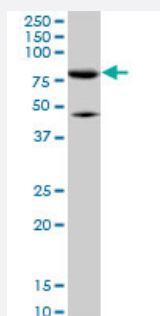


MFN2 monoclonal antibody (M01), clone 6A8

Catalog # H00009927-M01

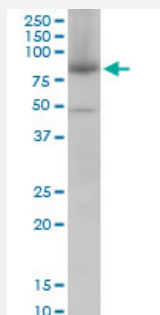
Size 100 ug

Applications



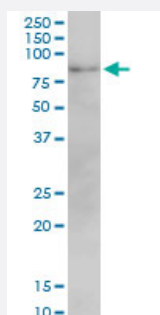
Western Blot (Cell lysate)

MFN2 monoclonal antibody (M01), clone 6A8. Western Blot analysis of MFN2 expression in HeLa (Cat # L013V1).



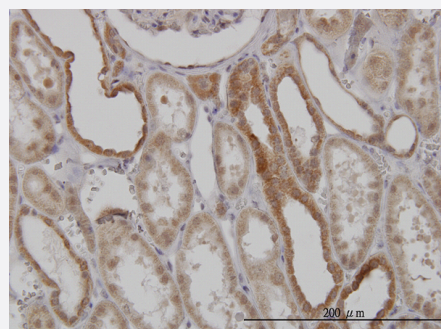
Western Blot (Cell lysate)

MFN2 monoclonal antibody (M01), clone 6A8. Western Blot analysis of MFN2 expression in PC-12(Cat # L012V1).



Western Blot (Cell lysate)

MFN2 monoclonal antibody (M01), clone 6A8. Western Blot analysis of MFN2 expression in NIH/3T3(Cat # L018V1).

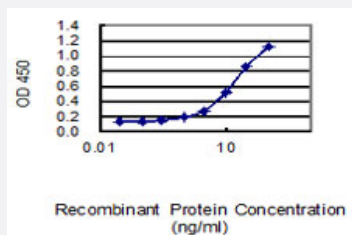


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to MFN2 on formalin-fixed paraffin-embedded human kidney. [antibody concentration 3 ug/ml]

Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged MFN2 is 0.3 ng/ml as a capture antibody.



Specification

Product Description	Mouse monoclonal antibody raised against a partial recombinant MFN2.
Immunogen	MFN2 (NP_055689, 661 a.a. ~ 757 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	FKRQFVEHASEKLQLVISYTGSNCSHQVQQELSGTFAHLCQQVDVTRENLEQEIAAMNKKIEVLD SLQSKAKLLRNKAGWLDSELNMFTHQYLQPSR
Host	Mouse
Reactivity	Human, Mouse, Rat
Interspecies Antigen Sequence	Mouse (93); Rat (93)
Isotype	IgG2a Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein.
Storage Buffer	In 1x PBS, pH 7.4
Storage Instruction	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Cell lysate)

MFN2 monoclonal antibody (M01), clone 6A8. Western Blot analysis of MFN2 expression in HeLa (Cat # L013V1).

[Protocol Download](#)

- Western Blot (Cell lysate)

MFN2 monoclonal antibody (M01), clone 6A8. Western Blot analysis of MFN2 expression in PC-12(Cat # L012V1).

[Protocol Download](#)

- Western Blot (Cell lysate)

MFN2 monoclonal antibody (M01), clone 6A8. Western Blot analysis of MFN2 expression in NIH/3T3(Cat # L018V1).

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to MFN2 on formalin-fixed paraffin-embedded human kidney. [antibody concentration 3 ug/ml]

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged MFN2 is 0.3 ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

Gene Info — MFN2

Entrez GeneID	9927
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GeneBank Accession#	NM_014874
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Protein Accession#	NP_055689
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Gene Name	MFN2
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Gene Alias	CMT2A, CMT2A2, CPRP1, HSG, KIAA0214, MARF
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Gene Description	mitofusin 2
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Omim ID	601152 608507 609260
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Gene Ontology	Hyperlink
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Gene Summary

This gene encodes a mitochondrial membrane protein that participates in mitochondrial fusion and contributes to the maintenance and operation of the mitochondrial network. This protein is involved in the regulation of vascular smooth muscle cell proliferation, and it may play a role in the pathophysiology of obesity. Mutations in this gene cause Charcot-Marie-Tooth disease type 2A2, and hereditary motor and sensory neuropathy VI, which are both disorders of the peripheral nervous system. Defects in this gene have also been associated with early-onset stroke. Two transcript variants encoding the same protein have been identified. [provided by RefSeq]

