

Product datasheet for **SC108187**

CAMK2B (NM_001220) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2B (NM_001220) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMK2B
Synonyms:	CAM2; CAMK2; CAMKB; CaMKIIbeta; MRD54
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

>OriGene ORF sequence for NM_001220 edited
 CGCACGCCGAGCCGTCGCCGCCGCCATGGCCACCACGGTGACCTGCACCCGCTTCACC
 GACGAGTACCAGCTCTACGAGGATATTGGCAAGGGGGCTTTCTCTGTGGTCCGACGCTGT
 GTCAAGCTCTGCACCCGGCCATGAGTATGCAGCCAAGATCATCAACACCAAGAAGCTGTCA
 GCCAGAGATCACCAGAAGCTGGAGAGAGAGGCTCGGATCTGCCGCTTCTGAAGCATTCC
 AACATCGTGCCTCCACGACAGCATCTCCGAGGAGGGCTTCCACTACCTGGTCTTCGAT
 CTGGTCACTGGTGGGGAGCTCTTTGAAGACATTGTGGCGAGAGAGTACTACAGCGAGGCT
 GATGCCAGTCACTGTATCCAGCAGATCCTGGAGGCCGTTCTCCATTGTCACCAAATGGGG
 GTCGTCCACAGAGACCTCAAGCCGGAGAACCTGCTTCTGGCCAGCAAGTGCAAAGGGGCT
 GCAGTGAAGCTGGCAGACTTCGGCCTAGCTATCGAGGTGCAGGGGGACCAGCAGGCATGG
 TTTGGTTTCGCTGGCACACCAGGCTACCTGTCCCCTGAGGTCCTTCGAAAGAGGCGTAC
 GGCAAGCCCGTGGACATCTGGGCATGTGGGGTGTCTGTACATCCTGCTCGTGGGCTAC
 CCACCCTTCTGGGACGAGGACCAGCACAAGCTGTACCAGCAGATCAAGGCTGGTGCCTAT
 GACTTCCCCTGCCCTGAGTGGGACACCGTCACTCCTGAAGCCAAAACCTCATCAACCAG
 ATGCTGACCATCAACCCTGCCAAGCGCATCACAGCCCATGAGGCCCTGAAGCACCCTGG
 GTCTGCCAACGCTCCACGGTAGCATCCATGATGCACAGACAGGAGACTGTGGAGTGTCTG
 AAAAAGTTCAATGCCAGGAGAAAGCTCAAGGGAGCCATCCTCACCACCATGCTGGCCACA
 CGGAATTTCTCAGTGGGCAGACAGACCACCGCTCCGGCCACAATGTCCACCGCGGCTCC
 GGCACCACCATGGGGCTGGTGGAAACAAGCCAAGAGTTTACTCAACAAGAAAGCAGATGGA
 GTCAAGCCCCAGACGAATAGCACAAAACAGTGCAGCCGCCACCAGCCCCAAAGGGACG
 CTTCTCCTGCCGCCCTGGAGCCTCAAACCACCGTCCATCAACCCAGTGGACGGGATT
 AAGGAGTCTTCTGACAGTGCCAATACCACCATAGAGGATGAAGACGCTAAAGCCCCGAAG
 CAGGAGATCATTAAAGACCACGGAGCAGCTCATCGAGGCCGTCACAACCGTGCATTTGAG
 GCCTACGCGAAAATCTGTGACCCAGGGCTGACCTCGTTTTGAGCCTGAAGCACTGGGCAAC
 CTGGTTGAAGGGATGGACTTCCACAGATTCTACTTCGAGAACCTGCTGGCCAAAGAACAGC
 AAGCCGATCCACACGACCATCCTGAACCCACACGTGCACGTCATTGGAGAGGATGCCGCC
 TGCATCGTTACATCCGGCTCACGCAGTACATTGACGGGCAGGGCCGGCCCCGACCAGC
 CAGTCTGAGGAGACCCCGTGTGGCACCGCCGACGGCAAGTGGCAGAACGTGCACTTC
 CACTGCTCGGGCGCCCTGTGGCCCCGCTGCAGTGAAGAGCTGCGCCCTGGTTTCGCGCG
 ACAGAGTTGGTGTGGAGCCCCACTGCCCTCGGGCACACGGCCTGCCTGTGCATGTTT
 GTGTCTGCCTCGTCCCTCCCCTGGTGCCTGTGTCTGCAGAAAAACAAGACCAGATGTGA
 TTTGTTAAAAAAAACAAAAAACAAGATGACGACGACAACCACAAAAA
 AAATTGACATCAGATGAAATGAAAAAAAAAAAAAAAAAACT

