

## Product datasheet for **RG217910**

### **CACNB1 (NM\_199247) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CACNB1 (NM_199247) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CACNB1
Synonyms:	CAB1; CACNLB1; CCHLB1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG217910 representing NM\_199247  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTCCAGAAGACCAGCATGTCCCGGGCCCTTACCCACCTCCAGGAGATCCCCATGGAGTCTTCG  
 ACCCCAGCCCGCAGGGCAAATACAGCAAGAGGAAAGGGCGATTCAAACGGTCAGATGGGAGCACGTCTC  
 GGATACCACATCCAACAGCTTTGTCGCCAGGGCTCAGCGGAGTCTACACCAGCCGTCCATCAGACTCT  
 GATGTATCTCTGGAGGAGGACCGGGAAGCCTTAAGGAAGGAAGCAGAGCGCCAGGCATTAGCGCAGCTCG  
 AGAAGGCCAAGACCAAGCCAGTGGCATTGCTGTGCGGACAAATGTTGGCTACAATCCGTCTCCAGGGGA  
 TGAGGTGCCTGTGCAGGGAGTGGCCATCACCTTCGAGCCAAAGACTTCTGCACATCAAGGAGAAATAC  
 AATAATGACTGGTGGATCGGGCGCTGGTGAAGGAGGGCTGTGAGGTTGGCTTCATCCAGCCCGTCA  
 AACTGGACAGCCTTCGCCTGCTGCAGGAACAGAAGCTGCGCCAGAACCCTCGGCTCCAGCAAATCAGG  
 CGATAACTCCAGTCCAGTCTGGGAGATGTGGTACTGGCACCCGCCGCCACACCCCTGCCAGTGGT  
 AATGAAATGACTAACTTAGCCTTTGAACTAGACCCCTAGAGTTAGAGGAGGAAGAGGCTGAGCTTGGTG  
 AGCAGAGTGGCTCTGCCAAGACTAGTGTAGCAGTGTACCACCCGCCACCCATGGCAAACGCATCCC  
 CTCTTTAAGAAGACAGAGCATGTGCCCCCTATGACGTGGTGCCTTCCATGAGGCCATCATCCTGGTG  
 GGACCGTCGCTCAAGGGCTACGAGGTTACAGACATGATGCAGAAAGCTTTATTTGACTTCTTGAAGCATC  
 GGTTTGATGGCAGGATCTCCATCACTCGTGTGACGGCAGATATTTCCCTGGCTAAGCGCTCAGTTCTCAA  
 CAACCCAGCAAACACATCATCATTGAGCGCTCCAACACACGCTCCAGCCTGGCTGAGGTGCAGAGTGAA  
 ATCGACGAATCTTCGAGCTGGCCCGACCTTCAGTTGGTCGCTCTGGATGCTGACACCATCAATCACC  
 CAGCCCAGCTGTCCAAGACCTCGCTGGCCCCATCATTGTTACATCAAGATCACCTCTCCAAGCTACT  
 TCAAAGGCTCATCAAGTCCCGAGGAAAGTCTCAGTCCAAACACCTCAATGTCCAATAGCGGCTCGGAA  
 AAGCTGGCACAGTGCCCCCTGAAATGTTTGACATCATCCTGGATGAGAACAATTGGAGGATGCCTGCG  
 AGCATCTGGCGGAGTACTTGAAGCCTATTGGAAGCCACACACCCGCCAGCAGCACGCCACCCATCC  
 GCTGCTGAACCGCACCATGGCTACCGCAGCCCTGGCTGCCAGCCCTGCCCTGTCTCCAACCTCCAGGTA  
 CAGGTGCTCACCTCGCTCAGGAGAACTCGGCTTCTGGGGCGGGCTGGAGTCTCACAGCGGGCAGTG  
 TGGTGCCCCAGGAGCAGGAACATGCCATG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG217910 representing NM\_199247  
 Red=Cloning site Green=Tags(s)

MVQKTSMSRGPYPSPQEIPMEVDFPSPQKYSKRKGRFKRSDGSTSSDSTSNSFVRRQGSAESYTSRPSDS  
 DVSLEEDREALRKEAERQALAQLEKAKTKPVAFVVRTNVGYNPSGDEVVQGVAITFEPKDFLHIKEY  
 NNDWWIGRLVKEGCEVGFIPSPVKLDSLRLLEQKLRQNLGSSKSGDNSSSLGDVVTGTRRPTPPASG  
 NEMTNLAFELDPLELEEEEAELGEQSGSAKTSVSVTTPPHGKRIPFFKKTEHVPPYDVVPSMRPIILV  
 GPSLKGVEVTDMMQKALFDLKHFRFDGRISITRVTADISLAKRSVLNPNPSKHIIERSNTRSSLAEVQSE  
 IERIFELARTLQLVALDADTINHPAQLSKTSLAPIIVYIKITSPKVLQRLIKSRGKSQSKHLNVQIAASE  
 KLAQCPEMFDIILDENQLEDACEHLAEYLEAYWKATHPPSSSTPPNPLLNRMTATAALAASPAPVSNLQV  
 QVLTSLRRNLGFWGGLESSQRGSVVPQEHEHAM

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_199247

**ORF Size:** 1569 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:**

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\\_199247.3](#)

**RefSeq Size:** 1847 bp

**RefSeq ORF:** 1572 bp

**Locus ID:** 782

**UniProt ID:** [Q02641](#)

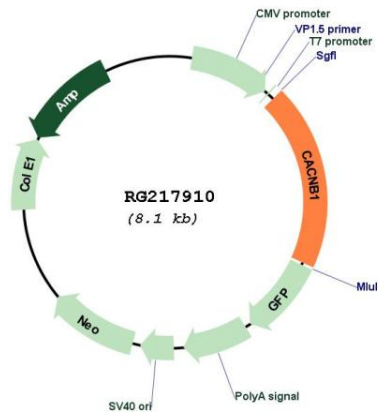
**Cytogenetics:** 17q12

**Protein Families:** Druggable Genome, Ion Channels: Other

**Protein Pathways:** Arrhythmogenic right ventricular cardiomyopathy (ARVC), Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway

**Gene Summary:** The protein encoded by this gene belongs to the calcium channel beta subunit family. It plays an important role in the calcium channel by modulating G protein inhibition, increasing peak calcium current, controlling the alpha-1 subunit membrane targeting and shifting the voltage dependence of activation and inactivation. Alternative splicing occurs at this locus and three transcript variants encoding three distinct isoforms have been identified. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG217910