

Product datasheet for **SC307674**

CACNA1G (NM_198380) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: CACNA1G (NM_198380) Human Untagged Clone
Tag: Tag Free
Symbol: CACNA1G
Synonyms: Ca(V)T.1; Cav3.1; NBR13; SCA42; SCA42ND
Vector: pCMV6 series
Fully Sequenced ORF: >NCBI ORF sequence for NM_198380, the custom clone sequence may differ by one or more nucleotides

```
ATGGACGAGGAGGAGGATGGAGCGGGCGCCGAGGAGTCGGGACAGCCCCGAGCTTCATG
CGGCTCAACGACCTGTCGGGGGCGGGGCGGGGCGGGGTCAGCAGAAAAGGAC
CCGGGCAGCGGACTCCGAGGCGGAGGGGCTGCCGTACCCGGCGCTGCCCCGGTGGTT
TTCTTCTACTTGAGCCAGGACAGCCGCCGCGGAGCTGGTGTCTCCGACGGTCTGTAAC
CCCTGGTTTGAGCGCATCAGCATGTTGGTCATCCTTCTCAACTGCGTGACCCTGGGCATG
TTCCGGCCATGCGAGGACATCGCCTGTGACTCCCAGCGTGCCGGATCCTGCAGGCCTTT
GATGACTTCATCTTTGCCTTCTTTGCCGTGGAGATGGTGGTGAAGATGGTGGCCTTGGGC
ATCTTTGGGAAAAGTGTACCTGGGAGACACTTGAACCGGCTTGACTTTTTTCATCGTC
ATCGCAGGGATGCTGGAGTACTCGCTGGACCTGCAGAACGTCAGTTCTCAGCTGTCAGG
ACAGTCCGTGTGCTGCGACCGCTCAGGGCCATTAACCGGGTGCCAGCATGCGCATCCTT
GTCACGTTGTGCTGGATACGCTGCCATGCTGGGCAACGTCCTGCTGCTGCTGCTTCTTC
GTCTTCTCATCTTCGGCATCGTCGGCGTCCAGCTGTGGGCAGGGCTGCTTCGGAACCGA
TGCTTCTACCTGAGAATTTACGCTCCCCTGAGCGTGGACCTGGAGCGCTATTACCAG
ACAGAGAACGAGGATGAGAGCCCCTTCTCTGCTCCCAGCCACGCGAGAACGGCATGCGG
TCCTGCAGAAGCGTGCCACGCTGCGCGGGGACGGGGCGGTGGCCACCTTGGCGTCTG
GACTATGAGGCCTACAACAGCTCCAGCAACACCCTGTGTCAACTGGAACCACTACTAC
ACCAACTGCTCAGCGGGGAGCACAACCCCTTCAAGGGCGCCATCAACTTTGACAACATT
GGCTATGCCTGGATCGCCATCTTCCAGGTCATCACGCTGGAGGGCTGGTTCGACATCATG
TACTTTGTGATGGATGCTCATTCTTCTACAATTTCTACTTCTCCTCCTCATCATC
GTGGGCTCCTTCTCATGATCAACCTGTGCTGGTGGTATTGCCACGCAGTTCTCAGAG
ACCAAGCAGCGGAAAGCCAGCTGATGCGGGAGCAGCGTGTGCGGTTCTGTCCAACGCC
AGCACCTGGCTAGCTTCTCTGAGCCCGCAGCTGCTATGAGGAGCTGCTCAAGTACCTG
GTGTACATCCTTGTAAAGCAGCCCGCAGGCTGGCTCAGGTCTCTCGGGCAGCAGGTGTG
CGGTTGGGCTGCTCAGCAGCCAGCACCCCTCGGGGGCCAGGAGACCCAGCCAGCAGC
AGCTGCTCTCGCTCCACCGCCGCTATCCGTCCACCACCTGGTGCAACCACCACCAC
CATCACCACCACTACCACCTGGGCAATGGGACGCTCAGGGCCCCCGGGCCAGCCCGGAG
ATCCAGGACAGGGATGCCAATGGGTCCCGCCGGCTCATGCTGCCACCACCCTCGACGCT
GCCCTCTCGGGGCCCCCTGGTGGCGCAGAGTCTGTGCACAGTCTTACCATGCCGAC
TGCCACTTAGAGCCAGTCCGCTGCCAGGCGCCCTCCAGGTCCCACATCTGAGGCATCC
```



[View online »](#)

