

Product datasheet for **RG238797**

CAMK2G (NM_001204492) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2G (NM_001204492) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CAMK2G
Synonyms:	CAMK; CAMK-II; CAMKG; MRD59
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG238797 representing NM_001204492.
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGGATCGCC
ATGGCCACCACCACCCTGCACCCGTTTCACCGACGACTACCAGCTCTTCGAGGAGCTTGCAAGGGT
GCTTTCTCTGTGGTCCGAGGTGTGTGAAGAAAACCTCCACGCAGGAGTACGCAGCAAAAATCATCAAT
ACCAAGAAGTTGTCTGCCCGGGATCACCAGAACTAGAAGCTGAGGCTCGGATATGTCGACTTCTGAAA
CATCCAAACATCGTGCCTCCATGACAGTATTTCTGAAGAAGGGTTTACTACCTCGTGTTTGACCTT
GTTACCGCGGGGAGCTGTTTGAAGACATTGTGGCCAGAGAGTACTACAGTGAAGCAGATGCCAGCCAC
TGTATACATCAGATTCTGGAGAGTGTAAACACATCCACCAGCATGACATCGTCCACAGGACCTGAAG
CCTGAGAACCTGCTGCTGGCAGTAAATGCAAGGGTGCCCGCTCAAGCTGGCTGATTTTGGCCTAGCC
ATCGAAGTACAGGAGAGCAGCAGGCTTGGTTTGGTTTCTGGCACCCAGGTTACTTGTCCCCTGAG
GTCTTGAGGAAAGATCCCTATGGAACCTGTGGATATCTGGCCTCGGGGTATCCTGTATATCCTC
CTGGTGGCTATCTCCCTTCTGGGATGAGGATCAGCACAAAGCTGTATCAGCAGATCAAGCTGGAGCC
TATGATTTCCCATCACCAGAATGGGACACGGTAACTCCTGAAGCCAAGAAGCTTGATCAACCAGATGCTG
ACCATAAACCCAGCAAAGCGCATCACGGCTGACCAGGCTCTCAAGCACCCGTGGGTCTGTCAACGATCC
ACGGTGGCATCCATGATGCATCGTCAGGAGACTGTGGAGTGTTCGCGAAGTTCAATGCCCGGAGAAAA
CTGAAGGGTGCCATCCTCACGACCATGCTTGTCTCCAGGAAGCTTCTCAGTTGGCAGGCAGAGCTCCGCC
CCCGCCTCGCCTGCCCGAGCGCCGCCGGCCTGGCCGGGCAAGCTGCCAAAAGCCTATTGAACAAGAAG
TCGGATGGCGGTGTAAGCCACAGAGCAACAACAAAACAGTCTCGTAAGCCAGCCAAAGAGCCCGCG
CCCTTGACAGCGCCATGGAGCCACAAACCACTGTGGTACACAACGCTACAGATGGGATCAAGGGCTCC
ACAGAGCTGCAACACCACACAGAAGATGAGGACCTCAAAGTGCGAAAACAGGAGATCATTAAAGATT
ACAGAACAGCTGATTGAAGCCATCAACAATGGGACTTTGAGGCCTACACGAAGATTTGTGATCCAGGC
CTCACTTCTTTGAGCCTGAGGCCCTTGGTAACTCGTGGAGGGGATGGATTTCCATAAGTTTTACTTT
GAGAATCTCCTGTCCAAGAACAGCAAGCCTATCCATACCACCATCCTAAACCCACACGTCCACGTGATT
GGGAGGACGCAGCGTGCATCGCTACATCCGCCTCACCCAGTACATCGACGGGCAGGGTCCGCCTCGC
ACCAGCCAGTCAAGAGACCCGGTCTGGCACCGTCGGGATGGCAAGTGGCTCAATGTCCACTATCAC
TGCTCAGGGGCCCTGCCGACCGCTGCAG
ACCGGTACGCGGCCGCTCGAG – GFP Tag – GTTAAAC
  
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Protein Sequence:

>Peptide sequence encoded by RG238797
 Blue=ORF Red=Cloning site Green=Tag(s)

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MATTATCTRFDDYQLFEELGKGAFSVVRRVCVKKTSTQEYAAKIINTKKLSARDHQKLEREARICRLK
HPNIVRLHDSISEEGFHLYVFDLVTGGELFEDIVAREYSEADASHCIHQILESVNHIHQHDIHVHDLK
PENLLLASKCKGAVKLADFLAIEVQGEQQAWFGFAGTPGYLSPEVLRKDPYKPVDIWACGVILYIL
LVGYPPFWDEQHKLYQIKAGAYDFPSPWDVTPEAKNLINQMLTINPAKRITADQALKHPWVCQRS
TVASMMHRQETVECLRFNARRKLGAILTTMLVSRNFSVGRQSSAPASPAASAAGLAGQAASLLNKK
SDGGVQKPSNNKNSLVSPAQEPAPLQTAMEPQTTVVHNATDGIKGSTESCNTTTEDEDLKVQRKEIIKI
TEQLIEAINNGDFEAYTKICDPGLTSFEPEALGNLVEGMDFHKFYFENLLSKNSKPIHTTILNPHVHI
GEDAACIAYIRLTQYIDGQGRPRTSQSEETRVWHRRDGKWLNVHYHCSGAPAAPLQ
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
  
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Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001204492

ORF Size: 1617 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).

RefSeq: [NM_001204492.1](#), [NP_001191421.1](#)

RefSeq Size: 3767 bp

RefSeq ORF: 1620 bp

Locus ID: 818

UniProt ID: [Q13555](#)

Cytogenetics: 10q22.2

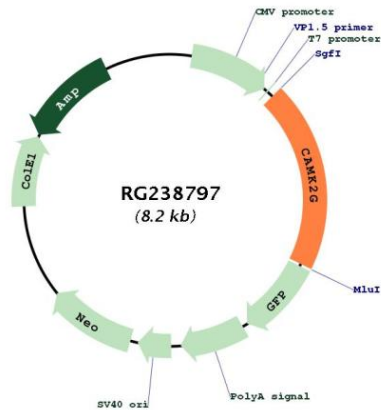
Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Calcium signaling pathway, ErbB signaling pathway, Glioma, GnRH signaling pathway, Long-term potentiation, Melanogenesis, Neurotrophin signaling pathway, Olfactory transduction, Oocyte meiosis, Wnt signaling pathway

MW: 60.7 kDa

Gene Summary:

The product of this gene is one of the four subunits of an enzyme which belongs to the serine/threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. In mammalian cells the enzyme is composed of four different chains: alpha, beta, gamma, and delta. The product of this gene is a gamma chain. Many alternatively spliced transcripts encoding different isoforms have been described but the full-length nature of all the variants has not been determined.[provided by RefSeq, Mar 2011]

Product images:

Circular map for RG238797