

## Product datasheet for RC222306

### CACNA2D3 (NM\_018398) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA2D3 (NM_018398) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CACNA2D3
Synonyms:	HSA272268
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC222306 representing NM_018398 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCGGGCGGGCTCGCCGCGCCGCGTCCCAGGGGGCTCGGCGCTTCTCGCTGCCGCGTCTCT  
ACGCCGCGCTGGGGACGTGGTGCCTCGGAGCAGCAGATACCGCTCTCCGTGGTGAAGCTCTGGGCTC  
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CCTGAAACATGAATTTGATGCAGACTTACAGTATGAATACTTCAATGCTGTGCTGATAAATGAAAGGGAC  
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GGTCATTTTAGTTGACGTCAGTGGCAGCATGAAAGGACTCCGCTGACTATCGCGAAGCAAACAGTCTCA  
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AGATCGAAGGGCATTCTTCTGGGAGTGGTTGGCACAGATGTCCCAGTGAAAGAATTCTGAAGACCATCC  
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 CAAGCAGCAACCTGTTTGTGGTGGTGGCAGCAGCTGCTGTAATCTGTGGCCCCCATCAGCAAT  
 GGCACCCATTGAAATCAGGTATAATGAATCCCTTAAGTGTGAACGTCTAAAGGCCAGAAAGATCAGAAGG  
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC222306 representing NM\_018398  
 Red=Cloning site Green=Tags(s)

MAGPGSPRRASRGASALLAAALLYAALGDVVRSEQQIPLSVVKLWASAFGGEIKSIAAKYSGSQLLKQKY  
 KEYEKDVAIEEIDGLQLVKKLAKNMEEMFHKKSEAVRRLVEAAEEAHLKHEFDADLQYEFNAVLINERD  
 KDNFLELGKEFILAPNDHFNNLPVNIISLSDVQVPTNMYNKDPAIVNGVYWSESLNKVFDNFRDPSLI  
 WQYFGSAKGFFRQYPGKWEPEDENGVIAFDCRNKRWYIQAATSPKDVVILVDVSGSMKGLRLTIKQTVS  
 SILDTLGGDDFFNI IAYNEELHYVEPLNGTLVQADRTNKEHFREHLDKLFAKIGMLDIALNEAFNLS  
 DFNHTGQGSICSAIMLITDGAVDTYDTIFAKYNWPDVKRIFTYLIGREAAFADNLKWMACANKGFFTQ  
 ISTLADVQENVMEYLHVL SRPKVIDQEHVVDVWTEAYIDSTLPQAQKL TDDQGPVLMTTVAMPVFSKQNET  
 RSKGILLGVVGTDPVKELLLKTI PKYKLG IGHYAFAITNNGYILTHELRLLYEKGKRRRKNPYSSVDLS  
 EVEWEDRDDVLRNAMVNRKTGKFSMEVKKTVDKGKRVL VMTNDYYTDIKGT PPSL GVALSRGHGKYFFR  
 GNVTIIEGLHDL EHPDVSLADEWSYCNLDLHPEHRHLSQLEAIKLYLKGKEPLLQCDKELIQEVL F DAVV  
 SAPIEAYWTSALNKSSENSDKGVEVAFLGTRTGLSRINL FVGAEQLTNQDFL KAGDKENIFNADHFLWY  
 RRAAEQIPGSFVYSIPFSTGPNKSNVVTASTSIQLLDERKSPVVAAVGIQMKLEFFQRKFWTASRQCAS  
 LDGKCSISCDDETVNICYLIDNNGFILVSEDTYQTGDFGEIEGAVMNKLLTMSGFKRITL YDYQAMCRAN  
 KESSDGAHGLLD PYNFLSAVKWIMTEL VLFVFNLC SWWHSDMTAKAQKLKQTL EPCDTEYPAFVSER  
 TIKETTGNIACEDCSKSFVIQQIPSSNLFMVVVDSSCLCESVAPITMAPIEIRYNE SLK CERLKAQKIRR  
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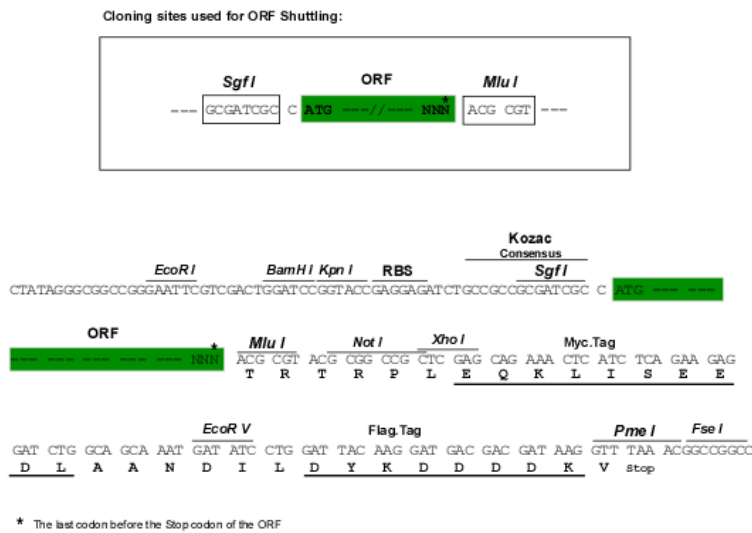
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6168\\_d04.zip](https://cdn.origene.com/chromatograms/mk6168_d04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_018398

**ORF Size:** 3273 bp

**OTI Disclaimer:** 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](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

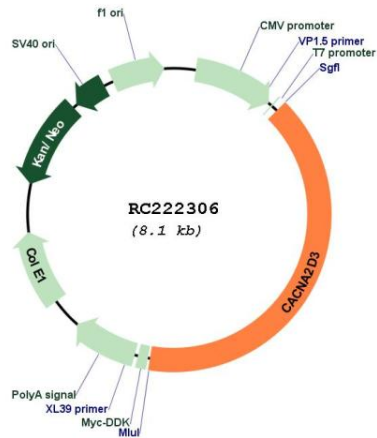
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [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.

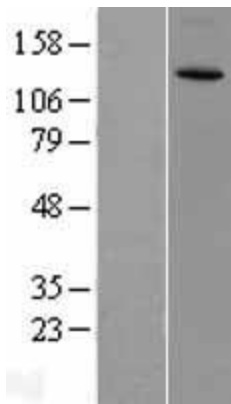
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<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_018398.2</a> , <a href="#">NP_060868.2</a>
<b>RefSeq Size:</b>	3689 bp
<b>RefSeq ORF:</b>	3276 bp
<b>Locus ID:</b>	55799
<b>UniProt ID:</b>	<a href="#">Q8IZS8</a>
<b>Cytogenetics:</b>	3p21.1-p14.3
<b>Domains:</b>	VWA, Cache
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Other
<b>Protein Pathways:</b>	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway
<b>MW:</b>	122.8 kDa
<b>Gene Summary:</b>	This gene encodes a member of the alpha-2/delta subunit family, a protein in the voltage-dependent calcium channel complex. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization and consist of a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. Various versions of each of these subunits exist, either expressed from similar genes or the result of alternative splicing. Research on a highly similar protein in rabbit suggests the protein described in this record is cleaved into alpha-2 and delta subunits. Alternate transcriptional splice variants of this gene have been observed but have not been thoroughly characterized. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC222306



Western blot validation of overexpression lysate (Cat# [LY402674]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222306 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).