

Product datasheet for **RG207230**

CACNB1 (NM_000723) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNB1 (NM_000723) 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:

>RG207230 representing NM_000723
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTCCAGAAGACCAGCATGTCCCGGGCCCTTACCCACCTCCAGGAGATCCCCATGGAGTCTTCG
 ACCCCAGCCCGCAGGGCAAATACAGCAAGAGGAAAGGGCGATTCAAACGGTCAGATGGGAGCACGTCTC
 GGATACCACATCCAACAGCTTTGTCGCCAGGGCTCAGCGGAGTCTACACCAGCCGTCCATCAGACTCT
 GATGTATCTCTGGAGGAGGACCGGGAAGCCTTAAGGAAGGAAGCAGAGCGCCAGGCATTAGCGCAGCTCG
 AGAAGGCCAAGACCAAGCCAGTGGCATTGCTGTGCGGACAAATGTTGGCTACAATCCGTCTCCAGGGGA
 TGAGGTGCCTGTGCAGGGAGTGGCCATCACCTTCGAGCCAAAGACTTCTGCACATCAAGGAGAAATAC
 AATAATGACTGGTGGATCGGGCGCTGGTGAAGGAGGGCTGTGAGGTTGGCTTCATCCAGCCCGTCA
 AACTGGACAGCCTTCGCCTGCTGCAGGAACAGAAGCTGCGCCAGAACCCTCGGCTCCAGCAAATCAGG
 CGATAACTCCAGTCCAGTCTGGGAGATGTGGTACTGGCACCCCGCCACACCCCTGCCAGTGCC
 AAACAGAAGCAGAAGTCGACAGAGCATGTGCCCCCTATGACGTGGTGCCTTCCATGAGGCCCATCATCC
 TGGTGGGACCGTTCGCTCAAGGGCTACGAGGTTACAGACATGATGCAGAAAGCTTTATTTGACTTCTTGAA
 GCATCGGTTTGTATGGCAGGACCTCCATCACTCGTGTGACGGCAGATATTTCCCTGGCTAAGCGCTCAGTT
 CTCAACAACCCAGCAAACACATCATCATTGAGCGCTCCAACACACGCTCCAGCCTGGCTGAGGTGCAGA
 GTGAAATCGAGCGAATCTTCGAGCTGGCCCGGACCCTTTCAGTTGGTGCCTCTGGATGCTGACACCATCAA
 TCAACCCAGCCAGCTGTCCAAGACCTCGCTGGCCCCATCATTGTTTACATCAAGATCACCTCTCCCAAG
 GTACTTCAAAGGCTCATCAAGTCCCAGGAAAGTCTCAGTCCAACACCTCAATGTCCAATAGCGGCTC
 CGGAAAAGCTGGCACAGTGGCACCTGAAATGTTGACATCATCTGGATGAGAACCAATTGGAGGATGC
 CTGCGAGCATCTGGCGGAGTACTTGAAGCCTATTGGAAGGCCACACCCCGCCAGCAGCACGCCACCC
 AATCCGCTGCTGAACCGACCATGGCTACCGCAGCCCTGGCTGCCAGCCCTGCCCTGTCTCCAACCTCC
 AGGGACCTACCTTGCTCCGGGGACGACCCTGGAACGGGCCACCGGGGAGCAGCCAGCATGCACGA
 GTACCCAGGGGAGCTGGGCCAGCCCGGAGCCTTACCCAGCAGCCACCCAGGCGGGGAGGACGAGCAGC
 CTACGGGCACTGTCCCGCAAGACACTTTTGTGCGGACACCCCGGAGCCGAAACTCTGCCTACACGG
 AGCTGGGAGACTCATGTGTGGACATGGAGACTGACCCCTCAGAGGGGCCAGGGCTGGAGACCCTGCAGG
 GGGCGGCACGCCCCAGCCGACAGGGATCCTGGGAGGACGAGGAAGAAGACTATGAGGAAGAGCTGACC
 GACAACCGGAACCGGGCCGGAATAAGGCCGCTACTGCGCTGAGGGTGGGGTCCAGTTTGGGGCGCA
 ACAAGAATGAGCTGGAGGCTGGGGACGAGGCGTCTACATTCGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG207230 representing NM_000723
 Red=Cloning site Green=Tags(s)

MVQKTSMSRGPYPSPQEIPMEVFDPSQKYSKRKGRFRKSDGSTSSDTSNSFVRQGSAESYTSRPSDS
 DVSLEEDREALRKEAERQALALEKAKTKPVAFVVRTNVGYNPSPGDEVVQGVAITFEPKDFLHIKEY
 NNDWWIGRLVKEGCEVGFIPSPVKLDSLRLLEQKLRQNLGSSKSGDNSSSSLGDVVTGTRRPTPPASA
 KQKQKSTEHVPPYDVVPSMRPIILVGP SLKGYEVTMMQKALDFLKHFRFDGRSITRVTADISLAKRSV
 LNNPSKHIIERSNTRSSLAEVQSEIERIFELARTLQLVALDADTINHPAQLSKTSLAPIIVYIKITSPK
 VLQRLIKSRGKSQSKHLNVQIAASEKLAQCHPEMFDIILDENQLEDACEHLAEYLEAYWKATHPPSSTPP
 NPLLNRMTATAALAASPAPVSNLQGPYLASGDQPLERATGEHASMHEYPGELGQPPGLYPSHPPGRAGT
 LRALSQRDTFDADTPGSRNSAYTELDGSCVDMETDPSGPGLDGPAGGGTPPARQGSWEDEEEDYEELT
 DNRNRGRNKARYCAEGGPPVLRNKNELEGWGRGVYIR

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_000723

ORF Size: 1794 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_000723.3](#), [NP_000714.3](#)

RefSeq Size: 3687 bp

RefSeq ORF: 1797 bp

Locus ID: 782

UniProt ID: [Q02641](#)

Cytogenetics: 17q12

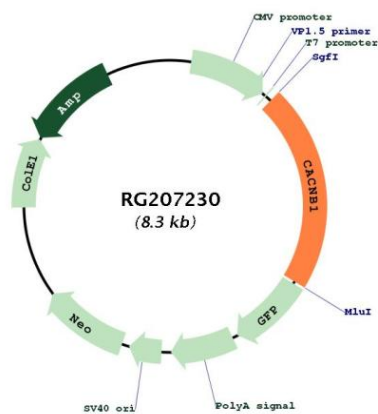
Domains: Ca_channel_B, SH3, GuKc

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 RG207230