

Product datasheet for **RG227880**

CACNB4 (NM_001145798) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNB4 (NM_001145798) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CACNB4
Synonyms:	CAB4; CACNLB4; EA5; EIG9; EJM; EJM4; EJM6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG227880 representing NM_001145798
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTCCTCCTCCTCTACGCCAAGAACGGGACCGCGGACGGCCGCACTCCCCACCTCGCAGGTGGCCC
 GAGGCACCACAACCCGGAGGAGCAGGTTGAAAAGATCCGATGGCAGCACCACTTCGACCAGCTTCATCCT
 CAGACAGGGTTCAGCGGATTCCTACACAAGCAGCCGTCTGACTCCGATGTCTCTTTGGAAGAGGACCGG
 GAAGCAATTCGACAGGAGAGAGAACAGCAAGCAGCTATCCAGCTTGAGAGAGCAAAGTCCAAACCTGTAG
 CATTTGCCGTGAAGACAAATGTGAGCTACTGCGGCGCCCTGGACGAGGATGTGCCTGTTCCAAGCACAGC
 TATCTCCTTTGATGCTAAAGACTTTCTACATATTAAGAGAAAATAACAATGATTGGTGGATAGGAAGG
 CTGGTAAAGAGGGCTGTGAAATGGCTTCATTCCAAGTCCACTCAGATTGGAGAACATACGGATCCAGC
 AAGAACAAAAAGAGGACGTTTTACGGAGGGAAATCAAGTGGAAATCTTCTTCAAGTCTTGGAGAAAT
 GGTATCTGGGACATTCGAGCAACTCCACATCAACAGCAAAACAGAAGCAAAAAGTGACGGAGCACATT
 CCTCCTTACGATGTTGTACCGTCAATGCGTCCGGTGGTGTAGTGGGGCCGTCACGTGAAAGGTTACGAGG
 TAACAGACATGATGCAGAAAGCCCTCTTTGATTTCTGAAGCACAGGTTTGATGGGAGGATTTCAATAAC
 GAGAGTGACAGCTGACATTTCTCTTGCTAAGAGGTCTGTCTAAATAATCCCAGCAAGAGAGCAATAATT
 GAACGTTGCAACCCCGTCCAGCTTAGCGGAAGTACAAAGTAAATGAAAGAAATCTTTGAGTTGGCAA
 GATCTTTGCAACTGGTTGTTCTTGATGCAGACACCATCAATCACCCAGCACAACTTATAAAGACTTCCTT
 AGCACCAATTATTGTTTATGTAAGTCTCATCTCAAAGGTTTTACAGCGGTTGATTAATCTAGAGGA
 AAGTCACAAAGTAAACACTTGAATGTTCAACTGGTGGCAGCTGATAAACTGCACAATGCCCCCAAGTC
 AGCGAATGAGGCACAGCAACCACTCCACAGAGAAGTCTCAATTGAAAGACGAAGTCTAATGACCTCTGA
 TAAAAATTATCACAATGAAAGGGCTCGGAAGAGTAGGAACCGCTTGTCTTCCAGTTCTCAGCATAGCCGA
 GATCATTACCCTCTGTGGAAGAAGATTACCCTGACTCATACCAGGACACTTACAAACCCATAGGAACC
 GAGGATCACCTGGGGATATAGCCATGACTCCCGACATAGGCTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG227880 representing NM_001145798
 Red=Cloning site Green=Tags(s)

MSSSSYAKNGTADGPHSPTSQVARGTTTRRSRLKRS DGSTTSTSFILRQGSADSYTSRPSDSVLSLEEDR
 EAIRQEREQAAIQLERAKSKPVFAVKTNVSYCGALDEDVVPVSTAI SFDAKDFLHIKEKYNNDDWWIGR
 LVKEGCEIGFIPSPLRLENIRIQEQKRGRFHGGKSSGNSSSSLGEMVSGTFRATPTSTAKQKQVTEHI
 PPYDVVPSMRPVVLVGPSLKGVEVTDMMQKALFDFLKHFRFDGRISITRVTADISLAKRSVLNPNPSKRAII
 ERSNTRSSLAEVQSEIERIFELARSLQLVVL DADTINHPAQLIKTSLAPIIVHVKVSSPKVLQRLIKSRG
 KSQSKHLNVQLVAADKLAQCPSQMRHNSHSTENSP IERRSLMTSDENYHNERARKSRNRLSSSSQHSR
 DHYPLVEEDYPDSYQDTYKPHNRGSPGGYSHDSRHRL

TRTRPLE - GFP Tag - V

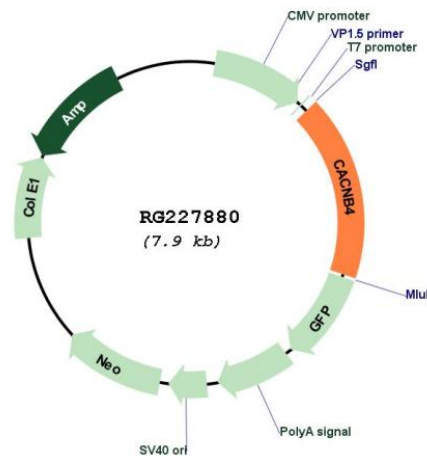
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001145798

ORF Size: 1374 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:	<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:	NM_001145798.2
RefSeq Size:	7793 bp
RefSeq ORF:	1377 bp
Locus ID:	785
UniProt ID:	O00305
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
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]