

Product datasheet for **MG206892**

Micu2 (NM_028643) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Micu2 (NM_028643) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Micu2
Synonyms:	1110008L20Rik; 4833427E09Rik; AU041871; Efha1; Smhs2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG206892 representing NM_028643 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGCGGCTGCGGGAAGAAGCGCTTGGCTGGCGGCCGTTGGGCGGAAGGCTGCGGCGGGCTCGCGG
CCGGCCGACGAGCTGTGCCGACTCGCGGCCCTCTCGCAGCGGCTGTGGCCGGGTAGCCCTGGCAGGCGC
AGGAGCGGCATGGCATCACGGCCGCGTAAAGCAGCCGCGCGAGGGCTCCCGAACGGTGTGCGGCAG
AAAAATTATTTGGACCAATAGAGAACTTTCTCTCCGAAACAGCGGTTTCATGCAGTTTTCATCCCTGG
AGCAGCAGCGGAGAGTATTACATGACACCCCGAGACTTCCTCTTCTCAGTCATGTTTGAGCAAGTGGAGCG
TAAACACTGGTCAAGAAGCTGGCAAAAAAGGATATCGAGGATGTACTGTGAGGAATCCAAACAGCACGC
TGTGGATCAACATTTTTAGAGACCTGGGTGATAAAGGGTAATTTTCATATACCGAGTATCTTTTCTTGC
TTACAATCCTCACAAAACCTCACTCTGGGTTCCATGTTGCTTTTAAAAATGCTGGATGTGGATGGGAATGA
GATGATCGAGAGGAAGGAGTTTGTAAAGCTGCAGAAGATCATAAGTAAACAAGATGGCTTCAAGACAGTG
AAGACTAATGAGACAGAAATACCAGGACCAACAGTGAAAGAGCCTGGCGTTAACACAACCCCTTCAAGTGC
GTTTCTTTGGGAAAAGAGGAGAAAAAACTCCATTATAAAGAATTTTGAAGATTTATGGAAAATTTACA
AACAGAAGTTCAAGAAATGGAATTCCTTCAGTTCTCTAAAGCCCTGAATTTTCATGAGAAAAGAAGACTTT
GCAGAATGGCTACTTTTCTCACTAACACTGAAAATAAAGATATTTACTGGAGAAACGTGAGAGAAAAGT
TGTGAGTAGGAGAGCATTAGTTTGGATGAGTTCAAGTCTTTTGCATTTTACAACGCATTTGGAAGA
CTTTGCTATCGCCATGCAATGTTTAGTTAGCTCATCGCCCTGTGCGGCTGGCAGAGTTCAAGAGAGCT
GTGAAGGTAGCGACTGGACAGGAGCTCTCGGACAATCTTCTGGACACCGTCTTCAAGATCTTTGACCTGG
ACGGGGACGAGTGCCTCAGCCACGGCGAGTTCTTGGGTAAGTAAACAGGATGCACCGAGGCTTATG
GGTGTACAGCAGCAGAGTGTGCAAGAATACTGGAAGTGTGTGAAGAAGGAAAGCATCAAGGGAGTAAAG
GAAGCCTGGAGACAACAAGCCGCAAGGGCCCTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG206892 representing NM_028643
 Red=Cloning site Green=Tags(s)

MAAAAGRSAWLAAWGGRLRRGLAAGRRAVPTRGPLAAAVAGVALAGAGAAWHHGRVKAAAREGSRTVSAQ
 KNYLGPiEKLsLRKQRFMQFSSLEHDGEYYMTPRDFLFSVMFEQVERKTLVKKLAKKDIEDVLSGIQTAR
 CGSTFFRDLDGKGVISYTEYLFLLTILTKPHSGFHVAFKMLDVDGNEMIERKEFVKLQKIIISKQDGFKTV
 KTNETEQDPTVKEPGVNTTLQVRFFGKRGEKKLHYKEFRRFMENLQTEVQEMEFLOFSKGLNFMRKEDF
 AEWLLFFNTENKDIYWRNVREKLSVGESISLDEFKSFCHFTTHLEDFAIAMQMFSLAHRPVRLAEFKRA
 VKVATGQELSDNLLDVTFKIFDLGDDECLSHGEFLGVLKNRMHRGLWVSQQQSVQEYWKCVKKEsIKGVK
 EAWRQQAGKGPf

TRTRPLE - GFP Tag - V

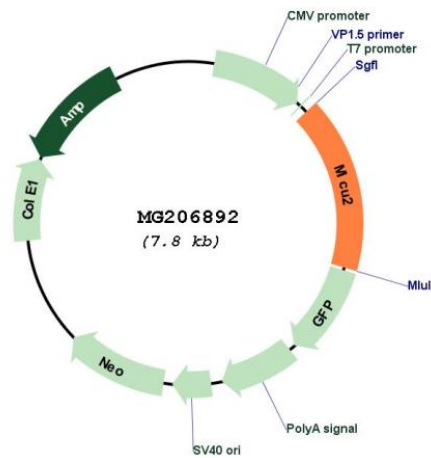
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_028643

ORF Size:	1296 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:	NM_028643.3
RefSeq Size:	2333 bp
RefSeq ORF:	1299 bp
Locus ID:	68514
UniProt ID:	Q8CD10
Cytogenetics:	14 C3
Gene Summary:	Key regulator of mitochondrial calcium uniporter (MCU) required to limit calcium uptake by MCU when cytoplasmic calcium is low (PubMed:23409044, PubMed:24560927). MICU1 and MICU2 form a disulfide-linked heterodimer that stimulate and inhibit MCU activity, depending on the concentration of calcium (PubMed:24560927). MICU2 acts as a gatekeeper of MCU that senses calcium level via its EF-hand domains: prevents channel opening at resting Ca(2+), avoiding energy dissipation and cell-death triggering (PubMed:24560927).[UniProtKB/Swiss-Prot Function]