

Product datasheet for **SC313992**

CAMK2G (NM_172171) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2G (NM_172171) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMK2G
Synonyms:	CAMK; CAMK-II; CAMKG; MRD59
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC124748 sequence for NM_172173 edited (data generated by NextGen Sequencing)

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ATGGCCACCACCGCCACCTGCACCCGTTTCACCGACGACTACCAGCTCTTCGAGGAGCTT
GGCAAGGGTGCTTTCTCTGTGGTCCGCAGGTGTGTGAAGAAAACCTCCACGCAGGAGTAC
GCAGCAAAAATCATCAATACCAAGAAGTTGTCTGCCCGGGATCACCAGAACTAGAACGT
GAGGCTCGGATATGTCGACTTCTGAAACATCCAACATCGTGCGCCTCCATGACAGTATT
TCTGAAGAAGGGTTTCACTACCTCGTGTGTTGACCTTGTTACCGGCGGGGAGCTGTTTGAA
GACATTGTGGCCAGAGAGTACTACAGTGAAGCAGATGCCAGCCACTGTATACATCAGATT
CTGGAGAGTGTTAACCACATCCACCAGCATGACATCGTCCACAGGACCTGAAGCCTGAG
AACCTGCTGCTGGCGAGTAAATGCAAGGGTGCCGCCGTCAAGCTGGCTGATTTTGGCCTA
GCCATCGAAGTACAGGGAGAGCAGCAGGCTTGGTTTGGTTTGTGGCACCCAGGTTAC
TTGTCCCTGAGGTCTTGAGGAAAGATCCCTATGGAAAACCTGTGGATATCTGGGCTGC
GGGGTCATCCTGTATATCCTCCTGGTGGGCTATCCTCCCTTCTGGGATGAGGATCAGCAC
AAGCTGTATCAGCAGATCAAGGCTGGAGCCTATGATTTCCCATCACCAGAATGGGACACG
GTAACCTCTGAAGCCAAGAATTGATCAACCAGATGCTGACCATAAACCCAGCAAAGCGC
ATCACGGCTGACCAGGCTCTCAAGCACCCGTGGGTCTGTCAACGATCCACGGTGGCATCC
ATGATGCATCGTCAGGAGACTGTGGAGTGTGTCGCAAGTTCAATGCCCGGAGAAAACTG
AAGGGTGCCATCCTCACGACCATGCTTGTCTCCAGGAATTCTCAGCTGCCAAAAGCCTA
TTGAACAAGAAGTCGGATGGCGGTGTCAAGCCACAGAGCAACAACAAAACAGTCTCGAG
CCACAAACCACTGTGGTACACAACGCTACAGATGGGATCAAGGGTCCACAGAGAGCTGC
AACACCACACAGAAGATGAGGACCTCAAAGTGCAGAAAACAGGAGATCATTAAAGATTACA
GAACAGCTGATTGAAGCCATCAACAATGGGGACTTTGAGGCCTACACGAAGATTTGTGAT
CCAGGCTCACTTCCTTTGAGCCTGAGGCCCTTGGTAACCTCGTGGAGGGGATGGATTTT
CATAAGTTTTACTTTGAGAATCTCTGTCCAAGAACAGCAAGCCTATCCATACCACCATC
CTAAACCACACGTCCACGTGATTGGGGAGGACGACGCGTGCATCGCCTACATCCGCCTC
ACCCAGTACATCGACGGGAGGGTGGCCTCGCACCAGCCAGTCAGAAGAGACCCGGGTC
TGGCACCGTCGGGATGGCAAGTGGCTCAATGTCCACTATCACTGCTCAGGGGCCCTGCC
GCACCGCTGCAGTGA

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Clone variation with respect to NM_172173.2

Restriction Sites: Please inquire

ACCN: NM_172171

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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	<ol style="list-style-type: none"> 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:	<u>NM_172171.1</u> , <u>NP_751911.1</u>
RefSeq Size:	3821 bp
RefSeq ORF:	1671 bp
Locus ID:	818
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
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (1) represents the longest transcript and encodes isoform 1.</p> <p>Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>