

## Product datasheet for RC235372

### CACNA1B (NM\_001243812) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** CACNA1B (NM\_001243812) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** CACNA1B  
**Synonyms:** BIII; CACNL1A5; CACNN; Cav2.2; DYT23; NEDNEH  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >RC235372 representing NM\_001243812  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGGATCGCC

ATGGTCCGCTTCGGGGACGAGCTGGGCGGCCGCTATGGGGCCCCGGCGGAGAGCGGGCCCCGGGGCG  
 GCGGGGCCGGCGGGCGGGGGCCCGGTCCCGGGGGCTGCAGCCCGCCAGCGGGTCTCTACAAGCA  
 ATCGATCGCGCAGCGCGCGGACCATGGCGCTGTACAACCCATCCCGTCAAGCAGAAGTCTTACC  
 GTCAACCGCTCGCTCTTGTCTTTCAGCGAGGACAACGTCGTCGCAAAATACGCGAAGCGCATCACCGAGT  
 GGCTCCATTGAGTATATGATCCTGGCCACCATCATCGCAACTGCATCGTGTGGCCCTGGAGCAGCA  
 CCTCCCTGATGGGGACAAAACGCCCATGTCCGAGCGGCTGGACGACACGGAGCCCTATTTTCATCGGGATC  
 TTTTGTTCGAGGCAGGGATCAAATCATCGCTCTGGGCTTTGTCTTCCACAAGGGCTCTTACCTGCGGA  
 ACGGCTGGAACGTCATGGACTTCGTGGTCTCCTCACAGGATCCTTCCACGGCTGGAAGTACTTTCGA  
 CCTGCGAACACTGAGGGCTGTGCGTGTGCTGAGGCCCTGAAGCTGGTGTCTGGGATCCAAGTTTCGAG  
 GTGGTGTCAAGTCCATCATGAAGGCCATGGTTCCACTCCTGCAGATTGGGCTGCTTCTCTTTGCCA  
 TCCTCATGTTGCCATCATTGGCTGGAGTTCTACATGGGCAAGTCCACAAGGCCTGTTCCCCAACAG  
 CACAGATGCGGAGCCCGTGGGTGACTTCCCTGTGGCAAGGAGGCCAGCCCGGCTGTGCGAGGGCGAC  
 ACTGAGTGCCGGGAGTACTGGCCAGGACCAACTTTGGCATCACCAACTTTGACAATATCCTGTTTGCCA  
 TCTTGACGGTGTCCAGTGCATCACCATGGAGGGCTGGACTGACATCCTCTATAATAACAACGATGCGGC  
 CGGCAACACCTGGAAGTGGCTCTACTTCACTCCTCATCATCATCGGCTCCTTCTTTCATGCTCAACCTG  
 GTGCTGGGCGTCTCCTGGGGAGTTTGCAAGGAGCGAGAGGGTGGAGAACCGCCGCGCCTTCTGA  
 AGCTGCGCCGGCAGCAGCAGATCGAGCGAGAGCTCAACGGTACCTGGAGTGGATCTTCAAGGGCGGAGGA  
 AGTCATGCTGGCCGAGGAGGACAGGAATGCAGAGGAGAAGTCCCCTTTGGACGTGCTGAAGAGAGCGGCC  
 ACCAAGAAGAGCAGAAATGACCTGATCCACGCAGAGGAGGAGAGACCGGTTTGCAGATCTCTGTGCTG  
 TTGGATCCCCCTTCGCCCAGCCAGCCTCAAGAGCGGGAAGACAGAGAGCTCGTCACTTCCGGAGGAA  
 GGAGAAGATGTTCCGGTTTTTATCCGGCGCATGGTGAAGGCTCAGAGCTTCTACTGGGTGGTGTGTC  
 GTGGTGGCCCTGAACACACTGTGTGGCCATGGTGCATTACAACCAGCCGCGGGCGGCTTACCACGACCC



[View online >](#)

