

Product datasheet for **RC216641**

CACNB2 (NM_000724) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNB2 (NM_000724) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CACNB2
Synonyms:	CAB2; CACNLB2; CAVB2; MYSB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC216641 representing NM_000724
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAGTCTCGGGCTGGTGCATCGCCGGCAGTACGGGTGTCCTATGGTTCGGCAGACTCTACACTA
 GCCGTCCATCCGATTCCGATGTATCTCTGGAGGAGGACCGGGAGGAGTGCAGAGAGAAGCGGAGCGGCA
 GGCCAGGCACAGTTGAAAAAGCAAAGACAAAGCCCGTTGCATTTGCGGTTTCGGACAAATGTCAGCTAC
 AGTGGCGCCCATGAAGATGATGTTCCAGTGCCTGGCATGGCCATCTCATTGAAAGCAAAGATTTTCTGC
 ATGTTAAGGAAAAATTAACAATGACTGGTGGATAGGGCGATTGGTAAAAGAAGGCTGTGAAATCGGATT
 CATTCCAAGCCAGTCAAAGTAAAGACATGAGGCTGCAGCATGAACAGAGAGCAAGCAAGGAAATTC
 TACTCCAGTAAATCAGGAGGAAATTCATCATCCAGTTTGGGTGACATAGTACCTAGTTCAGAAAAATCAA
 CACCTCCATCATCTGCTATAGACATAGATGCTACTGGCTTAGATGCAGAAGAAAAATGATATCCAGCAAA
 CCACCGCTCCCTAAACCCAGTCAAACAGTGTAAAGTCAACCCACTCCAAGAGAAAAGAAATGCCCTTC
 TTTAAGAAGACAGAGCACACTCCTCCGATGATGTGGTACCTTCCATGCGACCCAGTGGTCTAGTGGGCC
 CTTCTCTGAAGGGCTACGAGGTCACAGATATGATGCAAAAAGCGCTGTTTGTATTTTTAAAAACAGATT
 TGAAGGGCGGATATCCATCACAAGGGTCAACCGCTGACATCTCGCTTGCCAAACGCTCGGTATTAACAAT
 CCCAGTAAACAGCAATAATAGAAAAGTCCAACACAAGGTCAAGCTTAGCGGAAGTTCAGAGTGAATCG
 AAAGGATTTTTGAACTTGAAGAACATTGCAGTTGGTGGTCTTGACGCGGATACAATTAATCATCCAGC
 TCAACTCAGTAAAACCTCCTTGGCCCTATTATAGTATATGTAAGATTTCTTCTCCTAAGGTTTTACAA
 AGGTTAATAAAAATCTCGAGGAAATCTCAAGCTAAACACCTCAACGTCCAGATGGTAGCAGCTGATAAC
 TGGCTCAGTGTCTCCAGAGCTGTCGATGTGATCTTGGATGAGAACCAGCTTGAGGATGCCTGTAGCA
 CCTTGCCGACTATCTGGAGGCCTACTGGAAGGCCACCCATCCTCCAGCAGTAGCCTCCCAACCTCTC
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 GGAACCAAGTCAAGAAATCCAGCACCCTCTTCTCCTCAGCCCCACACCACAACCATCGCAGTGGGACA
 AGTCGCGGCTCTCCAGGCAAGAGACATTTGACTCGGAAACCCAGGAGTTCGAGACTCTGCCTACGTAG
 AGCCAAAGGAAGATTATCCCATGACCACGTGGACCACTATGCCTCACACCGTGACCACAACCACAGAGA
 CGAGACCCACGGGAGCAGTGACCACAGACAGGGAGTCCCGGCACCGTTCGCGGACGTGGATCGAGAG
 CAGGACCAACAGAGTGAACAAGCAGCGCAGCCGTCATAAATCCAAGGATCGCTACTGTGAAAAGGATG
 GAGAAGTGATATCAAAAAACCGAATGAGGCTGGGGAGTGAACAGGGATGTTTACATCCGCCAA

ACGCGTACGCGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216641 representing NM_000724
 Red=Cloning site Green=Tags(s)

MQCCGLVHRRRVRVSYGSADSYTSRPSDSVSLIEDREAVRREAERQAQAQLEKAKTKPVAFVVRTNVS
 SAAHEDDVPVPGMAISFEAKDFLHVKEKFNNDWWIGRLVKEGCEIGFIPSPVKLENMRLQHEQRAKQGF
 YSSKSGGNSSSLGDIVSSRKSTPPSSAIDIDATGLDAEENDIPANHRSPKPSANSVTSPPHSKEKRMPP
 FKKTEHTPPYDVVPSMRPVVLVGPVLKGYEVTMMQKALFDLKHREGRISITRVTADISLAKRSVLLN
 PSKHAI IERSNTRSSLAEVQSEIERIFELARTLQLVVLADDTINHPAQLSKTSLAPIIVYVKISSPKVLQ
 RLIKSRGKSQAKHLNVQMVAADKLAQCPELFDVILDENQLEDACEHLADYLEAYWKATHPPSSSLPNPL
 LSRTLATSSLPLSPTLASNSQGSQGDQRTDRSAPIRSASQAEPEPSVEPVKKSQHRSSSAPHNHRSRGT
 SRGLSRQETFDSETQESRDSAYVEPKEDYSHDHDVYASHRDHNHRDETHGSSDHRHRESRHRSDVDRE
 QDHNECNKQRSRHKSKDRYCEKDGVEISKKRNEAGEWNRDVYIRQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg2850_f05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000724

ORF Size: 1815 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_000724.4](#)

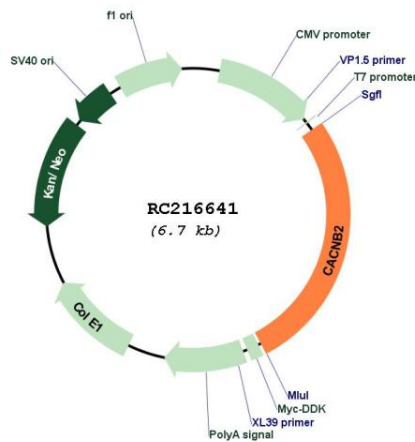
RefSeq Size: 3721 bp

RefSeq ORF: 1818 bp

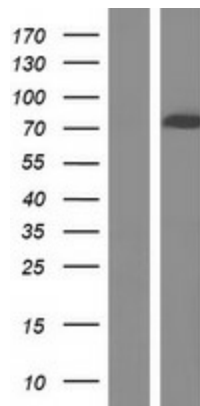
Locus ID: 783

UniProt ID: [Q08289](#)
Cytogenetics: 10p12.33-p12.31
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
MW: 68 kDa
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 RC216641



Western blot validation of overexpression lysate (Cat# [LY424553]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216641 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).