

Product datasheet for **SC300988**

CACNA2D2 (NM_001005505) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA2D2 (NM_001005505) Human Untagged Clone
Tag:	Tag Free
Symbol:	CACNA2D2
Synonyms:	CACNA2D; CASVDD
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_001005505 edited
 CATCTTGAATGGAACATGGCGGTGCCGGCTCGGACCTGCGGCGCCTCTCGGCCCGGCC
 AGCGCGGACTGCGCGCCCTGGCCGGCTGCGGCCCCACCCTGGCCCCGGCACCCGGCG
 CCCGACGTCCGGGCCCGCGCCCGCTGTGGCTGCTGCTGCCGCTTCTACGCTGCTCGC
 CGCCCCGGCGCCTCTGCCTACAGCTTCCCCAGCAGCACACGATGCAGCACTGGCCCCG
 GCGTCTGGAGCAGGAGTTCGACGGCGTATGCGGATTTTTGGAGGCGTCCAGCAGCTCCG
 TGAGATTTACAAGGACAACCGAACCTGTTTCGAGGTACAGGAGAATGAGCCTCAGAAGTT
 GGTGGAGAAGGTGGCAGGGGACATTGAGAGCCTTCTGGACAGGAAGGTGCAGGCCCTGAA
 GAGACTGGCTGATGCTGCAGAGAACTTCCAGAAAGCACACCGCTGGCAGGACAACATCAA
 GGAGGAAGACATCGTGTACTATGACGCCAAGGCTGACGCTGAGCTGGACGACCCTGAGAG
 TGAGGATGTGAAAGGGGTCTAAGGCCAGCACCTAAGGCTGGACTTCATCGAGGACCC
 AAACCTCAAGAACAAGGTCAACTATTCATACGCGGCTGTACAGATCCCTACGGACATCTA
 CAAAGGCTCCACTGTCATCCTCAATGAGCTCAACTGGACAGAGGCCCTGGAGAATGTGTT
 CATGAAAAACCGCAGACAAGACCCACACTGCTGTGGCAGGTCTTCGGCAGCGCCACAGG
 AGTCACTCGCTACTACCCGGCCACCCCGTGGCGAGCCCCAAGAAGATCGACCTGTACGA
 TGTCCGAAGGAGACCCTGGTATATCCAGGGGGCCTCGTCAACCAAGACATGGTCATCAT
 CGTGGATGTGAGTGGCAGTGTGAGCGGCCTGACCCTGAAGCTGATGAAGACATCTGTCTG
 CGAGATGCTGGACACGCTGTCTGATGATGACTATGTGAATGTGGCCTCGTTCAACGAGAA
 GGCACAGCCTGTGTCATGCTTACACACCTGGTGCAGGCCAATGTGCGCAACAAGAAGGT
 GTTCAAGGAAGCTGTGCAGGGCATGGTGGCCAAGGGCACCAAGGCTACAAGGCCGGCTT
 TGAGTATGCCTTTGACCAGCTGCAGAACTCCAACATCACTCGGGCCAACCTGCAACAAGAT
 GATCATGATGTTACGGATGGTGGTGGAGACCGCGTGCAGGACGCTTTTGAGAAGTACAA
 TTGGCCAAACCGGACGGTGCAGCTGTTTACTTTCTCCGTGGGCGAGCATAACTATGACGT
 CACACCGTGCAGTGGATGGCCTGTGCCAACAAAGGCTACTATTTTGAGATCCCTTCCAT
 CGGAGCCATCCGATCAACACACAGGAATATCTAGATGTGTTGGGCGAGGCCATGGTGTCT
 GGCAGGCAAGGAGGCCAAGCAGGTGCAGTGGACCAACGTGTATGAGGATGCACTGGGACT
 GGGGTTGGTGGTAACAGGGACCCTCCCTGTTTTCAACCTGACACAGGATGGCCCTGGGGA



[View online »](#)

