

Product datasheet for **RG213618**

CACNA1G (NM_198377) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA1G (NM_198377) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CACNA1G
Synonyms:	Ca(V)T.1; Cav3.1; NBR13; SCA42; SCA42ND
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG213618 representing NM_198377 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

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Protein Sequence: >RG213618 representing NM_198377
 Red=Cloning site Green=Tags(s)

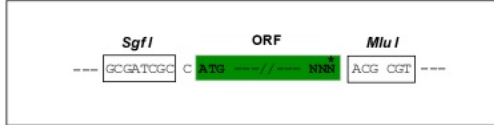
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TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

Cloning Scheme:

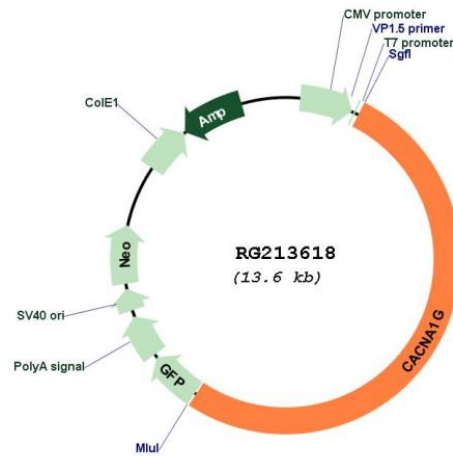
Cloning sites used for ORF Shutting:



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                                     Kozac
                                     Consensus
                                     SgfI   AscI
          EcoRI   BamHI KpnI   RBS   -----
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          HindIII  NheI  RsrII  MluI          NotI  XhoI          GFP Tag
CAAGCTTAACTAGCTAGCGGACCG  ACG CGT  ACG CGG  CCG CTC GAG  ATG GAG AGC GAC -----
                                     T R T R P L E M E S D - - -
          PmeI   FseI
          --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT
          - - E E R V Stop
    
```

Plasmid Map:


ACCN: NM_198377

ORF Size: 7098 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.

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:	NM_198377.3
RefSeq Size:	8231 bp
RefSeq ORF:	7101 bp
Locus ID:	8913
UniProt ID:	O43497
Cytogenetics:	17q21.33
Protein Families:	Druggable Genome, Ion Channels: Calcium, Transmembrane
Protein Pathways:	Calcium signaling pathway, MAPK signaling pathway, Type II diabetes mellitus
Gene Summary:	Voltage-sensitive 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, gene expression, cell motility, cell division, and cell death. This gene encodes a T-type, low-voltage activated calcium channel. The T-type channels generate currents that are both transient, owing to fast inactivation, and tiny, owing to small conductance. T-type channels are thought to be involved in pacemaker activity, low-threshold calcium spikes, neuronal oscillations and resonance, and rebound burst firing. Many alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Sep 2011]