TGTATTTTGCAGAGTTTGTTCCTGGGTCTCTTCTCACAGAGATGTCCCTGAAGATGTATGGCCTGGG  
 GCCCAGAAGCTACTTCCGGTCTCTTCAACTGCTTCGACTTTGGGGTCATCGTGGGGAGCGTCTTTGAA  
 GTGGTCTGGGCGGCCATCAAGCCGGGAAGCTCCTTTGGGATCAGTGTGCTGCGGGCCCTCCGCTGCTGA  
 GGATCTTCAAAGTACGAAGTACTGGAGCTCCCTGCGGAACCTGGTGGTGTCCCTGCTGAACTCCATGAA  
 GTCCATCATCAGCCTGCTTCTTGTCTTCTGTTTATTGTGGTCTTCGCCCTGCTGGGGATGCAGCTG  
 TTTGGGGACAGTTCAACTTCCAGGATGAGACTCCACAACCAACTTCGACACCTTCCCTGCCCCATCC  
 TCACTGTCTTCCAGATCCTGACGGGAGAGGACTGGAATGCAGTGATGTATCACGGGATCGAATCGCAAGG  
 CGGCGTCAGCAAAGGCATGTTCTCGTCTTTTACTTCATTGTCTGACACTGTTCCGAAACTACACTCTG  
 CTGAATGTCTTTTGGCCATCGCTGTGGACAACCTGGCCAACGCCCAAGAGCTGACCAAGGATGAAGAGG  
 AGATGGAAGAAGCAGCCAATCAGAAGCTTGTCTGCAAAAAGGCCAAAGAAGTGGTGAAAGTCAAGCCCAT  
 GTCTGCCGCAACATCTCCATCGCCGCCAGGCAGCAGAAGTCCGCAAGGCGCGCTCGGTGTGGGAGCAG  
 CGGGCCAGCCAGCTACGGCTGCAGAACCTGCGGGCCAGCTGCGAGGCGCTGTACAGCGAGATGGACCCCG  
 AGGAGCGGCTGCGCTTCGCCACTACGCGCCACCTGCGGCCGACATGAAGACGCACCTGGACCGGCCGCT  
 GGTGGTGGAGCTGGGCCGACGGCGCGGGGGCCCGTGGGAGGCAAAGCCGACCTGAGGCTGCGGAG  
 GCCCCGAGGGCGTGCACCTCCGCGCAGGCACCACCGGCACCGCGACAAGGACAAGACCCCGCGCGCG  
 GGGACCAGGACCGAGCAGAGGCCCGAAGGCGGAGAGCGGGGAGCCCGGTGCCCGGAGGAGCGGCCGCG  
 GCCGCACCGCAGCCACAGCAAGGAGGCCGCGGGGCCCGGAGGCGCGGAGCGAGCGCGGCCGAGGCCCA  
 GGCCCCGAGGGCGGCCGCGGCACCACCGGCGCGGCTCCCGGAGGAGGCGGCCGAGCGGGAGCCCCGAC  
 GCCACCGCGCGCACCGGCACCAGGATCCGAGCAAGGAGTGCGCCGCGCCAAGGGCGAGCGGCGCGCGCG  
 GCACCGCGGGCGGCCCGGAGCGGGGCCCGGAGGCGGAGAGCGGGGAGGAGCGGCGCGGGCGCACCGG  
 GCCCGGCACAAGGCGCAGCCTGCTCACGAGGCTGTGGAGAAGGAGACCACGGAGAAGGAGGCCACGGAGA  
 AGGAGGCTGAGATAGTGAAGCCGACAAGGAAAAGGAGCTCCGGAACCACAGCCCCGGGACCCACACTG  
 TGACCTGGAGACCAGTGGGACTGTGACTGTGGTCCCATGCACACACTGCCAGCACCTGTCTCCAGAAG  
 GTGGAGGAACAGCCAGAGGATGCAGACAATCAGCGGAACGTCACCTCGCATGGGCGACTCAGCCCCAGCC  
 CGAACACTATTGTACATATCCCAGTGATGCTGACGGGCCCTTGGGGAAGCCACGGTCTTCCCAGTGG  
 TAACGTGGACCTGGAAGCCAAGCAGAGGGGAAGAAGGAGGTGGAAGCGGATGACGTGATGAGGAGCGGC  
 CCCCAGCCTATCGTCCCATACAGCTCCATGTTCTGTTAAGCCCCACCAACTGCTCCGCGCCTTCTGCC  
 ACTACATCGTGACCATGAGGTAATTCGAGGTGGTCACTTCTCGTGGTATCGCCTTGAGCAGCATCGCCCT  
 GGCTGCTGAGGACCCAGTGCACAGACTCGCCAGGAACAACGCTCTGAAATACCTGGATTACATTTTC  
 ACTGGTGTCTTTACCTTTGAGATGGTGATAAAGATGATCGACTTGGGACTGCTGCTTACCCTGGAGCCT  
 ATTTCCGGGACTTGTGGAACATTCTGGACTTCATTGTGGTCAAGTGCAGGCTTGGTGGCGTTTGTCTTCTC  
 AGGATCCAAAGGAAAGACATCAATACCATCAAGTCTCTGAGAGTCTTGTGTCTGCGGCCCTCAAG  
 ACCATCAAACGGCTGCCAAGCTCAAGGCTGTGTTGACTGTGTGGTGAAGTCCCTGAAGAATGTCTCA  
 ACATCTTGATTGTCTACATGCTCTTCAATGTTTCAATTTGCCGTCAATGCGGTGCAGCTCTTCAAAGGAA  
 GTTTTTTACTGCACAGATGAATCCAAGGAGCTGGAGAGGGACTGCAGGGGTGAGTATTTGGATTATGAG  
 AAGGAGGAAGTGAAGCTCAGCCAGGCAGTGAAGAAATACGACTTTCCTACGACAATGTGCTCTGGG  
 CTCTGCTGACGCTGTTACAGTGTCCACGGGAGAAGGCTGGCCATGGTGTGAAACACTCCGTGGATGC  
 CACCTATGAGGAGCAGGGTCCAAGCCCTGGTACCGCATGGAGCTGTCCATCTTCTACGTGGTCTACTTT  
 GTGGTCTTCCCTTCTTCTCGTCAACATCTTTGTGGCTTGTATCATCACCTCCAGGAGCAGGGGG  
 ACAAGGTGATGTCTGAATGCAGCCTGGAGAAGAACGAGAGGGCTTGCATTGACTTCGCCATCAGCGCAA  
 ACCCTGACACGGTACATGCCCCAAAACCGGCAGTCTTCCAGTATAAGACGTGGACATTTGTGGTCTCC  
 CCGCCCTTTGAATACTTCAATCATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG  
 ATGACCCCTATGAGTACGAGCTGATGCTGAAATGCCTGAACATCGTGTTCACATCCATGTTCTCCATGGA  
 ATGCGTGTGAAGATCATCGCTTTGGGGTGTGAACTATTTAGAGATGCCTGGAATGTCTTTGACTTT  
 GTCAGTGTGGGAAGTATTACTGATATTTAGTAACAGAGATTGCGGAAACGAACAATTTTCAACCC  
 TCAGTCTCCTCCGCTCTTTCGAGCTGCGCGGCTGATCAAGCTGCTCCGCCAGGGCTACACCATCCGCAT  
 CCTGCTGTGGACCTTTGTCCAGTCTTCAAGGCCCTGCCCTACGTGTGTCTGCTCATTGCCATGCTGTT  
 TTCATCTACGCCATCATCGGCATGACAGGTGTTGGGAATATTGCCCTGGATGATGACACCAGCATCAACC  
 GCCACAACAATTCGGGACGTTTTTGAAGCCCTGATGCTGCTGTTTCAAGGAGCGCCACGGGGAGGCGCTG  
 GCACGAGATCATGCTGTCTGCTGAGCAACCAGGCTGTGATGAGCAGGCAATGCCACCAGTGTGGA  
 AGTGACTTTGCCACTTCTACTTCTGCTCTCTTCACTTCTGCTCCTTTCTGATGTTGAACCTCTTTG  
 TGGCTGTGATCATGGACAATTTGAGTACCTCACGCGGGACTCTCCATCCTAGTCTCACCACCTGGA