GGCAGGACTGTGGGCAGCGGGAAGGTGTATCCCACCGTGACACACCAGCCCTCCACCGGAG
 ACGCTGAAGGAGAAGGCACTAGTAGAGGTGGCTGCCAGCTCTGGGCCCAACCCCTCACC
 AGCCTCAACATCCCACCCGGGCCCTACAGCTCCATGCACAAGCTGCTGGAGACACAGAGT
 ACAGGTGCCTGCCAAAGCTCTTGAAGATCTCCAGCCCTTGCTTGAAAGCAGACAGTGA
 GCCTGTGGTCCAGACAGCTGCCCTACTGTGCCGGGCCGGGGCAGGGGAGGTGGAGCTC
 GCCGACCGTGAATGCCTGACTCAGACAGCGAGGCAGTTTATGAGTTCACACAGGATGCC
 CAGCACAGCGACCTCCGGGACCCACAGCCGGCGGCAACGGAGCCTGGGCCAGATGCA
 GAGCCCAGCTCTGTGCTGGCCTTCTGGAGGCTAATCTGTGACACCTTCCGAAAGATTGTG
 GACAGCAAGTACTTTGGCCGGGAATCATGATCGCCATCCTGGTCAACACTCAGCATG
 GGCATCGAATACCACGAGCAGCCGAGGAGCTTACCAACGCCCTAGAAATCAGCAACATC
 GTCTTACCAGCCTTTTGGCCTGGAGATGCTGCTGAAGCTGCTTGTGTATGGTCCCTTT
 GGCTACATCAAGAATCCCTACAACATCTTCGATGGTGTCTTGTGGTTCATCAGCGTGTG
 GAGATCGTGGCCAGCAGGGGGCGGCCTGTGGTGTGCGGACCTTCCGCCTGATGCGT
 GTGCTGAAGCTGGTGCCTTCTGCCGGCGCTGCAGCGCAGCTGGTGGTGTCTATGAAG
 ACCATGGACAACGTGGCCACCTTCTGCATGCTGCTTATGCTCTTCTCATCTTCAGC
 ATCCTGGGCATGATCTCTTCGGCTGCAAGTTTGCCTCTGAGCGGGATGGGGACACCCCTG
 CCAGACCGGAAGAATTTTACTCCTTGCTCTGGGCCATCGTCACTGTCTTTCAGATCCTG
 ACCCAGGAGGACTGGAACAAAGTCTCTACAATGGTATGGCCTCCACGTGCTCCTGGGCG
 GCCCTTATTTTCAATGGCCTCATGACCTTCGGCAACTACGTGCTCTTCAATTTGCTGGTC
 GCCATTCTGGTGGAGGGCTTCCAGGCGGAGGAAATCAGCAAACGGGAAGATGCGAGTGA
 CAGTTAAGCTGTATTAGCTGCCTGTGACTCCAGGGGGGAGATGCCAACAAGTCCGAA
 TCAGAGCCCGATTTCTTCTACCAGCCTGGATGGTGTGAGGGACAGGAAGAAGTCTTG
 CCCTTGGTGTCCCTGGGAGAGCACCCGAGCTGCGGAAGAGCCTGCTGCCCTCTCATC
 ATCCACAGCGCCGCCACACCCATGTGCTGCCAAGAGCACAGCACGGGCCCTGGGCGAG
 GCGCTGGGCCCTGCGTGCGCCGCCACCAGCAGCAGCGGGTCCGCGAGCCTGGGGCGCC
 CACGAGATGAAGTACCGCCAGCGCCCGAGCTCTCCGACAGCCCTGGAGCGCTGCA
