

Product datasheet for **MG224391**

Camk2g (NM_178597) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Camk2g (NM_178597) 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:

>MG224391 representing NM_178597
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCACCACCGCCACCTGCACCCGCTTCACCGACGACTACCAGCTTTTCGAGGAGCTCGCAAGGGTG
 CCTTCTCAGTGGTCCGGAGGTGTGTAAGAAAACATCTACGCAGGAATATGCTGCAAAAATCATCAATAC
 CAAGAAGTTGTCCGCCGAGATCATCAGAACTAGAACGAGAGGCCCGGATATGCCGACTTCTGAAACAT
 CCAAACATTGTGCGTCTCCATGACAGTATTTCTGAAGAAGGGTTTCACTACCTCGTGTGTTGACCTTGTTA
 CCGGAGGGGAGTTGTTTGAAGACATTGTGGCCAGAGAGTACTACAGTGAAGCTGATGCCAGCCACTGTAT
 ACATCAGATCCTGGAGAGTGTTAACCACATCCACCAGCATGACATCGTCCACCGGATCTGAAGCCTGAG
 AACTTGTCTGGCGAGTAAATGCAAGGGTGTGCGGTCAAGCTAGCTGATTTTGGCCTGGCCATCGAAG
 TACAGGGAGAGCAGCAGGCTTGGTTTGGTTTTGCCGCCACCCAGGTTACTTGTCCCTGAGGTCTTGAG
 GAAAGATCCCTATGGAACCTGTGGACATCTGGCCTGCGGGTTCATCCTGTATATCCTCCTGGTGGGC
 TACCCTCCCTTCTGGGATGAGGATCAGCACAAGCTGTATCAGCAGATCAAAGCTGGAGCCTACGATTTC
 CATCACCAGAATGGGACACAGTCACTCCTGAAGCTAAGAATTGATCAACCAGATGCTGACCATAAACCC
 TGCAAAGCGCATCACGGCCGACCAGGCTCTCAAGCACCCATGGGTCTGTCAACGGTCTACGGTGGCATCC
 ATGATGCATCGCAAGAGACGGTAGAGTGCTTACGCAAAATCAACGCCCGGAGAAAACCTGAAGGGTGCCA
 TCCTCACAAACATGCTTGTCTCCAGGAACCTTTTACAGTGCAAAAGCCTATTGAACAAGAAGTCAGATGG
 CGGTGTCAAGAAAAGGAGTCCAGTTCAGCGTGCACCTAATGCCACAGAGCAACAACAAAACAGTCTC
 GTAAGCCAGCCCAAGAGCCTGCGCCCTGCAGACGGCCATGGAACCACAACCACCGTGGTACATAATG
 TACAGATGGGATCAAGGGCTCCACAGAGAGCTGAACACCACTACAGAAGACGAAGACTCAAAGTGTGAG
 AAAACAAGAAATCATTAAAGATCACAGAACAAGTATCGAAGCCATCAACAATGGGGACTTTGAGGCCATC
 ACGAAGATTTGTACCCGGCCCTCACATCCTTTGAGCCAGAAGCCCTTGGTAACCTCGTGGAAAGGATGG
 ATTTCCATAAGTTTTACTTTGAGAATCTCCTGTCCAAGAACAGCAAGCCTATCCACACCACCATCTAA
 CCCTCACGTCCACGTGATTGGGGAGGACGAGCTTGCATCGCCTATATCCGGTCACTCAGTACATCGAC
 GGGCAGGGTGGCCTCGCACCAGTCAGTCAGAGGAGACCCGGGTGTGGCACCGCCGGATGGCAAGTGGC
 TCAATGTCCACTACTGCTCAGGGGCCCTGCCGCACCGCTACAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG224391 representing NM_178597
 Red=Cloning site Green=Tags(s)

MATTATCTRFTDDYQLFEELGKGAFSVVRRVCVKTSTQEYAAKIINTKKLSARDHQKLEREARICRLLKH
 PNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIHQILESVNHIHQHDIVHRDLKPE
 NLLLASKCKGAAVKLADFLAIEVQGEQAWFGFAGTPGYLSPEVLRKDPYGKPVDIWACGVILYILLVG
 YPPFWDEDQHKLYQIKAGAYDFPSPEWDTVTPEAKNLINQMLTINPAKRITADQALKHPWVCQRSTVAS
 MMHRQETVECLRKFNARRKLGAILTTMLVSRNFSAAKSLLNKSDGGVKKRKSSSSVHLMQSNKNSL
 VSPAQEPAPLQTAMEPQTTVVHNATDGIKSTESCNTTTEDEDLKVRKQEI I KITEQLIEAINNGDFEAY
 TKICDPGLTSFEPEALGNLVEGMDFHKFYFENLLSKNSKPIHTTILNPHVHVIGEDAACIAYIRLTQYID
 GQGRPRTSQSEETRVWHRRDGKWLNVHYHCSGAPAAPLQ

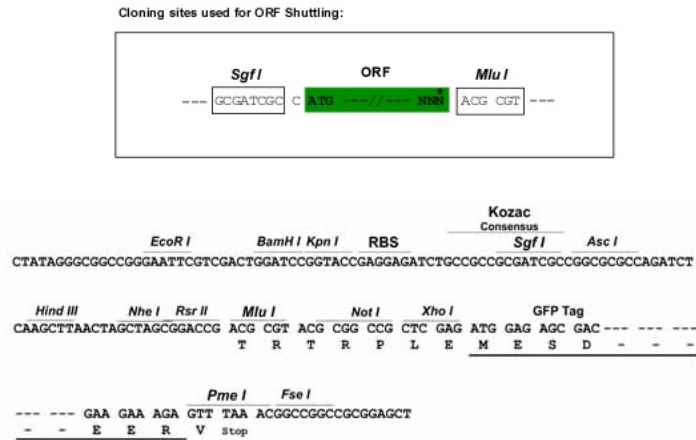
TRTRPLE - GFP Tag - V

Chromatograms:

https://cdn.origene.com/chromatograms/ja3074_b09.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_178597

ORF Size: 1587 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 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.

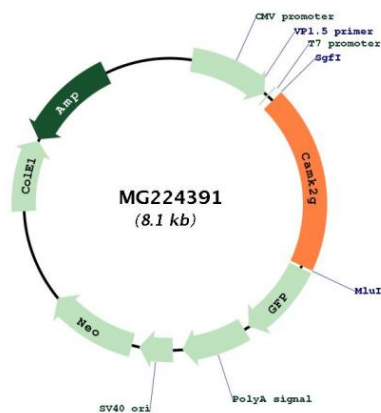
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_178597.5](#)
RefSeq Size: 3726 bp
RefSeq ORF: 1590 bp
Locus ID: 12325
UniProt ID: [Q923T9](#)
Cytogenetics: 14 A3

Gene Summary: 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]

Product images:



Circular map for MG224391