TGAGTTCATCCGGTCTGGGCTGAATACGACCCGGCTGCGTGTGGGCGCATCAGTTACAATGACATGTTT  
GAGATGCTGAAACACATGTCCCCGCTCTGGGGCTGGGGAAGAAATGCCCTGCTCGAGTTGCTTACAAGC  
GCCTGGTTCGCATGAACATGCCATCTCCAACGAGGACATGACTGTTCACTTCACGTCCACGCTGATGGC  
CCTCATCCGGACGGCACTGGAGATCAAGCTGGCCCCAGCTGGGACAAAGCAGCATCAGTGTGACGCGGAG  
TTGAGGAAGGAGATTTCCGTTGTGTGGGCAATCTGCCCCAGAAGACTTTGGACTGTGTTGTTACACCCC  
ATAAGCCTGATGAGATGACAGTGGGGAAGTTTATGCAGCTCTGATGATATTCGACTTCTACAAGCAGAA  
CAAAACCACAGAGACCAGATGCAGCAGGCTCCTGGAGGCTCTCCAGATGGGTCTGTCCCTGTTC  
CACCTCTGAAGGCCACCCTGGAGCAGACACAGCCGGCTGTGCTCCGAGGAGCCCGGTTTTCTTCGAC  
AGAAGAGTTCCACCTCCCTCAGCAATGGCGGGCCATACAAAACCAAGAGAGTGGCATCAAAGAGTCTGT  
CTCCTGGGGCACTCAAAGGACCCAGGATGCACCCCATGAGGCCAGGCCACCCCTGGAGCGTGGCCACTCC  
ACAGAGATCCCTGTGGGGCGGTGAGGACTGGCTGTGGACGTTGATGCAGAGCATAACCCGGAGGG  
GCCCTGATGGGGAGCCCCAGCCTGGGCTGGAGAGCCAGGGTCGAGCGGCTCCATGCCCCGCTTGGCGC  
CGAGACTCAGCCCGTACAGATGCCAGCCCATGAAGCGTCCATCTCCACGCTGGCCAGCGGCCCGT  
GGGACTCATCTTTCAGCACCACCCGGACCGCCACCCCTAGCCAGGGCTCGTCGCCACCACCACC  
ACCGCTGCCACCCCGCAGGGACAGGAAGCAGAGTCCCTGGAGAAGGGGCCAGCCTGTCTGCCGATAT  
GGATGGCCACCAAGCAGTGCTGTGGGGCCGGGCTGCCCCGGGAGAGGGGCTACAGGCTGCCGGCGG  
GAACGAGAGCGCCGGCAGGAGCGGGGCCGTCCAGGAGCGGAGGCAGCCCTCATCTCCTCCTCGGAGA  
AGCAGCGCTTCTACTCCTGCGACCGTTTGGGGCCGTGAGCCCCGAAGCCCAAGCCCTCCCTCAGCAG  
CCACCAACGTCGCCAACAGCTGGCCAGGAGCCGGGACCCACCCACAGGCCGGCTCAGCCGTGGGCTTT  
CCGAACACAACGCCCTGCTGCAGAGAGACCCCTCAGCCAGCCCTGGCCCTGGCTCTCGAATTGGCTC  
TGACCCTTACCTGGGGCAGCGTCTGGACAGTGAAGCCTCTGTCCACGCCCTGCCTGAGGACTCTCACT  
TTCGAGGAGGCTGTGGCCACCAACTCGGGCCGCTCCTCCAGGACTTCTACGTGTCCTCCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC235372 representing NM\_001243812  
 Red=Cloning site Green=Tags(s)

