

## Product datasheet for **RR209047**

### **Mfn1 (NM\_138976) Rat Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Mfn1 (NM_138976) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mfn1
Synonyms:	Fzo1b
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide  
Sequence:**

>RR209047 representing NM\_138976  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCAGAAACGGTATCTCCACTGAAGCACTTCGTGCTGGCAAAGAAGGCCATCACTGCGATCTTCGGCC  
 AGTTACTGGAGTTTGTACTGAGGGCTCACATTTTGTGAAGCAACATACAGGAACCCGGAACCTTGATCG  
 GATAGCAACCGAGGATGATCTGGTGGAGATACAGGGCTACAGAAACAAGCTCGCTGTCATTGGGGAGGTG  
 CTGTCTCGGAGGCATATGAAAGTGGCATTTCCTGGCAGGACAAGTAGTGGCAAGAGCTCTGTCATCAACG  
 CAATGCTGTGGGATAAAGTCTCCCGAGCGGGATTGGTACACAACCAACTGCTTCCTGAGTGTGGAGGG  
 AACTGATGGAGATAAAGCCTACCTTATGACCGAAGGGTCAGATGAGAAGAAAAGCGTGAAGACTGTTAAT  
 CAGCTGGCCCATGCCCTCCATATGGATAAAGACTTGAAGCTGGTTGTCTTGTGCACGATTTTGGCCCA  
 AAGCAAAATGTGCCCTTGTGAGAGATGACCTGGTTTTAGTAGACAGCCAGGTACAGATGCACCACAGA  
 GCTGGACATCTGGATTGATAAGTTCTGCCTTGATGCTGATGTTTTGTTTTGGTGGCAAACCTCGGAATCA  
 ACGCTGATGAACCGGAGAAACATTTTTCCATTAAGGTGAATGAGCGGCTCTCCAAGCCAAACATTTTTA  
 TCCTGAATAATCGTTGGGATGCTTCTGCTCAGAGCCAGAATATATGGAGGATGTGCGCAGACAGACAT  
 GGAAAGATGTCTTCACTTCTGGTAGAAGAGCTCAAGGTTGTGAGTCCTTTAGAAGCTCGGAATCGGATC  
 TTTTTGTTTTAGCAAGGAAGTTCTCACTCCAGAATGAATAAAGCCAGGGGATGCCAGAAGGTGGAG  
 GGGCACTTGCAGAAGGATTTAGGCAAGATTACAGGAGTTTCAAATTTGAACAAACTTTTGGAGAGTG  
 TATCTCGCAGTCAGCAGTGAACAAAGTTTGAACAGCACACTATCAGAGCTAACAGATACTAGACACT  
 GTGAAAAACATACTGGACTCAGTAAACGTGGCAGCAGCAGAGAAGAGGGTTTATCAATGGAAGAGAGGG  
 AAGACCAATCGACAGACTGGACTTTATTCGAAACCAGATGAACCTTTTAAACAATGGATGTTAAGAAAG  
 GATCAAGGAGGTCACGGAGGAGGTGGCAAACAAGGTTTCTTGTGCAATGACAGATGAGATTTGTCCGCTG  
 TCTGTTTTGTTGATGAGTTTTGTTCTGAGTTTATCCTACCCCAAGTGTGCTGAAAGTGTATAAGAGTG  
 AATTAATAAGCACATAGAAGATGGCATGGGAAGAAATTTGGCTGATCGGTGCACCAAGTGAAGTCAATGC  
 CTCCATTCTTCAATCTCAGCAAGAAATCATTGAAAATTTGAAGCCACTACTTCCAGCTGGTATACAGAAT  
 AAATTCATACATTAATCCCTTGCAAAAAGTTTGATCTCAGCTATGATCTCAATTGCCACAAGCTGTGTT  
 CGGATTTTCAAGAAGACATTGTGTTTCGGTTTTCCCTGGGCTGGTCTTCCCTGTACATCGATTCTGGG  
 TTCTACGAATGCACAGAGGGTGTGCTTGGGCTGTCAGAGCCTATCTTTCAGTCCCTAGATCTTTAGCT  
 TCAACTCTACTGCTCCTTAACCCAGCAGCACCAGATAATGCAGCCAGGAAGAGCTCATGATCACAC  
 TGATCACAGGATTGGCATCCCTCACGTCTAGAACCCTCCATGGGCATCATAGTTGTTGGGGCGTGATTTG  
 GAAAACAGTGGGCTGGAACTCATCTGTGACCTTAAGTATGTATGGAGCTTTGTACCTTTATGAAAGA  
 CTGACTTGGACTACTCGTGCGAAAGAGAGAGCGTTTAAGCAGCAGTTTGTAAACTATGCAACTGAAAAAC  
 TGCAGATGATTGTGAAGTTCACAAGTGCAAACTGCAGCCACCAAGTCCAGCAAGAAATGGCCACCACTTT  
 TGCTCGACTGTGCCAACAAAGTTGATGTTACTCAGAAACATCTGGAAGAAGAAATTTGCTAGATTATCCAAA  
 GAGATTGACCAACTGGAGAAAAACAAAACAATCAAAGCTCTTAAGAAATAAAGCTGTTCAACTTGAAC  
 GTGAGCTGGAAAAATTTTCGAAGCAGTTTCTCCACCCGAGCAGTGGAGAATCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR209047 representing NM\_138976  
 Red=Cloning site Green=Tags(s)

