

Product Datasheet

Mitofusin 1 Antibody - BSA Free NBP1-51841

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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NBP1-51841

Mitofusin 1 Antibody - 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 | Polyclonal |
| Preservative | 0.05% Sodium Azide |
| Isotype | IgG |
| Purity | Immunogen affinity purified |
| Buffer | PBS |

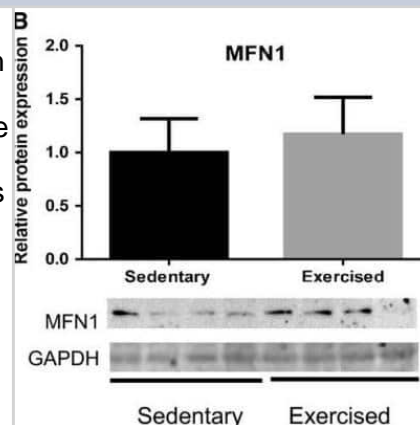
| Product Description | |
|---------------------|--|
| Host | Rabbit |
| Gene ID | 55669 |
| Gene Symbol | MFN1 |
| Species | Human, Mouse, Rat |
| Marker | Mitochondrial Fusion Marker |
| Immunogen | A genomic peptide made to an N-terminal region of human Mitofusin-1 (within residues 5-100). [Swiss-Prot Q8IWA4] |
| Notes | Manufactured by Genomic Antibody Technology™. GAT FAQs |

| Product Application Details | |
|-----------------------------|--|
| Applications | Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin |
| Recommended Dilutions | Western Blot reported in scientific literature, Immunohistochemistry 1:100, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 1:100 |
| Application Notes | Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. |

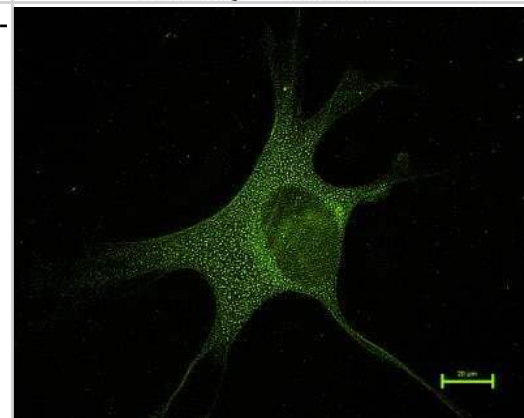


Images

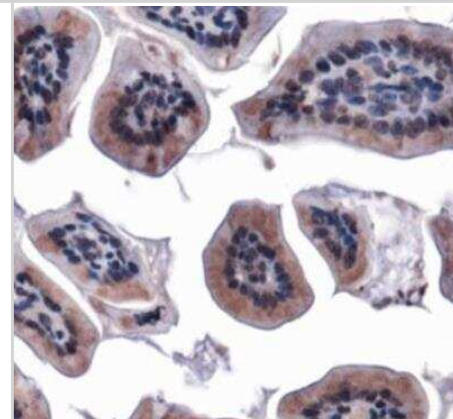
Western Blot: Mitofusin 1 Antibody [NBP1-51841] - Densitometric analyses of protein expression levels relative to the sedentary group with representative image of western blot are shown. $n = 5-6/\text{group}$. Values are expressed by mean \pm SEM expressed as fold change relative to the sedentary group. * $P < 0.05$, significantly different from the sedentary group. Black bar: fetal hearts from sedentary dams; gray bar: fetal hearts from exercised dams. Image collected and cropped by CiteAb from the following publication (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5350185/>) licensed under a CC-BY license.



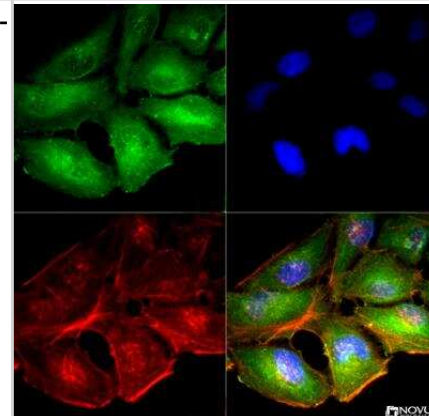
Immunocytochemistry/Immunofluorescence: Mitofusin 1 Antibody [NBP1-51841] - Mfn-1 expressed in mouse neural stem cells. Image from verified customer review.



