

Product datasheet for **SC313897**

CAMKK2 (NM_172214) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMKK2 (NM_172214) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMKK2
Synonyms:	CAMKK; CAMKKB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >SC313897 representing NM_172214.
 Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGTCATCATGTGTCTCTAGCCAGCCAGCAGCAACCGGGCCGCCCCAGGATGAGCTGGGGGGCAGG
GGCAGCAGCAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGGCCCTCATCCTTGAGCATCCAC
CTGGGCATGGAGTCCTTATTGTGGTCACCGAGTGTGAGCCGGGCTGTGCTGTGGACCTCGGCTTGGCG
CGGGACCGGCCCTGGAGGCCGATGGCCAAGAGGTCCCCCTTGACACCTCCGGGTCCAGGCCCGGCC
CACCTCTCCGGTCGCAAGCTGTCTCTGCAAGAGCGGTCCCAGGGTGGGCTGGCAGCCGGTGGCAGCCTG
GACATGAACGGACGCTGCATCTGCCCGTCCCTGCCCTACTCACCCGTGAGCTCCCGCAGTCTCGCCT
CGGCTGCCCGGGCGGCCAGAGTGGAGTCTCACACGTCTCCATCACGGGTATGCAGGACTGTGTGCAG
CTGAATCAGTATACCCTGAAGGATGAAATTGGAAAGGGCTCTATGGTGTGCTCAAGTTGGCCTACAAT
GAAAATGACAATACCTACTATGCAATGAAGGTGTGTCCAAAAAGAAGCTGATCCGGCAGGCCGGCTTT
CCACGTGCCCCTCACCCCGAGGCACCCGGCCAGCTCCTGGAGGCTGCATCCAGCCAGGGGCCCCATT
GAGCAGGTGTACCAGGAAATTGCCATCCTCAAGAAGCTGGACCACCCCAATGTGGTGAAGCTGGTGGAG
GTCCTGGATGACCCCAATGAGGACCATCTGTACATGGTGTTCGAACTGGTCAACCAAGGGCCCGTGATG
GAAGTGCCACCCTCAAACCACTCTCTGAAGACCAGGCCCGTTTCTACTTCCAGGATCTGATCAAAGGC
ATCGAGTACTTACACTACCAGAAGATCATCCACCGTGACATCAAACCTTCCAACCTCCTGGTCGGAGAA
GATGGGCACATCAAGATCGTGACTTTGGTGTGAGCAATGAATTCAGGGCAGTGACCGCTCCTCTCC
AACCCGTGGGCACGCCCGCCTTATGGCACCCGAGTCTGCTGAGACCCGAAGATCTTCTCTGGG
AAGCCCTTGGATGTTTGGCCATGGGTGTGACACTATACTGCTTGTCTTTGGCCAGTCCCATTTCATG
GACGAGCGGATCATGTGTTTACACAGTAAGATCAAGAGTCAGGCCCTGGAATTTCCAGACCAGCCCGAC
ATAGCTGAGGACTTGAAGGACCTGATCACCCGTATGCTGGACAAGAACCCTGAGTCGAGGATCGTGGTG
CCGGAATCAAGCTGCACCCCTGGGTACGAGGATGGGGCGGAGCCGTTGCCGTCGAGGATGAGAAC
TGCACGCTGGTGAAGTGAAGAGGAGTGCAGAACTCAGTCAAACACATTCAGCTTGGCAACC
GTGATCCTGGTGAAGACCATGATACGTAACGCTCCTTTGGGAACCCATTCGAGGGCAGCCGGGGGAG
GAACGCTCACTGTGAGCCCTGGAACTTGCTACCAAAAAACCAACCAGGGAATGTGAGTCCCTGTCT
GAGCTCAAGACCTAG
ACGGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
  
```

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM_172214
- Insert Size:** 1602 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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_172214.2](#)

RefSeq Size: 2981 bp

RefSeq ORF: 1602 bp

Locus ID: 10645

UniProt ID: [Q96RR4](#)

Cytogenetics: 12q24.31

Protein Families: Druggable Genome, Protein Kinase, Transcription Factors

Protein Pathways: Adipocytokine signaling pathway

MW: 58.9 kDa

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 (5), also known as beta 2, contains an alternate segment in the 3' coding region and differs in the 3' UTR, compared to variant 1. The encoded isoform (5) is shorter and has a distinct C-terminus, compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.