

Product datasheet for **SC100733**

CAMK2G (NM_172170) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2G (NM_172170) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMK2G
Synonyms:	CAMK; CAMK-II; CAMKG; MRD59
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

>OriGene ORF sequence for NM_172170 edited
 ATGGCCACCACCGCCACCTGCACCCGTTTCACCGACGACTACCAGCTCTTCGAGGAGCTT
 GGCAAGGGTGTCTTCTCTGTGGTCCGCAGGTGTGTGAAGAAAACCTCCACGCAGGAGTAC
 GCAGCAAAAATCATCAATACCAAGAAATTTGTCTGCCCGGGATCACCAGAAACTAGAACGT
 GAGGCTCGGATATGTCGACTTCTGAAACATCCAACATCGTGCGCCTCCATGACAGTATT
 TCTGAAGAAGGGTTTCACTACCTCGTGTGGTGTGACCTTGTACCGGGGGGAGCTGTTTGAA
 GACATTGTGGCCAGAGAGTACTACAGTGAAGCAGATGCCAGCCACTGTATACATCAGATT
 CTGGAGAGTGTTAACCACATCCACCAGCATGACATCGTCCACAGGGACCTGAAGCCTGAG
 AACCTGTCTGTGGCGAGTAAATGCAAGGGTGCCCGCTCAAGCTGGCTGATTTTGGCCTA
 GCCATCGAAGTACAGGGAGAGCAGCAGGCTTGGTTTGGTTTGTGGCAGCCAGGTTAC
 TTGTCCCCTGAGGTCTTGAGGAAAGATCCCTATGGAAAACCTGTGGATATCTGGGCTGC
 GGGGTCACTCTGTATATCCTCCTGGTGGCTATCCTCCTTCTGGGATGAGGATCAGCAC
 AAGCTGTATCAGCAGATCAAGGCTGGAGCCTATGATTTCCCATCACCAGAATGGGACACG
 GTAACCTCTGAAGCCAAGAACTTGATCAACCAGATGCTGACCATAAACCAGCAAAGCGC
 ATCAGCGGTGACCAGGCTCTCAAGCACCGTGGGTCTGTCAACGATCCACGGTGGCATCC
 ATGATGCATCGTACAGGACTGTGGAGTGTGGCGCAAGTTCAATGCCCGGAGAAAACCTG
 AAGGGTGCCATCCTCAGCACCATGCTTGTCTCCAGGAACTTCTCAGCTGCCAAAAGCCTA
 TTGAACAAGAACTCGGATGGCGGTGTCAAGCCACAGAGCAACAACAAAACAGTCTCGTA
 AGCCCAGCCCAAGAGCCCGCCCTTGCAGACGGCCATGGAGCCACAAACCCTGTGGTA
 CACAACGCTACAGATGGGATCAAGGGCTCCACAGAGAGCTGCAACACCACCACAGAAGAT
 GAGGACCTCAAAGTGGCAAAACAGGAGATCATTAAAGATTACAGAACAGCTGATTGAAGCC
 ATCAACAATGGGACTTTGAGGCCTACACGAAGATTTGTGATCCAGGCCTCACTTCCTTT
 GAGCCTGAGGCCCTTGGTAACCTCGTGGAGGGGATGGATTTCCATAAGTTTACTTTGAG
 AATCTCCTGTCCAAGAACAGCAAGCCTATCCATACCACCATCCTAAACCACACGTCAC
 GTGATTGGGAGGACGCAGCGTGCATCGCTACATCCGCTCACCCAGTACATCAACGGG
 CAGGGTCGGCCTCGCACCAGCCAGTCAAGAGAGACCCGGGTCTGGCACCGTCGGGATGGC
 AAGTGGCTCAATGTCCACTACTGCTCAGGGGCCCTGCCGCACCGTGCAGTGAGCT
 CAGCCACAGGGGCTTTAGGAGATTCCAGCCGGAGGTCCAACCTTTCGACCCAGTGGCTCT
 GGAGGGCCTGAGTGACAGCGGCAGTCTGTTTGTGGTGTAAACAATTCAATTACA
 AAAGCGGCAGCAGCAATGCACGCCCTGCATGCAGCTCTCCCGCCGCCCTTCGTGTCT
 GTCTCTGTGTACCGAGGTGTTTTTACATTTAAGAAAAAAAAAAAAAAAAAGAAAGATTG
 TTTAAAAAAAAAAAAAAAAAACTCGACTTAGATTGCGGGCCGGTGCATAGCTGTTTCCT
 GAACAGATCCCGGTGGCATCCCTGTGACCCCTCCCCAGTGCCTCTCTGGCCCTGGAAG
 TTGCCACTCCAGTGCCCACCAGCCTTGCTTAATAAAATTAAGTTGCATCATTTT

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_172170 unedited
 TTTGTAATACGACTCACTATAGGGGCGGCCGAATTCGCACGAGGGTCGGCGGGGCTG
 CACCGCCGCTCCGCCCGCCCGCAGCATGGCCACCACCGCCACCTGCACCCGTTTCACC
 GACGACTACCAGCTCTTCGAGGAGCTTGGCAAGGGTGTCTTCTCTGTGGTCCGCAGGTGT
 GTGAAGAAAACCTCCACGCAGGAGTACGCAGCAAAAATCATCAATACCAAGAAATTTGTCT
 GCCCGGGATCACCAGAACTAGAACGTGAGGCTCGGATATGTCGACTTCTGAAACATCCA
 AACATCGTGCCTCCATGACAGTATTTCTGAAGAAGGGTTTCACTACCTCGTGTGGTGTGAC
 CTTGTTACCGCGGGGAGCTGTTTGAAGACATTGTGGCCAGAGAGTACTACAGTGAAGCA
 GATGCCAGCCACTGTATACATCAGATTCTGGAGAGTGTAAACCACATCCACCAGCATGAC
 ATCGTCCACAGGGACCTGAAGCCTGAGAACCTGCTGCTGGCGAGTAAATGCAAGGGTGCC
 GCCGTCAGCTGGCTGATTNTGGCTANCCATCGAAGTACAGGGAGAGCAGCAGGCTTGG
 TTTGGTTNTGCTGGCACCCAGGTTACTTGTCCCTGAGGTCTTGAGGAAAGATCCCTAT
 GGNAAAACCTGTGNATATCTGGGCTGCGGNGTCATCCTGTATATCCTNCTGGAGGGCTA
 TCCTCCCTTNTGGATGAGGATCAGCANCAGCTGTATCANCAGATCAGGGCTGGAGCCCT
 ATGATTTCCATCACCAGAATGGGACACGGTACCTNCTGAGCCCAGAACTTGATCAACCG
 ATGCTGACCATNAACCAGCAAGCGCATTACGGNTGACCAGGCTCTCAGCACCCGGTGGT
 CTGTACAGATCCACGGTGT

Restriction Sites:	NotI-NotI
ACCN:	NM_172170
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	NM_172170.2 , NP_751910.1
RefSeq Size:	3712 bp
RefSeq ORF:	1557 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 (3) lacks an in-frame segment of the coding region, compared to variant 1. It encodes a shorter isoform (3), that is missing an internal segment compared to isoform 1. Variants 3 and 50 both encode the same isoform (3). Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.</p>