

Product datasheet for **RC226143**

Mitofusin 2 (MFN2) (NM_001127660) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mitofusin 2 (MFN2) (NM_001127660) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mitofusin 2
Synonyms:	CMT2A; CMT2A2; CMT2A2A; CMT2A2B; CPRP1; HMSN6A; HSG; MARF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC226143 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCCTGCTCTTCTCTCGATGCAACTCTATCGTCACAGTCAAGAAAAATAAGAGACACATGGCTGAGG
 TGAATGCATCCCCACTTAAGCACTTTGTCACTGCCAAGAAGAAGATCAATGGCATTTCCTGAGCAGCTGGG
 GGCTACATCCAGGAGAGCGCCACCTTCCTTGAAGACACGTACAGGAATGCAGAAGTGGACCCCGTTACC
 ACAGAAGAACAGGTTCTGGAGCTCAAAGGTTACCTATCCAAAGTGAGAGGCATCAGTGAGGTGCTGGCTC
 GGAGGCACATGAAAGTGGCTTTTTTGGCCGACGAGCAATGGGAAGAGCACCGTGATCAATGCCATGCT
 CTGGGACAAAGTTCTGCCCTCTGGGATTGGCCACACCACCAATTGCTTCTCGGGTAGAGGGCACAGAT
 GGCCATGAGGCCCTTTCCTTACCGAGGGCTCAGAGGAAAAGAGGAGTGCCAAGACTGTGAACAGCTGG
 CCCATGCCCTCCACCAGGACAAGCAGCTCCATGCCGCGAGCCTAGTGAGTGTGATGTGCCCAACTCTAA
 GTGCCACTTCTGAAGGATGACCTCGTTTTGATGGACAGCCCTGGTATTGATGTCACCACAGAGCTGGAC
 AGCTGGATTGACAAGTTTTGTCTGGATGCTGATGTGTTTGTGCTGGTGGCCAACCTCAGAGTCCACCTGA
 TGCAGACGAAAAAGCACTTCTTCCACAAGGTGAGTGAGCGTCTCTCCCGCCAAACATCTTCATCTGAA
 CAACCGCTGGGATGCATCTGCCTCAGAGCCGAGTACATGGAGGAGGTGCGGCGGCAGCACATGGAGCGT
 TGTACCAGCTTCTGGTGGATGAGCTGGGCGTGGTGGATCGATCCAGGCGGGGACCGCATCTTCTTTG
 TGTCTGCTAAGGAGGTGCTCAACGCCAGGATTCAGAAAGCCAGGGCATGCCTGAAGGAGGGGGCGCTCT
 CGCAGAAGGCTTCAAGTGAGGATGTTTGTGTTTGTGTTTGTGAGAGGAGATTTGAGGAGTGCATCTCC
 CAGTCTGCAGTGAAGACCAAGTTTGTGAGCAGCACACCGTCCGGGCAAGCAGATTGCAGAGCGGTTCCG
 TCATCATGGACTCCCTGCACATGGCGGCTCGGGAGCAGCAGGTTTACTGCGAGGAAATGCGTGAAGAGCG
 GCAAGACCGACTGAAATTTATTGACAAACAGCTGGAGCTTTGGCTCAAGACTATAAGCTGCGAATTAAG
 CAGATTACGAGGAAAGTGAGAGGCAGGTGTCGACTGCAATGGCCGAGGAGATCAGGCGCTCTCTGTAC
 TGGTGGACGATTACCAGATGGACTTCCACCCTTCCAGTAGTCTCAAGGTTTATAAGAATGAGCTGCA
 CCGCCACATAGAGGAAGGACTGGGTGAAACATGTCTGACCGCTGCTCCACGGCCATCACCACCTCCCTG
 CAGACCATGCAGCAGGACATGATAGATGGCTTGAACCCCTCCTTCTGTGTCTGTGCGGAGTCAAGTAG
 ACATGCTGGTCCCACGCCAGTGTCTCCCTCAACTATGACCTAAACTGTGACAAGCTGTGTGCTGACTT
 CCAGGAAGACATTGAGTCCATTTCTCTCTCGGATGGACCATGCTGGTGAATAGGTTCTGGGCCCAAG
 AACAGCCGTCGGGCTTGTGGGCTACAATGACCAGGTCCAGCGTCCCATCCCTCTGACGCCAGCCAACC
 CCAGCATGCCCCACTGCCACAGGGCTCGCTCACCCAGGAGGAGTTCATGGTTTCCATGGTTACCGGCT
 GGCTCCTTGACATCCAGGACCTCCATGGGCATTCTTGTGTTGGAGGAGTGGTGTGGAAGGCAGTGGGC
 TGGCGGCTCATTGCCCTCTCTTTGGGCTCTATGGCCTCCTCTACGTCTATGAGCGTCTGACCTGGACCA
 CCAAGGCCAAGGAGAGGGCTTCAAGCGCCAGTTTGTGGAGCATGCCAGCGAGAAGCTGCAGCTTGTGAT
 CAGCTACACTGGCTCCAAGTGCAGCCACCAAGTCCAGCAGGAAGTGTCTGGGACCTTTGCTCATCTGTGT
 CAGCAAGTTGACGTCACCCGGGAGAACCTGGAGCAGGAAATGCCGCCATGAACAAGAAAATTGAGGTTT
 TTGACTCACTTCCAGAGCAAAGCAAGCTGCTCAGGAATAAAGCCGGTTGGTTGGACAGTGAGCTCAACAT
 GTTCACACACCAGTACCTGCAGCCAGCAGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC226143 protein sequence
 Red=Cloning site Green=Tags(s)

```
MSLLFSRCNSIVTVKKNKRHMAEVNASPLKHFVTAKKINGIFEQLGAYIQESATFLEDYRNAELDPVT
TEEQVLVDVKGYLKVRGISEVLARRHMKVAFFGRTSNGKSTVINAMLWDKVLPSGIGHTTNCFLRVEGTD
GHEAFLATEGSEEKRSKTVNQLAHLHQDKQLHAGSLVSMWPNKCPLLKDDLVLMDSPGIDVTTELD
SWIDKFCLDADVFVLVANSESTLMQTEKHFFHKVSRERL SRPNIFILNNRWDASASEPEYMEEVRRQHMER
CTSFLVDELGVVDRSQAGDRIFVSAKEVLNARIQKAQGMPEGGALAEQFQVRMFEFQNFERRFECCIS
QSAVKTKFEQHTVRAKQIAEAVRLIMDSLHMAAREQQVYCEEMREERQDRLLKFKIDKQLELLAQDYKLRIK
QITEEVERQVSTAMAEERL SVLVDDYQMDHFHSPVVLKVKNELHRHIEEGLGRNMSDRCSTAITNSL
QTMQQDMIDGLKPLL PVSQRSIDMLVPRQCFSLNYDLNCDKLCADFQEDIEFHFSLGWTMLVNRFLGPK
NSRRALMGYNDQVQRPIPLTPANPSMPPLPQGSLTQEEMVSMVTGLASLTSRTSMGILVVGVVWKA VG
WRLIALSFGLYGLLYVYERLTWTTKAKERAFKRQFVEHASEKLQLVISYTGSNCSHQVQQLSGTFAHL C
QQVDVTRENLEQEI AAMNKKIEVLDSLQSKAKLLRNKAGWLDSELMFMTHQYLQPSR
```