 AGCAGCTGGACCAGCAGGCGCTCCAGCCGGAACAGCCTCGGCCGTGACCCAGCCTGAAG
 CGGAGAAGCCCAAGTGGAGAGCGGCGGTCCCTGTTGTGCGGAGAAGGCCAGGAGAGCCAG
 GATGAAGAGGAGAGCTCAGAAGAGGAGCGGGCCAGCCCTCGGGCAGTGACCATCGCCAC
 AGGGGGTCCCTGGAGCGGAGGCCAAGAGTTCTTTGACCTGCCAGACACTGCAGGTG
 CCAGGGTGCATGCACTGCCAGTGGCCGAGGGTCTGCTTCTGAGCACCAGGACTGCAAT
 GGCAAGTCCGGCTTCCAGGCGCCTGGCCCGGCCCTGCGGCCTGATGACCCCCACTGGAT
 GGGGATGACGCCGATGACGAGGGCAACCTGAGCAAAGGGGAACGGGTCCGCGCGTGGATC
 CGAGCCCGACTCCCTGCCTGCTGCCTCGAGCGAGACTCCTGGTCAGCCTACATCTTCCCT
 CCTCAGTCCAGGTTCCGCCTCCTGTGTCACCGGATCATCACCCACAAGATGTTCCGACCAC
 GTGGTCCCTGTATCATCTTCTTAACTGCATCACCATCGCCATGGAGCGCCCAAAATT
 GACCCCAACAGCGCTGAACGCATCTTCTGACCCTCTCCAATTACATCTTACCAGCATC
 TTTCTGGCTGAAATGACAGTGAAGGTGGTGGCACTGGGCTGGTGTCTCGGGGAGCAGGCG
 TACCTGCGGAGCAGTTGGAACGTGCTGGACGGGCTGTTGGTGTCTATCTCCGTCATCGAC
 ATTCTGGTGTCCATGGTCTCTGACAGCGCACCAAGATCCTGGCATGCTGAGGGTGCTG
 CGGCTGTGCGGACCTGCGCCCGCTCAGGGTGTATCAGCCGGGGCAGGGGCTGAAGCTG
 GTGGTGGAGACGCTGATGTCTCACTGAAACCCATCGGCAACATTGTAGTCATCTGCTGT
 GCCTTCTTATCATATTTTCCGCATCTTGGGGGTGCAGCTCTTCAAAGGGAAGTTTTTCGTG
 TGCCAGGGCGAGGATACCAGGAACATACCAATAAATCGGACTGTGCCGAGGCCAGTTAC
 CGGTGGTCCGGCACAAGTACAACCTTGGACAACCTTGGCCAGGCCCTGATGTCCCTGTTT
 GTTTTGGCCTCCAAGGATGGTTGGGTGGACATCATGTACGATGGGCTGGATGCTGTGGG
 GTGGACCAGCAGCCATCATGAACCACAACCCCTGGATGCTGCTGTACTTCTATCTCGTTC
 CTGCTCATTGTGGCCTTCTTGTCTGAACATGTTTGTGGGTGTGGTGGTGGAGAAGTTC
 CACAAGTGTCCGACAGCACCAGGAGGAAGAGGAGGCCCGGGCGGGAGGAGAAGCGCCTA
 CGAAGACTGGAGAAAAAGAGAAGGAGTAAGGAGAAGCAGATGGCTGAAGCCAGTGCAAA
 CCTTACTACTCCGACTACTCCCGCTTCCGGCTCCTCGTCCACCCTTGTGCACCAGCCAC
 TACCTGGACCTTTCATCACAGGTGTATCGGGCTGACGTGGTACCATGGCCATGGAG

