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MFN1 Antibody (monoclonal) (M04)

Mouse monoclonal antibody raised against a full length recombinant MFN1.
Catalog # AT2850a

Specification

MFN1 Antibody (monoclonal) (M04) - Product Information

Application	**WB, E**
Primary Accession	Q8IWA4
Other Accession	BC040557
Reactivity	**Human**
Host	**mouse**
Clonality	**Monoclonal**
Isotype	**IgG2a Kappa**
Calculated MW	**84160**

MFN1 Antibody (monoclonal) (M04) - Additional Information

Gene ID 55669

Other Names
Mitofusin-1, 365-, Fzo homolog, Transmembrane GTPase MFN1, MFN1

Target/Specificity
MFN1 (AAH40557, 1 a.a. ~ 741 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

Dilution
WB~~1:500~1000

Format
Clear, colorless solution in phosphate buffered saline, pH 7.2 .

Storage
Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Precautions
MFN1 Antibody (monoclonal) (M04) is for research use only and not for use in diagnostic or therapeutic procedures.

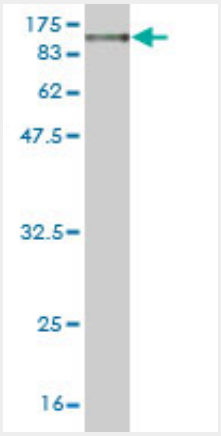
MFN1 Antibody (monoclonal) (M04) - Protocols

Provided below are standard protocols that you may find useful for product applications.

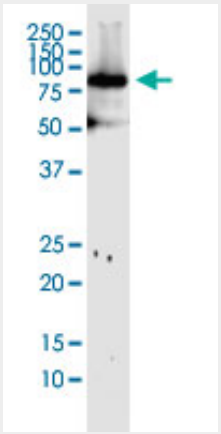
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry

- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

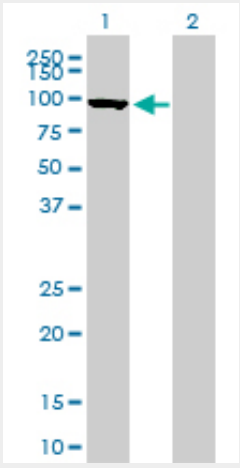
MFN1 Antibody (monoclonal) (M04) - Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (107.25 KDa) .



MFN1 monoclonal antibody (M04), clone 3C9. Western Blot analysis of MFN1 expression in HepG2.



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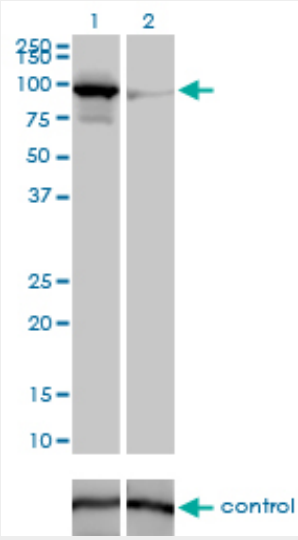
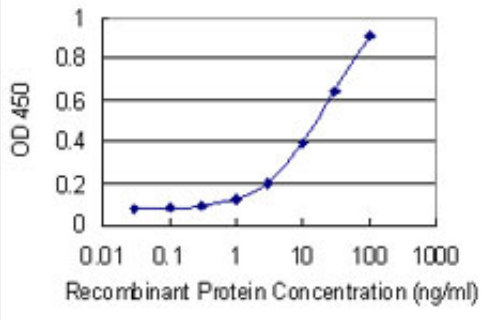
Western Blot analysis of MFN1 expression in transfected 293T cell line by MFN1 monoclonal antibody (M04), clone 3C9.

Lane 1: MFN1 transfected lysate(84.2 KDa).
Lane 2: Non-transfected lysate.



Western blot analysis of MFN1 over-expressed 293 cell line, cotransfected with MFN1 Validated Chimera RNAi ((Cat # AT2850a)



Detection limit for recombinant GST tagged MFN1 is 0.3 ng/ml as a capture antibody.

MFN1 Antibody (monoclonal) (M04) - Background

The protein encoded by this gene is a mediator of mitochondrial fusion. This protein and mitofusin 2 are homologs of the Drosophila protein fuzzy onion (Fzo). They are mitochondrial membrane proteins that interact with each other to facilitate mitochondrial targeting.

