

Product datasheet for **RC210440**

CACNB4 (NM_000726) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNB4 (NM_000726) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CACNB4
Synonyms:	CAB4; CACNLB4; EA5; EIG9; EJM; EJM4; EJM6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC210440 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTCCTCCTCCTACGCCAAGAACGGGACCGCGGACGGCCGCACTCCCCACCTCGCAGGTGGCCC
GAGGCACCACAACCCGGAGGAGCAGTTGAAAAGATCCGATGGCAGCACCACTTCGACCAGCTTCATCCT
CAGACAGGGTTCAGCGGATTCCTACACAAGCAGCCGTCTGACTCCGATGTCTTTTGAAGAGGACCGG
GAAGCAATTCGACAGGAGAGAGAACAGCAAGCAGCTATCCAGCTTGAGAGAGCAAAGTCCAAACCTGTAG
CATTTGCCGTGAAGACAAATGTGAGCTACTGCGGCGCCCTGGACGAGGATGTGCCTGTTCCAAGCACAGC
TATCTCCTTTGATGCTAAAGACTTTCTACATATTAAGAGAAAATAACAATGATTGGTGGATAGGAAGG
CTGGTAAAGAGGGCTGTGAAATGGCTTCATTCCAAGTCCACTCAGATTGGAGAACATACGGATCCAGC
AAGAACAAAAAGAGGACGTTTTACGGAGGGAAATCAAGTGGAAATCTTCTTCAAGTCTTGAGAAAT
GGTATCTGGGACATTCGAGCAACTCCACATCAACAGCAAAACAGAAGCAAAAAGTGACGGAGCACATT
CCTCCTTACGATGTTGTACCGTCAATGCGTCCGGTGGTGTAGTGGGGCCGTCACTGAAAGGTTACGAGG
TAACAGACATGATGCAGAAAGCCCTCTTTGATTTCTGAAGCACAGGTTTATGAGGAGGATTTCAATAAC
GAGAGTGACAGCTGACATTTCTTGTAAAGAGTCTGTCTTAAATAATCCAGCAAGAGAGCAATAATT
GAACGTTGCAACCCCGTCCAGCTTAGCGGAAGTACAAAGTAAATGAAAGAAATCTTTGAGTTGGCAA
GATCTTTGCAACTGGTTGTTCTTGTGACAGACACCATCAATCACCCAGCACAACTATAAAGACTTCCTT
AGCACCAATTATGTTTCAATGAAAAGTCTCATCTCAAAGTTTTACAGCGTTGATTAATCTAGAGGA
AAGTCACAAAGTAAACACTTGAATGTTCAACTGGTGGCAGCTGATAAACTGCACAATGCCCCCAGAAA
TGTTTGTGTTATATTGGATGAAAATCAGCTTGAGGATGCATGGAACATCTAGGGGAGTACCTGGAGGC
GTACTGGCGTGCCACCCACACAACAGTAGCACACCCATGACCCCGCTGCTGGGAAGGAATTTGGGCTCC
ACGGCACTCTACCATATCCACAGCAATTTCTGGTTACAGAGTCAGCGAATGAGGCACAGCAACCACT
CCACAGAGAACTCTCAATTGAAAGACGAAGTCTAATGACCTCTGATGAAAATTATCACAATGAAAGGGC
TCGGAAGAGTAGGAACCGCTTGTCTCCAGTTCTCAGCATAGCCGAGATCATTACCCTCTGTGGAAGAA
GATTACCCTGACTCATACCAGGACACTTACAACCCCATAGGAACCGAGGATCACCTGGGGGATATAGCC
ATGACTCCCGACATAGGCTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC210440 protein sequence
Red=Cloning site Green=Tags(s)

MSSSSYAKNGTADGPHSPTSQVARGTTTRRSRLKRS DGSTTSTSFILRQGSADSYTSRPSDSVLSLEEDR
EAIRQEREQAAIQLERAKSKPVFAVKTNVSYCGALDEDPVVPSTAISF DAKDFLHIKEKYNNDDWIGR
LVKEGCEIGFIPSPRLLENIRIQEQKRGRFHGGKSSGNSSSSLGEMVSGTFRATPTSTAKQKQKVEHI
PPYDVVPSMRPVVLVGPLKGYEVTMMQKALFDLKHFRDGRISITRVTADISLAKRSV LNPNPSKRAII
ERSNTRSSLAEVQSEIERIFELARSLQLVVL DADTINHPAQLIKTSLAPIIVHVKVSSPKVLQRLIKSRG
KSQSKHLNVQLVAADKLAQCPEMFDVILDENQLEDACEHLGEYLEAYWRATHHTTSTPMTPLLRNLGS
TALSPYPTAISGLQSRMRHSNHSTENSP IERRSLMTSDENYHNERARKSRNRLSSSQHSRDHYPLVEE
DYPDSYQD TYKPHNRGSPGGYSHDSRHRL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6007_e04.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000726

ORF Size: 1560 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_000726.5](#)

RefSeq Size: 7979 bp

RefSeq ORF: 1563 bp

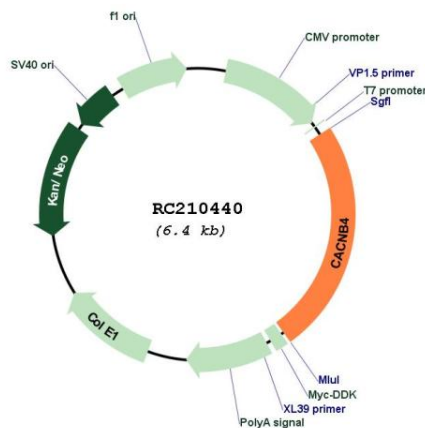
Locus ID: 785

UniProt ID: [O00305](#)

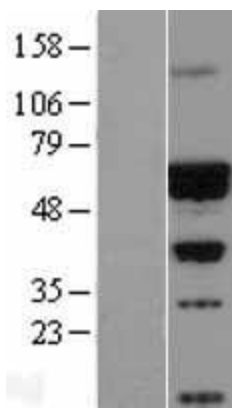
Cytogenetics: 2q23.3

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:	58.2 kDa
Gene Summary:	This gene encodes a member of the beta subunit family of voltage-dependent calcium channel complex proteins. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization and consist of a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. Various versions of each of these subunits exist, either expressed from similar genes or the result of alternative splicing. The protein encoded by this locus plays an important role in calcium channel function 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. Certain mutations in this gene have been associated with idiopathic generalized epilepsy (IGE), juvenile myoclonic epilepsy (JME), and episodic ataxia, type 5. [provided by RefSeq, Aug 2016]

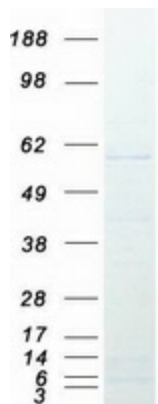
Product images:



Circular map for RC210440



Western blot validation of overexpression lysate (Cat# [LY400240]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210440 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CACNB4 protein (Cat# [TP310440]). The protein was produced from HEK293T cells transfected with CACNB4 cDNA clone (Cat# RC210440) using MegaTran 2.0 (Cat# [TT210002]).