

Product datasheet for **SC119076**

Calmodulin (CALM2) (NM_001743) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calmodulin (CALM2) (NM_001743) Human Untagged Clone
Tag:	Tag Free
Symbol:	Calmodulin
Synonyms:	CALM; CALML2; caM; CAM1; CAM3; CAMC; CAMII; CAMIII; LQT15; PHKD; PHKD2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_001743 edited
 GAATTCGGCACGAGGGCGAGCTGAGTGGTTGTGTGGTCTCGGAAACCGGTAGCCG
 TTGCAGCATGGCTGACCAACTGACTGAAGAGCAGATTGCAGAATTCAAAGAAGCTTTTTC
 ACTATTTGACAAAGATGGTGATGGAACATAACAACAAAGGAATTGGGAACTGTAATGAG
 ATCTCTTGGGCAGAATCCACAGAAGCAGAGTTACAGGACATGATTAATGAAGTAGATGC
 TGATGGTAATGGCACAATTGACTTCCCTGAATTTCTGACAATGATGGCAAGAAAAATGAA
 AGACACAGACAGTGAAGAAGAAATTAGAGAAGCATTCCGTGTGTTTGATAAGGATGGCAA
 TGGCTATATTAGTGCTGCAGAACTTCGCCATGTGATGACAAACCTTGGAGAGAAGTTAAC
 AGATGAAGAAGTTGATGAAATGATCAGGGAAGCAGATATTGATGGTGATGGTCAAGTAAA
 CTATGAAGAGTTGTACAAATGATGACAGCAAAGTGAAGACCTTGTACAGAATGTGTTAA
 ATTTCTTGACAAAATTGTTATTTGCCTTTTCTTTGTTTGTAACTTATCTGTAAAAGGT
 TTCTCCCTACTGTCAAAAAAATATGCATGTATAGTAATTAGGACTTCATTCTCCATGTT
 TTCTTCCCTTATCTTACTGTCATTGTCCTAAAACCTTATTTTAGAAAATTGATCAAGTAA
 CATGTTGCATGTGGCTTACTCTGGATATATCTAAGCCCTTCTGCACATCTAAACTTAGAT
 GGAGTTGGTCAAATGAGGGAACATCTGGGTTATGCCTTTTTTAAAGTAGTTTTCTTTAGG
 AACTGTCAGCATGTTGTTGTTGAAGTGTGGAGTTGTAACCTGCGTGGACTATGGACAGT
 CAACAATATGACTTAAAAGTTGCACTATTGCAAAACGGGTGTATTATCCAGGTAAGTTCG
 TTTTAAACTTTGTTAGCCACTTAAAACTGCTTATGGCACAATTTGCCTCAAAATCCA
 TTCCAAGTTGTATTTGTTTCCAAATAAAAAAATTACAATTTACCCAAAAAATTTTAA
 AAAAATCGAC



