

Product datasheet for **MG210400**

Mfn1 (NM_024200) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mfn1 (NM_024200) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mfn1
Synonyms:	2310002F04Rik; 6330416C07Rik; D3Ertd265e; HR2; mKIAA4032
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>MG210400 representing NM_024200
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGGCAGAAACGGTATCTCCACTGAAGCACTTCGTGCTGGCAAAGAAAGCCATCACTGCAATCTTCGGCC
AGTTACTGGAGTTTGTTACTGAGGGCTCACATTTTGTTGAAGCAACATACAGAAATCCAGAACTTGATCG
AATAGCATCCGAGGATGATCTGGTGAAATACAGGGCTACAGAAACAAGCTTGCTGTCATTGGGGAGGTG
CTGTCTCGGAGACATATGAAGGTGGCATTTCCTGGCAGGACAAGTAGTGGCAAGAGCTCTGTCATCAATG
CAATGCTGTGGGATAAAGTCTCCCGAGCGGATTGGTACACAACCAACTGCTTCCTGAGTGTGAGGG
GACCGATGGAGATAAAGCCTACCTTATGACCGAAGGGTCAGATGAAAAGAAAAGTGTGAAGACTGTTAAT
CAGCTGGCCCATGCCCTCCATATGGATAAAGACTTGAAGCTGGTGTCTTGTGCATGATTTTGGCCCA
AAGCAAAATGTGCCCTCTTGAGAGATGACCTGGTTTTAGTAGACAGCCAGGTACAGATGCACCACAGA
GCTGGATATCTGGATTGATAAGTTTTGCCTTGATGCTGATGTCTTTGTTTTGGTTGCAAACCTCGGAATCA
ACACTGATGAACCGGAGAAACATTTTTCCATTAAGGTGAATGAGCGGCTCTCCAAGCCCAACATCTTCA
TTCTGAATAACCGTTGGGATGCTTCTGCTTCGGAGCCGGAGTACATGGAGGATGTGCGCAGACAGACAT
GGAGAGATGTCTTCACTTCTTGGTAGAAGAGCTCAAGGTTGTAAGTCCGTCGGAAGCTCGGAATCGGATC
TTTTTTGTTTCAGCCAAGGAAGTTCTCAACTCCAGAAAGCATAAAGCTCAGGGGATGCCAGAAGTGGTG
GGGCACCTGCAGAAGGATTTCAAGCAAGATTACAGGAGTTTCAAATTTGAACAAACTTTTGAGGAGTG
TATCTCGCAGTCAGCAGTGAACAAAGTTTGAACAGCACACTATCAGAGCTAACAGATACTAGACACT
GTGAAAAACATACTGGACTCAGTAAACGTGGCAGCAGCAGAGAAGAGGGTTTATTCAATGGAAGAGAGAA
GATCAAGGAGGTCACGGAGGAGGTGGCAAACAAGGTTTCTTGTGCAATGACAGATGAAATTTGTCGACTA
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AGTTAAATAAGCACATAGAAGATGGCATGGGAAGAAATTTGGCTGATCGGTGTACCAATGAAGTCAATGC
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TCAACTCTACTGCTCCTTCTAACCCAGCAGCCCGGATAATGCAGCCAGGAGGAGCTCATGATCACCC
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GAAAACAGTGGGCTGGAACTAATCTCTGTACCTTAAGTATGTACGGAGCTCTGTACCTTTATGAGAGG
CTGACGTGGACGACCCGTGCGAAAGAGAGAGCGTTAAGCAGCAGTTTGTAAACTATGCAACTGAGAAGC
TGCAGATGATTGTGAGCTTACCAGTGCAACTGCAGCCACCAAGTACAGCAAGAAATGGCCACTACTTT
TGCTCGACTGTGCCAACAAAGTTGATGTTACTCAGAAACATCTGGAAGAGGAAATGCAAGATTATCCAAA
GAGATAGACCAACTGGAGAAAAACAGAACTCAAAGCTCTTAAGAAATAAAGCTATTCAACTTGAAA
GTGAGCTGGAGAATTTTTCGAAGCAGTTTCTACACCCGAGCAGTGGAGAATCC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >MG210400 representing NM_024200
 Red=Cloning site Green=Tags(s)

MAETVSPLKHFVLAKKAITAIFGQLLEFVTEGSHFVEATYRNPELDRIASEDDLVEIQGYRNKLAVIGEVL
 LSRHMKVAFVFGRTSSGKSSVINAMLWDKVLPSGIGHTTNCFLSVEGTDGDKAYLMTEGSDEKKSVKTVN
 QLAHALHMDKDLKAGCLVHVFWPKAKCALLRDDLVLVDSPGTDVTTTELDIWKDFCLDADVFVLVANSES
 TLMNTEKHFFHKVNERLSKPNIFILNNRWDA SASEPEYMEDVRRQHMERCLHFLVEELKVVSPSEARNRI
 FFVSAKEVLNSRKHKAQGMPEGGALAEQFQARLQEFQNFQTFEECISQSAVKTKFEQHTIRAKQILD
 YKNILDSVNVA AAEKRVYSMEEREDQIDRLDFIRNQMNLLTLDVKKKIKEVTEEVANKVSCAMTDEICRL
 SVLVDFECSEFHPTPSVLKVKYSELNKHIEDGMGRNLADRCTNEVNASILQSQQEIIENLKPLLPAQIQN
 KLHTLIPCKKFDLSYDLNCHKLCSDFQEDIVFRFSLGWSSLVHRFLGSTNAQRVLLGLSEPIFQVPRSLA
 STPTAPSNPAAPDAAQEELMITLITGLASLTSRTSMGIIVVGGVIWKTGVGKLSVTVLSMYGALYLYER
 LTWTRAKERAFKQQFVNYATEKLQMIVSFTSANC SHVQVQEMATTFARLCQQVDVTQKHLEEEIARLSK
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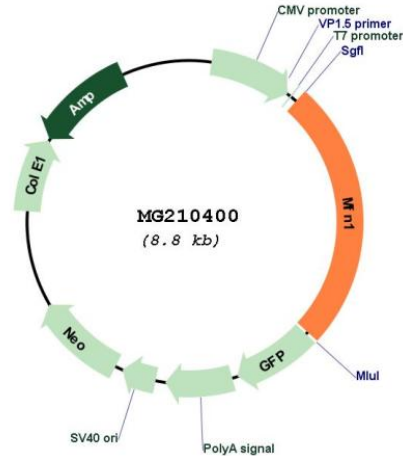
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_024200

ORF Size: 2223 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:

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_024200.2](#), [NP_077162.1](#)

RefSeq Size: 2980 bp

RefSeq ORF: 2226 bp

Locus ID: 67414

UniProt ID: [Q811U4](#)

Cytogenetics: 3 15.75 cM

Gene Summary: Mitochondrial outer membrane GTPase that mediates mitochondrial clustering and fusion (PubMed:12527753, PubMed:23921378, PubMed:24513856, PubMed:15297672). Membrane clustering requires GTPase activity (By similarity). It may involve a major rearrangement of the coiled coil domains (PubMed:15297672). Mitochondria are highly dynamic organelles, and their morphology is determined by the equilibrium between mitochondrial fusion and fission events (PubMed:12527753). Overexpression induces the formation of mitochondrial networks (in vitro). Has low GTPase activity (By similarity).[UniProtKB/Swiss-Prot Function]