MVRFGDELGGRYGGPGGGERARGGGAGGAGGPGGGLQPGQRVL YKQSIAGRARTMAL YNPIPVKQNCFT  
 VNRSLFVFSEDNVVRKYAKRITWPPFEYMLATIIANCIVLALAEQHL PDGDKTPMSERLDDTEPYFIGI  
 FCFEAGIKIIALGFVFKGSYLRNGWNVMDV VVLTGILATAGTDFDLRTRLRAVRVLRPLKLVSGIPSLQ  
 VVLSKIMKAMVPLLQIGLLFFAILMFAIIGLEFYMGKFKACFPNSTDAEPVGDFFPCGKEAPARLCEGD  
 TECREYWPGPNFGITNFDNILFAILTVFQCITMEGWTDILYNTNDAAGNTWNWLYIPLIIIGSFFMLNL  
 VLGVLSGEFAKERERVENRRAFLKLRQQQIERELNGYLEWIFKAAEVMLAEEDRNAEEKSPLDVLKRAA  
 TKKSRNDLIHAEEGEDRFADLCAVGSPFARASLKSGETESSYFRRKEKMRFFIRRMVKAQSFYVWVLC  
 VVALNTLCVAMVHYNQPRRLTTTLYFAEFVFLGLFLTEMSLKMYGLGPRS YFRSSFCDFGVIVGSVFE  
 VVWAAIKPGSSFGISVLRALRLLRIFKVKYWSSLRNLVVSL LNSMKSIIISLLFLLFIVV FALLGMQL  
 FGGQFNQDETPTNFDTPAAILTVFQILTGEDWNAV MYHGIESQGGVSKGMFSSFYFIVLTLFGNYTL  
 LNVFLAIAVDNLANAQELTKDEEMEEAANQKLALQKAKEVAEVS PMSAANISIAARQQNSAKARSVWEQ  
 RASQLRLQNLASCEALYSEMDPEERLRFATTRHLRPMKTHLDRPLVVELGRDGARGPVGGKARPEAAE  
 APEGVDPPRRHHRDRDKDTPAAGDQDRAEAPKAESGEPGAREERPRPHRSHSKEAAGPPEARSERGRGP  
 GPEGGRHHRHRSPEEAEREPRRHRHRHQDP SKECAGAKGERRARHRGPRAGPREAESGEEPARRHR  
 ARHKAQPAHEAVEKETTEKEATEKEAEIVEADKEKELRNHQPREPHCDLETSGTVTVGPMHTLPSTCLQK  
 VEEQPEDADNRQNVTRMGSQPPDPNTIVHIPVMLTGPLGEATVVP SGNVDLESQAEGKKEVEADDVMRSG  
 PRPIVYSSMFCLSPTNLLRRFCHYIVTMR YFEVVILVVIALSSIALAEDPVRTDSPRNNAKLYDYIF  
 TGVFTFEMVIK MIDLGLLLHPGAYFRDLWNILDFIVVSGALVAF AFSGSKGKDINTIKSLRVLRLRPLK  
 TIKRLPKLKAVFDCVVNSLKNVLNILIVYMLFMFIFAVIAVQLFKGKFFYCTDESKELERDCRGQYLDYE  
 KEEVEAQRQWKYDFHYDNVLWALLTLFTVSTGEGWPMVLKHSVDATYEEQGPSGYRMELSIFVYVYF  
 VVFPFFVNI FVALIIITFQEQGDVMSECSLEKNERACIDFAISAKPLTRYMPQNRQSFQYKWTTFVVS  
 PPFYFIMAMIALNTVLMKFYDAPYEYELMLKCLNIVFTSMFSMECVLKIIAFGVLNYFRDAWNVDFD  
 VTVLGSITDILVTEIAETNNFINLSFLRLFRAARLIKLLRQGYTIRILLWTFVQSFKALPYVCLLIAMLF  
 FIYAIIGMQVFGNIALDDDT SINRHNNFRFTLQALMLLFRSATGEAWHEIMLSCLSNQACDEQANATECG  
 SDFAYFYFVSFIFLCSFLMLNLFVAVIMDNFEYLTRDSSILGPHHLDEFIRVWAEYDPAACGRISYNDMF  
 EMLKHMSPPLGLGKKCPARVAYKRLVRMNMPISNEDMTVHFTSTLMALIRTALEIKLAPAGTKQHQCDAE  
 LRKEISVVWANLPQKTLDLLVPPHKPD EMTVGKVYAALMIFDFYKQNKTRDQMQQAPGGLSQMGPVSLF  
 HPLKATLEQTQPAVLRGARVFLRQKSSTSLNNGGAIQNQESGIKESVSWGTQRTQDAPHEARPLERGH  
 TEIPVGRSGALAVDVQMSITRRGPDGEPQPLESQGRAASMPRLAAETQPVTDASPMKRSISTLAQRPR  
 GTHLCSTTPDRPPPSQASSHHHHRCHRRRDRKQRSLEKGPSLSADMDGAPSSAVGPGLPPGEGPTGCR  
 ERERRQERGRSQERRQPSSSSSSEKQRFYSCDRFGGREPPKPKPSLSSHPTSPTAGQEPGPHQAGS  
 AVGF PNTTPCCRETSPASPWPLALELALTLTWGSVWTVRPLSTPCLRTLSSLRRLWPPTRAAPPGLPTCPP

