

Product datasheet for **RG214019**

CACNB2 (NM_201597) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | CACNB2 (NM_201597) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | CACNB2 |
| Synonyms: | CAB2; CACNLB2; CAVB2; MYSB |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide Sequence:

>RG214019 representing NM_201597
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTCCAAAGGGACATGTCCAAGTCGCCTCCACAGCGCGCGCGGTGGCGCAGGAGATCCAGATGG
 AACTGCTAGAGAACGTGGCTCCCGCGGGGCGCTCGGAGCCGCCACAGTCATATGGAAAAGGAGCCAG
 AAGGAAAAACAGATTTAAAGGATCTGATGGAAGCACGTCTGATACTACCTCAAATAGTTTTGTTTCGC
 CAGGGTTCGCGAGACTCTACACTAGCCGTCATCCGATTCGATGTATCTGAGGAGGACCGGGAGG
 CAGTGCAGAGAGAAGCGGAGCGGAGCCAGGCACAGTTGAAAAAGCAAAGCAAAGCCGTTGCATT
 TGGCGTTCGACAAAATGTCAGCTACAGTGCGCCCATGAAGATGATGTTCCAGTGCCTGGCATGGCCATC
 TCATTGAAAGCAAAGATTTTCTGCATGTTAAGGAAAAATTAACAATGACTGGTGGATAGGGCGATTGG
 TAAAAGAAGGCTGTGAAATCGGATTCATCCAAGCCAGTCAAAGTAAAGCAATGAGGCTGCAGCATGA
 ACAGAGAGCCAAGCAAGGAAATTTCTACTCCAGTAAATCAGGAGGAAATTCATCATCCAGTTTGGGTGAC
 ATAGTACCTAGTCCAGAAAATCAACACCTCCATCATCTGGTGCAAAATCTGCAGATGAACAAGACCAGT
 GGAAAATGCAGGCTTGTGGCGGTTACTACAGAGCACACTCCTCCGTATGATGTGGTACCTCCAT
 GCGACCAAGTGGTCTAGTGGGCCCTTCTGAAAGGCTACGAGGTCACAGATATGATGAAAAAGCGCTG
 TTTGATTTTTTAAACACAGATTTGAAGGGCGGATATCCATCACAAGGTCACCGCTGACATCTCGCTT
 CCAAACGCTCGGTATTAACAATCCAGTAAGCACGCAATAATAGAAAGTCCAACACAAGGTCAAGCTT
 AGCGGAAGTTCAGAGTGAATCGAAAGGATTTTGAAGTTCGAAAGCAATGAGTGGTGGTCTTGCAG
 GCGGATAACAATTAATCATCCAGTCAACTCAGTAAAACCTCCTGGCCCTATTATAGTATATGTAAGA
 TTTCTTCTCCTAAGGTTTTACAAAGGTTAATAAAATCTCGAGGAAATCTCAAGTAAACACCTCAAGT
 CCAGATGGTAGCAGCTGATAAACTGGCTCAGTGTCTCCAGAGCTGTTGATGTGATCTTGGATGAGAAC
 CAGCTTGAAGATGCCTGTGAGCACCTTGCCGACTATCTGAGGCTACTGGAAGGCCACCATCCTCCCA
 GCAGTAGCCTCCCAACCTCTCCTTAGCCGTACATTAGCCACTTCAAGTCTGCCTCTTAGCCCCACCT
 AGCCTCTAATTCACAGGTTCTCAAGGTGATCAGAGGACTGATCGCTCCGCTCCTATCCGTTCTGCTTCC
 CAAGCTGAAGAAGAACCTAGTGTGAACAGTCAAGAAATCCAGCACCGCTCTTCTCCTCAGCCCCAC
 ACCACAACCATCGCAGTGGGACAAGTCCGCGCCTCTCCAGGCAAGAGACATTTGACTCGGAAACCCAGGA
 GAGTCGAGACTCTGCCTACGTAGAGCAAAGGAAGATTATCCCATGACCAGTGGACCACTATGCCTCA
 CACCGTGACCACAACACAGAGACGAGACCCACGGGAGCAGTACCACAGACACAGGAGTCCCGGCACC
 GTTCCCGGACGTGGATCGAGAGCAGGACCACAACGAGTCAACAAGCAGCGCAGCCGTATAAATCCAA
 GGATCGCTACTGTGAAAAGGATGGAGAAGTGATATCAAAAAACGGAATGAGGCTGGGGAGTGAACAGG
 GATGTTTACATCCGCAA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG214019 representing NM_201597
 Red=Cloning site Green=Tags(s)

MVQRDMSKSPPTAAAAVAQEIQMELLENVAPAGALGAAAQSYGKGARRKNRFGSDGSTSSDTSNSFVR
 QGSADSYTSRPSDSVLSLEEDREAVRREAERQAQAQLEKAKTKPVAFVRTNVSAAHEDDVPVPGMAI
 SFEAKDFLHVKEKFNNDWWIGRLVKEGCEIGFIPSPVKLENMRLQHEQRAKQGFYSSKSGNSSSLGD
 IVPSSRKSTPPSSGAKSADEQDQWKTAGLFWRFTTEHTPPYDVVPSMRPVVVLVGPLKGYEVTMMQKAL
 FDFLKHREGRISITRVTADISLAKRSVLNPNPSKHAI IERSNTRSSLAEVQSEIERIFELARTLQLVVL
 ADTINHPAQLSKTSLAPIIVYVKISSPKVLQRLIKSRGKSQAKHLNVQMVAAADKLAQCPELFDVILDEN
 QLEDACEHLADYLEAYWKATHPPSSSLPNPLLSRTLATSSSLPLSPTLASNSQGSQDQRTDRSAPIRSAS
 QAEIEPSVEPVKKSQHRSSSSAPHHNHRSGTSRGLSRQETFDSETQESRDSAYVEPKEDYSHDHVDHYAS
 HRDHNHRDETHGSSDHRHRESRHRSDVDREQDHNECNKQRSRHKSKDRYCEKDGVEISKRNEAGEWNR
 DVYIRQ

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM_201597

ORF Size: 1908 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_201597.3](#)

RefSeq Size: 3373 bp

RefSeq ORF: 1911 bp

Locus ID: 783

UniProt ID: [Q08289](#)

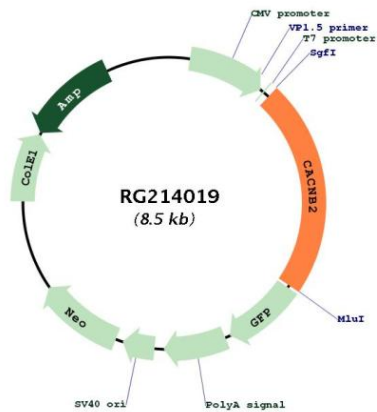
Cytogenetics: 10p12.33-p12.31

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: This gene encodes a subunit of a voltage-dependent calcium channel protein that is a member of the voltage-gated calcium channel superfamily. The gene product was originally identified as an antigen target in Lambert-Eaton myasthenic syndrome, an autoimmune disorder. Mutations in this gene are associated with Brugada syndrome. Alternatively spliced variants encoding different isoforms have been described. [provided by RefSeq, Feb 2013]

Product images:



Circular map for RG214019