

## Product datasheet for SC304909

### CACNA1I (NM\_021096) Human Untagged Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                      |
| Product Name:             | CACNA1I (NM_021096) Human Untagged Clone |
| Tag:                      | Tag Free                                 |
| Symbol:                   | CACNA1I                                  |
| Synonyms:                 | ca(v)3.3; Cav3.3                         |
| Mammalian Cell Selection: | None                                     |
| Vector:                   | <u>pCMV6-XL5</u>                         |
| E. coli Selection:        | Ampicillin (100 ug/mL)                   |

**Fully Sequenced ORF:** >OriGene sequence for NM\_021096 edited  
GCCACCATGGCTGAGAGCGCCTCCCGCCCTCCTCATCTGCAGCAGCCCCAGCCGCTGAG  
CCAGGAGTCACCACGGAGCAGCCCGGACCCCGGAGCCCCCATCCTCCCGCCAGGCCTG  
GAGGAGCCTCTGGATGGAGCTGATCCTCATGTCCACACCCAGACCTGGCGCCTATTGCC  
TTCTTCTGCCTGCGACAGACCACAGCCCGGAAGTGGTGCATCAAGATGGTGTGCAAC  
CCGTGGTTTGAATGTGTGACGATGCTGGTATCCTGCTGAACTGCGTGACACTTGGCATG  
TACCAGCCGTGCGACGACATGGACTGCCTGTCCGACCGCTGCAAGATCCTGCAGGCTTT  
GATGACTTCATCTTTATCTTCTTTGCCATGGAGATGGTGTCAAGATGGTGGCCCTGGGG  
ATTTTTGGCAAGAAGTGTACTCCTCGGGACACATGGAACCGCCTGGATTTCTTCATCGTC  
ATGGCAGGGATGGTGCAGTACTCCTGGACCTTCAAGAACATCAACCTGTCAGCCATCCGC  
ACCGTGCGCGTCTGAGGCCCTCAAAGCCATCAACCGCTGCCAGTATGCGGATCCTG  
GTGAACCTGCTCCTGGACACACTGCCATGCTGGGAATGCTCCTGCTGCTGCTTCTTT  
GTCTTCTTCATCTTTGGCATCATAGGTGTGCAGCTCTGGGCGGGCCTGCTGCGTAACCGC  
TGCTTCTCGGAGGAGAATTCACCATACAAGGGATGTGGCCTTGCCCCATACTACCAG  
CCGGAGGAGGATGATGAGATGCCCTTCACTGCTCCCTGTGCGGGCACAATGGGATAATG  
GGCTGCCATGAGATCCCCCGCTCAAGGAGCAGGGCCGTGAGTGTGCTGCTCAAGGAC  
GACGTCTACGACTTTGGGCGGGGCGCCAGGACCTCAATGCCAGCGGCCTCTGTGTCAAC  
TGAACCGTTACTACAATGTGTGCCGACGGGCAGGCCAACCCCAAGGGTGCCATC  
AACTTTGACAACATCGTTATGCTTGGATTGTCATCTTCCAGTGATCACTCTGGAAGGC  
TGGGTGGAGATCATGTAAGTACGTGATGGATGCTCACTCCTTCTACAACCTCATCTACTT  
ATCCTGCTTATCATAGTGGGCTCCTTCTCATGATCAACCTGTGCCTCGTTGTATAGCG  
ACCCAGTTCTCGGAGACCAAGCAACGGGAGCACCAGGCTGATGCTGGAGCAGCGGCAGCGC  
TACCTGCTCCTCCAGCACGGTGGCCAGCTACGCCGAGCCTGGCGACTGCTACGAGGAGATC  
TTCCAGTATGCTGCCACATCCTGCGCAAGGCCAAGCGCCGCGCCTGGGCCTCTACCAG  
GCCCTGCAGAGCCGGCGCCAGGCCCTGGGCCGGAGGCCCGGCCCGCCCAACCTGGG  
CCCCACGCCAAGGAGCCCGGCACTACCATGGGAAGACTAAGGGTCAGGGAGATGAAGGG  
AGACATCTCGGAAGCCGGCATTGCCAGACTTTGCATGGGCTGCCTCCCTGGAAATGAT



