

Product datasheet for **SC309460**

CAMK2B (NM_172084) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2B (NM_172084) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAMK2B
Synonyms:	CAM2; CAMK2; CAMKB; CaMKIIbeta; MRD54
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC309460 representing NM_172084. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTGTAGTAACCGTCAGAATTTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCCACCACGGTGACCTGCACCCGTTACCGACGAGTACCAGCTCTACGAGGATATTGGCAAGGGG
GCTTTCTCTGTGGTCCGACGCTGTGCAAGCTCTGCACCGCCATGAGTATGCAGCCAAGATCATCAAC
ACCAAGAAGCTGTCAGCCAGAGATCACCAGAAGCTGGAGAGAGAGGCTCGGATCTGCCGCTTCTGAAG
CATTCCAACATCGTGGTCTCCACGACAGCATCTCCGAGGAGGGCTTCCACTACCTGGTCTTCGATCTG
GTCACTGGTGGGAGCTCTTTGAAGACATTGTGGCGAGAGAGTACTACAGCGAGGCTGATGCCAGTCAC
TGTATCCAGCAGATCCTGGAGGCCGTTCTCCATTGTACCAAATGGGGTTCGTCACAGAGACCTCAAG
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GTCCTTCGCAAAGAGGCGTATGGCAAGCCTGTGGACATCTGGCATGTGGGTGATCCTGTACATCCTG
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TATGACTTCCCGTCCCCTGAGTGGGACACCGTCACTCCTGAAGCCAAAACCTCATCAACCAGATGCTG
ACCATCAACCCTGCCAAGCGCATCACAGCCATGAGGCCCTGAAGCACCCGTGGGTCTGCCAACGCTCC
ACGGTAGCATCCATGATGCACAGACAGGAGACTGTGGAGTGTCTGAAAAAGTTCAATGCCAGGAGAAAG
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CCAGGGCTGACCTCGTTTGGCCTGAAGCACTGGCAACCTGGTTGAAGGGATGGACTTCCACAGATTC
TACTTCGAGAACCTGCTGGCCAAGAACAGCAAGCCGATCCACACGACCATCCTGAACCCACACGTGCAC
GTCATTGGAGAGGATGCCGCTGCATCGTTACATCCGGCTCACGCAGTACATTGACGGGACGGCCGG
CCCCGCACCAGCCAGTCTGAGGAGACCCGCTGTGGCACCGCCGACGGCAAGTGGCAGAACGTGCAC
TCCACTGCTCGGGCGCGCTGTGGCCCCGCTGCAGTGA
ACGCGTACGCGGCCGCTCGAGCAGAAAACATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Restriction Sites:	Sgfl-Mlul
Plasmid Map:	□
ACCN:	NM_172084
Insert Size:	1350 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:	<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:	<u>NM_172084.2</u>
RefSeq Size:	3935 bp
RefSeq ORF:	1350 bp
Locus ID:	816
UniProt ID:	<u>Q13554</u>
Cytogenetics:	7p13
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
MW:	51 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. 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]

Transcript Variant: This variant (8), also known as beta 7, lacks an in-frame segment of the coding region, compared to variant 1. It encodes a shorter isoform (8), also known as beta 7 subunit, that is missing an internal segment compared to isoform 1. Sequence Note: The RefSeq transcript and protein were derived from transcript and genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.