Other Designations

OTTHUMP00000002509|hyperplasia suppressor|mitochondrial assembly regulatory factor|mitofusin-2|transmembrane GTPase MFN2

Publication Reference

- [Mitofusin 2 sustains the axonal mitochondrial network to support presynaptic Ca²⁺ homeostasis and the synaptic vesicle cycle in rat hippocampal axons.](#)

Jason D. Vevea and Edwin R. Chapman.

Journal of Neuroscience 2023 May; 43(19):3421.

Application: WB-Ti, Rat, Rat hippocampal neurons

- [The smoothened agonist SAG reduces mitochondrial dysfunction and neurotoxicity of frataxin-deficient astrocytes.](#)

Andrés Vicente-Acosta, Alfredo Giménez-Cassina, Javier Díaz-Nido, Frida Loria.

Journal of Neuroinflammation 2022 Apr; 19(1):93.

Application: WB-Tr, Human, Human astrocyte

- [Drug repositioning as a therapeutic strategy for neurodegenerations associated with OPA1 mutations.](#)

Serena J Aleo, Valentina Del Dotto, Mario Fogazza, Alessandra Maresca, Tiziana Lodi, Paola Goffrini, Anna Ghelli, Michela Rugolo, Valerio Carelli, Enrico Baruffini, Claudia Zanna.

Human Molecular Genetics 2021 Jan; 29(22):3631.

Application: WB-Ce, Mouse , MEFs

- [Restoring metabolism of myeloid cells reverses cognitive decline in ageing.](#)

Paras S Minhas, Amira Latif-Hernandez, Melanie R McReynolds, Aarooran S Durairaj, Qian Wang, Amanda Rubin, Amit U Joshi, Joy Q He, Esha Gauba, Ling Liu, Congcong Wang, Miles Linde, Yuki Sugiura, Peter K Moon, Ravi Majeti, Makoto Suematsu, Daria Mochly-Rosen, Irving L Weissman, Frank M Longo, Joshua D Rabinowitz, Katrin I Andreasson.

Nature 2021 Feb; 590(7844):122.

Application: WB-Ce, Human, Human monocyte-derived macrophages

- [Oligodendroglial glycolytic stress triggers inflammasome activation and neuropathology in Alzheimer's disease.](#)

Xinwen Zhang, Rihua Wang, Di Hu, Xiaoyan Sun, Hisashi Fujioka, Kathleen Lundberg, Ernest R Chan, Quanqiu Wang, Rong Xu, Margaret E Flanagan, Andrew A Pieper, Xin Qi.

Science Advances 2020 Dec; 6(49):eabb8680.

Application: WB-Ce, WB-Ti, Human, Mouse, Human oligodendrocytes, Mouse corpus callosum

- [Coenzyme Q biosynthesis inhibition induces HIF-1 \$\alpha\$ stabilization and metabolic switch toward glycolysis.](#)

Irene Liparulo, Christian Bergamini, Marco Bortolus, Natalia Calonghi, Giuseppe Gasparre, Ivana Kurelac, Luca Masin, Nicola Rizzardi, Michela Rugolo, Wenping Wang, Serena J Aleo, Alisar Kiwan, Cristian Torri, Claudia Zanna, Romana Fato.

The FEBS Journal 2021 Mar; 288(6):1956.

Application: WB-Ce, Human, T67 cells

- [DNMT1 mutations leading to neurodegeneration paradoxically reflect on mitochondrial metabolism.](#)

Maresca A, Del Dotto V, Capristo M, Scimonelli E, Tagliavini F, Morandi L, Tropeano CV, Caporali L, Mohamed S, Roberti M, Scandiffio L, Zaffagnini M, Rossi J, Cappelletti M, Musiani F, Contin M, Riva R, Liguori R, Pizza F, La Morgia C, Antelmi E, Polosa PL, Mignot E, Zanna C, Plazzi G, Carelli V.

Human Molecular Genetics 2020 Jul; 29(11):1864.

