MFN2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	MFN2, Polyclonal Antibody
Full Product Name	MFN2 Antibody, Biotin conjugated
Product Gene Name	anti-MFN2 antibody
Product Synonym Names	Mitofusin-2; Transmembrane GTPase MFN2; MFN2; CPRP1; KIAA0214
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid
Purity/Purification	>95%, Protein G purified
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: MFN2 (MBS7048656) Biotin Conjugated Antibody: MFN2 (MBS7048659)
Molecular Weight	50,041 Da
OMIM	AY028429 mRNA
3D Structure	ModBase 3D Structure for O95140
Immunogen	Recombinant Human Mitofusin-2 protein (61-158AA)
Preservative	0.03% Proclin 300
Constituents	50% Glycerol, 0.01M PBS, PH 7.4
Conjugation	Biotin
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-30366 / sc-50331
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-MFN2 antibody	ELISA (EIA)
Related Product Information for anti-MFN2 antibody	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. Involved in the clearance of damaged mitochondria via selective autophagy (mitophagy). Is required for PARK2 recruitment to dysfunctional mitochondria. Involved in the control of unfolded protein response (UPR) upon ER stress including activation of apoptosis and autophagy during ER stress. Acts as an upstream regulator of EIF2AK3 and suppresses EIF2AK3 activation under basal conditions.
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	MBS7048659 is an antibody targeting MFN2. Also known as MFN2 Antibody, Biotin conjugated. Reactive in Human. 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; HMSN6A; CMT2A2A; CMT2A2B
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
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: Cell cycle regulation; Cytoskeletal; EC 3.6.5.-; Hydrolase; Membrane protein, integral; Membrane protein, multi-pass; Mitochondrial Chromosomal Location of Human Ortholog: 1p36.22 Cellular Component: cytosol; intrinsic to mitochondrial outer membrane; mitochondrial outer membrane; mitochondrion Molecular Function: protein binding; ubiquitin protein ligase binding Biological Process: blood coagulation; cell cycle arrest; macroautophagy; mitochondrial fusion; mitochondrial membrane organization and biogenesis; mitochondrion localization; negative regulation of Ras protein signal transduction; negative regulation of smooth muscle cell proliferation; protein targeting to mitochondrion Disease: Charcot-marie-tooth Disease, Axonal, Autosomal Recessive, Type 2a2b; Charcot-marie-tooth Disease, Axonal, Type 2a2; Neuropathy, Hereditary Motor And Sensory, Type Vi
Research Articles on MFN2	**1.** We report four novel mutations and four rare missense variants of MFN2 in Charcot-Marie-Tooth disease 2A families in mainland China
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