

## Product datasheet for **MG207945**

### Camk2g (BC025597) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Camk2g (BC025597) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Camk2g
Synonyms:	Camkg
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG207945 representing BC025597  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCACCACCGCCACCTGCACCCGCTTCACCGACGACTACCAGCTTTTCGAGGAGCTCGCAAGGGTG  
 CCTTCTCAGTGGTCCGGAGGTGTGTAAGAAAACATCTACGCAGGAATATGCTGCAAAAATCATCAATAC  
 CAAGAAGTTGTCCGCCGAGATCATCAGAACTAGAACGAGAGGCCCGGATATGCCGACTTCTGAAACAT  
 CCAAACATTGTGCGTCTCCATGACAGTATTTCTGAAGAAGGGTTTCACTACCTCGTGTGGACCTTGTTA  
 CCGGAGGGGAGTTGTTTGAAGACATTGTGGCCAGAGAGTACTACAGTGAAGCTGATGCCAGCCACTGTAT  
 ACATCAGATCCTGGAGAGTGTAAACCACATCCACCAGCATGACATCGTCCACCGGGATCTGAAGCCTGAG  
 AACTTGTCTGGCGAGTAAATGCAAGGGTGTGCGGTCAAGCTAGCTGATTTTGGCCTGGCCATCGAAG  
 TACAGGGAGAGCAGCAGGCTTGGTTTGGTTTGGCCGACCCAGGTTACTTGTCCCTGAGGTCTTGAG  
 GAAAGATCCCTATGGAACCTGTGGACATCTGGCCTGCGGGTTCATCTGTATATCCTCTGGTGGGC  
 TACCCTCCCTTCTGGGATGAGGATCAGCACAAGCTGTATCAGCAGATCAAAGCTGGAGCCTACGATTTCC  
 CATCACCAGAATGGGACACAGTCACTCCTGAAGCTAAGAATTGATCAACCAGATGCTGACCATAAACCC  
 TGCAAAGCGCATCACGGCCGACCAGGCTCTCAAGCACCCATGGGTCTGTCAACGGTCTACGGTGGCATCC  
 ATGATGCATCGCAAGAGACGGTAGAGTGTACGCAAAATTAACGCCCGGAGAAAATGAAGGGTGCCA  
 TCCTCACAAACATGCTTGTCTCCAGGAACCTTTTCACTGCCCCAAAAGCCTATTGAACAAGAAGTCAAGTGG  
 CGGTGTCAAGGAACCAAAACCACCGTGGTACATAATGCTACAGATGGGATCAAGGGCTCCACAGAGAGC  
 TGTAACACCACTACAGAAGACGAAGATCTCAAAGTGAGAAAACAAGAAATCATTAAGATCACAGAACAAC  
 TGATCGAAGCCATCAACAATGGGACTTTGAGGCCTACACGAAGATTTGTGACCCGGCCTCACATCCTT  
 TGAGCCAGAAGCCCTTGGTAACCTCGTGAAGGAATGGATTTCCATAAGTTTTACTTTGAGAATCTCCTG  
 TCCAAGAACAGCAAGCCTATCCACACCACCATCTAAACCTCACGTCCACGTGATTGGGAGGACGCAG  
 CTTGCATCGCCTATATCCGGCTCACTCAGTACATCGACGGCAGGGTCCGCTCGCACCAGTCAAGTCAAG  
 GGAGACCCGGGTGTGGCACCAGCCGGATGGCAAGTGGCTCAATGTCCACTATCACTGCTCAGGGGCCCT  
 GCCGACCGCTACAG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG207945 representing BC025597  
 Red=Cloning site Green=Tags(s)

MATTATCTRFDDYQLFEELGKGAFSVVRRVCVKKTSTQEYAAKIINTKKLSARDHQKLEREARICRLLKH  
 PNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIHQILESUNHIIHQHDIVHRDLKPE  
 NLLLASKCKGAAVKLADFLAIEVQGEQQAWFGFAGTPGYLSPEVLRKDPYKPVDIWACGVILYILLVG  
 YPPFWDEDQHKLYQQIKAGAYDFPSPEWDTVTPEAKNLINQMLTINPAKRITADQALKHPWVCQRSTVAS  
 MMHRQETVECLRKFNARRKLGAILTTMLVSRNFSAAKSLLNKSDGGVKEPQTTVVHNATDGIKSTES  
 CNTTTEDEDLKVRKQEI IKITEQLIEAINNGDFEAYTKICDPGLTSFEPEALGNLVEGMDHFHKFYFENLL  
 SKNSKPIHTTILNPHVHVI GEDAACIAYIRLTQYIDGQGRPRTSQSEETRVWHRDGGKWLNVHYHCSGAP  
 AAPLQ

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-Mlul

## Cloning Scheme:

Cloning sites used for ORF Shutting:



*EcoRI*
*BamHI* *KpnI*
RBS
Kozac  
Consensus
*SgfI*
*AscI*

CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGGCCAGATCT

*HindIII*
*NheI* *RsrII*
*MluI*
*NotI*
*XhoI*
GFP Tag

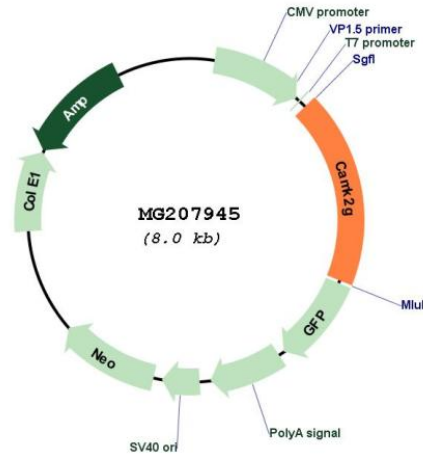
CAAGCTTAAGCTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- --- ---

T R T R P L E
M E S D - - -

*PmeI*
*FseI*

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

- - - E E R V Stop

**Plasmid Map:**


**ACCN:** BC025597

**ORF Size:** 1487 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>	<u><a href="#">BC025597</a></u> , <u><a href="#">AAH25597</a></u>
<b>RefSeq Size:</b>	3572 bp
<b>RefSeq ORF:</b>	1487 bp
<b>Locus ID:</b>	12325
<b>Cytogenetics:</b>	14 A3
<b>Gene Summary:</b>	Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in sarcoplasmic reticulum Ca(2+) transport in skeletal muscle and may function in dendritic spine and synapse formation and neuronal plasticity. In slow-twitch muscles, is involved in regulation of sarcoplasmic reticulum (SR) Ca(2+) transport and in fast-twitch muscle participates in the control of Ca(2+) release from the SR through phosphorylation of the ryanodine receptor-coupling factor triadin. In neurons, may participate in the promotion of dendritic spine and synapse formation and maintenance of synaptic plasticity which enables long-term potentiation (LTP) and hippocampus-dependent learning (By similarity).[UniProtKB/Swiss-Prot Function]