OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for SC329383

CACNA1C (NM_001167624) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA1C (NM_001167624) Human Untagged Clone
Tag:	Tag Free
Symbol:	CACNA1C
Synonyms:	CACH2; CACN2; CACNL1A1; CaV1.2; CCHL1A1; LQT8; TS; TS. LQT8
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>NCBI ORF sequence for NM_001167624, the custom clone sequence may differ by one or more nucleotides

```
ATGGTCAATGAGAATACGAGGATGTACATTCCAGAGGAAAACCACCAAGGTTCCAACTAT
GGGAGCCCACGCCCCGCCCATGCCAACATGAATGCCAATGCGGCAGCGGGGCTGGCCCCT
GAGCACATCCCCACCCCGGGGGCTGCCCTGTCGTGGCAGGCGGCCATCGACGCAGCCCGG
CAGGCTAAGCTGATGGGCAGCGCTGGCAATGCGACCATCTCCACAGTCAGCTCCACGCAG
CGGAAGCGGCAGCAATATGGGAAACCCAAGAAGCAGGGCAGCACCACGGCCACACGCCCG
CCCCGAGCCCTGCTCTGCCTGACCCTGAAGAACCCCATCCGGAGGGCCTGCATCAGCATT
GTCGAATGGAAACCATTTGAAATAATTATTTTACTGACTATTTTTGCCAATTGTGTGGCC
TTAGCGATCTATATTCCCTTTCCAGAAGATGATTCCAACGCCACCAATTCCAACCTGGAA
CGAGTGGAATATCTCTTTCTCATAATTTTTACGGTGGAAGCGTTTTTAAAAGTAATCGCC
TATGGACTCCTCTTTCACCCCAATGCCTACCTCCGCAACGGCTGGAACCTACTAGATTTT
ATAATTGTGGTTGTGGGGCTTTTTAGTGCAATTTTAGAACAAGCAACCAAAGCAGATGGG
GCAAACGCTCTCGGAGGGAAAGGGGCCGGATTTGATGTGAAGGCGCTGAGGGCCTTCCGC
GTGCTGCGCCCCCTGCGGCTGGTGTCCGGAGTCCCAAGTCTCCAGGTGGTCCTGAATTCC
ATCATCAAGGCCATGGTCCCCCTGCTGCACATCGCCCTGCTTGTGCTGTTTGTCATCATC
ATCTACGCCATCATCGGCTTGGAGCTCTTCATGGGGAAGATGCACAAGACCTGCTACAAC
CAGGAGGGCATAGCAGATGTTCCAGCAGAAGATGACCCTTCCCCTTGTGCGCTGGAAACG
GGCCACGGGCGGCAGTGCCAGAACGGCACGGTGTGCAAGCCCGGCTGGGATGGTCCCAAG
CACGGCATCACCAACTTTGACAACTTTGCCTTCGCCATGCTCACGGTGTTCCAGTGCATC
ACCATGGAGGGCTGGACGGACGTGCTGTACTGGATGCAGGACGCTATGGGCTATGAGTTA
CCCTGGGTGTATTTTGTCAGTCTGGTCATCTTTGGATCCTTTTTCGTTCTAAATCTGGTT
CTCGGTGTGTTGAGCGGAGAGTTTTCCAAAGAGAGGGAGAAGGCCAAGGCCCGGGGAGAT
TTCCAGAAGCTGCGGGAGAAGCAGCAGCTAGAAGAGGATCTCAAAGGCTACCTGGATTGG
ATCACTCAGGCCGAAGACATCGATCCTGAGAATGAGGACGAAGGCATGGATGAGGAGAAG
CCCCGAAACATGAGCATGCCCACCAGTGAGACCGAGTCCGTCAACACCGAAAACGTGGCT
GGAGGTGACATCGAGGGAGAAAACTGCGGGGCCAGGCTGGCCCACCGGATCTCCAAGTCA
```


View online »

