

## Product datasheet for **RC204796**

### Calmodulin (CALM2) (NM\_001743) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Calmodulin (CALM2) (NM\_001743) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Calmodulin  
**Synonyms:** CALM; CALML2; caM; CAM1; CAM3; CAMC; CAMII; CAMIII; LQT15; PHKD; PHKD2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC204796 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGACCAACTGACTGAAGAGCAGATTGCAGAATTCAAAGAAGCTTTTTCACTATTTGACAAAGATG  
GTGATGGAATAACAACAAAGGAATTGGAACTGTAATGAGATCTCTGGGCAGAATCCACAGAAGC  
AGAGTTACAGGACATGATTAATGAAGTAGATGCTGATGGTAATGGCACAATTGACTTCCCTGAATTTCTG  
ACAATGATGGCAAAAAATGAAAGACACAGACAGTGAAGAAGAAATTAGAGAAGCATTCCGTGTGTTTG  
ATAAGGATGGCAATGGCTATATTAGTGCTGCAGAACTTCGCCATGTGATGACAAACCTTGGAGAGAAGTT  
AACAGATGAAGAAGTTGATGAAATGATCAGGGAAGCAGATATTGATGGTGGTCAAGTAACTATGAA  
GAGTTTGTACAAATGATGACAGCAAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC204796 protein sequence  
Red=Cloning site Green=Tags(s)

MADQLTEEQIAEFKEAFSLFDKGDGTITTKELGTVMRSLGQNPTEAELQDMINEVDADNGNTIDFPEFL  
TMMARKMKDTSDEEIEAIFRVFDKDGNGYISAAELRHVMTNLGEKLTDEEVDDEMIREADIDGDGQVNYE  
EFVQMMTAK

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6060\\_h05.zip](https://cdn.origene.com/chromatograms/mk6060_h05.zip)



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**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001743

**ORF Size:** 447 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

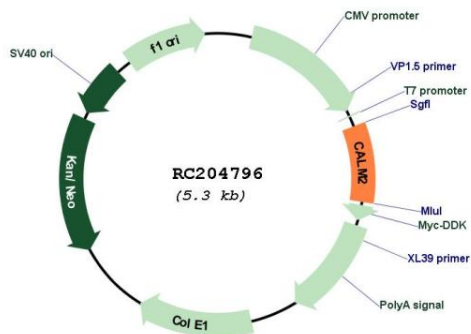
**RefSeq:** [NM\\_001743.6](#)

**RefSeq Size:** 1309 bp

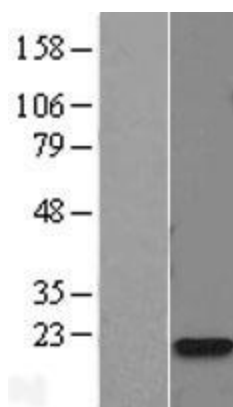
**RefSeq ORF:** 450 bp

<b>Locus ID:</b>	805
<b>UniProt ID:</b>	<a href="#">P62158</a>
<b>Cytogenetics:</b>	2p21
<b>Domains:</b>	EFh
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	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
<b>MW:</b>	16.8 kDa
<b>Gene Summary:</b>	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]

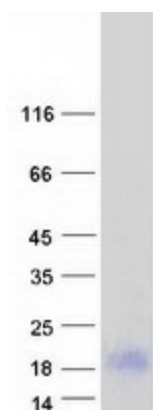
**Product images:**



Circular map for RC204796



Western blot validation of overexpression lysate (Cat# [LY400660]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204796 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CALM2 protein (Cat# [TP304796]). The protein was produced from HEK293T cells transfected with CALM2 cDNA clone (Cat# RC204796) using MegaTran 2.0 (Cat# [TT210002]).