

## Product datasheet for **SC316312**

### **CAMKK2 (NM\_153499) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CAMKK2 (NM_153499) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMKK2
Synonyms:	CAMKK; CAMKKB
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:**

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>OriGene sequence for NM_153499 edited
CCGAGCTGGGGGCGCAGAGCGCGGGAGGCGGCGGCGGCGGAGCCAGGTGGCTCCGCT
GCCGGATGGGAGTGCCCCAGTGTGCTGGATGAAGCTGGCGCATGCACCATGTCATCATGT
GTCTCTAGCCAGCCAGCAGCAACCGGGCCGCCCCCAGGATGAGCTGGGGGCGAGGGG
AGCAGCAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGGCTCTCATCCTTGAGC
ATCCACCTGGGCATGGAGTCCTTCATTGTGGTCACCGAGTGTGAGCCGGGCTGTGCTGTG
GACCTCGGCTTGCGCGGGACCGGCCCTGGAGCCGATGGCCAAGAGGTCCCCCTTGAC
TCCTCCGGGTCCAGGCCGCGCCACCTCTCCGGTCGCAAGCTGTCTCTGCAAGAGCGG
TCCAGGGTGGGCTGGCAGCCGGTGGCAGCCTGGACATGAACGGACGCTGCATCTGCCCG
TCCCTGCCCTACTCACCCGTGAGCTCCCCGAGTCTCGCTCGGCTGCCCGGGCGGCCG
ACAGTGGAGTCTCACACGTCTCCATCACGGGTATGCAGGACTGTGTGCAGCTGAATCAG
TATACCTGAAGGATGAAATTGAAAGGGCTCCTATGGTGTGTCGCAAGTTGGCTACAAT
GAAAATGACAATACCTACTATGCAATGAAGGTGCTGTCCAAAAAGAAGCTGATCCGGCAG
GCCGGCTTTCACGTGCGCTCCACCCGAGGCACCCGGCCAGCTCCTGGAGGCTGCATC
CAGCCCAGGGGCCCCATTGAGCAGGTGTACCAGGAAATTGCCATCCTCAAGAAGCTGGAC
CACCCCAATGTGGTGAAGCTGGTGGAGGTCCTGGATGACCCCAATGAGGACCATCTGTAC
ATGGTGTTCGAACTGGTCAACCAAGGGCCCGTATGGAAGTGCCACCCCTCAAACCACTC
TCTGAAGACCAGGCCGTTTCTACTTCCAGGATCTGATCAAAGGCATCGAGTACTTACAC
TACCAGAAGATCATCCACCGTGACATCAAACCTTCCAACCTCCTGGTCGGAGAAGATGGG
CACATCAAGATCGCTGACTTTGGTGTGAGCAATGAATTAAGGGCAGTGACGCGCTCCTC
TCCAACACCGTGGGCACGCCCGCCTTCATGGCACCCGAGTCGCTCTCTGAGACCCGCAAG
ATCTTCTCTGGGAAGGCCTTGGATGTTTGGGCCATGGGTGTGACACTATACTGCTTTGTC
TTTGGCCAGTGCCATTATGGACGAGCGGATCATGTGTTTACACAGTAAGATCAAGAGT
CAGGCCCTGGAATTTCCAGACCAGCCCGACATAGCTGAGGACTTGAAGGACCTGATCACC
CGTATGCTGGACAAGAACCCCGAGTCGAGGATCGTGGTGCCGAAATCAAGCTGCACCCC
TGGGTCACGAGGCATGGGGCGGAGCCGTTGCCGTGCGGAGGATGAGAACTGCACGCTGGTC
GAAGTGACTGAAGAGGAGGTGAGAACTCAGTCAAACACATTCCCAGCTTGGCAACCGTG
ATCCTGGTGAAGACCATGATACGTAACGCTCCTTTGGGAACCCATTGAGGGCAGCCGG
CGGGAGGAACGCTCACTGTCAGCGCCTGGAACTTGCTCACGAAGCAAGGCAGCGAAGAC
AACCTCCAGGGCACCGACCCGCCCCCGTGGGGGAGGAGGAAAGTCTCTTGTGAGAGGCA
GTCCCTGCGTGGAAAGTTGCTGGGCCCGCCCGGCTCCCCGCACGCATGCATCCAC
TGCGGCCGGAGGAGGCCATGGAGCCGAGTAGCTGCCTGGATCGCTCGACCTCGCATGCG
CGCCGCGTGCCTCTGGGGGGCTGCTGCACCGCCTTCCATAGCAGCATGCTACGGAA
ACCCAGCACGTGTAGAGCCTCGATCGTCATCTCTGGTTATTTGTTTTTCTTTGTTG
TTTTAAAGGGGACAAAAAAAAAAAAAAAAAAAA
    
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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_153499 unedited GACGGCATTATGTATACGACTCCTATAGGGCGGCCGCGAAATCAGTATCCACAAGTTTGT ACAAAAAGCAGGCTTGTAAAACGACGGCCAGTAACTATAACGGTCTAAGGTAGCGAGG CCTGGGTGGCGAATTCGGCACGAGGCCGAGCTGGGGCGCAGAGCGGGAGGCGGCGGC GGCGCGGAGCCCAGGTGGCTCCGCTGCCGATGGGAGTGCCCCAGTGTGCTGGATGAAGC TGGCGCATGCACCATGTATCATGTGTCTTAGCCAGCCAGCAGCAACCGGGCCGCCCC CCAGGATGAGCTGGGGGCGAGGGCAGCAGCAGCAGCGAAAGCCAGAAGCCCTGTGAGGC CCTGCGGGGCTCTCATCCTTGAGCATCCACCTGGGCATGGAGTCTTCATTGTGGTCAC CGAGTGTGAGCCGGGCTGTGCTGTGGACCTCGGCTTGGCGCGGGACCGGCCCTGGAGGC CGATGGCCAAGAGGTCCCCCTTGACTCCTCCGGGTCCCAGGCCCGGCCACCTCTCCGG TCGCAAGTGTCTCTGCAAGAGCGGTCCCAGGGTGGGCTGGCAGCCGGTGGCAGCCTGGA CATGAACGGACGCTGCATCTGCCGTCCCTGCCCTACTCACCCGTGAGTCCCCGAGTC CTCGCTCGGCTGCCCGCGGCCGACAGTGGAGTCTACCACGTCTCCATCACGGGTAT GCAGACTGTGTGAGCTGAATCAGTATACCCTGAAGATGAAATTGAAAGGGCTCCTATG GTGTCGCAAGTTGGCCTACAATGAAAATGACAATACCTACTATGCAATGAAGTGTGTC CAAAAAGAAGCTGATCCGCAGCCGCTTCCACGTGCCCCCTCCACCCCGAGGCACCCGG CCAGCTCTGGAGGCTGCATCAGCCCAAGGGACCT
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_153499
<b>Insert Size:</b>	2000 bp
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	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.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<u><a href="#">NM_153499.2</a></u> , <u><a href="#">NP_705719.2</a></u>
<b>RefSeq Size:</b>	5577 bp
<b>RefSeq ORF:</b>	1626 bp
<b>Locus ID:</b>	10645
<b>UniProt ID:</b>	<u><a href="#">Q96RR4</a></u>

<b>Cytogenetics:</b>	12q24.31
<b>Domains:</b>	pkinase, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase, Transcription Factors
<b>Protein Pathways:</b>	Adipocytokine signaling pathway
<b>Gene Summary:</b>	<p>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]</p> <p>Transcript Variant: This variant (2), also known as beta 1del16, 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 7.</p>