Application: WB-Ce, Human, HeLa, SK-N-SH cells

- [Novel role of Tieg1 in muscle metabolism and mitochondrial oxidative capacities.](#)

Malek Kammoun, Jerome Piquereau, Lydie Nadal-Desbarats, Sandra Mème, Maud Beuvin, Gisèle Bonne, Vladimir Veksler, Yann Le Fur, Philippe Pouletaut, William Mème, Frederic Szeremeta, Jean-Marc Constans, Elizabeth S Bruinsma, Molly H Nelson Holte, Zeynab Najafova, Steven A Johnsen, Malayannan Subramaniam, John R Hawse, Sabine F Bensamoun.

Acta Physiologica (Oxford, England) 2020 Mar; 228(3):e13394.

Application: WB-Ti, WB-Tr, Mouse, Mouse extensor digitorum longus muscle, Mouse soleus

- [Miro1 Marks Parkinson's Disease Subset and Miro1 Reducer Rescues Neuron Loss in Parkinson's Models.](#)

Hsieh CH, Li L, Vanhauwaert R, Nguyen KT, Davis MD, Bu G, Wszolek ZK, Wang X.

Cell Metabolism 2019 Sep; [Epub].

Application: WB-Ce, Human, Fibroblasts

- [ATAD3A oligomerization causes neurodegeneration by coupling mitochondrial fragmentation and bioenergetics defects.](#)

Zhao Y, Sun X, Hu D, Prosdocimo DA, Hoppel C, Jain MK, Ramachandran R, Qi X.

Nature Communications 2019 Mar; 10(1):1371.

Application: WB, Mouse, HdhQ7, HdhQ111 cells

- [A selective inhibitor of mitofusin 1-βIIPKC association improves heart failure outcome in rats.](#)

Ferreira JCB, Campos JC, Qvit N, Qi X, Bozi LHM, Bechara LRG, Lima VM, Queliconi BB, Disatnik MH, Dourado PMM, Kowaltowski AJ, Mochly-Rosen D.

Nature Communications 2019 Jan; 10(1):329.

Application: WB, Rat, Rat cardiomyocytes

- [Deciphering OPA1 mutations pathogenicity by combined analysis of human, mouse and yeast cell models.](#)

Del Dotto V, Fogazza M, Musiani F, Maresca A, Aleo SJ, Caporali L, La Morgia C, Nolli C, Lodi T, Goffrini P, Chan D, Carelli V, Rugolo M, Baruffini E, Zanna C.

Biochimica et Biophysica Acta. Molecular Basis of Disease 2018 Oct; 1864(10):3496.

Application: WB-Tr, Human, Mouse, Fibroblasts, MEFs

- [Effect of Roux-en-Y gastric bypass on liver mitochondrial dynamics in a rat model of obesity.](#)

Sacks J, Mulya A, Fealy CE, Huang H, Mosinski JD, Pagadala MR, Shimizu H, Batayyah E, Schauer PR, Brethauer SA, Kirwan JP.

Physiological Reports 2018 Apr; 6:1.

Application: WB-Ce, Rat, Liver homogenates

- [A new mitofusin topology places the redox-regulated C terminus in the mitochondrial intermembrane space.](#)

Mattie S, Riemer J, Wideman JG, McBride HM.

The Journal of Cell Biology 2018 Feb; 217(2):507.

Application: WB, Human, HEK 293 cells

- [Increase in proteins involved in mitochondrial fission, mitophagy, proteolysis and antioxidant response in type I endometrial cancer as an adaptive response to respiratory complex I deficiency.](#)

Cormio A, Musicco C, Gasparre G, Cormio G, Pesce V, Sardanelli A, Gadaleta MN.

Biochemical and Biophysical Research Communications 2017 Jul; 491(1):85.

Application: WB-Ti, Human, Human type I endometrial cancer

- [Mitochondrial and metabolic dysfunction in renal convoluted tubules of obese mice: protective role of melatonin.](#)

Stacchiotti A, Favero G, Giugno L, Lavazza A, Reiter RJ, Rodella LF, Rezzani R.

PLoS One 2014 Oct; 9(10):e1111141.

Application: IF, IHC, Mouse, Kidney

Disease

- [Charcot-Marie-Tooth Disease](#)

- [Genetic Predisposition to Disease](#)
- [Glaucoma](#)
- [Hereditary Sensory and Motor Neuropathy](#)