AAAGAAGAACCAGCTGATCCTGGGCGTGATGGGCATTGACGTGGCTCTGAATGACATCAA
 GAGGCTGACCCCAACTACACGCTTGGAGCCAACGGCTATGTGTTTGCCATTGACCTGAA
 CGGCTACGTGTTGCTGCACCCCAATCTCAAGCCCAGACCACCAACTCCGGGAGCTGT
 GACTCTGGACTTCTGGATGCGGAGCTAGAGGATGAGAACAAGGAAGAGATCCGTGCGAG
 CATGATTGATGGCAACAAGGGCCACAAGCAGATCAGAACGTTGGTCAAGTCCCTGGATGA
 GAGGTACATAGATGAGGTGACACGGAACACACCTGGGTGCCTATAAGGAGCACTAACTA
 CAGCCTGGGGCTGGTGCCTCCACCCTACAGCACCTTCTACCTCCAAGCCAATCTCAGTGA
 CCAGATCCTGCAGGTCAAGTATTTTGGTTCTGCTCCCAAGCAGCTTTGAGTCTGAAGG
 ACACGTTTTTCATTGCTCCAGAGAGTACTGCAAGGACCTGAATGCCTCAGACAACAACAC
 CGAGTTCTGAAAAAATTATTAGCTCATGGAGAAAAGTACTCCAGACTCCAAGCAGTG
 CAACAACCTCCTTCTGCACAACCTGATCTTGGACACGGGCATCACGCAGCAGCTGGTGA
 GCGTGTGTGGAGGGACCAGGATCTCAACACGTACAGCCTACTGGCCGTGTTGCTGCCAC
 AGACGGTGGCATACCCGAGTCTCCCCAACAAGGCAGCTGAGGACTGGACAGAGAACC
 TGAGCCCTTCAATGCCAGCTTCTACCGCCGACGCTGGATAACCACGGTTATGCTTCAA
 GCCCCACACCAGGATGCCCTGTTAAGGCCGCTGGAGCTGGAGAATGACACTGTGGGCAT
 CCTCGTACGACAGCTGTGGAGCTCAGCCTAGGCAGGCGCACACTGAGGCCAGCAGTGGT
 GGGCGTCAAGCTGGACCTAGAGGCTTGGGCTGAGAAGTTCAAGGTGCTAGCCAGCAACCG
 TACCCACCAAGACCAGCCTCAGAAGTGGGCCCCAACAGCCTACTGTGAGATGGACTGCGA
 GGTTAACAAATGAGGACTTACTCTGTGTCCTCATTGATGATGGAGGATTCCTGGTGTGTC
 AAACAGAAACCATCAGTGGGACCAGGTGGGCGAGTTCTTCAAGTGGATGCCAACCT
 GATGCTGGCACTCTACAATACTCCTTCTACACCCGCAAGGAGTCTATGACTATCAGGC
 AGCCTGTGCCCTCAGCCCCCTGGCAACCTGGGTGCTGCACCCCGGGGTGCTTTGTGCC
 CACCGTTGCAGATTTCTTAACCTGGCCTGGTGGACCTGCTGCCGCTGGTCCCTGTT
 CCAGCAGTCTCTACGGCCTCATCTACCACAGCTGGTTCCAAGCAGACCCCGCGGAGGC
 CGAGGGGAGCCCCGAGACACGCGAGAGCAGCTGCGTCATGAAACAGACCCAGTACTACTT
 CGGCTCGGTAAACGCCTCCTACAACGCCATCATCGACTGCGGAAACTGCTCCAGGCTGTT
 CCACGCGCAGAGACTGACCAACACCAATCTTCTTTTGGTGGCCGAGAAGCCGCTGTG
 CAGCCAGTGCAGGCTGGCCGGCTGCTGCAGAAGGAGACGCACTGCCAGCGGACGGCCC
 GGAGCAGTGTGAGCTAGTGCAGAGACCGCGATACCGGAGAGGCCCGCACATCTGCTTCGA
 CTAACAACGCGACAGAAGATACCTCAGACTGTGGCCGCGGGGCTCCTTCCCGCCGTGCT
 GGGCGTCTGGTCTCCCTGCAACTGCTGCTCCTCTGGGCTGCCGCCCCGGCCGACGCC
 TCAAGTCTCGTCCACGCCTCTCGCCGCTCTGAGCACCTGCCCAACCCACCTCCA
 CCCACCTCACCCGGCTCTTCCGCTTTCCACCCTCCTGCCCCACACTCCCCGCCTTAGA
 GCCTCGTCCCTCCCTCACTGAAGGACCTGAGCTGGCCAGGCCCTGAGAGTCTGGTCTGCG
 CCTTGGGATGGGAGTCCCAAAGCGGGACGCCGAGGTGTTTGGCACCCAAATCACATCT
 CACCTCCGAACCTGTTCAAGTGTCCCCAGACCTTCTTGCCTGTGGGCTCCCCCAGTGG
 GATGGGACAGGGAGGCCACACGCACTGGTGCCAAAACAGGCCTCTGCTGCCGCCCTTCC
 TGGAGGCTGCCTATGTTGGGGGGACCTGCCTCAGCTGACCCGGCTCTCTGCCCAAC
 CAAGCCCCAACTTGGTTTCTGTGAGAATAGTGGAGGAAGGTGAGATGGCCAGTTTGAAGC
 CTGTGCCCTCCAGCTTAAATCCTAGCAGGAGAGAGGCTCTGGGGCAGCCCCATGGGCTC
 CTGCCCTTTTCCAGCCTACAGCCACATCCCCAAGCCACCAAGGTGTCAGGATAGTCAAG
 TGATACCAGTTCAGACTACCCCATATACACCTGGAACATTGAGGATGGAAACTGGACT
 CACATTCGACATACCCACTGGGCACACGCACAAAACACACACTATGGGGTGGGGTGGG
 TGTAGGGGCTTACAAAGCCTTACACAGGGCGAGGGGTTGGTGGGAGGGTTGGCACCTGCA
 CACTCCATCTCTGCTCACCACCTGCCTTAATCTGAGCTGCAGCCTGGTGGTCTCTCC
 ATTTCTAAAGCTGAATGTCAAACAGTGCCAAATGCTGGGGCAGGGGTGAAGAACCCTCT
 GTCCACCCCTAGCCACCAGTGTCTCCAAGTGGCCCTCACCTCTCCAGGTGCTCATTG
 TAACCATTTCTACTAGTGTGAGCCCCAGTGGGACCACATGCCACTGCCTGCACCTTT
 CGGCAGAGGAACCCCAACAGACATCACCTTTGCCTTAGCAGGGGTGACTTTGTCTCTC
 CTGGCTGGGCCATCCTTCCGCCAATCTGGCCCTTACACACTCAGGCCTGTGCCACTCCC
 TATCTCTTCCACCCCTACACACACTCCCTGCTTGCAGGAGGCCAAACTGTCCTCC
 CTTGCTGAACACACACACACACACACACAGGTGGGGACTGGGCACAGCTCTTACA