MFN1 Antibody (monoclonal) (M04) - References

1.A small natural molecule promotes mitochondrial fusion through inhibition of the deubiquitinase USP30.Yue W, Chen Z, Liu H, Yan C, Chen M, Feng D, Yan C, Wu H, Du L, Wang Y, Liu J, Huang X, Xia L, Liu L, Wang X, Jin H, Wang J, Song Z, Hao X, Chen QCell Res. 2014 Feb 11. doi: 10.1038/cr.2014.20.2.Phosphatidic Acid (PA)-Preferring Phospholipase A1 Regulates Mitochondrial Dynamics.Baba T, Kashiwagi Y, Arimitsu N, Kogure T, Edo A, Maruyama T, Nakao K, Nakanishi H, Kinoshita M, Frohman MA, Yamamoto A, Tani KJ Biol Chem. 2014 Mar 5.3.Extramitochondrial OPA1 and adrenocortical function.Fulop L, Rajki A, Katona D, Szanda G, Spat AMol Cell Endocrinol. 2013 Jul 29. pii: S0303-7207(13)00315-8. doi: 10.1016/j.mce.2013.07.021.4.Dynamics of nucleoid structure regulated by mitochondrial fission contributes to cristae reformation and release of

cytochrome c.Ban-Ishihara R, Ishihara T, Sasaki N, Mihara K, Ishihara NProc Natl Acad Sci U S A. 2013 Jul 16;110(29):11863-8. doi: 10.1073/pnas.1301951110. Epub 2013 Jul 2.5.Regulation of miRNAs in human skeletal muscle following acute endurance exercise and short term endurance training.Russell AP, Lamon S, Boon H, Wada S, Guller I, Brown EL, Chibalin AV, Zierath J, Snow RJ, Stepto NK, Wadley GD, Akimoto TJ Physiol. 2013 Jun 24.6.Atad3 Function Is Essential for Early Post-Implantation Development in the Mouse.Goller T, Seibold UK, Kremmer E, Voos W, Kolanus W.PLoS One. 2013;8(1):e54799. doi: 10.1371/journal.pone.0054799. Epub 2013 Jan 25.7.TRAP1 Controls Mitochondrial Fusion/Fission Balance through Drp1 and Mff Expression.Takamura H, Koyama Y, Matsuzaki S, Yamada K, Hattori T, Miyata S, Takemoto K, Tohyama M, Katayama T.PLoS One. 2012;7(12):e51912. doi: 10.1371/journal.pone.0051912. Epub 2012 Dec 20.8.PINK1-mediated phosphorylation of the Parkin ubiquitin-like domain primes mitochondrial translocation of Parkin and regulates mitophagy.Shiba-Fukushima K, Imai Y, Yoshida S, Ishihama Y, Kanao T, Sato S, Hattori N.Sci Rep. 2012;2:1002. doi: 10.1038/srep01002. Epub 2012 Dec 19.9.Suppressor of cytokine signaling 6 (SOCS6) promotes mitochondrial fission via regulating DRP1 translocation.Lin HY, Lai RH, Lin ST, Lin RC, Wang MJ, Lin CC, Lee HC, Wang FF, Chen JY.Cell Death Differ. 2013 Jan;20(1):139-53. doi: 10.1038/cdd.2012.106. Epub 2012 Sep 7.10.Rab32 modulates apoptosis onset and mitochondria-associated membrane (MAM) properties.Bui M, Gilady SY, Fitzsimmons RE, Benson MD, Lynes EM, Gesson K, Alto NM, Strack S, Scott JD, Simmen T.J Biol Chem. 2010 Oct 8;285(41):31590-602. Epub 2010 Jul 29.11.PGC1{alpha} relationship with skeletal muscle palmitate oxidation is not present with obesity, despite maintained ained PGC1{alpha} and PGC1{beta} protein.Holloway GP, Perry CG, Thrush AB, Heigenhauser GJ, Dyck DJ, Bonen A, Spriet LL.Am J Physiol Endocrinol Metab. 2008 Jun;294(6):E1060-9. Epub 2008 Mar 18.12.OPA1 mutations associated with dominant optic atrophy impair oxidative phosphorylation and mitochondrial fusion.Zanna C, Ghelli A, Porcelli AM, Karbowski M, Youle RJ, Schimpf S, Wissinger B, Pinti M, Cossarizza A, Vidoni S, Valentino ML, Rugolo M, Carelli V.Brain. 2008 Feb; 131(Pt 2): 352-67.