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Product datasheet for SC323656

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:	pCMV6-XL6
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

ATGTCATCATGTGTCTCTAGCCAGCCCAGCAGCAACCGGGCCGCCCCCCAGGATGAGCTGGGGGGCAGGG
GCAGCAGCAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGGCCTCTCATCCTTGAGCATCCACCT
GGGCATGGAGTCCTTCATTGTGGTCACCGAGTGTGAGCCGGGCTGTGCTGTGGACCTCGGCTTGGCGCGG
GACCGGCCCCTGGAGGCCGATGGCCAAGAGGTCCCCCTTGACACCTCCGGGTCCCAGGCCCGGCCCCACC
TCTCCGGTCGCAAGCTGTCTCTGCAAGAGCGGTCCCAGGGTGGGCTGGCAGCCGGTGGCAGCCTGGACAT
GAACGGACGCTGCATCTGCCCGTCCCTGCCCTACTCACCCGTCAGCTCCCCGCAGTCCTCGCCTCGGCTG
CCCCGGCGGCCGACAGTGGAGTCTCACCACGTCTCCATCACGGGTATGCAGGACTGTGTGCAGCTGAATC
AGTATACCCTGAAGGATGAAATTGGAAAGGGCTCCTATGGTGTCGTCAAGTTGGCCTACAATGAAAATGA
CAATACCTACTATGCAATGAAGGTGCTGTCCAAAAAGAAGCTGATCCGGCAGGCCGGCTTTCCACGTCGC
CCTCCACCCCGAGGCACCCGGCCAGCTCCTGGAGGCTGCATCCAGCCCAGGGGCCCCATTGAGCAGGTGT
ACCAGGAAATTGCCATCCTCAAGAAGCTGGACCACCCCAATGTGGTGAAGCTGGTGGAGGTCCTGGATGA
CCCCAATGAGGACCATCTGTACATGGTGTTCGAACTGGTCAACCAAGGGCCCGTGATGGAAGTGCCCACC
CTCAAACCACTCTCTGAAGACCAGGCCCGTTTCTACTTCCAGGATCTGATCAAAGGCATCGAGTACTTAC
ACTACCAGAAGATCATCCACCGTGACATCAAACCTTCCAACCTCCTGGTCGGAGAAGATGGGCACATCAA
GATCGCTGACTTTGGTGTGAGCAATGAATTCAAGGGCAGTGACGCGCTCCTCTCCAACACCGTGGGCACG
CCCGCCTTCATGGCACCCGAGTCGCTCTCTGAGACCCGCAAGATCTTCTCTGGGAAGGCCTTGGATGTTT
GGGCCATGGGTGTGACACTATACTGCTTTGTCTTTGGCCAGTGCCCATTCATGGACGAGCGGATCATGTG
TTTACACAGTAAGATCAAGAGTCAGGCCCTGGAATTTCCAGACCAGCCCGACATAGCTGAGGACTTGAAG
GACCTGATCACCCGTATGCTGGACAAGAACCCCGAGTCGAGGATCGTGGTGCCGGAAATCAAGCTGCACC
CCTGGGTCACGAGGCATGGGGCGGAGCCGTTGCCGTCGGAGGATGAGAACTGCACGCTGGTCGAAGTGAC
TGAAGAGGAGGTCGAGAACTCAGTCAAACACATTCCCAGCTTGGCAACCGTGATCCTGGTGAAGACCATG
ATACGTAAACGCTCCTTTGGGAACCCATTCGAGGGCAGCCGGCGGGAGGAACGCTCACTGTCAGCGCCTG
GAAACTTGCTCACCAAAAAACCAACCAGGGAATGTGAGTCCCTGTCTGAGCTCAAGGAAGCAAGGCAGCG
AAGACAACCTCCAGGGCACCGACCCGCCCCCCGTGGGGGAGGAGGAAGTGCTCTTGTGAGAGGCAGTCCC
TGCGTGGAAAGTTGCTGGGCCCCCGCCCCCGGCTCCCCCGCACGCATGCATCCACTGCGGCCGGAGGAGG
CCATGGAGCCCGAGTAG

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_006549 unedited
ACCGCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTTGGGAGGTCTATATAAGCAGAGCTCATTTAGGTG
ACACTATAGAATACAAGCTACTTGTTCTTTTTGCAGCGGCCGCGAATTCGGCACGAGGTGCCCCAGTGTG
CTGGATGAAGCTGGCGCATGCACCATGTCATCATGTGTCTCTAGCCAGCCCAGCAGCAACCGGGCCGCCC
CCCAGGATGAGCTGGGGGGCAGGGGCAGCAGCAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGG
CCTCTCATCCTTGAGCATCCACCTGGGCATGGAGTCCTTCATTGTGGTCACCCGAGTGTGAGCCGGGGCT
GTGCTGTGGACCTCGGCTTTGGCGCGGGACCGGGCCCCCTGGAGGGCCGATGGCCAAGAGGTCCCCCCTT
GAACTCCTTCCGGGGTCCCCAGGCCCCGCCCCCACCCTTCTCCGGTCGCAGCCTGGTCTCTCTGCAAAAC
CGGTCCCAAGGGTGGGGCTGCCAGCCCGGTGGCAGCCGGAACTTGAACGGAACGCTGCATCTGCCCGTCC
TTGCCCTACTAACCGGTAAGCTCCCGAATTCCTGGCCTGGGTGCCCGGGGGCCGAGTGGGATTCCACACA
CGTCCCCTCACGGGAATCAGAGACTGTGTGCGTGAAATATATATACTGAGAGAGAGATTTGAAAAGGTCT
CTAGGTGTCTAATGGGCTTACTGAGAATAGACAACCATGCCTGTGTGGCGTGCCAAGAGATGTATCCGAG
CGCGTTTTACATTCCTCAACTAGAGACTGCGCGTCTGAGAGCGTCTCGCCAGGCCATTGACAGGTCCAGA
ATGCATCGAAGCTGACCAATGTGACTTGACTCGTACTTAGACGTAAGGTCCAGCCAGCGTAGAGTCAACT
AAA

Kinase Domain Sequence:	>SC323656 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation TAGWGATTGGAAGGGCTCCTATGGTGTCGTCAAGTTGGCCTACAATGAAAATGACAATACCTTATGCAAT GATGGTGCTGTCCAAAAAGAAGCTGATCCGGCAGGCCGGCTTTCCACGTCGCCCTCCACCCCGAGGCACC CGGCCAGCTCCTGGAGGCTGCATCCAGCCCAGGGGCCCCATTGAGCAGGTGTACCAGGAAATTGCCATCC TCAAGAAGCTGGACCACCCCAATGTGGTGAAGCTGGTGGAGGTCC
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:	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).