

Product datasheet for **RG220047**

CACNB1 (NM_199248) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNB1 (NM_199248) 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)



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ORF Nucleotide Sequence:

>RG220047 representing NM_199248
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTCCAGAAGACCAGCATGTCCCGGGCCCTTACCCACCTCCAGGAGATCCCCATGGAGTCTTCG
 ACCCCAGCCCGCAGGGCAAATACAGCAAGAGGAAAGGGCGATTCAAACGGTCAGATGGGAGCACGTCTC
 GGATACCACATCCAACAGCTTTGTCCGCCAGGGCTCAGCGGAGTCTACACCAGCCGTCCATCAGACTCT
 GATGTATCTCTGGAGGAGGACCGGGAAGCCTTAAGGAAGGAAGCAGAGCGCCAGGCATTAGCGCAGCTCG
 AGAAGGCCAAGACCAAGCCAGTGGCATTGCTGTGCGGACAAATGTTGGCTACAATCCGTCTCCAGGGGA
 TGAGGTGCCTGTGCAGGGAGTGGCCATCACCTTCGAGCCAAAGACTTCTGCACATCAAGGAGAAATAC
 AATAATGACTGGTGGATCGGGCGCTGGTGAAGGAGGGCTGTGAGGTTGGCTTCATCCCAGCCCGTCA
 AACTGGACAGCCTTCGCCTGCTGCAGGAACAGAAGCTGCGCCAGAACCCTCGGCTCCAGCAAATCAGG
 CGATAACTCCAGTCCAGTCTGGGAGATGTGGTACTGGCACCCCGCCCCACACCCCTGCCAGTGCC
 AAACAGAAGCAGAAGTCGACAGAGCATGTGCCCCCTATGACGTGGTGCCTTCCATGAGGCCCATCATCC
 TGGTGGGACCGTTCGCTCAAGGGCTACGAGGTTACAGACATGATGCAGAAAGCTTTATTTGACTTCTTGAA
 GCATCGGTTTGTATGGCAGGATCTCCATCACTCGTGTGACGGCAGATATTTCCCTGGCTAAGCGCTCAGTT
 CTCAACAACCCAGCAAACACATCATCATTGAGCGCTCCAACACACGCTCCAGCCTGGCTGAGGTGCAGA
 GTGAAATCGAGCGAATCTTCGAGCTGGCCCGGACCCTTCAGTTGGTCGCTCTGGATGCTGACACCATCAA
 TCAACCCAGCCAGCTGTCCAAGACTCGCTGGCCCCATCATTGTTTACATCAAGATCACCTCTCCCAAG
 GTACTTCAAAGGCTCATCAAGTCCCGAGGAAAGTCTCAGTCCAACACCTCAATGTCAAATAGCGGCCT
 CGGAAAAGCTGGCACAGTGCCCCCTGAAATGTTGACATCATCCTGGATGAGAACCAATGGAGGATGC
 CTGCGAGCATCTGGCGGAGTACTTGAAGCCTATTGGAAGGCCACACCCCGCCAGCAGCACGCCACCC
 AATCCGCTGCTGAACCGACCATGGCTACCGCAGCCCTGGCTGCCAGCCCTGCCCTGTCTCCAACCTCC
 AGGTACAGGTGCTCACCTCGCTCAGGAGAACTCGGCTTCTGGGGCGGGCTGGAGTCTCACAGCGGGG
 CAGTGTGGTGCCCGAGGACAGGAACATGCCATG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

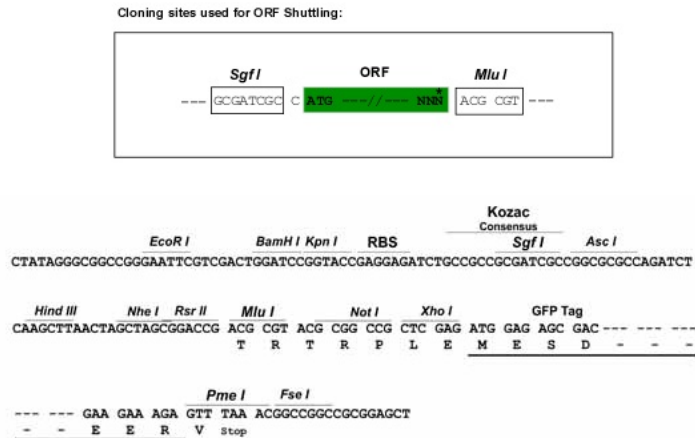
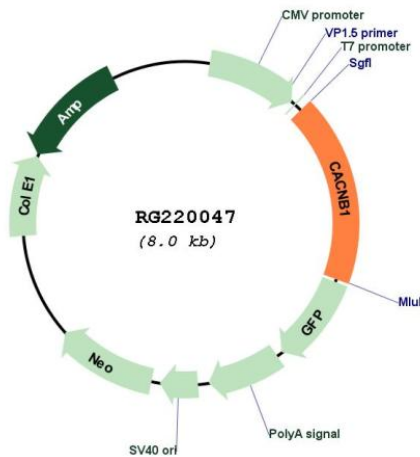
>RG220047 representing NM_199248
 Red=Cloning site Green=Tags(s)

MVQKTSMSRGPYPPSQEIPMEVFDPSQKYSKRKGRFKRSDGSTSSDTSNSFVRQGSAESYTSRPSDS
 DVSLEEDREALRKEAERQALALEKAKTKPVAFVAVRTNVGYNPSPGDEVPVQGVAITFEPKDFLHIKEY
 NNDWWIGRLVKEGCEVGFIPSPVKLDSLRLLEQKLRQNLGSSKSGDNSSSLGDVVTGTRRPTPPASA
 KQKQKSTEHVPPYDVVPSMRPIILVGPSTKGYEVTMMQKALFDLKHFRDGRISITRVADISLAKRSV
 LNNPSKHIIERSNTRSSLAEVQSEIERIFELARTLQLVALDADTINHQAQLSKTSLAPIIVYIKITSPK
 VLQRLIKSRGKSQSKHLNVQIAASEKLAQCPEMFDIILDENQLEDACEHLAEYLEAYWKATHPPSSTPP
 NPLLNRMTATAALAASPAPVSNLQVQVLTSLRRNLGFWGGLESSQRGSVVPQEQEHAM

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Plasmid Map:


ACCN: NM_199248

ORF Size: 1434 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_199248.3
RefSeq Size:	1700 bp
RefSeq ORF:	1437 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]