

## Product datasheet for **SC315221**

### CACNA2D2 (NM\_006030) Human Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** CACNA2D2 (NM\_006030) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** CACNA2D2  
**Synonyms:** CACNA2D; CASVDD  
**Vector:** pCMV6 series  
**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_006030, the custom clone sequence may differ by one or more nucleotides

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ATGGCGGTGCCGGCTCGGACCTGCGGCGCCTCTCGGCCCGGCCAGCGCGGACTGCGCGC
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GATGCGGAGCTAGAGGATGAGAACAAGGAAGAGATCCGTCGGAGCATGATTGATGGCAAC  
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 TCAGACTGTGGCCGCGGGCCTCCTTCCCGCCGTCGCTGGGCGTCTGGTCTCCCTGCAA  
 CTGCTGCTCCTCTGGGCTGCCGCCCCGGCCGACGCTCAAGTCTCTGTCACGCCTCT  
 CGCCGCCTC

- Restriction Sites:** Please inquire
- ACCN:** NM\_006030
- 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).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_006030.2</a> , <a href="#">NP_006021.2</a>
<b>RefSeq Size:</b>	5337 bp
<b>RefSeq ORF:</b>	3432 bp
<b>Locus ID:</b>	9254
<b>UniProt ID:</b>	<a href="#">Q9NY47</a>
<b>Cytogenetics:</b>	3p21.31
<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>Gene Summary:</b>	<p>Calcium channels mediate the entry of calcium ions into the cell upon membrane polarization. This gene encodes the alpha-2/delta subunit of the voltage-dependent calcium channel complex. The complex consists of the main channel-forming subunit alpha-1, and auxiliary subunits alpha-2/delta, beta, and gamma. The auxiliary subunits function in the assembly and membrane localization of the complex, and modulate calcium currents and channel activation/inactivation kinetics. The subunit encoded by this gene undergoes post-translational cleavage to yield the extracellular alpha2 peptide and a membrane-anchored delta polypeptide. This subunit is a receptor for the antiepileptic drug, gabapentin. Mutations in this gene are associated with early infantile epileptic encephalopathy. Single nucleotide polymorphisms in this gene are correlated with increased sensitivity to opioid drugs. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Mar 2014]</p> <p>Transcript Variant: This variant (2) lacks an alternate in-frame exon in the central coding region compared to variant 3. The encoded isoform (b, also known as Alpha2delta-2b) is shorter than isoform c. 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.</p>