AAGTTCAGCCGCTACTGGCGCCGGTGGAATCGGTTCTGCAGAAGGAAGTGCCGCGCCGCA
GTCAAGTCTAATGTCTTCTACTGGCTGGTGATTTTCCTGGTGTTCCTCAACACGCTCACC
ATTGCCTCTGAGCACTACAACCAGCCCAACTGGCTCACAGAAGTCCAAGACACGGCAAAC
AAGGCCCTGCTGGCCCTGTTCACGGCAGAGATGCTCCTGAAGATGTACAGCCTGGGCCTG
CAGGCCTACTTCGTGTCCCTCTTCAACCGCTTTGACTGCTTCGTCGTGTGTGGCGGCATC
CTGGAGACCATCCTGGTGGAGACCAAGATCATGTCCCCACTGGGCATCTCCGTGCTCAGA
TGCGTCCGGCTGCTGAGGATTTTCAAGATCACGAGGTACTGGAACTCCTTGAGCAACCTG
GTGGCATCCTTGCTGAACTCTGTGCGCTCCATCGCCTCCCTGCTCCTTCTCCTCTTCCTC
TTCATCATCATCTTCTCCCTCCTGGGGATGCAGCTCTTTGGAGGAAAGTTCAACTTTGAT
GAGATGCAGACCCGGAGGAGCACATTCGATAACTTCCCCCAGTCCCTCCTCACTGTGTTT
CAGATCCTGACCGGGGAGGACTGGAATTCGGTGATGTATGATGGGATCATGGCTTATGGC
GGCCCCTCTTTTCCAGGGATGTTAGTCTGTATTTACTTCATCATCCTCTTCATCTGTGGA
AACTATATCCTACTGAATGTGTTCTTGGCCATTGCTGTGGACAACCTGGCTGATGCTGAG
AGCCTCACATCTGCCCAAAAGGAGGAGGAAGAGGAGAAGGAGAGAAAGAAGCTGGCCAGG
ACTGCCAGCCCAGAGAAGAAACAAGAGTTGGTGGAGAAGCCGGCAGTGGGGGAATCCAAG
GAGGAGAAGATTGAGCTGAAATCCATCACGGCTGACGGAGAGTCTCCACCCGCCACCAAG
ATCAACATGGATGACCTCCAGCCCAATGAAAATGAGGATAAGAGCCCCTACCCCAACCCA
GAAACTACAGGAGAAGAGGATGAGGAGGAGCCAGAGATGCCTGTCGGCCCTCGCCCACGA
CCACTCTCTGAGCTTCACCTTAAGGAAAAGGCAGTGCCCATGCCAGAAGCCAGCGCGTTT
TTCATCTTCAGCTCTAACAACAGGTTTCGCCTCCAGTGCCACCGCATTGTCAATGACACG
ATCTTCACCAACCTGATCCTCTTCTTCATTCTGCTCAGCAGCATTTCCCTGGCTGCTGAG
GACCCGGTCCAGCACACCTCCTTCAGGAACCATATTCTGTTTTATTTTGATATTGTTTTT
ACCACCATTTTCACCATTGAAATTGCTCTGAAGATGACTGCTTATGGGGCTTTCTTGCAC
AAGGGTTCTTTCTGCCGGAACTACTTCAACATCCTGGACCTGCTGGTGGTCAGCGTGTCC
CTCATCTCCTTTGGCATCCAGTCCAGTGCAATCAATGTCGTGAAGATCTTGCGAGTCCTG
CGAGTACTCAGGCCCCTGAGGGCCATCAACAGGGCCAAGGGGCTAAAGCATGTGGTTCAG
TGTGTGTTTGTCGCCATCCGGACCATCGGGAACATCGTGATTGTCACCACCCTGCTGCAG
TTCATGTTTGCCTGCATCGGGGTCCAGCTCTTCAAGGGAAAGCTGTACACCTGTTCAGAC
AGTTCCAAGCAGACAGAGGCGGAATGCAAGGGCAACTACATCACGTACAAAGACGGGGAG
GTTGACCACCCCATCATCCAACCCCGCAGCTGGGAGAACAGCAAGTTTGACTTTGACAAT
GTTCTGGCAGCCATGATGGCCCTCTTCACCGTCTCCACCTTCGAAGGGTGGCCAGAGCTG
CTGTACCGCTCCATCGACTCCCACACGGAAGACAAGGGCCCCATCTACAACTACCGTGTG
GAGATCTCCATCTTCTTCATCATCTACATCATCATCATCGCCTTCTTCATGATGAACATC
TTCGTGGGCTTCGTCATCGTCACCTTTCAGGAGCAGGGGGAGCAGGAGTACAAGAACTGT
GAGCTGGACAAGAACCAGCGACAGTGCGTGGAATACGCCCTCAAGGCCCGGCCCCTGCGG
AGGTACATCCCCAAGAACCAGCACCAGTACAAAGTGTGGTACGTGGTCAACTCCACCTAC
TTCGAGTACCTGATGTTCGTCCTCATCCTGCTCAACACCATCTGCCTGGCCATGCAGCAC
TACGGCCAGAGCTGCCTGTTCAAAATCGCCATGAACATCCTCAACATGCTCTTCACTGGC
CTCTTCACCGTGGAGATGATCCTGAAGCTCATTGCCTTCAAACCCAAGGGTTACTTTAGT
GATCCCTGGAATGTTTTTGACTTCCTCATCGTAATTGGCAGCATAATTGACGTCATTCTC
AGTGAGACTAATCCAGCTGAACATACCCAATGCTCTCCCTCTATGAACGCAGAGGAAAAC
TCCCGCATCTCCATCACCTTCTTCCGCCTGTTCCGGGTCATGCGTCTGGTGAAGCTGCTG
AGCCGTGGGGAGGGCATCCGGACGCTGCTGTGGACCTTCATCAAGTCCTTCCAGGCCCTG
CCCTATGTGGCCCTCCTGATCGTGATGCTGTTCTTCATCTACGCGGTGATCGGGATGCAG
GTGTTTGGGAAAATTGCCCTGAATGATACCACAGAGATCAACCGGAACAACAACTTTCAG
ACCTTCCCCCAGGCCGTGCTGCTCCTCTTCAGGTGTGCCACCGGGGAGGCCTGGCAGGAC
ATCATGCTGGCCTGCATGCCAGGCAAGAAGTGTGCCCCAGAGTCCGAGCCCAGCAACAGC
ACGGAGGGTGAAACACCCTGTGGTAGCAGCTTTGCTGTCTTCTACTTCATCAGCTTCTAC
ATGCTCTGTGCCTTCCTGATCATCAACCTCTTTGTAGCTGTCATCATGGACAACTTTGAC
TACCTGACAAGGGACTGGTCCATCCTTGGTCCCCACCACCTGGATGAGTTTAAAAGAATC
TGGGCAGAGTATGACCCTGAAGCCAAGGGTCGTATCAAACACCTGGATGTGGTGACCCTC
CTCCGGCGGATTCAGCCGCCACTAGGTTTTGGGAAGCTGTGCCCTCACCGCGTGGCTTGC

