

## Product datasheet for **SC118666**

### ME2 (NM\_002396) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ME2 (NM_002396) Human Untagged Clone
Tag:	Tag Free
Symbol:	ME2
Synonyms:	ODS1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC118666 sequence for NM\_002396 edited (data generated by NextGen Sequencing)

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ATGTTGTCCTCCGGTTAAGAGTAGTTTCCACCACTTGTACTTTGGCATGTCGACATTTGCAC
ATAAAAGAAAAGGCAAGCCACTTATGCTGAACCAAGAACAACAAGGGAATGGCATT
ACTTTACAAGAACGACAAATGCTTGGTCTTCAAGGACTTCTACCTCCAAAATAGAGACA
CAAGATATTCAGCCTTACGATTTATAGAAAACCTGAAGAAAATGACTAGCCCTTTGGAA
AAATATATCTACATAATGGGAATACAAGAAAGAAATGAGAAATGTTTTATAGAATACTG
CAAGATGACATTGAGAGTTTAAATGCCAATTGTATATACACCGACGGTTGGTCTTGCCTGC
TCCAGTATGGACACATCTTTAGAACCTAAGGATTATTTATTTTCGATCTCAGACAGA
GGTCATGTTAGATCAATTGTGGATAACTGGCCAGAAAATCATGTTAAGGCTGTTGTAGTG
ACTGATGGAGAGAGAATTCTGGGTCTTGGAGATCTGGGTGTCTATGGAATGGGAATTCCA
GTAGGAAAACCTTTGTTTGTATACAGCTTGTGCAGGAATACGGCCTGATAGATGCCTGCCA
GTGTGATTGATGTGGAACTGATAATATCGCACTCTTAAAGACCCATTTTACATGGGC
TTGTACCAGAAAACGAGATCGCACACAACAGTATGATGACCTGATTGATGAGTTTATGAAA
GCTATTACTGACAGATATGGCCGGAACACACTCATTTCAGTTCGAAGACTTTGGAAATCAT
AATGCATTTCAGGTTCTTGAGAAAAGTACCAGAAAATATTGTACTTTCAATGATGATATT
CAAGGGACAGCTGCAGTAGCTCTAGCAGGTCTTCTTGCAGCACAAAAAGTTATTAGTAAA
CCAATCTCCGAACACAAAATCTTATTCCTTGGAGCAGGAGAGGCTGCTCTTGGAAATGCA
AATCTTATAGTTATGTCTATGGTAGAAAATGGCCTGTCAGAACAAAGAGGCACAAAAGAAA
ATCTGGATGTTTGACAAGTATGGTTTATTAGTTAAGGGACGGAAGCAAAAATAGATAGT
TATCAGGAACCTTTACTCACTCAGCCCCAGAGAGCATACTGATACTTTTGAAGATGCA
GTGAATAACTGAAGCCTTCAACTATAATTGGAGTTGCAGGTGCTGGCCGTCTTTTCACT
CCTGTGTAATCAGAGCCATGGCCTCTATCAATGAAAGGCTGTAATATTTGCATTAAGT
AATCCTACAGCACAGGCAGAGTGCACGGCTGAAGAAGCATATACACTTACAGAGGCGAGG
TGTTTGTGGCCAGTGGCAGTCCATTTGGCCAGTGAACCTTACAGATGGGCGAGTCTTT
ACACCAGGTCAAGGAAACAATGTTTATATTTTTCCAGGTGTGGCTTTAGCTGTTATTCTC
TGTAACACCCGGCATATTAGTGACAGTGTTCCTAGAAAGCTGCAAAGGCCCTGACAAGC
CAATTGACAGATGAAGAGCTAGCCCAAGGGAGACTTTACCCACCGCTTGCTAATATTGAG
GAAGTTTCTATTAACATTGCTATTAAGTTACAGAATACCTATATGCTAATAAAAATGGCT
TTCCGATACCCAGAACCTGAAGACAAGGCCAAAATATGTTAAAGAAAGAACATGGCGGAGT
GAATATGATTCCCTGCTGCCAGATGTGTATGAATGGCCAGAATCTGCATCAAGCCCTCT
GTGATAACAGAATAG
    
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Clone variation with respect to NM\_002396.4