CACTACCAGCAGCCCCAGATTCTGGATGAGGCTCTGAAGATCTGCAACTACATCTTCACT
 GTCATCTTTGCTTGGAGTCAGTTTTCAAACCTGTGGCCTTTGGTTTTCCGTCGGTCTTC
 CAGGACAGGTGGAACCAGCTGGACCTGGCCATTGTGCTGCTGCCATCATGGGCATCAGC
 CTGGAGGAAATCGAGGTCAACGCCTCGCTGCCATCAACCCACCATCATCCGCATCATG
 AGGGTGTGCGCATTGCCGAGTCTGAAGCTGCTGAAGATGGCTGTGGGCATGCGGGCG
 CTGCTGGACACGGTGATGCAGGCCCTGCCAGGTGGGAACCTGGGACTTCTCTTCATG
 TTGTTGTTTTTCATCTTTGCAGCTCTGGGCGTGGAGCTCTTTGGAGACCTGGAGTGTGAC
 GAGACACACCCCTGTGAGGGCTGGGCCGTCATGCCACCTTTCGAACCTTTGGCATGGCC
 TTCCTAACCTCTCCGAGTCTCCACAGGTGACAATTGGAATGGCATTATGAAGGACACC
 CTCGGGACTGTGACCAGGAGTCCACCTGCTACAACACGGTCATCTCGCCTATCTACTTT
 GTGTCCTTCGTGCTGACGGCCAGTTCGTGCTAGTCAACGTGGTGTGATCGCCGTGCTGATG
 AAGCACCTGGAGGAGAGCAACAAGGAGGCCAAGGAGGAGGCCGAGCTAGAGGCTGAGCTG
 GAGCTGGAGATGAAGACCCTCAGCCCCAGCCCCACTCGCCACTGGGCAGCCCCTTCTC
 TGGCCTGGGGTCGAGGGCCCGACAGCCCCGACAGCCCCAAGCCTGGGGCTCTGCACCCA
 GCGGCCACGCGAGATCAGCCTCCCACTTTCCCTGGAGCACCCACGGACAGGCAGCTG
 TTTGACACCATATCCCTGCTGATCCAGGGCTCCCTGGAGTGGGAGCTGAAGCTGATGGAC
 GAGCTGGCAGGCCAGGGGGCCAGCCCTCTGCCTTCCCTTCTGCCCCAGCCTGGGAGGC
 TCCGACCCACAGATGCAGCCCCACCCACGGAGCTGCCAGGACCAGACTTACTGACTGTG
 CGGAAGTCTGGGGTCAGCCGAACGCACTCTCTGCCAATGACAGCTACATGTGTCGGCAT
 GGGAGCACTGCCGAGGGGCCCTGGGACACAGGGGCTGGGGGCTCCCCAAAGCTCAGTCA
 GGCTCCGTCTTGTCCGTTCACTCCCAGCCAGCAGATACCAGCTACATCCTGCAGCTTCCC
 AAAGATGCACCTCATCTGCTCCAGCCCCACAGCGCCCCAACCTGGGGCACCATCCCCAAA
 CTGCCCCACAGGACGCTCCCCTTGGCTCAGAGGCCACTCAGGCGCCAGGCAGCAATA
 AGGACTGACTCCTTGGAGGTTCAAGGTCTGGGCAGCCGGGAAGACCTGCTGGCAGAGGTG
 AGTGGGCCCTCCCGCCCTGGCCCGGGCTACTTTTCTGGGGCCAGTCAAGTACCCAG
 GCACAGCAGCACTCCCGCAGCCACAGCAAGATCTCCAAGCACATGACCCCGCCAGCCCCT
 TGCCAGGCCCAGAACCCAACTGGGGCAAGGGCCCTCCAGAGACCAGAAGCAGCTTAGAG
 TTGGACACGGAGCTGAGCTGGATTTAGGAGACCTCTGCCCCCTGGCGGCCAGGAGGAG
 CCCCCATCCCCACGGGACCTGAAGAAGTGTACAGCGTGGAGGCCAGAGCTGCCAGCGC
 CGGCCTACGTCTGGCTGGATGAGCAGAGGAGACTCTATCGCCGTGAGCTGCCTGGAC
 AGCGGCTCCCAACCCACCTGGGCACAGACCCCTAACCTTGGGGGCCAGCCTCTTGGG
 GGGCCTGGGAGCCGGCCCAAGAAAAAACTCAGCCCGCCTAGTATACCATAGACCCCCC
 GAGAGCCAAGGTCTCGGACCCCGCCAGCCCTGGTATCTGCCTCCGGAGGAGGGCTCCG
 TCCAGGACTCCAAGGATCCCTTGGCCTCTGGCCCCCTGACAGCATGGCTGCCTCGCCC
 TCCCCAAGAAAGATGTGCTGAGTCTCTCCGGTTATCCTCTGACCCAGCAGACCTGGAC
 CCCTGA

- Restriction Sites:** Please inquire
- ACCN:** NM_198380
- 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).

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_198380.1](#), [NP_938194.1](#)

RefSeq Size: 7657 bp

RefSeq ORF: 6966 bp

Locus ID: 8913

UniProt ID: [O43497](#)

Cytogenetics: 17q21.33

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

Protein Pathways: Calcium signaling pathway, MAPK signaling pathway, Type II diabetes mellitus

Gene Summary: Voltage-sensitive calcium channels mediate the entry of calcium ions into excitable cells, and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division, and cell death. This gene encodes a T-type, low-voltage activated calcium channel. The T-type channels generate currents that are both transient, owing to fast inactivation, and tiny, owing to small conductance. T-type channels are thought to be involved in pacemaker activity, low-threshold calcium spikes, neuronal oscillations and resonance, and rebound burst firing. Many alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Sep 2011]
Transcript Variant: This variant (5) has multiple differences in the coding region but maintains the reading frame, compared to variant 1. The resulting isoform (5) has a distinct and smaller segment and also lacks an internal segment in the C-terminal region, compared to isoform 1.
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.