

## Product datasheet for **MR208304**

### Camk2g (NM\_001039138) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Camk2g (NM_001039138) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Camk2g
Synonyms:	Camkg
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208304 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCACCACCGCCACCTGCACCCGCTTCACCGACGACTACCAGCTTTTCGAGGAGCTCGCAAGGGTG  
 CCTTCTCAGTGGTCCGGAGGTGTGTAAGAAAACATCTACGCAGGAATATGCTGCAAAAATCATCAATAC  
 CAAGAAGTTGTCCGCCGAGATCATCAGAACTAGAACGAGAGGCCGGATATGCCGACTTCTGAAACAT  
 CCAAACATTGTGCGTCTCCATGACAGTATTTCTGAAGAAGGGTTTCACTACCTCGTGTGGACCTTGTTA  
 CCGGAGGGGAGTTGTTTGAAGACATTGTGGCCAGAGAGTACTACAGTGAAGCTGATGCCAGCCACTGTAT  
 ACATCAGATCCTGGAGAGTGTTAACCACATCCACCAGCATGACATCGTCCACCGGATCTGAAGCCTGAG  
 AACTTGTCTGGCGAGTAAATGCAAGGGTGTGCGGTCAAGCTAGCTGATTTTGGCCTGGCCATCGAAG  
 TACAGGGAGAGCAGCAGGCTTGGTTTGGTTTGGCCGACCCAGGTTACTTGTCCCTGAGGTCTTGAG  
 GAAAGATCCCTATGGAACCTGTGGACATCTGGCCTGCGGGTCACTCTGTATATCCTCTGGTGGGC  
 TACCCTCCCTTCTGGGATGAGGATCAGCACAAGCTGTATCAGCAGATCAAAGCTGGAGCCTACGATTTC  
 CATCACCAGAATGGGACACAGTCACTCCTGAAGCTAAGAATTGATCAACCAGATGCTGACCATAAACCC  
 TGCAAAGCGCATCACGGCCGACCAGGCTCTCAAGCACCCATGGGTCTGTCAACGGTCTACGGTGGCATCC  
 ATGATGCATCGCAAGAGACGGTAGAGTGCTTACGCAAAATCAACGCCCGGAGAAAACCTGAAGGGTGCCA  
 TCCTCACAAACCATGCTTGTCTCCAGGAATTTTTCAGCTGCCAAAAGCCTATTGAACAAGAAGTCAGATGG  
 CGGTGTCAAGCCACAGAGCAACAACAAAACAGTCTCGTAAGCCAGCCCAAGAGCCTGCGCCCTTGCA  
 ACGCCATGGAACCACAAACCACCGTGGTACATAATGCTACAGATGGGATCAAGGGCTCCACAGAGAGCT  
 GTAACCACTACAGAAGACGAAGATCTCAAAGTGAGAAAACAAGAAATCATTAAAGATCACAGAACAAT  
 GATCGAAGCCATCAACAATGGGGACTTTGAGGCCCTACACGAAGATTTGTGACCCGGCCTCACATCCTTT  
 GAGCCAGAAGCCCTTGGTAACCTCGTGGGAAGGAATGGATTTCCATAAGTTTTACTTTGAGAACTCCTGT  
 CCAAGAACAGCAAGCCTATCCACACCACCATCCTAAACCCTCACGTCCACGTGATTGGGAGGACGCAGC  
 TTGCATCGCTATATCCGGCTCACTCAGTACATCGACGGGAGGGTGGCCTCGCACCAGTCAGTCAGAG  
 GAGACCCGGGTGTGGCACCGCCGGGACGGCAAGTGGCTCAATGTCCACTACTGCTCAGGGGCCCTG  
 CCGCACCGCTACAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208304 protein sequence  
 Red=Cloning site Green=Tags(s)

MATTATCTRFTDDYQLFEELGKGAFSVVRRVCVKTSTQEYAAKIINTKKLSARDHQKLEREARICRLLKH  
 PNIVRLHDSISEEGFHLYVFDLVTGGELFEDIVAREYYSEADASHCIHQILESVNHIHQHDIVHRDLKPE  
 NLLLASKCKGAAVKLADFLAIEVQGEQAWFGFAGTPGYLSPEVLRKDPYGKPVDIWACGVILYILLVG  
 YPPFWDEDQHKL YQIKAGAYDFPSPEWDTVTPEAKNLINQMLTINPAKRITADQALKHPWVCQRSTVAS  
 MMHRQETVECLRKFNARRKLGAILTTMLVSRNFSAAKSLNKKSDGGVQPQSNKNSLVSPAQEPAPLQ  
 TAMEPQTTVVHNATDGIKSTESCNTTTEDELKVRKQEI IKITEQLIEAINNGDFEAYTKICDPGLTSF  
 EPEALGNLVEGMDFHKFYFENLLSKNSKPIHTTILNPHVHVIGEDAACIAYIRLTQYIDGQGRPRTSQSE  
 ETRVWHRRDGKWLNVVHYHCSGAPAAPLQ

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001039138

**ORF Size:** 1557 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:**

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\\_001039138.1](#), [NM\\_001039138.2](#), [NP\\_001034227.1](#)

**RefSeq Size:** 3693 bp

**RefSeq ORF:** 1557 bp

**Locus ID:** 12325

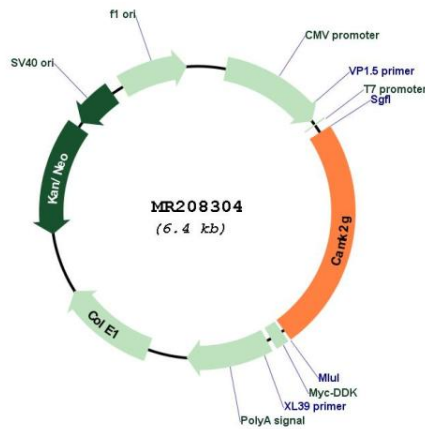
**UniProt ID:** [Q923T9](#)

**Cytogenetics:** 14 A3

**MW:** 58.4 kDa

**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 MR208304