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_002396 unedited

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NNGGTCAATTTTTGTATACGACTCACTATAGGCGGCCGCGNAATTCGCACGAGGGCTCGC
AGAAGGGAGGGCCGGGCGCGCGGGAGCTGAGCATCGCCAGGGCGGGCGCAGGGCGCGG
CCTCTCCGCCGGGTGTACCACCTGTGCGGCGCGAGACCTCTGGTGAAAGAAAAGATGTT
GTCCCGTTAAGAGTAGTTTCCACCACTTGTACTTTGGCATGTCGACATTTGCACATAAA
AGAAAAAGGCAAGCCACTTATGCTGAACCAAGAACAACAAGGGAATGGCATTACTTTT
ACAAGAACGACAAATGCTTGGTCTTCAAGGACTTCTACCTCCAAAATAGAGACACAAGA
TATTCAGCCTTACGATTTATAGAAAACCTGAAGAAAATGACTAGCCCTTTGGAAAAATA
TATCTACATAATGGGAATACAAGAAAGAAATGAGAAATGTTTTATAGAATACTGCAAGA
TGACATTGAGAGTTTAAATGCCAATTGTATATACACCGACGGTTGGTCTTGCCTGCTCCA
GTATGGACACATCTTTAGAACCTAAGGATTATTTATTTTCGATCTCAGACAGAGGTCA
TGTTAGATCAATTGTGGATAACTGGCCAGAAAATCATGTTAAGGCTGTTGTAGTGACTGA
TGGAGAGAGAATTCTGGGTCTTGGAGATCTGGGTGTCTATGGAATGGGAATTCAGTAGG
AAAACCTTTGTTTGTATACAGCTTGTGCAGGAATACGGCCTGATAGATGCCTGCCAGTGTG
TATTGATGTGGAACTGATATATCGCACTCTTAAAGACCCATTTTATGGGCTTGTACCA
GAACGAGATCGCACACACAGTATGATGACCTGATTGATGAGTTTATGAAAGCTATTCTG
    
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_002396 unedited TGACCGCGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTACTGTTGAAAACAAT GACTTTTATTTACTTAAAGCCAGCAGTAGTTCCCATTTACTCTCATAATGTTATAGTTAAG GCTTGATTTAGTTCAGAAAAATAAATAGGGTAAATTTTAAATATTTCCCTAGCTCTGTCT GCTATAGGGAATTCAGAGTATGAAGGTAAGATGAAGCAGATATAAGAACATTTTTAG ATAATGACAATTTTCTTAAAAATTTGGTAAAAATTTAGTTTCTTCTCAAATTTCTGTAC TTCTATCCATAAAAAGTAAATTTCTATTTTAGTAGCTCTGTAAGAAGTGGCCAGAGAAGA GTATTACCCATAATAGTAAATAGCAAATACTTTGGCAAGTCTGAATTAGAGTACAAGTGA AGACATTCACAAAACACACTTTTTACATCTCCTGGATGTGGTACGGGCTGTATGTTAGAAT TAAAGCATCACAACATCTGATTGTAGGGTGTGGTGGGCAATGCAATCAATCAACACGT CTACCCCAACAGATGTGGAGACGCATGGAAAAATACATCAACCAAAGTGGTCAGGGAGA ACAAAACACAGAAAACACCATAAACTGAAGACATTATCTTCTTGTCTGAAAAAGGG GTTCCCTGGAGCACAGAAAGTATTTATCAGGGAGTGCTTCTATTCTGTTATCACAGGAN GGGCTTGATGCAGATTCTGGCCATTCATACACATCTGGCAGCAGGAATCATATTTACTC CGCCATGTTCTTTTAAACATATTGGCCTTGNCTTCAGTTCTGGGTATCGGAAGCCATT TATTAGCATATAGTATCTGTACTTTATAGCATGTTATAGAAGTCTGATATANCAGCGTG GGTAAGCTCCTTGCCCTCCTC
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_002396
<b>Insert Size:</b>	2880 bp
<b>OTI Disclaimer:</b>	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).
<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_002396.3</a> , <a href="#">NP_002387.1</a>
<b>RefSeq Size:</b>	2730 bp
<b>RefSeq ORF:</b>	1755 bp
<b>Locus ID:</b>	4200
<b>UniProt ID:</b>	<a href="#">P23368</a>
<b>Cytogenetics:</b>	18q21.2
<b>Domains:</b>	malic
<b>Protein Pathways:</b>	Pyruvate metabolism

**Gene Summary:**

This gene encodes a mitochondrial NAD-dependent malic enzyme, a homotetrameric protein, that catalyzes the oxidative decarboxylation of malate to pyruvate. It had previously been weakly linked to a syndrome known as Friedreich ataxia that has since been shown to be the result of mutation in a completely different gene. Certain single-nucleotide polymorphism haplotypes of this gene have been shown to increase the risk for idiopathic generalized epilepsy. Alternatively spliced transcript variants encoding different isoforms found for this gene. [provided by RefSeq, Dec 2009]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.