

Product datasheet for **RC220047**

CACNB1 (NM_199248) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNB1 (NM_199248) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CACNB1
Synonyms:	CAB1; CACNLB1; CCHLB1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC220047 representing NM_199248
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTCCAGAAGACCAGCATGTCCCGGGCCCTTACCCACCTCCAGGAGATCCCCATGGAGTCTTCG
 ACCCCAGCCCGCAGGGCAAATACAGCAAGAGGAAAGGGCGATTCAAACGGTCAGATGGGAGCACGTCTC
 GGATACCACATCCAACAGCTTTGTCGCCAGGGCTCAGCGGAGTCTACACCAGCCGTCCATCAGACTCT
 GATGTATCTCTGGAGGAGGACCGGGAAGCCTTAAGGAAGGAAGCAGAGCGCCAGGCATTAGCGCAGCTCG
 AGAAGGCCAAGACCAAGCCAGTGGCATTGCTGTGCGGACAAATGTTGGCTACAATCCGTCTCCAGGGGA
 TGAGGTGCCTGTGCAGGGAGTGGCCATCACCTTCGAGCCAAAGACTTCTGCACATCAAGGAGAAATAC
 AATAATGACTGGTGGATCGGGCGCTGGTGAAGGAGGGCTGTGAGGTTGGCTTCATCCAGCCCGTCA
 AACTGGACAGCCTTCGCCTGCTGCAGGAACAGAAGCTGCGCCAGAACCCTCGGCTCCAGCAAATCAGG
 CGATAACTCCAGTCCAGTCTGGGAGATGTGGTACTGGCACCCCGCCACACCCCTGCCAGTGCC
 AAACAGAAGCAGAAGTCGACAGAGCATGTGCCCCCTATGACGTGGTGCCTTCCATGAGGCCCATCATCC
 TGGTGGGACCGTTCGCTCAAGGGCTACGAGGTTACAGACATGATGCAGAAAGCTTTATTTGACTTCTTGA
 GCATCGGTTTGTATGGCAGGATCTCCATCACTCGTGTGACGGCAGATATTTCCCTGGCTAAGCGCTCAGT
 CTCAACAACCCAGCAAACACATCATCATTGAGCGCTCCAACACACGCTCCAGCCTGGCTGAGGTGACAG
 GTGAAATCGAGCGAATCTTCGAGCTGGCCCGGACCCTTTCAGTGGTTCGCTCTGGATGCTGACACCATCA
 TCAACCCAGCCAGCTGTCCAAGACCTCGCTGGCCCCATCATTGTTTACATCAAGATCACCTCTCCAAG
 GTACTTCAAAGGCTCATCAAGTCCCAGGAAAGTCTCAGTCCAACACCTCAATGTCAAATAGCGGCT
 CGGAAAAGCTGGCACAGTCCCCCTGAAATGTTGACATCATCCTGGATGAGAACCAATGGAGGATGC
 CTGCGAGCATCTGGCGGAGTACTTGAAGCCTATTGGAAGGCCACACCCGCCAGCAGCACGCCACCC
 AATCCGCTGCTGAACCGACCATGGCTACCGCAGCCCTGGCTGCCAGCCCTGCCCTGTCTCAACCTCC
 AGGTACAGGTGCTCACCTCGCTCAGGAGAACTCGGCTTCTGGGGCGGGCTGGAGTCTCACAGCGGGG
 CAGTGTGGTGCCCGAGGACGAGAACATGCCATG

ACGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220047 representing NM_199248
 Red=Cloning site Green=Tags(s)

MVQKTSMSRGPYPPSQEIPMEVFDPSQKYSKRKGRFRKSDGSTSSDTSNSFVRQGSAESYTSRPSDS
 DVSLEEDREALRKEAERQALAQLEKAKTKPVAFVAVRTNVGYNPSPGDEVVQGVAITFEPKDFLHIKEY
 NNDWWIGRLVKEGCEVGFIPSPVKLDSLRLLEQKLRQNLGSSKSGDNSSSLGDVVTGTRRPTPPASA
 KQKQKSTEHVPPYDVVPSMRPIILVGPLKGYEVTMMQKALFDLKHFRDGRISITRVTADISLAKRSV
 LNNPSKHIIERSNTRSSLAEVQSEIERIFELARTLQLVALDADTINHPAQLSKTSLAPIIVYIKITSPK
 VLQRLIKSRGKSQSKHLNVQIAASEKLAQCPEMFDIILDENQLEDACEHLAEYLEAYWKATHPPSSSTPP
 NPLLNRMTATAALAASPAPVSNLQVQVLTSLRRNLGFWGGLESSQRGSVVPQEQEHAM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8062_e08.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


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:

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

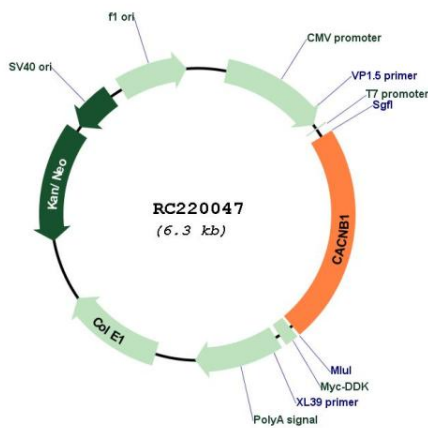
Protein Families: Druggable Genome, Ion Channels: Other

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

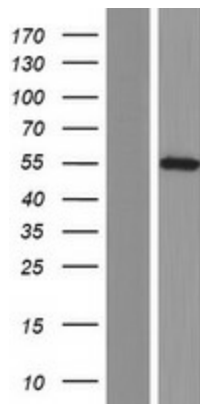
MW: 52.8 kDa

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 RC220047



Western blot validation of overexpression lysate (Cat# [LY404593]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220047 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).