AAACGCCTGGTCTCCATGAACATGCCTCTGAACAGCGACGGGACAGTCATGTTCAATGCC
ACCCTGTTTGCCCTGGTCAGGACGGCCCTGAGGATCAAAACAGAAGGGAACCTAGAACAA
GCCAATGAGGAGCTGCGGGCGATCATCAAGAAGATCTGGAAGCGGACCAGCATGAAGCTG
CTGGACCAGGTGGTGCCCCCTGCAGGTGATGATGAGGTCACCGTTGGCAAGTTCTACGCC
ACGTTCCTGATCCAGGAGTACTTCCGGAAGTTCAAGAAGCGCAAAGAGCAGGGCCTTGTG
GGCAAGCCCTCCCAGAGGAACGCGCTGTCTCTGCAGGCTGGCTTGCGCACACTGCATGAC
ATCGGGCCTGAGATCCGACGGGCCATCTCTGGAGATCTCACCGCTGAGGAGGAGCTGGAC
AAGGCCATGAAGGAGGCTGTGTCCGCTGCTTCTGAAGATGACATCTTCAGGAGGGCCGGT
GGCCTGTTCGGCAACCACGTCAGCTACTACCAAAGCGACGGCCGGAGCGCCTTCCCCCAG
ACCTTCACCACTCAGCGCCCGCTGCACATCAACAAGGCGGGCAGCAGCCAGGGCGACACT
GAGTCGCCATCCCACGAGAAGCTGGTGGACTCCACCTTCACCCCGAGCAGCTACTCGTCC
ACCGGCTCCAACGCCAACATCAACAACGCCAACAACACCGCCCTGGGTCGCCTCCCTCGC
CCCGCCGGCTACCCCAGCACGGTCAGCACTGTGGAGGGCCACGGGCCCCCCTTGTCCCCT
GCCATCCGGGTGCAGGAGGTGGCGTGGAAGCTCAGCTCCAACAGGGAAAGGCACGTTCCG
ATGTGTGAGGATCTGGAGCTCAGGAGGGATTCAGGCTCAGCAGGGACTCAGGCTCACTGC
CTTCTGCTCAGGAAAGCAAACCCCTCTAGGTGCCACTCCCGGGAGAGCCAGGCAGCCATG
GCGGGTCAGGAGGAGACGTCTCAGGATGAGACCTATGAAGTGAAGATGAACCATGACACG
GAGGCCTGCAGTGAGCCCAGCCTGCTCTCCACAGAGATGCTCTCCTACCAGGATGACGAA
AATCGGCAACTGACGCTCCCAGAGGAGGACAAGAGGGACATCCGGCAATCTCCGAAGAGG
GGTTTCCTCCGCTCTGCCTCACTAGGTCGAAGGGCCTCCTTCCACCTGGAATGTCTGAAG
CGACAGAAGGACCGAGGGGGAGACATCTCTCAGAAGACAGTCCTGCCCTTGCATCTGGTT
CATCATCAGGCATTGGCAGTGGCAGGCCTGAGCCCCCTCCTCCAGAGAAGCCATTCCCCT
GCCTCATTCCCTAGGCCTTTTGCCACCCCACCAGCCACACCTGGCAGCCGAGGCTGGCCC
CCACAGCCCGTCCCCACCCTGCGGCTTGAGGGGGTCGAGTCCAGTGAGAAACTCAACAGC
AGCTTCCCATCCATCCACTGCGGCTCCTGGGCTGAGACCACCCCCGGTGGCGGGGGCAGC
AGCGCCGCCCGGAGAGTCCGGCCCGTCTCCCTCATGGTGCCCAGCCAGGCTGGGGCCCCA
GGGAGGCAGTTCCACGGCAGTGCCAGCAGCCTGGTGGAAGCGGTCTTGATTTCAGAAGGA
CTGGGGCAGTTTGCTCAAGATCCCAAGTTCATCGAGGTCACCACCCAGGAGCTGGCCGAC
GCCTGCGACATGACCATAGAGGAGATGGAGAGCGCGGCCGACAACATCCTCAGCGGGGGC
GCCCCACAGAGCCCCAATGGCGCCCTCTTACCCTTTGTGAACTGCAGGGACGCGGGGCAG
GACCGAGCCGGGGGCGAAGAGGACGCGGGCTGTGTGCGCGCGCGGGGTCGACCGAGTGAG
GAGGAGCTCCAGGACAGCAGGGTCTACGTCAGCAGCCTGTAG

