

Product datasheet for **RG226457**

CACNA1C (NM_001129846) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | CACNA1C (NM_001129846) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | CACNA1C |
| Synonyms: | CACH2; CACN2; CACNL1A1; CaV1.2; CCHL1A1; LQT8; TS; TS. LQT8 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |
| ORF Nucleotide Sequence: | >RG226457 representing NM_001129846 Red=Cloning site Blue=ORF Green=Tags(s) |

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GCC**CGATCGCC**

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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTAA

Protein Sequence: >RG226457 representing NM_001129846
 Red=Cloning site Green=Tags(s)

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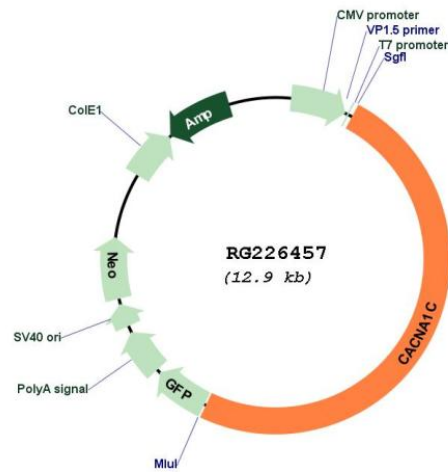
TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001129846

ORF Size: 6381 bp

OTI Disclaimer: 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 clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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| 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_001129846.1, NP_001123318.1</u> |
| RefSeq Size: | 13447 bp |
| RefSeq ORF: | 6384 bp |
| Locus ID: | 775 |
| UniProt ID: | <u>Q13936</u> |
| 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] |