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Product datasheet for SC110186

CAMKK2 (NM_172226) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMKK2 (NM_172226) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMKK2
Synonyms:	CAMKK; CAMKKB
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

Fully Sequenced ORF:

>OriGene ORF sequence for NM_172226 edited
ATGTCATCATGTGTCTCTAGCCAGCCCAGCAGCAACCGGGCCGCCCCCCAGGATGAGCTG
GGGGGCAGGGGCAGCAGCAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGGCCTC
TCATCCTTGAGCATCCACCTGGGCATGGAGTCCTTCATTGTGGTCACCGAGTGTGAGCCG
GGCTGTGCTGTGGACCTCGGCTTGGCGCGGGACCGGCCCCTGGAGGCCGATGGCCAAGAG
GTCCCCCTTGACACCTCCGGGTCCCAGGCCCGGCCCCACCTCTCCGGTCGCAAGCTGTCT
CTGCAAGAGCGGTCCCAGGGTGGGCTGGCAGCCGGTGGCAGCCTGGACATGAACGGACGC
TGCATCTGCCCGTCCCTGCCCTACTCACCCGTCAGCTCCCCGCAGTCCTCGCCTCGGCTG
CCCCGGCGGCCGACAGTGGAGTCTCACCACGTCTCCATCACGGGTATGCAGGACTGTGTG
CAGCTGAATCAGTATACCCTGAAGGATGAAATTGGAAAGGGCTCCTATGGTGTCGTCAAG
TTGGCCTACAATGAAAATGACAATACCTACTATGCAATGAAGGTGCTGTCCAAAAAGAAG
CTGATCCGGCAGGCCGGCTTTCCACGTCGCCCTCCACCCCGAGGCACCCGGCCAGCTCCT
GGAGGCTGCATCCAGCCCAGGGGCCCCATTGAGCAGGTGTACCAGGAAATTGCCATCCTC
AAGAAGCTGGACCACCCCAATGTGGTGAAGCTGGTGGAGGTCCTGGATGACCCCAATGAG
GACCATCTGTACATGGTGTTCGAACTGGTCAACCAAGGGCCCGTGATGGAAGTGCCCACC
CTCAAACCACTCTCTGAAGACCAGGCCCGTTTCTACTTCCAGGATCTGATCAAAGGCATC
GAGTACTTACACTACCAGAAGATCATCCACCGTGACATCAAACCTTCCAACCTCCTGGTC
GGAGAAGATGGGCACATCAAGATCGCTGACTTTGGTGTGAGCAATGAATTCAAGGGCAGT
GACGCGCTCCTCTCCAACACCGTGGGCACGCCCGCCTTCATGGCACCCGAGTCGCTCTCT
GAGACCCGCAAGATCTTCTCTGGGAAGGCCTTGGATGTTTGGGCCATGGGTGTGACACTA
TACTGCTTTGTCTTTGGCCAGTGCCCATTCATGGACGAGCGGATCATGTGTTTACACAGT
AAGATCAAGAGTCAGGCCCTGGAATTTCCAGACCAGCCCGACATAGCTGAGGACTTGAAG
GACCTGATCACCCGTATGCTGGACAAGAACCCCGAGTCGAGGATCGTGGTGCCGGAAATC
AAGCTGCACCCCTGGGTCACGAGGCATGGGGCGGAGCCGTTGCCGTCGGAGGATGAGAAC
TGCACGCTGGTCGAAGTGACTGAAGAGGAGGTCGAGAACTCAGTCAAACACATTCCCAGC
TTGGCAACCGTGATCCTGGTGAAGACCATGATACGTAAACGCTCCTTTGGGAACCCATTC
GAGGGCAGCCGGCGGGAGGAACGCTCACTGTCAGCGCCTGGAAACTTGCTCACCAAAAAA
CCAACCAGGGAATGTGAGTCCCTGTCTGAGCTCAAGGAAGCAAGGCAGCGAAGACAACCT
CCAGGGCACCGACCCGCCCCCCGTGGGGGAGGAGGAAGTGCTCTTGTGAGAGGCAGTCCC
TGCGTGGAAAGTTGCTGGGCCCCCGCCCCCGGCTCCCCCGCACGCATGCATCCACTGCGG
CCGGAGGAGGCCATGGAGCCCGAGTAG