Restriction Sites: Please inquire

ACCN: NM_001167624

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_001167624.1, NP_001161096.1
RefSeq Size:	13585 bp
RefSeq ORF:	6522 bp
Locus ID:	775
UniProt ID:	Q13936
Cytogenetics:	12p13.33
Protein Families:	Druggable Genome, Ion Channels: Calcium, Transmembrane
Protein Pathways:	Alzheimer's disease, Arrhythmogenic right ventricular cardiomyopathy (ARVC), Calcium signaling pathway, Cardiac muscle contraction, Dilated cardiomyopathy, GnRH signaling pathway, Hypertrophic cardiomyopathy (HCM), Long-term potentiation, MAPK signaling pathway, Type II diabetes mellitus, Vascular smooth muscle contraction
Gene Summary:	This gene encodes an alpha-1 subunit of a voltage-dependent calcium channel. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization. The alpha-1 subunit consists of 24 transmembrane segments and forms the pore through which ions pass into the cell. The calcium channel consists of a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. There are multiple isoforms of each of these proteins, either encoded by different genes or the result of alternative splicing of transcripts. The protein encoded by this gene binds to and is inhibited by dihydropyridine. Alternative splicing results in many transcript variants encoding different proteins. Some of the predicted proteins may not produce functional ion channel subunits. [provided by RefSeq, Oct 2012] Transcript Variant: This variant (22) lacks two alternate in-frame exons and contains another alternate in-frame exon compared to variant 1, resulting in a shorter protein (isoform 22), 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.