Mitofusin-2 (MFN2) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Mitofusin-2 (MFN2), Polyclonal Antibody
Full Product Name	Mitofusin-2 (Mfn2, Mitofusin-2, Transmembrane GTPase MFN2)
Product Gene Name	anti-MFN2 antibody
Product Synonym Names	Anti -Mitofusin-2 (Mfn2, Mitofusin-2, Transmembrane GTPase MFN2)
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Rat
Form/Format	Supplied as a liquid in 0.1M Tris-glycine, pH 7.4, 150mM sodium chloride, 0.05% sodium azide.
Purity/Purification	Affinity Purified Purified by immunoaffinity chromatography.
Specificity	Recognizes human Mitofusin-2. Species Crossreactivity
Preparation and Storage	May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	86,402 Da
Chromosome Location	Chromosome: 1; NC_000001.10 (12040238..12073572). Location: 1p36.22
OMIM	601152
3D Structure	ModBase 3D Structure for O95140
Immunogen	Synthetic linear peptide corresponding to the cytoplasmic domain of human Mfn2 (KLH).
Positive Control	Human heart tissue lysate
Product Categories/Family for anti-MFN2 antibody	Antibodies; Abs to GTPase; Rab; Ras; Rho Proteins
Applications Tested/Suitable for anti-MFN2 antibody	Western Blot (WB)
Application Notes for anti-MFN2 antibody	Suitable for use in Western Blot. Dilution: Western Blot: 0.5ug/ml
Related Product Information for anti-MFN2 antibody	Mitofusin-2 (Mfn2) is a membrane protein of the mitochondria and is important in mitochondrial fusion in mammalian cells. Mfn2 activity has also been implicated in mitochondrial metabolism and the loss of Mfn2 may be the reason for certain metabolic modifications that are seen in individuals with obesity. Mfn2 has been associated with maintaining the membrane potential of the mitochondria. Mfn2 has been shown to hinder mitochondrial antiviral signaling by inhibiting production of type 1 interferons. Mfn2 is a p53-inducible target and involved in cell proliferation, apoptosis promotion and tumor suppression.
Other Notes	Small volumes of anti-MFN2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MFN2 purchase	MBS6009754 is an antibody targeting MFN2. Also known as Mitofusin-2 (Mfn2, Mitofusin-2, Transmembrane GTPase MFN2). Reactive in Human, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MFN2. It may not necessarily be applicable to this product.

NCBI GI #	189083768
NCBI GeneID	9927
NCBI Accession #	NP_001121132.1
UniProt Primary Accession #	O95140
UniProt Secondary Accession #	O95572; Q5JXC3; Q5JXC4; Q9H131; Q9NSX8; A8K1B3
UniProt Related Accession #	O95140
GenBank Nucleotide #	NM_001127660.1
NCBI Official Full Name	mitofusin-2
NCBI Official Synonym Full Names	mitofusin 2
NCBI Official Symbol	MFN2
NCBI Official Synonym Symbols	HSG; MARF; CMT2A; CPRP1; CMT2A2
UniProt Protein Name	Mitofusin-2
UniProt Synonym Protein Names	Transmembrane GTPase MFN2
Protein Family	Mitofusin
UniProt Gene Name	MFN2
UniProt Synonym Gene Names	CPRP1; KIAA0214
UniProt Entry Name	MFN2_HUMAN
NCBI Protein Information	mitofusin-2; hyperplasia suppressor; transmembrane GTPase MFN2; mitochondrial assembly regulatory factor
NCBI Summary for MFN2	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, Jul 2008]

UniProt Comments for MFN2	MFN2: Essential transmembrane GTPase, which mediates mitochondrial fusion. Fusion of mitochondria occurs in many cell types and constitutes an important step in mitochondria morphology, which is balanced between fusion and fission. MFN2 acts independently of the cytoskeleton. It therefore plays a central role in mitochondrial metabolism and may be associated with obesity and/or apoptosis processes. Overexpression induces the formation of mitochondrial networks. Plays an important role in the regulation of vascular smooth muscle cell proliferation. Defects in MFN2 are the cause of Charcot-Marie-Tooth disease type 2A2 (CMT2A2). CMT2A2 is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathy or CMT1, and primary peripheral axonal neuropathy or CMT2. Neuropathies of the CMT2 group are characterized by signs of axonal regeneration in the absence of obvious myelin alterations, normal or slightly reduced nerve conduction velocities, and progressive distal muscle weakness and atrophy. Defects in MFN2 are the cause of Charcot-Marie-Tooth disease type 6 (CMT6); also referred to as autosomal dominant hereditary motor and sensory neuropathy VI (HMSN6). CMT6 is an autosomal dominant form of axonal CMT associated with optic atrophy. Belongs to the mitofusin family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 3.6.5.-; Cell cycle regulation; Mitochondrial; Membrane protein, multi-pass; Membrane protein, integral; Cytoskeletal; Hydrolase Chromosomal Location of Human Ortholog: 1p36.22 Cellular Component: microtubule cytoskeleton; mitochondrial outer membrane; mitochondrion; integral to membrane; cytosol; intrinsic to mitochondrial outer membrane Molecular Function: GTPase activity; protein binding; GTP binding; ubiquitin protein ligase binding Biological Process: mitochondrial fusion; apoptosis; negative regulation of smooth muscle cell proliferation; mitochondrial membrane organization and biogenesis; blastocyst formation; mitochondrion localization; response to unfolded protein; camera-type eye morphogenesis; autophagy; negative regulation of Ras protein signal transduction; blood coagulation; cell cycle arrest; protein targeting to mitochondrion Disease: Charcot-marie-tooth Disease, Axonal, Type 2a2; Neuropathy, Hereditary Motor And Sensory, Type Vi
Research Articles on MFN2	**1.** MFN2 mutations alter mitochondrial oxidative phosphorylation by affecting mtDNA replication
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