MAETVSPLKHFVLAKKAITAIFGQLLEFVTEGSHFVEATYRNPELDRIATEDDLVEIQGYRNKLAVIGEVL  
 LSRRHMKVAFFGRTSSGKSSVINAMLWDKVLPSGIGHTTNCFLSVEGTGDKAYLMTEGSDEKKSVKTVN  
 QLAHALHMDKDLKAGCLVHVFWPKAKCALLRDDLVLVDSPGTDVTTTELDIWKDFCLDADVFVLANSES  
 TLMNTEKHFFHKVNERLSKPNIFILNNRWDA SASEPEYMEDVRRQHMERCLHFLVEELKVVSPLRNRI  
 FFVSAKEVLNSRMNKAQGMPEGGALAEQFQARLQEFQNFQTFEECISQSAVKTKFEQHTIRAKQILD  
 YKNILDSVNVA AAEKRVYSMEEREDQIDRLDFIRNQMNLLTMDVKKKIKEVTEEVANKVSCAMTDEICRL  
 SVLVDFECSEFHPTPSVLKVKYSELNKHIEDGMGRNLADRCTSEVNASILQSQQEIIENLKPLLPAGIQN  
 KLHTLIPCKKFDLSYDLNCHKLCSDFQEDIVFRFSLGWSSLVHRFLGSTNAQRVLLGLSEPIFQVPRSLA  
 STPTAPSNPAAPDAAQEELMITLITGLASLTSRTSMGIIVVGGVIWKTGVGKLSVTVLSMYGALYLYER  
 LTWTRAKERAFKQQFVNYATEKLQMIKFTSANC SHVQVQEMATTFARLCQQVDVTQKHLEEEIARLSK  
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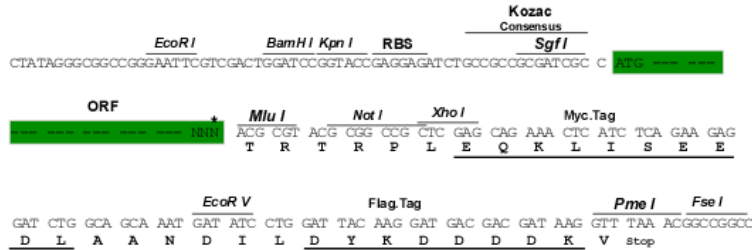
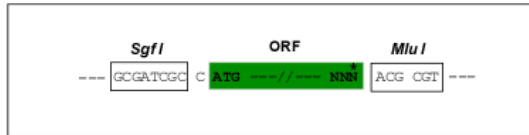
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

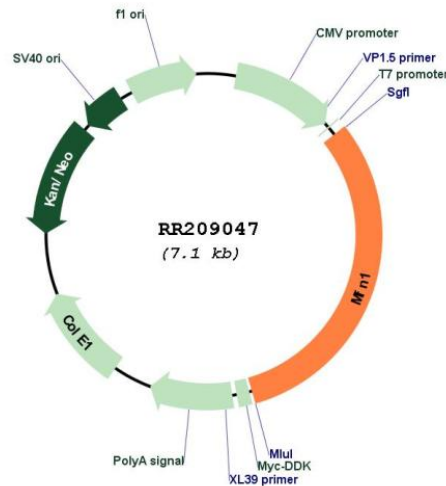
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_138976

**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\\_138976.1](#), [NP\\_620432.1](#)

**RefSeq Size:** 2226 bp

**RefSeq ORF:** 2226 bp

**Locus ID:** 192647

**UniProt ID:** Q8R4Z9

**Cytogenetics:** 2q24

**MW:** 83.8 kDa

**Gene Summary:** mouse homolog is involved in regulation of mitochondrial fusion and is essential for embryonic development [RGD, Feb 2006]