

Product datasheet for **SC309716**

CaV1.3 (CACNA1D) (NM_000720) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CaV1.3 (CACNA1D) (NM_000720) Human Untagged Clone
Tag:	Tag Free
Symbol:	CaV1.3
Synonyms:	CACH3; CACN4; CACNL1A2; Cav1.3; CCHL1A2; PASNA; SANDD
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_000720 edited
 ATGATGATGATGATGATGATGAAAAAATGCAGCATCAACGGCAGCAGCAAGCGGACCAC
 GCGAACGAGGCAAACATGCAAGAGGACCAGACTTCCTCTTTCTGGTGAAGACCAACT
 TCTCAGCCGAATAGCTCCAAGCAAACCTGCCTGTCTTGCAAGCTGCAATCGATGCTGCT
 AGACAGGCCAAGGCTGCCAAACTATGAGCACCTCTGCACCCCCACCTGTAGGATCTCTC
 TCCCAAAGAAAACGTGAGCAATACGCCAAGAGCAAAAAACAGGTAACCTCGTCCAACAGC
 CGACCTGCCCGCCCTTTCTGTTTATCACTCAATAACCCCATCCGAAGAGCCTGCATT
 AGTATAGTGAATGAAAACCATTTGACATATTTATATTATTGGCTATTTTTGCCAATTGT
 GTGGCCTTAGCTATTTACATCCCATTCCCTGAAGATGATTCTAATTCAACAAATCATAAC
 TTGAAAAAGTAGAATATGCCTTCTGATTATTTTTACAGTCGAGACATTTTTGAAGATT
 ATAGCGTATGGATTATTGCTACATCCTAATGCTTATGTTAGGAATGGATGGAATTTACTG
 GATTTTGTATAGTAATAGTAGGATTGTTTAGTGAATTTTGGAAACAATTAAACAAAGAA
 ACAGAAGCGGGAACCACTCAAGCGGCAAATCTGGAGGCTTTGATGTCAAAGCCCTCCGT
 GCCTTTGAGTGTGCGACCACTTCGACTAGTGTGAGGAGTGCACGTTTACAAGTTGTC
 CTGAACTCCATTATAAAGCCATGGTCCCCTCCTTCACATAGCCCTTTTGGTATTATTT
 GTAATCATAATCTATGCTATTATAGGATTGAACTTTTTATTGGAAAAATGCACAAAACA
 TGTTTTTTGCTGACTCAGATATCGTAGCTGAAGAGGACCCAGCTCCATGTGCGTTCTCA
 GGAATGGACGCCAGTGTACTGCCAATGGCACGGAATGTAGGAGTGGCTGGGTTGGCCCG
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 ATCACCATGGAGGCTGGACAGATGTGCTCTACTGGGTAATGATGCGATAGGATGGGAA
 TGCCATGGGTGATTTTTGTTAGTCTGATCATCCTTGGCTCATTTTTTCGTCTTAACCTG
 GTTCTTGGTGTCTTAGTGGAGAATTCTCAAAGGAAAAGAGAGAAGGCAAAAGCACGGGGA
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 TGGATCACCCAAGCTGAGGACATCGATCCGAGAATGAGGAAGAAGGAGGAGAGGAAGGC
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 GGTGAAGGCGAGAACCGAGGCTGCTGTGGAAGTCTCTGGTCTGGTGGAGACGGAGAGGC
 GCGCCAAGGCGGGCCCTCTGGGTGTCGCGGGTGGGGTCAAGCCATCTCAAAATCCAAA



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CTCAGCCGACGCTGGCGTCGCTGGAACCGATTCAATCGCAGAAGATGTAGGGCCGCCGTG
 AAGTCTGTACGTTTTACTGGCTGGTTATCGTCCTGGTGTCTTCTGAACACCTTAACCATT
 TCCTCTGAGCACTACAATCAGCCAGATTGGTTGACACAGATTCAAGATATTGCCAACAA
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 GTGCGCCTTTAAGAATCTTCAAAGTGACCAGGCACTGGACTCCCTGAGCAACTTAGTG
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 ACTGCTACACCTGGGAACTCTGAAGAGCAATAGAATCTCCATCACCTTTTTCCGTCTT
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 TGGACTTTTATTAAGTCTTTCAGGCGCTCCCGTATGTGGCCCTCCTCATAGCCATGCTG
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 AACCAGATCAATAGGAACAATAACTTCCAGACGTTTCCCAGGCGGTGCTGCTCTTTC
 AGGTGTGCAACAGGTGAGGCCTGGCAGGAGATCATGCTGGCCTGTCTCCAGGGAAGCTC
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 GCTGTCATCATGGATAATTTGACTATCTGACCCGGGACTGGTCTATTTTGGGGCCTCAC
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 AAACACCTTGATGGTCACTCTGCTTCGACGCATCCAGCCTCCCTGGGGTTTGGGAAG
 TTATGTCCACACAGGGTAGCGTGAAGAGATTAGTTGCCATGAACATGCCTCTCAACAGT

