

Product datasheet for **SC323602**

CAMKK2 (NM_006549) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMKK2 (NM_006549) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMKK2
Synonyms:	CAMKK; CAMKKB
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_006549, the custom clone sequence may differ by one or more nucleotides

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ATGTCATCATGTGTCTCTAGCCAGCCAGCAGCAACCGGGCCGCCCCAGGATGAGCTGGGGGCGAGG
GCAGCAGCAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGGCTCTCATCCTTGAGCATCCACCT
GGGCATGGAGTCCTTATTGTGGTACCAGTGTGAGCCGGGCTGTGCTGTGGACCTCGGCTTGGCGGG
GACCGGCCCTGGAGCCGATGGCCAAGAGGTCCCCCTTGACACCTCCGGGTCCCAGGCCGCGCCACC
TCTCCGGTCGCAAGCTGTCTCTGCAAGAGCGGTCCCAGGGTGGGCTGGCAGCCGGTGGCAGCCTGGACAT
GAACGGACGCTGCATCTGCCCGTCCCTGCCCTACTCACCCGTGAGCTCCCCGAGTCTCGCCTCGGCTG
CCCCGGCGGCGACAGTGGAGTCTCACCACGTCTCCATCACGGGTATGCAGGACTGTGTGCAGTGAATC
AGTATACCCTGAAGGATGAAATTGGAAGGGCTCCTATGGTGTGCTCAAGTTGGCCTACAATGAAAATGA
CAATACCTACTATGCAATGAAGGTGCTGTCCAAAAGAAGCTGATCCGGCAGGCCGGCTTCCACGTGCG
CCTCCACCCGAGGCACCCGGCCAGCTCCTGGAGGCTGCATCCAGCCCAGGGGCCCATGAGCAGGTGT
ACCAGGAAATTGCCATCCTCAAGAAGCTGGACCACCCCAATGTGGTGAAGCTGGTGGAGGCTCCTGGATGA
CCCAATGAGGACCATCTGTACATGGTGTTCGAACTGGTCAACCAAGGGCCCGTATGGAAGTGCCACC
CTCAAACCACTCTCTGAAGACCAGGCCGTTTCTACTTCCAGGATCTGATCAAAGGCATCGAGTACTTAC
ACTACCAGAAGATCATCCACCGTACATCAAACCTTCAAACCTCCTGGTGGGAGAAGATGGGCACATCAA
GATCGCTGACTTTGGTGTGAGCAATGAATCAAGGGCAGTGCAGCGCTCCTCTCCAACACCGTGGGCAGC
CCCGCCTTCATGGCACCCGAGTCGCTCTGTGAGACCCGCAAGATCTTCTCTGGGAAGGCCTTGGATGTT
GGGCCATGGGTGTGACACTATACTGCTTTGTCTTTGGCCAGTGCCATTCATGGACGAGCCGATCATGTG
TTTACACAGTAAAGTCAAGAGTCAAGCCCTGGAATTTCCAGACCAGCCGACATAGTGAAGACTGAAG
GACCTGATCACCCGATGCTGGACAAGAACCCGAGTGCAGGATCGTGGTGGCGGAAATCAAGCTGCACC
CCTGGGTACAGAGCATGGGGCGGAGCCGTTGCCGTGGAGGATGAGAAGTGCACGCTGGTTCGAAGTGAC
TGAAGAGGAGGTGAGAACTCAGTCAAACACATTTCCAGCTTGGCAACCGTATCCTGGTGAAGACCATG
ATACGTAACCGCTCCTTTGGAAACCCATTGAGGGCAGCCGGCGGGAGGAACGCTCACTGTGAGCGCTG
GAACTTGCTCACAAAAAACCAACCAGGGAATGTGAGTCCCTGTCTGAGCTCAAGGAAGCAAGGCAGCG
AAGACAACCTCCAGGGCACCCGACCCGCCCGGCTGGGGGAGGAGGAAGTGTCTTGTGAGAGGCAGTCCC
TGCGTGGAAAGTGTGGGCCCCCGCCCGGCTCCCCGCACGCATGCATCCACTGCGGCCGAGGAGG
CCATGGAGCCCGAGTAG
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_006549 unedited

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ACCGCCGTTGTGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAA
CCGTGAGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCAGGAGGGCCGAGCCGAGCTG
GGGGCGCAGAGCGCGGGAGGCGGGCGGCGGCGGAGCCAGGTGGCTCCGCTGCCGATGGGAGTGCCCC
AGTGTGCTGGATGAAGCTGGCGCATGCACCATGTATCATGTGTCTAGCCAGCCAGCAGCAACCCGGG
CCGCCCCCAGATGAGCTGGGGGCGAGGCGAGCAGCAGCAGCAAGCCAGAAAGCCCTGTGAGGTCCCTG
CGGGGGCCTCTCATCCCTTGAGCCATCCCCCTGGGCTTGGAGTCTTTTCAATTTGTGGTTACCCAATTGTA
AGCCGGGCTGTGTGGGACTTTGGGCTGGGCGCGGGAACCGGGCCCTGGAAGGCCAAGGGGCCAAAAA
GGTCCCCCTTTGACCCTTCCGGTTTCCAAGGCCGGGCCCCCTTTCGGGTTTGAAGGCTTGTCTT
TTGAAAGACCGGGCCCCAGGGGGGGCTGGAAGCCGGGGGCACCCTGGAACCTAAAGGAGCCTTTGTTT
TTGCCCTTCTGGCCTATCTAACCCGTAAGTTCGCCGAATTTTGGCCTCGTGTGGCCGGGGGGGCAAAA
GGGAGAATTTACACCCTTTCACACTAAGGTTACAAGAAATGTTGACCCAGTAAATATATACACCAG
AAGT
    
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Kinase Domain Sequence:

>SC323602 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

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TAGAGAATTGGAAGGGCTCCTATGGTGTGCTCAAGTTGGCCTACAATGAAAATGACAATACCTACTATGC
AATGATGGTGTCTCCAAAAGAAGCTGATCCGGCAGGCCGGCTTCCACGTGCGCTCCACCCGAGGC
ACCCGGCCAGCTCCTGGAGGCTGCATCCAGCCCAGGGGCCCATGAGCAGGTGTACCAGGAAATTGCCA
TCCTCAAGAAGCTGGACCACCCCAATGTGGTGAAGCTGGTGGAGG
    
```

Restriction Sites:	Please inquire
ACCN:	NM_006549
Insert Size:	2000 bp
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).
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:	NM_006549.3 , NP_006540.3
RefSeq Size:	5620 bp
RefSeq ORF:	1767 bp
Locus ID:	10645
UniProt ID:	Q96RR4
Cytogenetics:	12q24.31
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase, Transcription Factors
Protein Pathways:	Adipocytokine signaling pathway

Gene Summary:

The product of this gene belongs to the Serine/Threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. The major isoform of this gene plays a role in the calcium/calmodulin-dependent (CaM) kinase cascade by phosphorylating the downstream kinases CaMK1 and CaMK4. Protein products of this gene also phosphorylate AMP-activated protein kinase (AMPK). This gene has its strongest expression in the brain and influences signalling cascades involved with learning and memory, neuronal differentiation and migration, neurite outgrowth, and synapse formation. Alternative splicing results in multiple transcript variants encoding distinct isoforms. The identified isoforms differ in their ability to undergo autophosphorylation and to phosphorylate downstream kinases. [provided by RefSeq, Jul 2012]

Transcript Variant: This variant (1), also known as beta 1, represents the longest transcript, and encodes the longest isoform (1). Variants 1 and 8 encode the same protein (isoform 1).