Immunohistochemistry: Mitofusin 1 Antibody [NBP1-51841] - IHC staining of Mfn1 in mouse intestine.



Immunocytochemistry/Immunofluorescence: Mitofusin 1 Antibody [NBP1-51841] - Mitofusin-1 antibody was tested in HeLa cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).



Publications

Jingwen Zhang, Zhibin He, Julia Fedorova, Cole Logan, Lauryn Bates, Kayla Davitt, Van Le, Jiayuan Murphy, Melissa Li, Mingyi Wang, Edward G. Lakatta, Di Ren, Ji Li Alterations in mitochondrial dynamics with age-related Sirtuin1/Sirtuin3 deficiency impair cardiomyocyte contractility *Aging Cell* 2021-07-03 [PMID: 34216536]

Ramasubramanian B, Griffith C, Hanson M et al. Protective Effects of Chaya against Mitochondrial and Synaptic Toxicities in the Type 2 Diabetes Mouse Model TallyHO Cells 2022-02-21 [PMID: 35203393] (WB, IF/IHC, Mouse)

Chidipi B, Angulo MB, Shah SI et al. The dynamin-related protein 1 is decreased and the mitochondrial network is altered in Friedreich's ataxia cardiomyopathy *The international journal of biochemistry & cell biology* 2021-12-16 [PMID: 34923139] (WB, Human)

Panes, J D, Godoy, P A Et al. Changes in PGC-1 alpha /SIRT1 Signaling Impact on Mitochondrial Homeostasis in Amyloid-Beta Peptide Toxicity Model. *Front Pharmacol* 2020-06-12 [PMID: 32523530] (IF/IHC, Sheep)

Singh Bhatti J, Tamarai K, Kandimalla R et al. Protective effects of a mitochondria-targeted small peptide SS31 against hyperglycemia-induced mitochondrial abnormalities in the liver tissues of diabetic mice, Tallyho/JngJ mice *Mitochondrion* 2021-02-24 [PMID: 33639273] (WB, Mouse)

Lin H, Magrane J, Rattelle A et al. Early cerebellar deficits in mitochondrial biogenesis and respiratory chain complexes in the KIKO mouse model of Friedreich ataxia *Dis Model Mech.* 2017-11-01 [PMID: 29125827] (WB, Mouse)

Wang X, Yang H, Yanagisawa D et al. Mitochondrial ferritin affects mitochondria by stabilizing HIF-1alpha in retinal pigment epithelium: implications for the pathophysiology of age-related macular degeneration. *Neurobiol Aging* 2016-11-01 [PMID: 27599360] (WB)

Chung E, Joiner HE, Skelton T et al. Maternal exercise upregulates mitochondrial gene expression and increases enzyme activity of fetal mouse hearts. *Physiol Rep.* 2017-03-01 [PMID: 28292876] (WB, Mouse)

Reddy PH, Manczak M, Yin X et al. Protective effects of a natural product, curcumin, against amyloid beta induced mitochondrial and synaptic toxicities in Alzheimer's disease. *J. Investig. Med.* 2016-12-01 [PMID: 27521081] (WB, Human)

Miller MW, Knaub LA, Olivera-Fragoso LF et al. Nitric oxide regulates vascular adaptive mitochondrial dynamics. *Am J Physiol Heart Circ Physiol.* 2013-06-15 [PMID: 23585138] (WB, Rat)



Procedures

Immunohistochemistry-Paraffin Embedded Sections protocol specific for MFN1 antibody (NBP1-51841)

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.





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Products Related to NBP1-51841

| | |
|-------------|---|
| HAF008 | Goat anti-Rabbit IgG Secondary Antibody [HRP] |
| NB7160 | Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP] |
| NBP2-24891 | Rabbit IgG Isotype Control |
| NBP1-51841H | Mitofusin 1 Antibody [HRP] |

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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