

## Product datasheet for **RG230839**

### **CBARA1 (MICU1) (NM\_001195518) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CBARA1 (MICU1) (NM_001195518) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MICU1
Synonyms:	ara CALC; CALC; CBARA1; EFHA3; MPXPS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG230839 representing NM\_001195518  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTTTCTGCTGAACTCACTTTCTGCTTTGGCAGAAGTGGCTGTGGGTTCTCGATGGTACCATGGAGGAT  
 CACAGCCCATCCAGATCCGGCGAAGACTAATGATGGTGGCTTTCTGGGAGCATCTCGAGTAACTGCAAG  
 TACTGGTCTTTTGTGGAAGAGGGCCCATGCAGAATCTCCACCATGTGTAGACAACCTAAAAAGTGACATC  
 GGTGATAAAGGGAAGAATAAAGATGAAGGGGATGTTTGTAAACATGAGAAAAAGACTGCAGATCTTGCCC  
 CTCACCCAGAAGAAAAAGAAGAACGTTCTGGATTCAGAGACAGAAAAGTGATGGAATATGAGAATAG  
 GATTCGAGCCTACTCCACGCCAGACAAAATCTCCGATATTTGCCACCTTGAAAGTCATCAGTGAGCCT  
 GGTGAAGCAGAAGTGTATGACACCAGAAGATTTGTGCGATCCATAACACCCAATGAAAAACAACCAG  
 AACACTTGGGTCTGGATCAATATATAATAAACGCTTTGATGAAAGAAAATTTCCAGGAACGAGAAAA  
 ATTTGCTGATGAAGGCAGTATATTTACACCTTGGAGAATGTGGGCTCATATCCTTTTCAGACTACATT  
 TTCTCACAACCTGTTCTTCCACTCCTCAGAGAAATTTGAAATTGCCTTCAAGATGTTTGAATG  
 GAGATGGAGAAGTAGATATGGAAGAATTTGAACAGGTTTCAGAGCATCATTGCTCCCAAACAGTATGGG  
 TATGCGCCACAGAGATCGTCCAACACTACTGGCAACACCCTCAAGTCTGGCTTGTGTTTCAGCCCTACAACC  
 TACTTTTTTGGAGCTGATCTGAAGGAAAGCTGACAATCAAAAACCTCCTCGAATTTTCAGCGTAAACTGC  
 AGCATGATGTTCTGAAGCTTGAAGTTGAAACCCATGACCTGTGGATGGGAGAATTACTGAGAGGCAGTT  
 TGGTGGCATGCTACTTGCCTACAGTGGGTGCAGTCCAAGAAGCTGACCGCCATGCAGAGGCAGCTCAAG  
 AAGCACTCAAAGAAGGAAAGGGTCTGACATTTCCAGAGGTGGAGAATCTTTACTTTCTAAAGAACA  
 TTAATGATGTGGACACTGCATTGAGTTTTTACCATATGGCTGGAGCATCTTTGATAAAGTACCATGCA  
 GCAGGTGGCCAGGACAGTGGCTAAAGTGGAGCTCTCAGACCACGTGTGTGATGTGGTGTTCGACTCTTT  
 GACTGTGATGGCAATGGCGAACTGAGCAATAAGGAATTTGTTTCCATCATGAAGCAACGGCTGATGAGAG  
 GCCTGGAAAAGCCCAAAGACATGGGTTTCACTCGCCTCATGCAGGCCATGTGAAATGTGCACAGGAAAC  
 TGCCTGGGACTTCGCTTTACCCAAACAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG230839 representing NM\_001195518  
 Red=Cloning site Green=Tags(s)

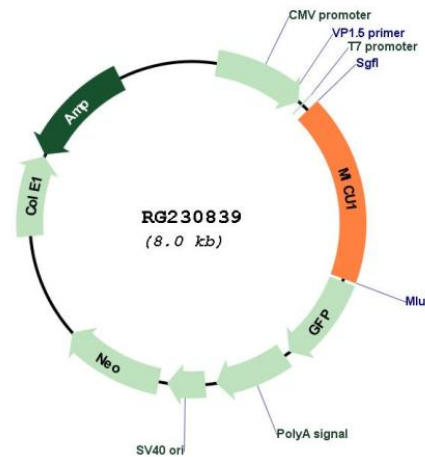
MFRLNSLSALAEAVGSRWYHGGSPQIQIRRRLLMVAFLGASAVTASTGLLWKRAHAESPCCVDNLKSDI  
 GDKGKNKDEGDVCNHEKKTADLAPHPEEKKKRSGFRDRKVMYENRIRAYSTPDKIFRYFATLKVISEP  
 GEAEVFMTPEDFVRSITPNEKQPEHLGLDQYIIKRFDGKKISQEREKFADEGSIFYTLGECGLISFSDYI  
 FLTTVLSTPQRNFEIAFKMFDLNGDGEVDMEEFEQVQSIIRSQTSMGMRHRDRPTTGNTLKSGLCSALTT  
 YFFGADLKGKLTIKNFLEFQRKLQHDVLKLEFERHDPVDGRITERQFGMMLLAYSGVQSKKLTAMQRQK  
 KHFKEGKGLTFQEVENFFTFKININDVDTALSFYHMAGASLDKVTMQQVARTVAKVELSDHVCDDVVFALF  
 DCDGNGELSNKEFVSIKQRLMRGLEKPKDMGFTRLMQAMWKAQETAWDFALPKQ

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

**Plasmid Map:**


**ACCN:** NM\_001195518

**ORF Size:** 1428 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\\_001195518.2](#)

**RefSeq Size:** 2500 bp

**RefSeq ORF:** 1431 bp

**Locus ID:** 10367

**UniProt ID:** [Q9BPX6](#)

**Cytogenetics:** 10q22.1

**Gene Summary:** This gene encodes an essential regulator of mitochondrial Ca<sup>2+</sup> uptake under basal conditions. The encoded protein interacts with the mitochondrial calcium uniporter, a mitochondrial inner membrane Ca<sup>2+</sup> channel, and is essential in preventing mitochondrial Ca<sup>2+</sup> overload, which can cause excessive production of reactive oxygen species and cell stress. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Mar 2013]