CCATTCATTCTGGTCATTTCCCCCAAAGGCATCCCAGCCTGGGGGCCAGTGGGGAAGTGA
 GGGCAAGGGGATATAGTGATGGGGCTCAGATGGACTGGGAGGAGGGGAGGGTGTGCAT
 TAATTAATGGCTTCGTTAATTAATGTCATGTTGCTTGTGCGCTTCTCAGTGTGTGTGT
 GGTCCATGCCACTGCTGGTGCCAGGGTGGGTGTCCATGTGCACCCGGCCTGGATGCCAG
 CTGTGTCCTTCGGGGCGTGCCTGTAACCTGTAGTGTAGTCAGGTGCTCAATGGAGAATAT
 AAACATATACAGAAAAATATATATTTTAAAGTTTAAAAAACAGAAAAACAGAAAAACAAT
 CCCCATCAGGTAGCTGTCTAACCCCGAGCTGGGTCTAATCCTTCTCATTACCCACCCGAC
 CTGGTAGCCCTCACCTTGGGCTGGGGGACTGGGGGCCATTTCTTTTCTCTGCCCTTT
 TTTTGTGTTCTATTTTGTACAGACAAGTTGAAAAACAACAGCGACAAAAAAGTCAAGA
 AACTTTGTAAATATAAAAAAAAAAAAAAAAAAAAA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_001005505 unedited
 TGACAGGTTTCGATTTTGAATACCACTTACTATAGGGCGGCCGCGCATTGCCCTTCCGC
 ATCTTGAAGGAAACATGGCGGTGCCGGCTCGGACCTGCGGCGCCTCTCGGCCCGGCCAG
 CGCGGACTGCGCCGCCCTGGCCCGCTGCGGCCCCACCCTGGCCCGGACCCGGCGCC
 CGACGTCCGGGCCCCCGCCCGCTGTGGCTGCTGCTGCCGCTTCTACCGCTGCTCGCCG
 CCCCCGCGCCTCTGCCTACAGCTTCCCCAGCAGCACACGATGCAGCACTGGGCCCGGC
 GTCTGGAGCAGGAGTGCAGCGGTGATGCGGATTTTTGGAGGCGTCCAGCAGTCCGTG
 AGATTTACAAGGACAACCGAACCTGTTTCGAGGTACAGGAGAATGAGCCTCAGAAGTTGG
 TGGAGAAGGTGCGAGGGACATTGAGAGCCTTCTGGACAGGAAGGTGCAGGCCCTGAAGA
 GACTGGCTGATGCTGCAGAGAACTTCCAGAAAGCACACCGCTGGCAGGACAACATCAAGG
 AGGAAGACATCGTACTATGACGCCAAGGCTGACGCTGAGCTGGACGACCTGAGAGTG
 AGGATGTGAAAGGGGGTCTAAGGCCAGCACCTAAGGCTGGACTTCATCGAGGACCCAA
 ACTTCAAGAACAGGTCAACTATTCATACGCGGCTGTACAGATCCCTACCGACATCTACAA
 AGGCTCCACTGTATCCTCAATGAGCTCAACTGGACAGAGGCCCTGGAGAATGTGTTTCAT
 GGAAAACCGCAGACAAGACCCACACTGCTGTGGCAGGTCTTCGGCAGCGCCACAAGAGT
 CACTCGCTACTACCCGGCCACCCCGTG

