

Product datasheet for **RG205455**

EFHA1 (MICU2) (NM_152726) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	EFHA1 (MICU2) (NM_152726) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MICU2
Synonyms:	1110008L20Rik; EFHA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG205455 representing NM_152726 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGCGGCTGCGGGTAGCTGCGCGGAGTGGCGGCCCTGGGGCGGAAAACCTGCGACGGGGGCTCGCTG
TCAGCCGACAGGCTGTGCGGAGTCCCGGCCCTTGGCAGCGGCAGTGGCCGGCGCGGCCCTGGCAGGAGC
AGGAGCGGCTGGCACCACAGCCCGTCAGTGTTCGCGCGGGATGGCAGTTTTACAGTCTCCGCACAG
AAAAATGTTGAACATGGAATAATATATATTGGGAAACCGTCTCTTCGTAAGCAGCGCTTCATGCAGTTTT
CTTCACTCGAACATGAAGGAGAATATTATATGACACCACGAGACTTCCTTCTCAGTGATGTTTGAGCA
AATGGAACGTA AAACTTCAGTCAAGAAGCTGACAAAAAGGACATCGAGGATACACTGTCAGGGATCCAA
ACAGCTGGCTGTGGATCAACTTTTTTTCAGAGACCTTGGCGATAAAAGGGCTAATTTTCATATACCGAGTATC
TTTTCTTGCTTACAATCCTCACTAAACCCATTCTGGATTTTCATGTTGCTTTTAAATGCTGGATACAGA
TGGTAATGAGATGATTGAAAAAGGGAATTTTTAAGCTGCAGAAGATCATAAATAACAAGATGACTTG
ATGACAGTGAAAACCTAATGAACTGGATATCAGGAAGCAATAGTAAAGAACCTGAAATTAACACAACCT
TTCAGATGCGTTTCTTTGGAAAAAGAGGACAAAGAAAACCTCATTATAAAGAATTTCAAGATTTATGGA
AAATTTACTAACAGAGATTCAAGAAATGGAATTCCTTCAGTTTTCTAAAGGTTTGAGTTTCATGAGAAAA
GAAGACTTTGCAGAGTGGCTACTTTTTTCACTAACACTGAAAAAAGATATTTATTGGAAAAATGTGA
GAGAGAAGTTGTCAGCAGGAGAGAGCATTAGTTTGGATGAATTCAGTCATTTTGGCATTTTACAACCCA
CTTGGAAGACTTTGCTATTGCCATGCAGATGTTTCAGTTTTCAGTCTCATCGTCTGTGACTAGCGGAGTTT
AAGAGAGCTGTGAAAGTAGCAACAGGACAAGAAGCTCTCAACAATATTTTGGACTGTCTTTAAGATCT
TTGATTTGGATGGTGAATGTCTTAGTCATGAAGAGTTTCTTGGGGTGTAAAAAACAGAAATGCATCG
AGGTTTATGGGTACCACAACATCAGAGTATACAAGAATACTGGAAGTGTGTGAAGAAAGAAAGCATTAA
GGAGTAAAGAAGTCTGGAAACAAGCTGGAAAAGGTCTTTTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG205455 representing NM_152726
 Red=Cloning site Green=Tags(s)

MAAAAGSCARVAAWGGKLRRLAVSRQAVRSPGPLAAAVAGAALAGAGAAWHHSRVSVAAARDGSFTVSAQ
 KNVEHGI IYIGKPSLRKQRFMQFSSLEHEGEYMTPRDFLFSVMFEQMERKTSVKKLTKKDIEDTLSGIQ
 TAGCGSTFFRDLGDKGLISYTEYLFLLTILTKPHSGFHVAFKMLD TDGNEMIEKREFFKLQKIINKQDDL
 MTVKTNETGYQEAIVKEPEINTTLQMRFFGKRGRKRLHYKEFRFRMENLLTEIQEMEF LQFSKGLSFMRK
 EDFAEWLLFFNTENKDIYKWNVREKLSAGESISLDEFKSFCHFTHLEDFAIAMQMFSLAHRPVRLAEF
 KRAVKVATGQELSNNILDVFKIFDLGDDECLSHEEFLGVLKNRMHRGLWVPQHQS IQEYWKCVKKEIK
 GVKEVWKQAGKGLF

TRTRPLE - GFP Tag - V

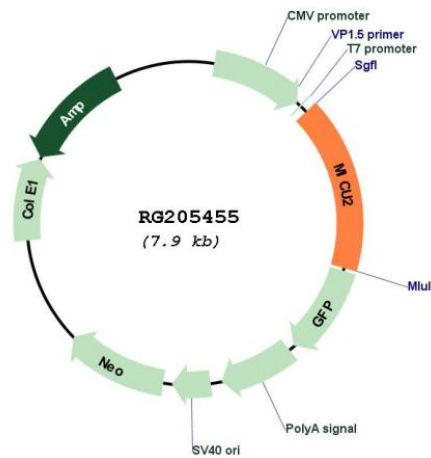
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_152726

ORF Size:	1302 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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_152726.1 , NP_689939.1
RefSeq Size:	1891 bp
RefSeq ORF:	1305 bp
Locus ID:	221154
UniProt ID:	Q8IYU8
Cytogenetics:	13q12.11
Domains:	EFh
Gene Summary:	<p>Key regulator of mitochondrial calcium uniporter (MCU) required to limit calcium uptake by MCU when cytoplasmic calcium is low (PubMed:24503055, PubMed:24560927, PubMed:26903221). 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 calcium, avoiding energy dissipation and cell-death triggering (PubMed:24560927).[UniProtKB/Swiss-Prot Function]</p>