

Product datasheet for **SC323386**

CAMK2D (NM_001221) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2D (NM_001221) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMK2D
Synonyms:	CAMKD
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001221, the custom clone sequence may differ by one or more nucleotides

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ATGGCTTCGACCACAACCTGCACCAGGTTACGGACGAGTATCAGCTTTTCGAGGAGCTTGAAAGGGG
CATTCTCAGTGGTGAAGAAGTATGAAAATTCCTACTGGACAAGAATATGCTGCCAAAATTATCAACAC
CAAAAAGCTTTCTGCTAGGGATCATCAGAACTAGAAAGAGAAGCTAGAATCTGCCGCTTTTGAAGCAC
CCTAATATTGTGCGACTTCATGATAGCATATCAGAAGAGGGCTTTCCTACTTGGTGTGGTTAGTTAGTTA
CTGGAGGTGAAGTGTGGAAAGACATAGTGGCAAGAGAATACTACAGTGAAGCTGATGCCAGTCATTGTAT
ACAGCAGATTCTAGAAAGTGTTAATCATTGTACCTAAATGGCATAGTTCACAGGGACCTGAAGCCTGAG
AATTTGCTTTTAGCTAGCAAATCCAAGGGAGCAGCTGTGAAATGGCAGACTTTGGCTTAGCCATAGAAG
TTCAAGGGGACCAGCAGGCGTGGTTTGGTTTTGCTGGCACACCTGGATATCTTTCTCCAGAAGTTTTACG
TAAAGATCCTTATGAAAAGCCAGTGGATATGTGGGCATGTGGTGTCAATCTCTATATTCTACTTGTGGGG
TATCCACCCTTCTGGGATGAAGACCAACACAGACTCTATCAGCAGATCAAGGCTGGAGCTTATGATTTTC
CATCACCAGAATGGGACACGGTGACTCCTGAAGCCAAAGACCTCATCAATAAAATGCTTACTATCAACCC
TGCCAAACGCATCACAGCCTCAGAGGCACTGAAGCACCCATGGATCTGTCAACGTTCTACTGTTGCTTCC
ATGATGCACAGACAGGAGACTGTAGACTGCTTGAAGAAATTTAATGCTAGAAGAAAATAAAGGGTGCCA
TCTTGACAACATGCTGGCTACAAGGAATTTCTCAGCAGCCAAGAGTTTGTGGAAGAAACCAGATGGAGT
AAAGGAGTCAACTGAGAGTTCAAATACAACAATTGAGGATGAAGATGTGAAAGCACGAAAGCAAGAGATT
ATCAAAGTCACTGAACAACCTGATCGAAGCTATCAACAATGGGGACTTTGAAGCCTACACAAAATCTGTG
ACCCAGGCCTTACTGCTTTTGAACCTGAAGCTTTGGGTAAATTTAGTGAAGGGATGGATTTTACCAGATT
CTACTTTGAAAATGCTTTGTCCAAAAGCAATAACCAATCCACACTATTATTCTAAACCCTCATGTACAT
CTGGTAGGGGATGATGCCGCTGCATAGCATATATTAGGCTCACACAGTACATGGATGGCAGTGGAAATGC
CAAAGACAATGCAGTCAGAAGAGACTCGTGTGGCACCCCGGGATGAAAAGTGGCAGAATGTTTCATTT
TCATCGCTCGGGTCCCAACAGTACCCATCAAGCCACCTGTATTCCAATGGGAAAGAAAATCTCA
GGAGGCACCTCTTTGTGGCAAAACATCTAA

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5' Read Nucleotide Sequence:	>OriGene 5' read for mutant NM_001221 unedited CCGCCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAA CCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGTGACAGCGCCGCG GGGCCAGTCCCGGGGTTAGCCGCGCTGTCTCGCTTCTGGTCCGTCGCGCTCCCAGCCAGGGCACAGCC CGGACCGAGGATGGCTTCGACCACAACCTGCACCAGGTTACGGACGAGTATCAGCTTTTCGAGGAGCTT GGAAAGGGGGCATTCTCAGTGGTGAGAAGATGTATGAAAAATTCCTACTGGACAAGAAATATGCTTCGCA TGATTATCAACACCAAAAAAGCTTTCTGTAGGGATCATCAGAACTAGAAAGGAGAAGCTAGAAATCTG CCGTTCTTTTGAAGCCACCCTAATTATTTGTGCGACTTTCATGAATAGCATTATCAGAAGAAGGCTT TTCACTACTTGGTTGTTTATTAGTACTGGGAGGTTGAACTTGTGAAGACTAGTGGGCAGAGAGAATC CTACGGTGAAGCCTGATGCAGTCATTGTATCCGGCAAATCTGAAGGTGTTAATCTTGTCACCTAATGGC ATGTTACGGGACCGGAGCCTGGAAATGCTTTTACCTGCAATCCAGGGACGCCTTGAATGGCAAATCTG GGCTAACATAAATTCAGGGACCGGCTGTGTGGTTGCTGCACACTGGAATCTCTCGAAGTTACGT GAGTCTCTCGGAACCAGGAATGGCCATGGGTCATCCAATCACTTGAGGTTACCCTCTGTAGACCGGC ATACGGATACGTGCCCTGATGCACCATTGACCGAATCTAATCAGAGCTTA
Kinase Domain Sequence:	>SC323386 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation TSMMSRTMYTWCGCGCKMGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGT TTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGTGACA GCGCCGCGGGGCCAGTCCCGGGTTAGCCGCGCTGTCTCGCTTCTGGTCCGTCGCGCTCCCAGCCAGG GCACAGCCCGGACCGAGGATGGCTTCGACCACAACCTGCACCAGG
Restriction Sites:	Please inquire
ACCN:	NM_001221
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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.
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_001221.2, NP_001212.2</u>
RefSeq Size:	2140 bp
RefSeq ORF:	1500 bp
Locus ID:	817
UniProt ID:	<u>Q13557</u>
Cytogenetics:	4q26
Domains:	ppk, TyrKc, S_TKc
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 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 delta chain. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Distinct isoforms of this chain have different expression patterns.[provided by RefSeq, Nov 2008]</p> <p>Transcript Variant: This variant (3) represents the longest transcript and encodes the longest isoform (3). Sequence Note: The RefSeq transcript and protein were derived from transcript and genomic sequence to make the sequence consistent with the reference genome assembly. The extend of this RefSeq trasncript is supported by transcript alignments.</p>