

## Product datasheet for RC219081

### CACNA2D1 (NM\_000722) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** CACNA2D1 (NM\_000722) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** CACNA2D1  
**Synonyms:** CACNA2; CACNL2A; CCHL2A; LINC01112; lncRNA-N3  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >RC219081 representing NM\_000722  
Red=Cloning site Blue=ORF Green=Tags(s)

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**Protein Sequence:**

>RC219081 representing NM\_000722  
 Red=Cloning site Green=Tags(s)

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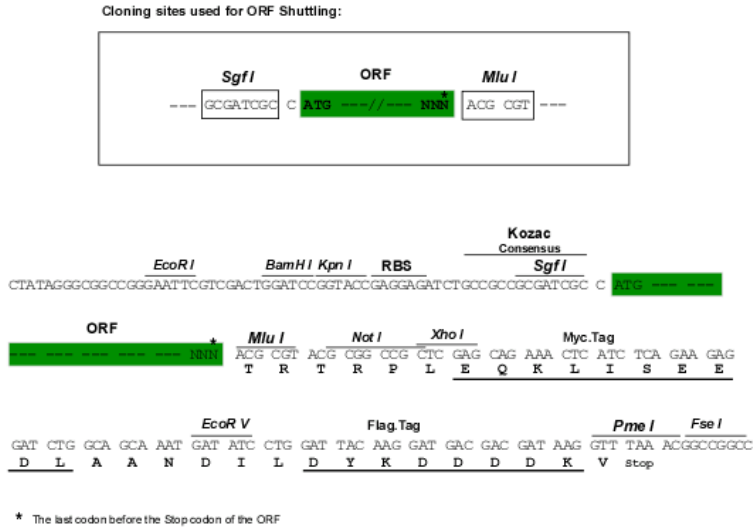
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**Chromatograms:**

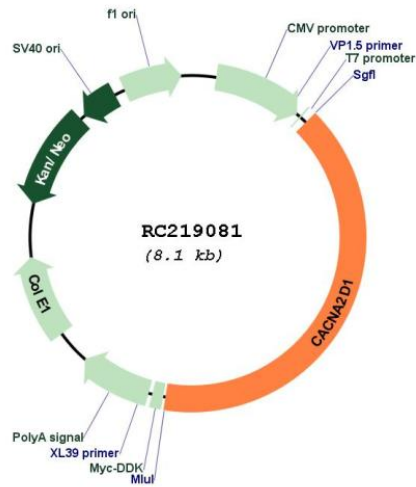
[https://cdn.origene.com/chromatograms/mg3795\\_h09.zip](https://cdn.origene.com/chromatograms/mg3795_h09.zip)

Restriction Sites: Sgfl-MluI

Cloning Scheme:



Plasmid Map:



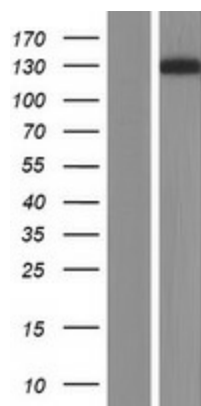
ACCN: NM\_000722

ORF Size: 3273 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>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_000722.4</a>
<b>RefSeq Size:</b>	3822 bp
<b>RefSeq ORF:</b>	3276 bp
<b>Locus ID:</b>	781
<b>UniProt ID:</b>	<a href="#">P54289</a>
<b>Cytogenetics:</b>	7q21.11
<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>	123 kDa

**Gene Summary:**

The preproprotein encoded by this gene is cleaved into multiple chains that comprise the alpha-2 and delta subunits of the voltage-dependent calcium channel complex. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization. Mutations in this gene can cause cardiac deficiencies, including Brugada syndrome and short QT syndrome. Alternate splicing results in multiple transcript variants, some of which may lack the delta subunit portion. [provided by RefSeq, Nov 2014]

**Product images:**

Western blot validation of overexpression lysate (Cat# [LY424551]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219081 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).