

Product datasheet for **SC301025**

CACNB4 (NM_001005746) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNB4 (NM_001005746) Human Untagged Clone
Tag:	Tag Free
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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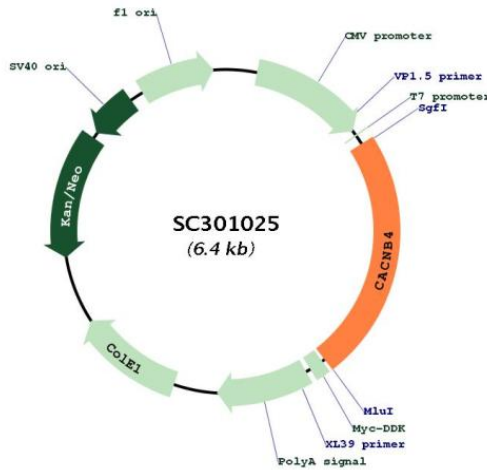
Fully Sequenced ORF: >SC301025 representing NM_001005746.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGGATCGCC
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TCGACCAGCTTCATCCTCAGACAGGGTTCAGCGGATTCTACACAAGCAGGCCGTCTGACTCCGATGTC
TCTTTGGAAGAGGACCGGGAAGCAATTCGACAGGAGAGAGAACAGCAAGCAGCTATCCAGCTTGAGAGA
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TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
  
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Restriction Sites: SgfI-MluI

Plasmid Map:



ACCN: NM_001005746

Insert Size:	1509 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	<ol style="list-style-type: none"> 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:	<u>NM_001005746.2</u>
RefSeq Size:	7929 bp
RefSeq ORF:	1509 bp
Locus ID:	785
UniProt ID:	<u>O00305</u>
Cytogenetics:	2q23.3
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:	56.4 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]

Transcript Variant: This variant (3) differs in the 5' UTR and 5' coding region, compared to variant 2. The resulting isoform (c) has a shorter and distinct N-terminus, compared to isoform b. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.