3' Read Nucleotide Sequence:

>OriGene 3' genomic read for NM_001005505 unedited
 CTCGGAATGGCACTTCCAGGACCGAAAAGCACTGGGGAAGGGTACAGGATGCCACCCG
 GATCTGTTCAGAAACAGCTATGACCGCGCCGCAATCTAGAGTTCGAGTTTTTTTTTTTT
 TTTTTTTATATTTTACAAGTTTCTTGACTTTTTTGTGCTGTTGTTTTTCCAAGTTGT
 CTGTACAAAATACAACAACAAAAAGGGCAGAGAAAAGGAAATGGCCCCCAGTCCCCCA
 GCCCAAGGTGAGGGGCAGCCAGGTGGGTAAATGAGAAGGATTACACCCAGCTGGGG
 GTTAAACAGCTACCTGATGGGGATTGTTTTGTCTGTTTTTCTGTTTTTAAACTTAAAT
 ATATATTTTCTGTATATGTTTATTTTCCATTGAGCACCTGACTACACTACAGTTACA
 CGCACGCCCCGAAGGACACAGCTGGCATCCAGGCCGGTGCACATGGACACCCACCTG
 GCACAGCAGTGGGCATGGACCACACACACACTGAGAAAGCGACTAGCAACATGACAT
 TAATTAACGAAGCCATTAATTAATGCATCACCTCCCCCTCCTCCAGTCCATCTGAGCC
 CCATCACTATATCACCTTGCCTCAGTTCCTACTGGCCCTCAGGCTGGGATGCCTTTTGG
 GGAAATGACCAGAATGAATGGTGTGAANAGCTTGCCAGTCCCCACCTGTGTGTGCGTGT
 GTGTGCGTGTGTTACCAAGGGAGGACAGTTTTGGCTCCTGCAACCAGGGATTGTGTGT
 TTAGGGGTGGGAAGAAAAGGGAATGGGCACAGCCCTGGATGTGTAAGGGCCAAAATTGG
 CGCAAGATTGGCCAACCCAGGAAAAACC

Restriction Sites:

Please inquire

ACCN:

NM_001005505

Insert Size:

5300 bp

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:	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
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:	<ol style="list-style-type: none"> 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:	<u>NM_001005505.1</u> , <u>NP_001005505.1</u>
RefSeq Size:	5343 bp
RefSeq ORF:	3438 bp
Locus ID:	9254
UniProt ID:	<u>Q9NY47</u>
Cytogenetics:	3p21.31
Protein Families:	Druggable Genome, Ion Channels: Other
Protein Pathways:	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway

Gene Summary:

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]

Transcript Variant: This variant (1) lacks an alternate in-frame exon in the central coding region and uses an alternate in-frame splice site in the 3' coding region compared to variant 3. The encoded isoform (a) 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.