GACGGGACAGTCATGTTTAAATGCAACCCTGTTTGTCTTGGTTGCGAACGGCTCTTAAGATC
 AAGACCGAAGGGAACCTGGAGCAAGCTAATGAAGAACTTCGGGCTGTGATAAAGAAAATT
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 CAGGCGGGATTAAGGACACTGCATGACATTGGGCCAGAAAACCGGCGTGCATATATCGTGT
 GATTTGCAAGATGACGAGCCTGAGGAAACAAAACGAGAAGAAGAAGATGATGTGTTCAA
 AGAAATGGTGCCCTGCTTGGAAACCATGTCAATCATGTTAATAGTGATAGGAGAGATTCC
 CTTCAGCAGACCAATACCACCCACCGTCCCTGCATGTCCAAAGGCCTTCAATCCACCT
 GCAAGTGATACTGAGAAACCGCTGTTTCTCCAGCAGGAAATTCGGTGTGCATAACCAT
 CATAACCATAATTCCATAGGAAAGCAAGTCCCACCTCAACAAATGCCAATCTCAATAAT
 GCCAATATGTCCAAAGCTGCCATGAAAGCGGCCAGCATTGGGAACCTTGAGCATGTG
 TCTGAAAATGGGCATCATTCTCCACAAGCATGACGGGAGCCTCAGAGAAGGTCCAGT
 GTGAAAAGAACCCGCTATTATGAAACTTACATTAGGTCCGACTCAGGAGATGAACAGCTC
 CCAACTATTTGCCGGAAGACCCAGAGATACATGGCTATTTGAGGACCCCACTGCTTG
 GGGGAGCAGGAGTATTTAGTAGTGAGGAATGCTACGAGGATGACAGCTCGCCACCTGG
 AGCAGGCAAAAATATGGCTACTACAGCAGATACCAGGCAGAAACATCGACTCTGAGAGG
 CCCCAGGCTACCATCATCCCAAGGATTCTTGGAGGACGATGACTCGCCCGTTTGTAT
 GATTACGGAGATCTCCAAGGAGACGCCTACTACCTCCCACCCAGCATCCCACCGGAGA
 TCCTCCTTCAACTTTGAGTGCCTGCGCCGGCAGAGCAGCCAGGAAGAGGTCCCGTCTGCT
 CCCATCTTCCCCATCGCACGGCCCTGCCTCTGCATCTAATGCAGCAACAGATCATGGCA
 GTTGCCGGCCTAGATTCAAGTAAAGCCAGAAGTACTACCGAGTCACTCGACCCGGTCTG
 TGGGCCACCCCTCCAGCAACCCCTCCCTACCGGACTGGACCCGTGTACACCCCCCTG
 ATCCAAGTGGAGCAGTCAGAGGCCCTGGACCAGGTGAACGGCAGCCTGCGTCCCTGCAC
 CGCAGCTCCTGGTACACAGACGACCCGACATCTCTACCGGACTTTACACCAGCCAGC
 CTGACTGTCCCCAGCAGCTTCCGGAACAAAACAGCGACAAGCAGAGGAGTGCAGGACAGC
 TTGGTGGAGGCAGTCTGATATCCGAAGGCTTGGGACGCTATGCAAGGGACCCAAAATTT
 GTGTCAGCAACAAAACACGAAATCGCTGATGCCTGTGACCTCACCATCGACGAGATGGAG
 AGTGCAGCCAGCACCTGCTTAATGGGAACGTGCGTCCCCGAGCCAACGGGGATGTGGGC
 CCCCTCTCACACCGGCAGGACTATGAGCTACAGGACTTTGGTCTGGCTACAGCGACGAA
 GAGCCAGACCCTGGGAGGATGAGGAGGACCTGGCGGATGAAATGATATGCATCACCACC
 TTGTAG

Restriction Sites:

Please inquire

ACCN:

NM_000720

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 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:	<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_000720.1, NP_000711.1</u>
RefSeq Size:	7193 bp
RefSeq ORF:	6546 bp
Locus ID:	776
UniProt ID:	<u>Q01668</u>
Cytogenetics:	3p21.1
Domains:	ion_trans
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), MAPK signaling pathway, Type II diabetes mellitus, Vascular smooth muscle contraction
Gene Summary:	Voltage-dependent 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, and gene expression. Calcium channels are multisubunit complexes composed of alpha-1, beta, alpha-2/delta, and gamma subunits. The channel activity is directed by the pore-forming alpha-1 subunit, whereas the others act as auxiliary subunits regulating this activity. The distinctive properties of the calcium channel types are related primarily to the expression of a variety of alpha-1 isoforms, namely alpha-1A, B, C, D, E, and S. This gene encodes the alpha-1D subunit. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Dec 2012] Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a).