

## Product datasheet for **SC101057**

### EFHA1 (MICU2) (NM\_152726) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	EFHA1 (MICU2) (NM_152726) Human Untagged Clone
Tag:	Tag Free
Symbol:	MICU2
Synonyms:	1110008L20Rik; EFHA1
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None
Fully Sequenced ORF:	>NCBI ORF sequence for NM_152726, the custom clone sequence may differ by one or more nucleotides

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ATGGCGGCGGCTGCGGGTAGCTGCGCGCGGGTGGCGGCCCTGGGGCGGAAAAC TGCACGGGGGCTCGCTG
TCAGCCGACAGGCTGTGCGGAGTCCCGGCCCTTGGCAGCGGCAGTGGCCGGCGCGGCCCTGGCAGGAGC
AGGAGCGGCTGGCACCACAGCCCGTCACTGTTGCGGCGGGGATGGCAGTTTTACAGTCTCCGCACAG
AAAAATGTTGAACATGGAATAATATATATTGGGAAACCGTCTCTTCGTAAGCAGCGCTTCATGCAGTTTT
CTTCACTCGAACATGAAGGAGAATATTATATGACACCACGAGACTTCCTTCTCAGTGATGTTTGAGCA
AATGGAACGTA AAACTTCAGTCAAGAAGCTGACAAAAAGGACATCGAGGATACACTGTCAGGGATCCAA
ACAGCTGGCTGTGGATCAACTTTTTTCAGAGACCTTGGCGATAAAGGGCTAATTTTCATATACCGAGTATC
TTTTCTTGCTTACAATCCTCACTAAACCCATTCTGGATTTTCATGTTGCTTTTAAATGCTGGATACAGA
TGGTAATGAGATGATTGAAAAAGGGAATTTTTAAGCTGCAGAAGATCATAAGTAAACAAGATGACTTG
ATGACAGTGAAAAC TAACTGAACTGGATATCAGGAAGCAATAGTAAAGAACCTGAAATTAACACAAC T
TTCAGATGCGTTTCTTTGGAAAAAGAGGACAAAGAAAAC T CATTATAAAGAATTTGAAAGATTTATGGA
AAATTTACAAACAGAGATTCAAGAAATGGAATTCCTTCAGTTTTCTAAAGTTTGAGTTTCATGAGAAAA
GAAGACTTTGCAGAGTGGCTACTTTTTTCACTAACACTGAAAAATAAGATATTTATTGAAAAATGTGA
GAGAGAAGTTGTCAGCAGGAGAGACATTAGTTTGGATGAATTCAGTCATTTTGCCATTTTACAACCCA
CTTGGAAGACTTTGCTATTGCCATGCAGATGTTCAAGTTAGCTCATCGTCCTGTCAGACTAGCGGAGTTT
AAGAGAGCTGTGAAAGTAGCAACAGGACAAGA ACTCTCAAACAATATTTTGGACTGTCTTTAAGATCT
TTGATTTGGATGGTGTGAATGTCTTAGTCATGAAGAGTTTCTTGGGGTGTAAAAAACAGAAATGCATCG
AGGTTTATGGGTACCACAACATCAGAGTATACAAGAATACTGGAAGTGTGTGAAGAAAGAAAGCATTAAA
GGAGTAAAAGAAGTCTGGAAACAAGCTGGAAAAGGTCTTTTTTAA
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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_152726 unedited AGAAATTTGTAATACGACTCACTATAGGGCGGCNCGCAATCGGCACGAGGCTTCCGCAA AGAGGGCGGCGGCTGCGGGTAGCTGCGCGCGGGTGGCGGCCTGGGGCGGAAAACCTGCGACG GGGGCTCGCTGTGAGCCGACAGGCTGTGCGGAGTCCC GGCCCTTGGCAGCGCAGTGGC CGGCGCGGCCCTGGCAGGAGCAGGAGCGGCCTGGCACCACAGCCGCGTCAGTGTTCGGC GCGGATGGCAGTTTTACAGTCTCCGCACAGAAAAATGTTGAACATGGAATAATATATAT TGGGAAACCGTCTCTTCGTAAGCAGCGCTTCATGCAGTTTTCTTCACTCGAACATGAAGG AGAATATTATATGACACCACGAGACTTCCTCTTCTCAGTGATGTTTGAGCAAATGGAACG TAAAACTCAGTCAAGAAGCTGACAAAAAGGACATCGAGGATACACTGTGAGGGATCCA AACAGCTGGCTGTGGATCAACTTTTTTCAGAGACCTTGGCGATAAAGGGCTAATTTTCATA TACCGAGTATCTTTTCTGCTTACAATCCTCACTAAACCCATTCTGGATTTTCATGTTGC TTTTAAATGCTGGATACAGATGGTAATGAGATGATTGAAAAAGGGAATTTTTTAAGGT AAGTGGACGCTAATTATTTTAGGTTTATCATAAAATACCTGGATGTTTGTGTGATAATTN TACATTTCCATTAATAATCAAAATTTGATTTCATTGTTTACATATGAACTATCANGAAATTA TTTGGACATTAATAATTAATTTTCTATATAACCATAGGACACCAGNTAGTGAACC AGAGCATAGATTCCAANAGAGAAGTAGCAGAGCATCTGTTTTTTAGGGTACATTTTATGA TTTAGCAATATATGGTAGAAGAGTTCATAGAATATATTTTAAGAATTGTNGTGAATGCTA AATATACAAN
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_152726
<b>Insert Size:</b>	5500 bp
<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.
	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. <a href="#">More info</a>
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_152726.1</a> , <a href="#">NP_689939.1</a>

RefSeq Size: 1891 bp

RefSeq ORF: 1305 bp

Locus ID: 221154

UniProt ID: [Q8IYU8](#)

Cytogenetics: 13q12.11

Domains: EFh

**Gene Summary:** 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]