

## Product datasheet for **SC323310**

### CACNA1C (NM\_001129831) Human Untagged Clone

#### Product data:

|                      |  |
|----------------------|--|
| Product Type:        | Expression Plasmids  |
| Product Name:        | CACNA1C (NM_001129831) Human Untagged Clone  |
| Tag:                 | Tag Free   |
| Symbol:              | CACNA1C  |
| Synonyms:            | CACH2; CACN2; CACNL1A1; CaV1.2; CCHL1A1; LQT8; TS; TS. LQT8  |
| Vector:              | <u>pCMV6 series</u>  |
| Fully Sequenced ORF: | >NCBI ORF sequence for NM_001129831, the custom clone sequence may differ by one or more nucleotides |

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ATGGTCAATGAGAATACGAGGATGTACATTCCAGAGGAAAACCACCAAGGTTCCAATAT
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 GAGATGGAGAGCGCGGCCACAACATCCTCAGCGGGGGGCCCCACAGAGCCCCAATGGC  
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 GTCTACGTCAGCAGCCTG

**Restriction Sites:**

Please inquire

**ACCN:**

NM\_001129831

**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:           | <a href="#">NM_001129831.1</a> , <a href="#">NP_001123303.1</a>   |
| RefSeq Size:      | 13564 bp  |
| RefSeq ORF:       | 6501 bp   |
| Locus ID:         | 775   |
| UniProt ID:       | <a href="#">Q13936</a>  |
| 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:     | <p>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]</p> <p>Transcript Variant: This variant (5), also referred to as HLCC88, lacks two alternate in-frame exons, compared to variant 1, resulting in a shorter protein (isoform 5), compared to isoform 1. This isoform (5) is predicted to form a non-functional calcium channel subunit because it contains an aberrant number of transmembrane domains.</p> |