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_001220 unedited
 ACATTTTGAATACGACTCACTATAGGGCGGCCGAAATTCGCACGAGGGCGCAGCCGA
 GCGCACGCCGAGCCCGTCCGCCGCCATGGCCACCACGGTGACCTGCACCCGCTTCAC
 CGACGAGTACCAGCTCTACGAGGATATTGGCAAGGGGGCTTTCTCTGTGGTCCGACGCTG
 TGCAAGCTCTGCACCCGCCATGAGTATGCAGCCAAGATCATCAACACCAAGAAGCTGTC
 AGCCAGAGATCACCAGAAGCTGGAGAGAGAGGCTCGGATCTGCCGCTTCTGAAGCATT
 CAACATCGTGCCTCCACGACAGCATCTCCGAGGAGGGCTTCCACTACCTGGTCTTCGA
 TCTGGTCACTGGTGGGGAGCTCTTTGAAGACATTGTGGCGAGAGAGTACTACAGCGAGGC
 TGATGCCAGTCACTGTATCCAGCAGATCCTGGAGGCCGTTCTCCATTGTCACCAAATGGG
 GGTCTGCACAGAGACCTCAAGCCGGAGAACCTGCTTCTGGCCAGCAAGTGCAAAGGGGC
 TGCAGTGAAGCTGGCAGACTTCGGCCTAGCTATCGAGGTGCAGGGGGACCAGCAGGCATG
 GTTTGGTTTCGCTGGCACACCAGGCTACCTGTCCCTGAGGTCTTCGAAAGAGGCGTA
 CGGCAAGCCCGTGGACATCTGGGCATGTGGGGTGTCTGTACATCCTGCTCGTGGGCTA
 CCCACCCTTCTGGGACGAGGACCAGCACAAGCTGTACCAGCAGATCAAGGCTGGTGCCTA
 TGACTTCCCCTGCCCTGAGTGGGACACCGTCACTCCTGAAGCCAAAACCTCATCAACAGA
 TGCTGACCATCACCCCTGCCAAGCGCATCACAGCCCATGAGGCCCTGAGCACCCGTGGGTC
 TGCCACGCTCCACGTAGCATCCTGATGCCAGACAGAGACTGTGGAN

3' Read Nucleotide Sequence:	>OriGene 3' read for NM_001220 unedited CAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTAAATTCATCTGATGTCAATTTTTTTTTG TGGTTGTCGTCGTCATCTTGTTTTTTTTTTTTTTTTTTGTTTTTTTTTTAACAAATCACAT CTGGTCTTGTTTTTCTGCAAACACAGGCACCAGGGGAGGGAACGAGGCAAACACAAACAT GCGACAGGCAGGCCGTGTCCCGAGGGCAGTCGGGCTCCAAACACCAACTTTGTCCGGCG AAACCAGGGCGCAGCTTTTCACTGCAGCGGGCCACAGGCGGCCCGAACAGTGGAAAGTG CACGTTCTGCCACTTGCCGTGCGGGCGGTGCCACACGCGGGTCTCCTCAAACACTGGCTGGT GCGGGGCCGGCCCTGCCGTCAATGTAAGTACTGCGTGAGCCGGATGTAAGCGATGCAGGCGGC ATCCTCTCCAATGACGTGCACGTGTGGGTTAGGATGGTGTGGATCGGCTTGTCTGTT CTTGGCCAAACAGTTCTCGAAGTAAAATCTGTGGAAGTCCATCCCTTCAACCAGGTTGCC CAGTGCTTCAAGCTCAAACGAGGTTAGCCCTGGGTACAGATTTTTTCGCGTAAGCCTCAA GCCACCGTTGTTGACGGCCTTTATGAGCTGCTCCGCGTTCTTAATGATCTCCTGCTTCCG GGCTTTTACCGTTTTATTCTTTATGGTGAACGGCCCTGTCAGAAGACCCCTAATCCGCC CACTGGGTTATAGAGAACGTGGTCTGAAGCTCCAGGGCCGAGAAGAAACCCCTTTTTG CGGCTGGGGCGGCTGCCCTGTTTTGGGCTTTTCTCCGGGGCTTGAATCCTTCGCTTTTTG GTGAAAAACCTTGCTTGTCCACCACCATGTGGTTCGGAGCTCCGTGGGAATTGCGCCGA ACGGGGTTTTTCGCATAAAAATCCGTGGCCCCGGGGGAAGAAGTCTTGACTTTCTGG CTAAATTTTAAACACCCACTCCGCTGG
Restriction Sites:	NotI-NotI
ACCN:	NM_001220
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).
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_001220.3 , NP_001211.3
RefSeq Size:	2438 bp
RefSeq ORF:	2001 bp
Locus ID:	816
UniProt ID:	Q13554
Cytogenetics:	7p13
Domains:	pkinese, TyrKc, S_TKc

Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Calcium signaling pathway, ErbB signaling pathway, Glioma, GnRH signaling pathway, Long-term potentiation, Melanogenesis, Neurotrophin signaling pathway, Olfactory transduction, Oocyte meiosis, Wnt signaling pathway
Gene Summary:	<p>The product of this gene belongs to the serine/threonine protein kinase family and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. In mammalian cells, the enzyme is composed of four different chains: alpha, beta, gamma, and delta. The product of this gene is a beta chain. It is possible that distinct isoforms of this chain have different cellular localizations and interact differently with calmodulin. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]</p> <p>Transcript Variant: This variant (1) represents the longest transcript and encodes the longest 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.</p>