

Product datasheet for **MC228873**

Mfn2 (NM_001285922) Mouse Untagged Clone

Product data:

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



Fully Sequenced ORF: >MC228873 representing NM_001285922
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCTGCTCTTTTCTCGATGCAACTCCATCGTCACCGTCAAGAAGGATAAGCGACACATGGCTGAAG
TGAATGCTTCCCCTCTCAAGCACTTTGTCACTGCCAAGAAAAGATCAATGGAATCTTTGAGCAGCTGGG
GGCCTACATCCAAGAGAGCGCCAGCTTCTTGAAGACACCCACAGGAACACAGAAGTGGACCCGGTTACC
ACGGAAGAGCAGGTCTGGACGTCAAAGGGTACCTGTCCAAGGTCAGGGGTATCAGCGAAGTGTGGCCA
GGCGGCACATGAAGGTGGCTTTTTTTGGCCGGACGAGCAATGGGAAGAGCACCGTGATCAATGCCATGCT
CTGGGACAAAAGTTCTGCCATCTGGGATTGGTCAACCAATTGCTTCTGCGGGTTGGGGGCACAGAT
GGCCATGAGGCCTTCTCTCACAGAGGGCTCAGAAGAGAAGAAGAGTGTCAAGACTGTGAACCAACTGG
CCCATGCCCTCCATCAGGACGAGCAGTTGCATGCAGGCAGCATGGTGTGATGTGGCCCAACTCCAA
GTGTCCGCTCTGAAGGATGACCTCGTGTGATGGACAGCCCTGGGATCGATGTACCAGGAGCTGGAC
AGCTGGATTGATAAGTTTTGCCTGGATGTGATGTGTTGTGCTGGTGGCAACTCAGAGTCCACCGCTGA
TGCAGACGGAGAAGCAGTTCTCCACAAAAGTGTGAGTGAACGTCTCTCCCGGCCAACATCTTCATCTGAA
CAACCGCTGGGATGCGTCTGCCTCGGAGCCTGAGTACATGGAGGAGTGCAGCGGCAGCACATGGAGCGC
TGCACACGCTTTCTGGTGGATGAGCTGGGCGTGGTGGATCGAGCTCAGGCTGGGACCGGATCTTCTTCG
TGCTGCCAAGGAGGTTCTCAGCGCCAGGGTCCAGAAAAGCCAGGGCATGCCAGAAGGAGCGCGCCTCT
CGCAGAAGGTTTTCAAGTGAGGATGTTTGTGAGTTTTCAGAATTCGAGAGGAGTTTGGAGTGTGATTTCC
CAGTCTGCAGTAAAGACAAAATTTGAGCAGCACACAGTCCGGGCCAAGCAGATTGCAGAGCCGTTCTGTC
TCATCATGGATCCCTGCACATCGCAGCTCAGGAGCAGCGGTTTTATTGCCTAGAAAAGCGGGAAGAGCG
GCAAGACCGCTGAGGTTTTATTGACAAGCAGCTGGAGCTCCTGGCTCAAGACTACAAGCTGCGAATTAAG
CAGATTACGGAGGAAGTGGAAAGGCAGGTGCCACAGCCATGGCTGAAGAGATCAGGCGCCTCTCTGTGC
TAGTTGACGAGTACCAGATGGACTTCCACCCATCCCGAGTTGCTCAAGGTTTATAAGAAGCAGCTGCA
CCGCCATATAGAGGAAGTCTGGCCCGAACCTGTCTGACCGCTGCTCCACTGCCATTGCCAGTTCACTG
CAGACTATGCAGCAGGACATGATAGACGGCTTGAAGCCCTTCTTCTGTATCTATGCGGAATCAGATAG
ACATGTGTTCCCTCGACAGTGTCTCCCTCAGCTATGACCTGAATTGTGACAAGCTGTGTGCTGACTT
TCAGGAGGACATCGAGTCCACTTCTCCCTGGATGGACTATGCTAGTGAACAGGTTCTGGGCCCAAG
AATAGCCCGCGGGCCTTCTAGGCTACAGTGTGATCAGGTTGAGCTCTCTCCCTGACACCTGCCAACC
CCAGCATGCCCCCTTGCACAGAGCTCCCTCACCCAGGAGGAGCTCATGGTCTCCATGGTTACTGGCCT
GGCCTCTCTGACGCTAGGACCTCCATGGCATTCTTGTGGTGGAGGAGTGGTGTGGAAGGCAGTGGGC
TGGAGACTCATCGCCCTCTCTTTGGACTGTATGGCCTCTGTACGCTATGAGCGACTGACCTGGACCA
CCAAAGCCAAAGAGAGGGCCTTCAAGCGCCAGTTTGTGGAATACGCCAGTGAGAAGCTACAGCTCATCAT
CAGTTACACCGGCTCTAACTGCAGCCACCAAGTCCAGCAGGAATTGCTGGGACATTTGCTCATCTGTGC
CAGCAAGTTGACATCACCCGAGATAATCTGGAGCAGGAAATTGCTGCCATGAACAAGAAAGTCGAGGCTC
TGGATTCACTTCAGAGCAGAGCCAACTGCTCAGGAATAAAGCTGGCTGGTTGGACAGCGAACTCAACAT
GTTACACACCAGTACCTGCAGCCAGCAGATAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001285922

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:	<ol style="list-style-type: none">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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001285922.1 , NP_001272851.1
RefSeq Size:	4473 bp
RefSeq ORF:	2274 bp
Locus ID:	170731
UniProt ID:	Q80U63
Cytogenetics:	4 E1
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (4) differs in the 5' UTR compared to variant 1. All variants (1 through 7) encode the same protein.</p>