

Product datasheet for **RG226465**

CACNA1C (NM_001129839) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA1C (NM_001129839) 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:	>RG226465 representing NM_001129839 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGTCAATGAGAATACGAGGATGTACATTCCAGAGGAAAACCACCAAGTTCCAACATATGGGAGCCCAC
GCCCGCCCATGCCAACATGAATGCCAATGCGGCAGCGGGGCTGGCCCTGAGCACATCCCCACCCCGGG
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GCCAGGCTGGCCACCGGATCTCCAAGTCAAAGTTCAGCCGCTACTGGCGCCGGTGAATCGGTTCTGCA
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GCGCGGGGGTCGACCGAGTGAGGAGGACTCCAGGACAGCAGGGTCTACGTCAGCAGCCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTAA

Protein Sequence: >RG226465 representing NM_001129839
 Red=Cloning site Green=Tags(s)

MVNTNRMYP EENHQGSNYGSPRPAHANMNANAAAGL APEHIPTPGAALSWQAAIDAARQAKLMGSAGN
 ATISTVSTQRKRQY GPKKQGSTTATRPPRALLCLTLKNPIRRACISIVEWKPF EIIILLTIFANCVA
 LAIYIPFPEDDSNATNSNLERVEYLFLLIIFTVEAFLKVIAYGLLFHPNAYLRNGWNLLDFIIVVGLFSA
 ILEQATKADGANALGGKAGFDVKALRAFRVLRPLRLVSGVPSLQVVLNSIIKAMVPLLHIALLVLFVII
 IYAIIGLELFMGKMHKTCYNQEGIADVPAEDDPSPCALETGHGRQCQNGTVCKPGWDGPKHGITNFDNFA
 FAMLTVFQCITMEGWTDVLYWVNDVAVGRDWPWIYFVTLIIIGSFFVLNLVLGVLSGEFSKEREKAKARGD
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 ETTGEEDEEPEMPVGRPRPLSELHLKEKAVMPPEASAFFIFSSNNRFRQLQCHRIVNDTIFTNLILFFI
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 LISFGIQSSAINVVKILRVLRLRPLRAINRAKGLKHVVQCVFVAIRTIGNIVIVITLLQFMFACIGVQL
 FKGLYTCSDSSKQTEAECKGN YITYKDG EVDHPIIQPRSWENSKFDFDNVLAAMMALFTVSTFEGWPEL
 LYRSIDSHTEKGIYNYRVEISIFFIIYIIIIAFFMMNIFVGFVIVTFQEQGEQEKNCELDKNQRQCV
 EYALKARPLRRYIPKNQH QYKVVWVYVNSTYFEYLMFVILLNNTICLAMQHYGQSCLFKIAMNILMLFTG
 LFTVEMILKLI AFKPKHYFCDAWNTFDALIVVGSIVDIAITENA EENSRSITFFRLFRVMRLVKLLSRG
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 TGEAWQDIMLACMPGKKCAPESEPSNSTEGETPCGSSFAVFYFISFYMLCAFLIINL FVAVIMDNFDYLT
 RDWSILGPHHLDEFKRIWAEYDPEAKGRIKHLDVVTLRRIQPPLGFGKLCPHRVACKRLVSMNPLNSD
 GTVMFNATL FALVRTALRIKTEEGPSPSEAHQGAEDPFRPAGNLEQANEELRAIIKKIWKRTSMKLLDQV
 VPPAGDDEVTVGK FYATFLIQEYFRKFKRKEQGLVGKPSQRNALSLQAGLRTLHDIGPEIRRAISGDLT
 AEEELDKAMKEAVSAASEDDIFRRAGGLFGNHVSYQSDGRSAFPQFTTQRPLHINKAGSSQGDTESPS
 HEKLV DSTFTPSSYSSTGSNANINNANNTALGRLPRPAGYPSTVSTVEGHGPPLSPAIRVQEVAWKLSN
 RCHSRESQAAMAGQEETSQDETYEVMNHDTEACSEPSLLSTEMLSYQDDENRQLTLPEEDKRDIRQSPK
 RGFLRSASLGRRAS FHLECLKRQKDRGGDISQKTVLPLHLVHHQALAVAGLSPLLQRSHSPASFPRPFAT
 PPATPGSRGWPPQVPVTLRLEGVESSEKLNSSFPSIHCGSWAETTPGGGSSAARRVRPVSMLMVP SQAGA
 PGRQFHGSASSLVEAVLISEGLGQFAQDPKIEVTTQELADACDMTIEEMESAADNILSGGAPQSPNGAL
 LPFVNCRDAGQDRAGGEEDAGCVRARGRPEEELQDSRVVYSSL

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

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_001129839.1</u> , <u>NP_001123311.1</u>
RefSeq Size:	13498 bp
RefSeq ORF:	6435 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]