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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_001743 unedited ATTTTGTAAACGACTTANCTATAGGGCGGCCGGAATTCGCACGAGGGCGAGCTGATTG GTTGTGTGGTCGCGTCTCGGAAACCGGTAGCGCTTGCAGCATGGCTGACCAACTGACTGA AGAGCAGATTGCAGAATCAAAGAAGCTTTTCACTATTTGACAAAGATGGTGATGGAAC TATAACAACAAAGGAATTGGGAAGTATTTATATCTCTTGGGCAGAATCCCACAGAAGC AGAGTTACAGGACATGATTAATGAAGTAGATGCTGATGGTAATGGCACAATTGACTTCCC TGAATTTCTGACAATGATGGCAAGAAAAATGAAAGACACAGACAGTGAAGAAGAAATTAG AGAAGCATTCCGTGTGTTTGATAAGGATGGCAATGGCTATATTAGTGTGAGAAGTTCCG CCATGTGATGACAAACCTTGGAGAGAAGTTAACAGATGAAGAAGTTGATGAAATGATCAG GGAAGCAGATATTGATGGTGATGGTCAAGTAACTATGAAGAGTTGTACAAATGATGAC AGCAAAGTGAAGACCTTGTACAGAATGTGTTAAATTTCTTGTACAAAATTGTTTATTTGC CTTTTCTTTGTTGTAACCTATCTGTAAGGTTTCTCCCTACTGTCAAAAAATATGCA TGTATAGTAATTAGGACTTCACTCCATGTTTTCTCCCTTACTTACTGTCATTGTC CTAACCTTATTTAGAAATGATCAAGTAACATGTTGCATGTGGCTTACTCTGGATA TATCTAAGCCCTTCTGCACATCTAACTTAAATGGAGNTGGTCAATGAGGGAAACATCT GGNATGCCTTTTTTAAGTAAGTTTCTTAGGAAGTGCACCATGNTGTTGTTGAAGTGT GGAGTTGAACTCTGCGTGGACTATGGCAGCCACCATATGTAAGTAAAAGTGCACATGCA AACGGTTGATNATCCAGGACTT</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_001743 unedited TTTCCCCCCCCCTCCNCCCTCCNCTTCCCTTACCTTGAAGCGGCCGAATCTACATCG AGTTTTTTTTTTTTTTTTTGGGTAATTTGTAATTTTTTATTGAAAAACAAATATACAA CTTGCGAAGGATTTTGGGCAAAATGTGCCATAAGCAGATTTTAAAGTGGCTAAACAAAGT TAAAAAGCAAGTAACAATAAAAGAAAAATGTTTCTGGTACAGGACCAGCAGTACAAAAAA ATAGTGTACGAGTACCTGGATAATACACCCGTTTTGCAATAGTGAACCTTTTAAAGTACAT ATTGTTGACTGTCCATAGTCCACGCAGAGTTACAACCTCCACACTTCAACAACAACATGCT GACAGTTCCTAAAGAAAACCTTTAAAAAAGGCATAACCCAGATGTTCCCTCATTTGAC CAACATGTTACTTGATCAATTTCTAAAATAAGGCTTTAGGACAATGACAGCAAGATAAG GGAAGAAAACATGGAGGAATGAAGCCCTAATTACTATACATGCATTTTTTTTGTGACAGTA GGGAGAAAACCTTTTACAGATAAGTTACAACACAGAAAAGGCAATAAACAATTTTGTTC CAGAAAATTAACACATTCTGTACAAGTCTTAACTTTGGTGTGATTTTGTACAAAAT TTTTATTAGTTTACTTGACCATCACCTAATATCTGCTTCCCTGATTTTCAATAAACT TTTAATCCGTTAACCTCTCTTCAAGTTTTGTTATACAATTGCCCAAAGTTCTTTAACCA CTAATAATACCCATTGGCCTTCCCTATTCAAACACACCGGAAAGCCTCCCTAATTCCTT TCTCAACGGCCTGGGCTCTTCATTTTTCTTGGCACTCTTGCACAGAAT</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_001743
Insert Size:	1160 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: [NM_001743.3](#), [NP_001734.1](#)

RefSeq Size: 1128 bp

RefSeq ORF: 450 bp

Locus ID: 805

UniProt ID: [P62158](#)

Cytogenetics: 2p21

Domains: EFh

Protein Families: Druggable Genome

Protein Pathways: Alzheimer's disease, Calcium signaling pathway, Glioma, GnRH signaling pathway, Insulin signaling pathway, Long-term potentiation, Melanogenesis, Neurotrophin signaling pathway, Olfactory transduction, Oocyte meiosis, Phosphatidylinositol signaling system, Vascular smooth muscle contraction

Gene Summary: This gene is a member of the calmodulin gene family. There are three distinct calmodulin genes dispersed throughout the genome that encode the identical protein, but differ at the nucleotide level. Calmodulin is a calcium binding protein that plays a role in signaling pathways, cell cycle progression and proliferation. Several infants with severe forms of long-QT syndrome (LQTS) who displayed life-threatening ventricular arrhythmias together with delayed neurodevelopment and epilepsy were found to have mutations in either this gene or another member of the calmodulin gene family (PMID:23388215). Mutations in this gene have also been identified in patients with less severe forms of LQTS (PMID:24917665), while mutations in another calmodulin gene family member have been associated with catecholaminergic polymorphic ventricular tachycardia (CPVT)(PMID:23040497), a rare disorder thought to be the cause of a significant fraction of sudden cardiac deaths in young individuals. Pseudogenes of this gene are found on chromosomes 10, 13, and 17. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Mar 2015]

Transcript Variant: This variant (2) lacks an exon in the 5' coding region, and uses an alternate start codon compared to variant 1. The encoded isoform (2) has a shorter N-terminus compared to isoform 1, and is the same protein encoded by other calmodulin gene family members.