

## Product datasheet for **RG222854**

### CaV1.3 (CACNA1D) (NM\_000720) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CaV1.3 (CACNA1D) (NM_000720) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CaV1.3
Synonyms:	CACH3; CACN4; CACNL1A2; Cav1.3; CCHL1A2; PASNA; SANDD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG222854 representing NM_000720. Blue=ORF Red=Cloning site Green=Tag(s)

```
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**Protein Sequence:**

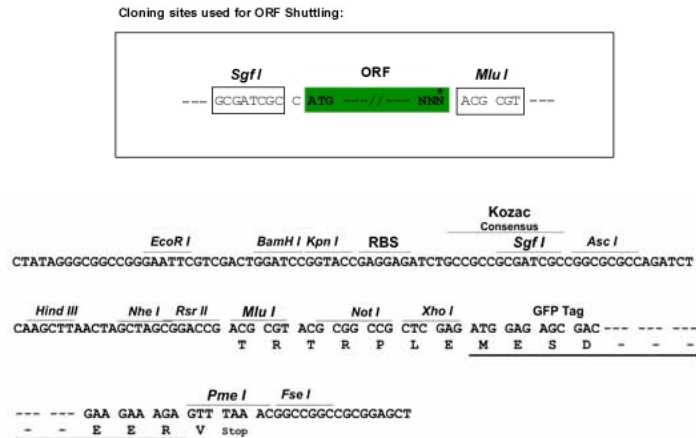
>Peptide sequence encoded by RG222854  
 Blue=ORF Red=Cloning site Green=Tag(s)

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```

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_000720

**ORF Size:** 6543 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](mailto: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 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:**

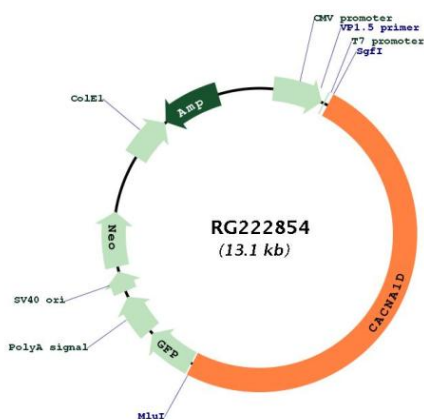
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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\\_000720.4](#)

**RefSeq Size:** 7193 bp  
**RefSeq ORF:** 6546 bp  
**Locus ID:** 776  
**UniProt ID:** [Q01668](#)  
**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  
**MW:** 247.6 kDa

**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]

### Product images:



Circular map for RG222854