

Product datasheet for **MC201052**

Micu1 (NM_144822) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Micu1 (NM_144822) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Micu1
Synonyms:	C730016L05Rik; Calc; Cbara1
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC018320 sequence for NM_144822
 CGTCTCTATGGTTGTCAGAGGTGGGCGGCATTCTCCGAGTTGCTGCTAAAGCTGGAGCGCGGACGGGATG
 TTTTCGTCTTAACACCCCTTTCTGCGTTGGCAGAAGTCTAGCTGTGGGCTCTCGCTGGTACCATGGGGCATCAC
 AGCCCACACAGACCAAACGAAGATTGATGCTGGTGGGCTTCTGGGAGCATCTGCAGTACTGCAAGTAC
 CGGTCTCCTGTGGAAGAAGGCTCACGCAGAATCTCCACCATGCGTTAACAGCAAGAAGCCTGACACAGAA
 GATAAAGAGAGAAAACAAGACAGCGGGGAAGTCCAGCCGTGAAGGAAGGGCTGCAGATGCTGCGGCAG
 AGCCTTATCCTGAGGACAAGAAGAAGCGCTCTGGATTGAGAGACAGAAAAGTATGGAGTATGAGAA
 TCGAATCCGAGCCTACTCCACACCAGACAAAATTTCCGATATTTTGCCACCTTGAAAGTAAATCAACGAA
 CCTGGTGAACCCGAAGTGTTCATGACTCCGAGGACTTTGTGCGCTCCATAACGCCCAATGAGAAGCAGC
 CAGAACACTTGGGCTGGATCAGTATATAATAAAGCGCTTTGATGGAAAGAAAATGCCAGGAACGAGA
 AAAATTTGCTGATGAAGGCAGCATCTTCTACAGCCTTGGAGAGTGTGGGCTCATCTCCTTCTGACTAC
 ATCTTCTCACACAGTCTCTCCACTCCTCAGAGAAAATTTGAAATGCTTTCAAGATGTTTGACTTGA
 ATGGAGACGGAGAGGTAGACATGGAGGAGTTTGGAGGTTTGGAGCATCATTGCTCCAGACCAGCAT
 GGGCATGCGTCACAGAGACCGTCCAACCACTGGGAACACCCTCAAGTCTGGCTTATGTTCCGCCCTCAGC
 ACCTACTTTTTTGGAGCTGATCTCAAAGGGAACTGACCATCAAAAATCTCTGGAAATTCAGCGCAAAC
 TTCAGCATGACGTTCTAAAGCTGGAGTTTGAACGCCATGACCCGGTAGATGGGAGAAATCTCTGAGAGGCA
 GTTCGGGGGCATGCTGCTGGCCTACAGTGGAGTGCAGTCCAAGAAGCTGACCCGCATGCAGAGACAGCTG
 AAGAAGCACTTCAAAGATGGGAAGGGCCTGACTTTCCAGGAGGTAGAGAATTTCTCACTTTCTGAAAGA
 ACATTAATGACGTGGACTGCACTAAGCTTTTACCACATGGCTGGAGCATCTCTTGATAAAGTGACCAT
 GCAGCAAGTGGCCAGGACAGTGGCGAAGGTCGAATCTCGGACCATGTGTGTGACGTGGTGTTCGCGCTC
 TTTGACTGTGATGGCAATGGGGAGCTGAGCAACAAGGAGTTTGGTTCCATCATGAAGCAGCGGCTGATGA
 GAGGCTGGAGAAGCCCAAGGACATGGGCTTCAACCGCCTCATGCAGGCCATGTGGAAATGTGCCAAGA
 AACTGCTGGGACTTTGCTCTGCCAAATAGTATCCACCTCCTGCACCTTAGCACCTGCAAGCCCTG
 GAGTGGCCCTTTCATGCTGCTGATGCATCGGAGTGGTGCCACCTCCCATCTTTCTGGGAGTAACCTCT
 GGGCTCAGCCGGCTTCCCTCTCCACCCTGCCCTGACCCCATCAGTGTCTGCTAGGCTCTGAGTCTGCAG
 TCGGATGGAAGGTCTAAAACAGGACTGAGGCTTCAAAGTAGAGACCTTAGTTAACTCCCTTAGCAAGTG
 CCCTGTGGGTCAGTGCAGGAGCCCTCCCAACCCCGGCCAGCCGGGAGGGAGGCAGCTCTGCTCTGCTCT
 GACATCTGCTCTCGCTGTGGATTTATAGTAGCAAGAACAACCTCCCTGCCATTTTCTCCTGCTGTTTTTA
 AGCTGCAAGTTTGGAAATGAGCTGGCAGGCGAAAGGAAGTGTGATGAATGATAATGCAGATGACCCTGGC
 ACCCTGAGCTGGCAGGAAGCCTGGCCAGAGGAGGGTCTGTGTTAGCCACCAGGGGCTCCAGGAAGGCACT
 GTGCCCCAGCAGAATCCAGATTCCAAGTGGCTGCTTTAAGCAGCTCTCCAGAATTCACAGCTCTGTGG
 TTTCTCCAGGCTCCCTGCGATGCCTCCTCTGGGACTCTGCTTACTAGAGCAATGGCTGAGCCCTGT
 CCCTGTGTCTATCCCTCTCTATGGACCTGTGGAGCCAGCCAGCTCAGAGCCTAGTGCCTCTGT
 CTAAGACTCGTAAAATATCACTTTAATTATAGCACTTTGCAGGAAATACCCGCAAAAAAAAAAAAAAAAAA AAAAAAAAAA

Restriction Sites: RsrII-NotI

ACCN: NM_144822

Insert Size: 1434 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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: [BC018320](#), [AAH18320](#)

RefSeq Size: 2321 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]

Transcript Variant: This variant (3) lacks two alternate exons in the coding region compared to variant 1. The resulting protein (isoform 3) is shorter but has the same N- and C-termini compared to isoform 1.