

Product datasheet for **RC218366**

CAMK2B (NM_172084) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CAMK2B (NM_172084) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CAMK2B
Synonyms:	CAM2; CAMK2; CAMKB; CaMKIIbeta; MRD54
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC218366 representing NM_172084
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCCACCACGGTGACCTGCACCCGTTACCCGACGAGTACCAGCTCTACGAGGATATTGGCAAGGGG
 CTTTCTCTGTGGTCCGACGCTGTGTCAAGCTCTGCACCGCCATGAGTATGCAGCCAAGATCATCAACAC
 CAAGAAGCTGTCAGCCAGAGATCACCAGAAGCTGGAGAGAGAGGCTCGGATCTGCCGCCTCTGAAGCAT
 TCCAACATCGTGCCTCCACGACAGCATCTCCGAGGAGGGCTTCCACTACCTGGTCTTCGATCTGGTCA
 CTGGTGGGAGCTCTTTGAAGACATTGTGGCGAGAGAGTACTACAGCGAGGCTGATGCCAGTCACTGTAT
 CCAGCAGATCCTGGAGGCCGTTCTCCATTGTACCAAATGGGGTTCGTCACAGAGACCTCAAGCCGGAG
 AACCTGCTTCTGGCCAGCAAGTCAAAGGGGCTGCAGTGAAGCTGGCAGACTTCGGCCTAGCTATCGAGG
 TGCAGGGGACCAGCAGGCATGGTTTGGTTTCGCTGGCACACCAGGCTACCTGTCCCCTGAGGTCTTCCG
 CAAAGAGCGGTATGGCAAGCCTGTGGACATCTGGGCATGTGGGGTATCCTGTACATCCTGCTCGTGGC
 TACCCACCTTCTGGGACGAGGACCAGCACAAGCTGTACCAGCAGATCAAGGCTGGTGCCTATGACTTCC
 CGTCCCCTGAGTGGGACACCGTCACTCCTGAAGCCAAAAACCTCATCAACCAGATGCTGACCATCAACCC
 TGCCAAGCGCATCACAGCCATGAGGCCCTGAAGCACCCGTGGGTCTGCCAACGCTCCACGGTAGCATCC
 ATGATGCACAGACAGGAGACTGTGGAGTGTCTGAAAAAGTTCAATGCCAGGAGAAAGCTCAAGGGAGCCA
 TCCTCACCACCATGCTGGCCACACGGAATTTCTCAGCCCGGAAGCAGGAGATCATTAAAGACCACGGAGCA
 GCTCATCGAGGCCGTCACAACGGTGACTTTGAGGCCTACGCGAAAATCTGTGACCCAGGGCTGACCTCG
 TTTGAGCCTGAAGCACTGGGCAACCTGGTTGAAGGGATGGACTTCCACAGATTCTACTTCGAGAACCTGC
 TGGCCAAGAACAGCAAGCCGATCCACACGACCATCCTGAACCCACACGTCACGTCATTGGAGAGGATGC
 CGCCTGCATCGCTTACATCCGGCTCACGCAGTACATTGACGGGCAGGGCCGGCCCGCACCAGCCAGTCT
 GAGGAGACCCGCGTGTGGCACCCCGCGACGGCAAGTGGCAGAACGTGCCTTCCACTGCTCGGGCGCGC
 CTGTGGCCCCGCTGCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC218366 representing NM_172084
 Red=Cloning site Green=Tags(s)

MATTVTCTRFTDEYQLYEDIGKGAFSVVRRCVKLCTGHEYAALKINTKKLSARDHQKLEREARICRLK
 SNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIQQILEAVLHCHQMGMVHRDLKPE
 NLLLASKCKGAAVKLADFLAIEVQGDQQAQWFGAGTPGYLSPEVLRKEAYGKPVDIWACGVILYILLVG
 YPPFWDEDQHKLYQIKAGAYDFPSPEWDTVTPEAKNLINQMLTINPAKRITAHEALKHPWVCQRSTVAS
 MMHRQETVECLKKFNARRKLGAILTTMLATRNFSARKQEIIKTTEQLIEAVNNGDFEAYAKICDPGLTS
 FEPEALGNLVEGMDFHRFYFENLLAKNSKPIHTTILNPHVHVIIGEDAACIAYIRLTQYIDGQGRPRTSQS
 EETRVWHRRDGKWQNVHFHCSGAPVAPLQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8060_g02.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_172084

ORF Size: 1347 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_172084.3](#)

RefSeq Size: 1787 bp

RefSeq ORF: 1350 bp

Locus ID: 816

UniProt ID: [Q13554](#)

Cytogenetics: 7p13

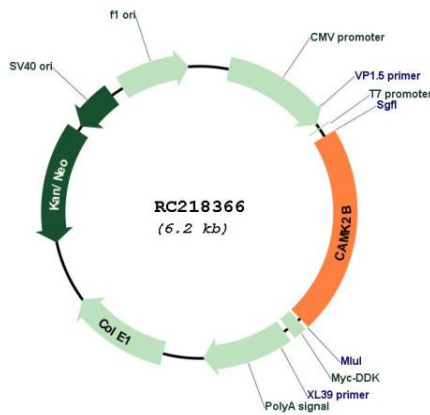
Protein Families: Druggable Genome, Protein Kinase

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

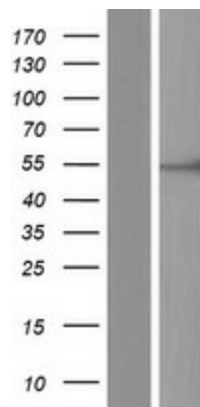
MW: 50.8 kDa

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]

Product images:



Circular map for RC218366



Western blot validation of overexpression lysate (Cat# [LY406828]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218366 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).