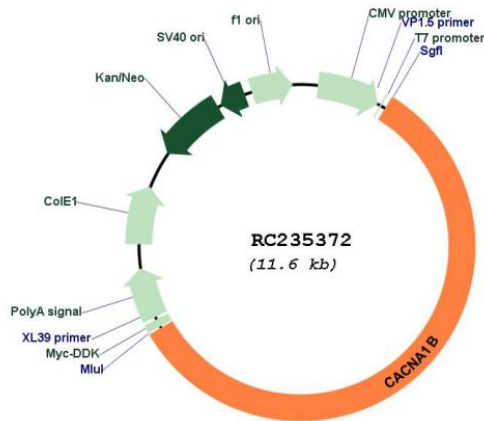
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001243812

ORF Size: 6711 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001243812.2</a>
<b>RefSeq Size:</b>	9618 bp
<b>RefSeq ORF:</b>	6714 bp
<b>Locus ID:</b>	774
<b>UniProt ID:</b>	<a href="#">Q00975</a>
<b>Cytogenetics:</b>	9q34.3
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Calcium, Transmembrane
<b>Protein Pathways:</b>	Calcium signaling pathway, MAPK signaling pathway, Taste transduction, Type II diabetes mellitus
<b>MW:</b>	252.2 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is the pore-forming subunit of an N-type voltage-dependent calcium channel, which controls neurotransmitter release from neurons. The encoded protein forms a complex with alpha-2, beta, and delta subunits to form the high-voltage activated channel. This channel is sensitive to omega-conotoxin-GVIA and omega-agatoxin-IIIa but insensitive to dihydropyridines. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2011]