

## Product datasheet for **MG223100**

### **Cacnb2 (NM\_023116) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Cacnb2 (NM_023116) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cacnb2
Synonyms:	AW060387; CAB2; Cavbeta2; Cchb2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>MG223100 representing NM\_023116  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGTCCAAAGCGACACGTCCAAGTCGCCTCCCGTAGCGCGGTGGCGCAGGAGACCAGATGGAGCTGC  
TGGAGAGCGCGGCTCCCGCGGGGCGCTCGGAGCACAGTCTATGGAAAAGGAGCCAGGAGGAAAAATAG  
ATTTAAAGGCTCGGATGGAAGCACATCGTCAGACACTACCTCAAACAGTTTTGTCCGCCAGGGTTCGGCA  
GACTCCTACACCAGCGCCCATCCGATTAGATGTGTCTTTGGAAGAGGACCGGGAGGCAGTACGTAGAG  
AAGCTGAGCGGCAGGCACAGGCACAGTTGGAAAAAGCAAAGACAAAACCTGTTGCATTTGCGATTCGGAC  
CAATGTCAGATACAGCGCAGCCAGGAGGATGACGTTCCGGTGCCTGGCATGGCCATCTCCTTCGAGGCC  
AAAGATTTCTGCATGTTAAAGAAAAATTAATAATGACTGGTGGATAGGACGGCTGGTTAAAGAAGGCT  
GTGAAATCGGATTTATTCGAAGCCAGTCAAACAGAGAATGAGGCTACAGCACGAACAGAGAGCCAA  
GCAAGGGAAATCTATTCAGTAATCAGGAGGAATTCATCATCCAGTTTGGGTGACATAGTGCCAGT  
TCCAGAAAATCGACACCGCGCTCATCTGCTATAGACATAGATGCTACTGGCTTAGATGCAGAAGAGAATG  
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AAGAATGCCCTTCTTTAAGAAGACAGAGCACACTCCTCCTTATGATGTGGTACCTTCCATGCGACCAGTG  
GTGCTGGTGGGCCGCTCTGAAGGGGTATGAGGTCACAGATATGATGCAAAAAGCACTGTTTGATTTTC  
TAAACACAGATTTGAAGGGCGGATATCCATCACAAGAGTCACTGCTGACATCTCCTTGCCAAACGCTC  
AGATTAACAATCCCAGTAAGCATGCAATCATAGAAAGATCCAACACAAGGTCCAGCTTAGCGGAAGTT  
CAGAGTGAATTTGAAAGGATTTTGAAGTTGCAAGAACACTGCAATTGGTAGTCCCTGACGCGGATACAA  
TTAATCACCCAGCTCAACTCAGTAAGACCTCTTTGGCCCTATCATAGTGTACGTAAAGATTTCTCTCC  
CAAGGTTTTACAAGGTTGATAAAATCTCGAGGGAAATCTCAAGCAAAACACCTCAATGTCCAGATGGTA  
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CAGCGGGACAGGTCGAGGCTCTTAGGCAAGAGACGTTTACTCTGAAACCAAGAGAGCCGAGACTCT  
GCCTACGTGGAGCAAAGGAAGATTATTCACATGAACATGTGGACCGGTATGTCCACACCGCGAGCATA  
ACCACAGAGAGGAGCCACAGCAGCAATGGCCACAGACACAGGGAGTCTCGCCACCGCTTAGGGACAT  
GGTTCGAGACCAGGACCAATGAGTGCATCAAACAACGAAGCCGGCATAAATCTAAGGATCGCTACTGT  
GACAAGGAGGGGAAGTAATATCCAAGAGAAGGAATGAGGCTGGCGAGTGAACAGGGATGTATACATCC  
GCCAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG223100 representing NM\_023116  
 Red=Cloning site Green=Tags(s)

MVQSDTSKSPVAAVAQESQMELLESAAPAGALGAQSYGKGARRKNRFGSDGSTSSDSTTSNSFVRQGSA  
 DSYTSRPSDSVLEEDREAVRREAERQAQAQLEKAKTKPVAFVAVRTNVRYSAAQEDDVPVPGMAISFEA  
 KDFLHVKEKFNNDWWIGRLVKEGCEIGFIPSPVKLENMRLQHEQRAKQKGFYSSKSGGNSSSLGDIVPS  
 SRKSTPPSSAIDIDATGLDAEENDIPANHRSPKPSANSVTSPHSKEKRMPPFFKKTEHTPPYDVVPSMRPV  
 VLVGPSLKGVEVTDMMQKALDFLKHFRFGRISITRVTADISLAKRSVLNPNPSKHAIERSNTRSSLAEV  
 QSEIERIFELARTLQLVVLADDTINHPAQLSKTSLAPIIYVVKISSPKVLQRLIKSRGKSQAKHLNVQMV  
 AADKLAQCPPQESFDVILDENQLEDACEHLADYLEAYWKATHPPSGNLPNPLLSRTLASSTLPLSPTLAS  
 NSQGSQGDQRPDARSAPRSASQAEEEPCLPEPVKKSQHRSSATHQNHRSGTGRGLSRQETFDSQESRDS  
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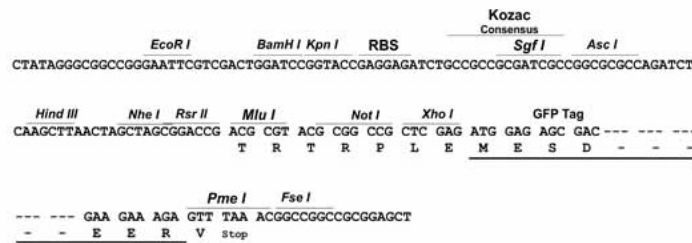
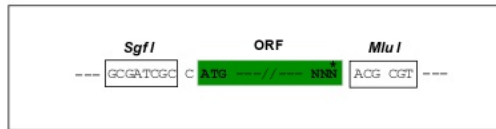
TRTRPLE - GFP Tag - V

**Restriction Sites:**

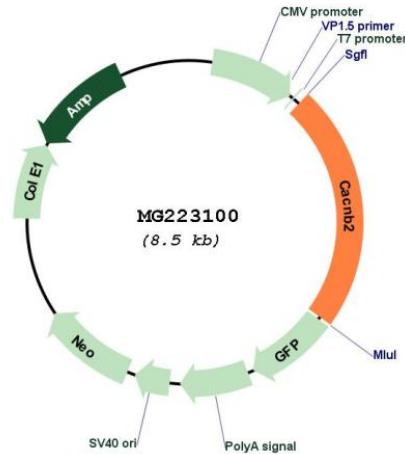
SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM\_023116

ORF Size: 1965 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_023116.4](#), [NP\\_075605.1](#)

**RefSeq Size:** 3945 bp

**RefSeq ORF:** 1968 bp

**Locus ID:** 12296

**UniProt ID:** [Q8CC27](#)

**Cytogenetics:** 2 10.7 cM

**Gene Summary:** The beta subunit of voltage-dependent calcium channels contributes to the function of the calcium channel by increasing peak calcium current, shifting the voltage dependencies of activation and inactivation, modulating G protein inhibition and controlling the alpha-1 subunit membrane targeting.[UniProtKB/Swiss-Prot Function]