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_172226 unedited
ACTCGGATTTGTAACCGACTTATATAGGCGGCCGCGCAATTCGCACGAGGGCCGAGCCGA
GCTGGGGGCGCAGAGCGCGGGAGGCGGCGGCGGCGCGGAGCCCAGGTGGCTCCGCTGCCG
GATGGGAGTGCCCCAGTGTGCTGGATGAAGCTGGCGCATGCACCATGTCATCATGTGTCT
CTAGCCAGCCCAGCAGCAACCGGGCCGCCCTTTTGTATGAGCTGGGGGGCAGGGGCAGCA
GCAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGGCCTCTCATCCTTGAGCATCC
ACCTGGGCATGGAGTCCTTCATTGTGGTCACCGAGTGTGAGCCGGGCTGTGCTGTGGACC
TCGGCTTGGCGCGGGACCGGCCCCTGGAGGCCGATGGCCAAGAGGTCCCCCTTGACACCT
CCGGGTCCCAGGCCCGGCCCCACCTCTCCGGTCGCAAGCTGTCTCTGCAAGAGCGGTCCC
AGGGTGGGCTGGCAGCCGGTGGCAGCCTGGACATGAACGGACGCTGCATCTGCCCGTCCC
TGCCCTACTCACCCGTCAGCTCCCCGCAGTCCTCGCCTCGGCTGCCCCGGCGGCCGACAG
TGGAGTCTCACCACGTCTCCATCACGGGTATGCAGGACTGTGTGCAGCTGAATCAGTATA
CCCTGGAAGATGAAATTGGAAAGGGCTCCTATGGTGTCGTCAAGTTGGCCTACAATGAAN
ATGAACATACCTACTATGCAATGAAAGTGCTGTCCAAAAAGAAGCTGATCCGGCAGGNNC
CGCTTCCACGTCGCCCTCCACCCCGAGGCACCCGGCCAGCTNCTGGNAGCTGCATCCAGC
CCNAGGGGCCCCATTGAGCAGGTGTACCAGGAAAATGCCATCCTCCAGAAGCTGGACCAC
CCCAATGTGGTGAAGCTGGTGGAAGTCCTG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_172226 unedited
NNNCCTTACTCTGGACCGCGGGCCGCATGCTANGATCGAGTTTTTTTTTTTTTTTTTTTT
AAGTTCATGTACTTTTTAGTGATAAATACACAGTATTTAACTTTATACACCTGATAAAAG
GAAAATGCATAGTAGAAAGGGTCGGGAATGAAACAGAAGCATCGGGCATTGAATCGATCA
CAGAGTAGAAAAATCTGCAGTCCCCAGAAACTCGGCCTCCAGCTGGAGAGGGGAACCAGC
GTACCCTGAAACTTCCCTAGCACCTTGGAAGCAAGTGGAGGTCATGGTTCTTCCACTCGG
CAACGTGAAGCTCCCCGCTGGAAGACAAGTGAGAGCGACAGGCCAGGCCTGTGTGTCCAC
CTGCACAGGCATTCTCCTTGTTCCAGAAAGGCTCTGAGGACGGAAGACCTGCCTCTCAGG
AAAGGCCAGACCAGTAGGGAGAGGCCTCCGCAGCCCCAAGTGTCAACAAGGGGCTCAATA
AGGCTTTCTGGGAGCCACTGGCAGCTGGTGGGATGGAAGGGGGAGGTGGAAAAGGGCAGA
GGAAATGGGAAGTGGTGGGGGGTTTTGTGCTTCCTTCGAGGCCACAAGTGCAGGCCACAG
GTTGCTTACACCAAATTGGTCCCACAGATGAGCTAGCAATGGAAGAAATTATGGGGCGTC
CTCTTTGCCCACTGGAAGAGCTGCTCATAACAGCACCTCCTTTCCTGACAGAGCTGGCTT
TTGAAAAATCAATGTGCTCCAAGAGTGGCAGCTCAAATGCTCTGTGTTTACAGCCATCTT
GGCTTATCCTTTTCATGGGGGGCAGGGCCTTTCCCAGCTTTTTTTGGGGTGTCTTCATTA
AAGAAAAAAAAAGTCATCATTGTGGGTCTTCCCACCCACTGCCCCACAGCTGGGTGCTGN
CTGAATGGCTGCATTCCTGGAAGAA

Restriction Sites: NotI-NotI

ACCN: NM_172226

Insert Size: 4860 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).

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_172226.1, NP_757380.1

RefSeq Size: 4873 bp

RefSeq ORF: 1626 bp

Locus ID: 10645

UniProt ID: Q96RR4

Cytogenetics: 12q24.31

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 (7) differs in the 5' UTR and also lacks a segment in the coding region, which leads to a frameshift, compared to variant 1. The resulting isoform (2) contains a shorter and distinct C-terminus compared to isoform 1. This isoform (2) is also encoded by variant 2.