

## Product datasheet for **MG207652**

### Micu1 (NM\_144822) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Micu1 (NM_144822) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Micu1
Synonyms:	C730016L05Rik; Calc; Cbara1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>MG207652 representing NM\_144822  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTTTCGTCTTAACACCCTTTCTGCGTTGGCAGAAGCTGTGGGCTCTCGTGGTACCATGGGGCAT  
 CACAGCCACACAGACCAACGAAGATTGATGCTGGTGGCGTTCTCTGGGAGCATCTGCAGTGACTGCAAG  
 TACCGGTCTCCTGTGGAAGAAGGCTCACGCAGAATCTCCACCATGCGTTAACAGCAAGAAGCCTGACACA  
 GAAGATAAAGAGAGAAACAAAGACACGGGGAAGTGTCCAGCCGTGAAGGAAGGGCTGCAGATGCTGCGG  
 CAGAGCCTTATCCTGAGGACAAGAAGAAGCGCTCTGGATTACAGAGACAGAAAAGTATGGAGTATGA  
 GAATCGAATCCGAGCCTACTCCACACCAGACAAAATTTCCGATATTTGCCACCTTGAAAGTAATCAAC  
 GAACCTGGTGAACCGAAGTGTTCATGACTCCGACAGGACTTTGTGCGCTCCATAACGCCCAATGAGAAGC  
 AGCCAGAACACTTGGGCCTGGATCAGTATAATAAAGCGCTTTGATGGAAGAAAATTGCCAGGAACG  
 AGAAAAATTTGCTGATGAAGGCAGCATCTCTACAGCCTTGAGAGTGTGGGCTCATCTCCTTCTCTGAC  
 TACATCTTCTCACAAACAGTCTCTCCACTCTCAGAGAAAATTTGAAATTTGCTTCAAGATGTTTGACT  
 TGAATGGAGACGGAGAGGTAGACATGGAGGAGTTTGGAGGTTTCAAGAGCATCATTTCGCTCCAGACCAG  
 CATGGGCATGCGTCACAGAGACCGTCCAACCCTGGGAACACCCTCAAGTCTGGCTTATGTTTCGGCCCTC  
 ACGACCTACTTTTTGGAGCTGATCTCAAAGGGAAACTGACCATCAAAAACCTTCTGGAATTTACAGCGCA  
 AACTTCAGCATGACGTTCTAAAGCTGGAGTTTGAACGCCATGACCCGGTAGATGGGAGAATCTCTGAGAG  
 GCAGTTCGGGGCATGCTGCTGGCCTACAGTGGAGTGCAGTCCAAGAAGCTGACCCCATGCAGAGACAG  
 CTGAAGAAGCACTTCAAAGATGGGAAGGCGCTGACTTTCCAGGAGGTAGAGAATCTTCTCACTTTCTGAC  
 AGAACATTAATGACGTGGACACTGCACTAAGCTTTTACCACATGGCTGGAGCATCTCTTCAAAGTGTGAC  
 CATGCAGCAAGTGGCCAGGACAGTGGCGAAGGTGCAACTCTCGGACCATGTGTGTGACGTGGTGTTCGCG  
 CTCTTTGACTGTGATGGCAATGGGAGCTGAGCAACAAGGAGTTCGTTTCCATCATGAAGCAGCGGCTGA  
 TGAGAGGCTGGAGAAGCCCAAGGACATGGGCTTACCCGCTCATGCAGGCCATGTGGAATGTGCCCA  
 AGAAACTGCCTGGGACTTTGCTCTGCCAAA

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

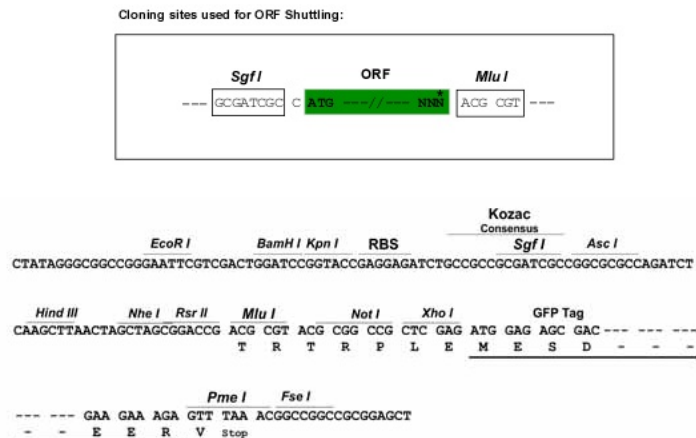
>MG207652 representing NM\_144822  
 Red=Cloning site Green=Tags(s)

MFRLNTLSALAEAVGSRWYHGASQPTQTKRRLMLVAFLGASAVTASTGLLWKAHAESPVCVNSKKPDT  
 EDKERNKDSGEVSSREGRAADAAAEPYPEDKRRSGFRDRKVMYENRIRAYSTPDKIFRYFATLKVIN  
 EPGETEVFMTQPQDFVRSITPNEKQPEHLGLDQYI IKRFDGKKIAQEREKFADEGSIFYSLGECGLISFSD  
 YIFLTTVLSTPQRNFEIAFKMFDLNGDGEVDMEEFEQVQSIIRSQTSMGMRHRDRPTTGNTLKSGLCSAL  
 TTYFFGADLKGKLTIKNFLEFQRKLQHDVLKLEFERHDPVDGRI SERQFGMLLAYSGVQSKKLTAMQRQ  
 LKKHFKDGGKGLTFQEVENFFFLKNINDVDTALSFYHMAGASLDKVTMQQVARTVAKVELSDHVCDVVFV  
 LFDGNGELSNKEFVSIKQRLMRGLEKPKDMGFTRLMQAMWKAQETAWDFALPK

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_144822

**ORF Size:** 1431 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\\_144822.3](#)

**RefSeq Size:** 2275 bp

**RefSeq ORF:** 1434 bp

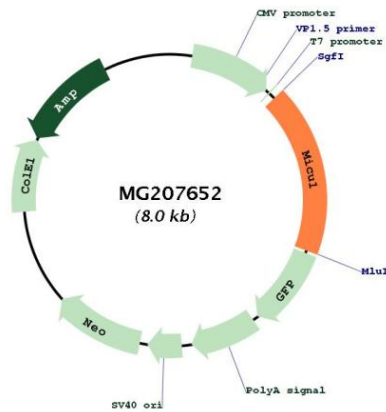
**Locus ID:** 216001

**UniProt ID:** [Q8VCX5](#)

Cytogenetics: 10 B4

**Gene Summary:** Key regulator of mitochondrial calcium uniporter (MCU) that senses calcium level via its EF-hand domains (PubMed:24560927). MICU1 and MICU2 form a disulfide-linked heterodimer that stimulates and inhibits MCU activity, depending on the concentration of calcium (PubMed:24560927). MICU1 acts both as an activator or inhibitor of mitochondrial calcium uptake (By similarity). Acts as a gatekeeper of MCU at low concentration of calcium, preventing channel opening (By similarity). Enhances MCU opening at high calcium concentration, allowing a rapid response of mitochondria to calcium signals generated in the cytoplasm (PubMed:24560927). Regulates glucose-dependent insulin secretion in pancreatic beta-cells by regulating mitochondrial calcium uptake (By similarity). Induces T-helper 1-mediated autoreactivity, which is accompanied by the release of IFNG (By similarity). [UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG207652