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6201_a09.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001127660

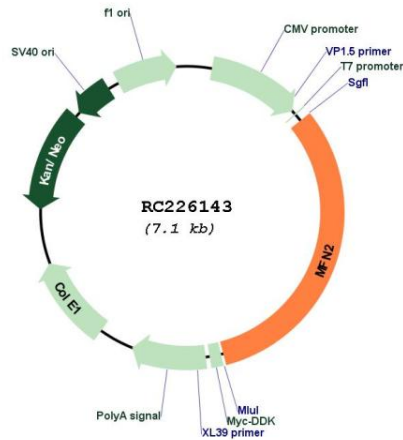
ORF Size: 2271 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

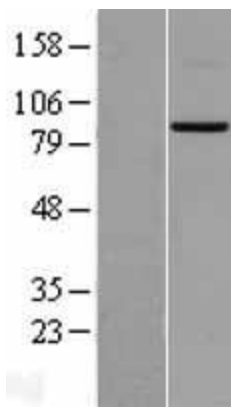
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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.
RefSeq:	<u>NM_001127660.1, NP_001121132.1</u>
RefSeq Size:	4540 bp
RefSeq ORF:	2274 bp
Locus ID:	9927
UniProt ID:	<u>O95140</u>
Cytogenetics:	1p36.22
Protein Families:	Transmembrane
MW:	86.4 kDa
Gene Summary:	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]

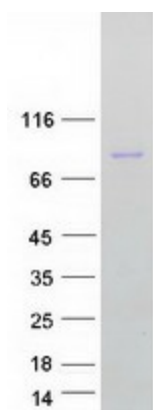
Product images:



Circular map for RC226143



Western blot validation of overexpression lysate (Cat# [LY426838]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226143 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MFN2 protein (Cat# [TP326143]). The protein was produced from HEK293T cells transfected with MFN2 cDNA clone (Cat# RC226143) using MegaTran 2.0 (Cat# [TT210002]).