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Product datasheet for MC228874

Mfn2 (NM_001285923) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mfn2 (NM_001285923) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Mfn2
Synonyms:	D630023P19Rik; Fzo
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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Fully Sequenced ORF:

>MC228874 representing NM_001285923
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCCTGCTCTTTTCTCGATGCAACTCCATCGTCACCGTCAAGAAGGATAAGCGACACATGGCTGAAG
TGAATGCTTCCCCTCTCAAGCACTTTGTCACTGCCAAGAAAAAGATCAATGGAATCTTTGAGCAGCTGGG
GGCCTACATCCAAGAGAGCGCCAGCTTCCTTGAAGACACCCACAGGAACACAGAACTGGACCCGGTTACC
ACGGAAGAGCAGGTCCTGGACGTCAAAGGGTACCTGTCCAAGGTCAGGGGTATCAGCGAAGTGCTGGCCA
GGCGGCACATGAAGGTGGCTTTTTTTGGCCGGACGAGCAATGGGAAGAGCACCGTGATCAATGCCATGCT
CTGGGACAAAGTTCTGCCATCTGGGATTGGTCATACCACCAATTGCTTCCTGCGGGTTGGGGGCACAGAT
GGCCATGAGGCCTTCCTCCTCACAGAGGGCTCAGAAGAGAAGAAGAGTGTCAAGACTGTGAACCAACTGG
CCCATGCCCTCCATCAGGACGAGCAGTTGCATGCAGGCAGCATGGTGAGTGTGATGTGGCCCAACTCCAA
GTGTCCGCTCCTGAAGGATGACCTCGTGCTGATGGACAGCCCTGGGATCGATGTTACCACGGAGCTGGAC
AGCTGGATTGATAAGTTTTGCCTGGATGCTGATGTGTTTGTGCTGGTGGCCAACTCAGAGTCCACGCTGA
TGCAGACGGAGAAGCAGTTCTTCCACAAAGTGAGTGAACGTCTCTCCCGGCCCAACATCTTCATCCTGAA
CAACCGCTGGGATGCGTCTGCCTCGGAGCCTGAGTACATGGAGGAGGTGCGGCGGCAGCACATGGAGCGC
TGCACCAGCTTTCTGGTGGATGAGCTGGGCGTGGTGGATCGAGCTCAGGCTGGGGACCGGATCTTCTTCG
TGTCTGCCAAGGAGGTTCTCAGCGCCAGGGTCCAGAAAGCCCAGGGCATGCCAGAAGGAGGCGGCGCTCT
CGCAGAAGGTTTTCAAGTGAGGATGTTTGAGTTTCAGAATTTCGAGAGGCAGTTTGAGGAGTGCATTTCC
CAGTCTGCAGTAAAGACCAAATTTGAGCAGCACACAGTCCGGGCCAAGCAGATTGCAGAGGCCGTTCGTC
TCATCATGGATTCCCTGCACATCGCAGCTCAGGAGCAGCGGGTTTATTGCCTAGAAATGCGGGAAGAGCG
GCAAGACCGGCTGAGGTTTATTGACAAGCAGCTGGAGCTCCTGGCTCAAGACTACAAGCTGCGAATTAAG
CAGATTACGGAGGAAGTGGAAAGGCAGGTGTCCACAGCCATGGCTGAAGAGATCAGGCGCCTCTCTGTGC
TAGTTGACGAGTACCAGATGGACTTCCACCCATCCCCAGTTGTCCTCAAGGTTTATAAGAACGAGCTGCA
CCGCCATATAGAGGAAGGTCTGGGCCGGAACCTGTCTGACCGCTGCTCCACTGCCATTGCCAGTTCACTG
CAGACTATGCAGCAGGACATGATAGACGGCTTGAAGCCCCTTCTTCCTGTATCTATGCGGAATCAGATAG
ACATGCTGGTCCCTCGACAGTGTTTCTCCCTCAGCTATGACCTGAATTGTGACAAGCTGTGTGCTGACTT
TCAGGAGGACATCGAGTTCCACTTCTCCCTTGGATGGACTATGCTAGTGAACAGGTTCCTGGGCCCCAAG
AATAGCCGCCGGGCCTTGCTAGGCTACAGTGATCAGGTTCAGCGTCCTCTCCCTCTGACACCTGCCAACC
CCAGCATGCCCCCCTTGCCACAGAGCTCCCTCACCCAGGAGGAGCTCATGGTCTCCATGGTTACTGGCCT
GGCCTCTCTGACGTCTAGGACCTCCATGGGCATTCTTGTGGTCGGAGGAGTGGTGTGGAAGGCAGTGGGC
TGGAGACTCATCGCCCTCTCCTTTGGACTGTATGGCCTCCTGTACGTCTATGAGCGACTGACCTGGACCA
CCAAAGCCAAAGAGAGGGCCTTCAAGCGCCAGTTTGTGGAATACGCCAGTGAGAAGCTACAGCTCATCAT
CAGTTACACCGGCTCTAACTGCAGCCACCAAGTCCAGCAGGAATTGTCTGGGACATTTGCTCATCTGTGC
CAGCAAGTTGACATCACCCGAGATAATCTGGAGCAGGAAATTGCTGCCATGAACAAGAAAGTCGAGGCTC
TGGATTCACTTCAGAGCAGAGCCAAACTGCTCAGGAATAAAGCTGGCTGGTTGGACAGCGAACTCAACAT
GTTCACACACCAGTACCTGCAGCCCAGCAGATAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001285923

Insert Size: 2274 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_001285923.1, NP_001272852.1
RefSeq Size:	4473 bp
RefSeq ORF:	2274 bp
Locus ID:	170731
UniProt ID:	Q80U63
Cytogenetics:	4 E1
Gene Summary:	Mitochondrial outer membrane GTPase that mediates mitochondrial clustering and fusion (PubMed:12527753, PubMed:23921378, PubMed:23620051). Mitochondria are highly dynamic organelles, and their morphology is determined by the equilibrium between mitochondrial fusion and fission events. Overexpression induces the formation of mitochondrial networks. Membrane clustering requires GTPase activity and may involve a major rearrangement of the coiled coil domains (By similarity). Plays a central role in mitochondrial metabolism and may be associated with obesity and/or apoptosis processes. Plays an important role in the regulation of vascular smooth muscle cell proliferation (By similarity). Involved in the clearance of damaged mitochondria via selective autophagy (mitophagy). Is required for PRKN recruitment to dysfunctional mitochondria (PubMed:23620051). Involved in the control of unfolded protein response (UPR) upon ER stress including activation of apoptosis and autophagy during ER stress (PubMed:23921556). Acts as an upstream regulator of EIF2AK3 and suppresses EIF2AK3 activation under basal conditions (PubMed:23921556).[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (5) differs in the 5' UTR compared to variant 1. All variants (1 through 7) encode the same protein.