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CACTCGGGAAGAGAGCTGTGCCCGCAACATAGCCCCCTGGATGCGACGCCCCACACCCTG  
 GTGCAGCCATCCCCGCCACGCTGGCTCCGATCCCGCCAGCTGCCCTTGCTGCCAGCAT  
 GAGGACGGCCGGCGGCCCTCGGGCTGGGCAGCACCGACTCGGGCCAGGAGGGCTCGGGC  
 TCCGGGAGCTCCGCTGGTGGCGAGGACGAGGCGGATGGGGACGGGGCCCGGAGCAGCGAG  
 GACGGAGCCTCCTCAGAACTGGGGAAGGAGGAGGAGGAGGAGGAGCAGGCGGATGGGGCG  
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 AGCAAGTACTTCAACCGGGGCATCATGATGGCCATCCTGGTCAACACCGTCAGCATGGGC  
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 ACCCTACGCCCCCTGCGTGTATCAGCCGGGCGCGGGCCTGAAGCTGGTGGTGGAGACA  
 CTCATCTCTCCCTCAAGCCCATCGGCAACATCGTGTCTCATCTGCTGTGCCTTCTCATC  
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 AAGGATGGTTGGGTGAACATCATGTACAATGGACTGGATGCTGTTGCTGTGGACCAGCAG  
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 AGTCTCTTTGTGCTCAACATGTTTGTGGGTGTCGTGGTGGAGAACTTCCACAAGTGCCGG  
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 AAGAAGCGCCGGAAGGCCAGCGGCTGCCCTACTATGCCACCTATTGTACACCCGGCTG  
 CTCATCCACTCCATGTGACACAGCCACTACCTGGACATCTTCATCACCTTCATCATCTGC  
 CTCAACGTGGTACCATGTCCCTGGAGCACTACAATCAGCCCACGTCCCTGGAGACAGCC  
 CTCAAGTACTGCAACTATATGTTCAACACTGTCTTTGTGCTGGAGGCTGTGCTGAAGCTG  
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 TTGAAGATGGCCACAGGAATGCGGGCCCTGCTGGACACGGTGGTCAAGCTTTGCCCCAG  
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 GAGCTCTTTGGGAAGCTGGTCTGCAACGACGAGAACCCTGCGAGGGCATGAGCCGGCAT  
 GCCACCTTCGAGAACTTCGGCATGGCCTTCCTCACACTTCCAGGTCTCCACGGGTGAC  
 AACTGGAACGGGATCATGAAGGACACGCTGCGGGACTGCACCCACGACGAGCGCAGCTGC  
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 TTCGTGCTCATCAACGTGGTGGTGGCTGTGCTCATGAAGCACCTGGACGACAGCAACAAG  
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 GGCCCTGGCCGAGGCTGCCTACCGGCTCCCCGGGCGCCCTGGCCGAGGGCCGGGAGGG  
 GCGGGCGGGGGGACACCGAGGGCGGCTTGTGCCGGCTGCTACTCGCCTGCCAG  
 GAGAACCTGTGGCTGGACAGCTCTTTAATCATCAAGGACTCCTTGGAGGGGAGCTG  
 ACCATCATGACAACCTGTGGGCTCCATTTCCACCCTACTCCTCGCCTGCCGGCTGC  
 AAGAAGTGTACCACGACAAGCAAGAGGTGCAGCTGGCTGAGACGGAGGCTTCTCCCTG  
 AACTCAGACAGGTCTCGTCCATCCTGTGGGTGACGACCTGAGTCTCGAGGACCCACA  
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 CCCATGCCAGCCGAGTTCTTCCACCCTGCAGTGTCTGCCAGCCAGAAAGGCCAGAAAAG  
 GGCCTGGCACTGGAACCCTCCCCAAGATTGCGCTGCAGGGCTCCTGGGCATCTCTGCGG  
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 GCCAGCCCCAGCAGCTCCGCGGGCAGCCTGCAGACCACGCTCGAGGACAGCCTGACCCTG  
 AGCGACAGCCCCGGCGTGCCCTGGGGCCGCCCGCCTGCTCCAGGACCCCGGGCCGGC  
 CTGTCCCCCGCCGCTCGCCGCGCCTGAGCCTGCGCGGCCGGGGCCTTTCAGCCTGCGG  
 GGGCTGCGGGCGCATCAGCGCAGCCACAGCAGCGGGGGCTCCACCAGCCCGGGTGCACC  
 CACCACGACTCCATGGACCCCTCGGACGAGGAGGGCCGCGGTGGCGGGGCGGGGGG  
 GCGGGCAGCGAGCACTCGGAGACCCTCAGCAGCCTCTCGCTCACCTCCCTTTCTGCCCC  
 CCGCCCCCGCCAGCCCCCGGCTCACGCCCGCAGGAAGTTCAGCAGCACCAGCAGC  
 CTGGCCGCCCCCGCCGCCCCACGCCCGCCCTGGCCACGGCTGGCCCGGAGCCCC  
 TCGTGGGCGCGGACCGCAGCAAGGACCCCCCGCCGGGACCGCTGCCATGGGCCTG  
 GGCCCTTGGCGCCCCCGCGCAACCGCTCCCCGGAGAGCTGGAGCCGGGAGACCGCC  
 AGCAAGAGGAAGAGATGA

**Restriction Sites:** Please inquire  
**ACCN:** NM\_021096  
**Insert Size:** 6700 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 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).

**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\\_021096.3](#), [NP\\_066919.2](#)

**RefSeq Size:** 10007 bp

**RefSeq ORF:** 6672 bp

**Locus ID:** 8911

**UniProt ID:** [Q9P0X4](#)

**Cytogenetics:** 22q13.1

**Protein Families:** Druggable Genome, Ion Channels: Calcium, Transmembrane

**Protein Pathways:** Calcium signaling pathway, MAPK signaling pathway

**Gene Summary:**

This gene encodes the pore-forming alpha subunit of a voltage gated calcium channel. The encoded protein is a member of a subfamily of calcium channels referred to as is a low voltage-activated, T-type, calcium channel. The channel encoded by this protein is characterized by a slower activation and inactivation compared to other T-type calcium channels. This protein may be involved in calcium signaling in neurons. Alternate splicing results in multiple transcript variants. [provided by RefSeq, Oct 2011]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (a).