656] - Image shows a specific band for OPA1 in 0.1 ug/uL mouse hippocampus tissue lysate. Primary antibody dilution: 1:200. Image from verified customer review.	

Publications

Acosta CH, Clemons GA, Citadin CT et al. PRMT7 can prevent neurovascular uncoupling, blood-brain barrier permeability, and mitochondrial dysfunction in repetitive and mild traumatic brain injury Experimental neurology 2023-05-15 [PMID: 37196697] (WB, Mouse)

Wu, Z, Tantray, I Et al. MISTERMINATE Mechanistically Links Mitochondrial Dysfunction with Proteostasis Failure. Mol Cell 2019-08-22 [PMID: 31378462] (IF/IHC, Mouse)

Bollu LR, Ren J, Blessing AM et al. Involvement of de novo synthesized palmitate and mitochondrial EGFR in EGF induced mitochondrial fusion of cancer cells. Cell Cycle 2014-01-01 [PMID: 25483192]

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. 2014-06-13 [PMID: 24928681] (WB, Human)

Procedures

Western Blot protocol for OPA1 Antibody (NBP1-71656)
OPA1 Antibody (1E8-1D9):
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 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%.

Immunohistochemistry-Paraffin protocol for OPA1 Antibody (NBP1-71656)
OPA1 Antibody (1E8-1D9):
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes.

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

Immunocytochemistry/Immunofluorescence protocol for OPA1 Antibody (NBP1-71656)
OPA1 Antibody (1E8-1D9):
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 1:25,0000 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.

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NBP1-71656

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)
NB110-55290PEP	OPA1 Antibody Blocking Peptide

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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