

## Product datasheet for **RG219723**

### **CAMK2B (NM\_172080) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CAMK2B (NM_172080) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CAMK2B
Synonyms:	CAM2; CAMK2; CAMKB; CaMKIIbeta; MRD54
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG219723 representing NM\_172080  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCACCACGGTGACCTGCACCCGCTTCACCGACGAGTACCAGCTCTACGAGGATATTGGCAAGGGG  
 CTTTCTCTGTGGTCCGACGCTGTGTCAAGCTCTGCACCGCCATGAGTATGCAGCCAAGATCATCAACAC  
 CAAGAAGCTGTCAGCCAGAGATCACCAGAAGCTGGAGAGAGAGGCTCGGATCTGCCGCCCTCTGAAGCAT  
 TCCAACATCGTGCCTCCACGACAGCATCTCCGAGGAGGGCTTCCACTACCTGGTCTTCGATCTGGTCA  
 CTGGTGGGAGCTCTTTGAAGACATTGTGGCGAGAGAGTACTACAGCGAGGCTGATGCCAGTCACTGTAT  
 CCAGCAGATCCTGGAGGCCGTTCTCCATTGTACCAAATGGGGTCTCCACAGAGACCTCAAGCCGGAG  
 AACCTGCTTCTGGCCAGCAAGTCAAAGGGGCTGCAGTGAAGCTGGCAGACTTCGGCCTAGCTATCGAGG  
 TGCAGGGGACCAGCAGGCATGGTTTGGTTTCGCTGGCACACCAGGCTACCTGTCCCTGAGGTCCTTCG  
 CAAAGAGCGGTATGGCAAGCCTGTGGACATCTGGGCATGTGGGTGATCCTGTACATCCTGCTCGTGGC  
 TACCCACCTTCTGGGACGAGGACCAGCACAAGCTGTACCAGCAGATCAAGGCTGGTGCCTATGACTTCC  
 CGTCCCTGAGTGGGACACCGTCACTCCTGAAGCCAAAAACCTCATCAACCAGATGCTGACCATCAACCC  
 TGCCAAGCGCATCACAGCCATGAGGCCCTGAAGCACCCGTGGTCTGCCAACGCTCCACGGTAGCATCC  
 ATGATGCACAGACAGGAGACTGTGGAGTGTCTGAAAAAGTTCAATGCCAGGAGAAAGCTCAAGGGAGCCA  
 TCCTCACCACCATGCTGGCCACACGGAATTTCTCAGCCAAGAGTTTACTCAACAAGAAAGCAGATGGAGT  
 CAAGCCCCAGACGAATAGCACAAAAACAGTGCAGCCGCCACCAGCCCCAAAGGGACGCTTCTCCTGCC  
 GCCCTGGAGCCTCAAACCACCGTCAATCCATAACCCAGTGGACGGGATTAAGGAGTCTTCTGACAGTGCCA  
 ATACCACCATAGAGGATGAAGACGCTAAAGCCCCGGAAGCAGGAGATCATTAAAGACCACGGACAGCTCAT  
 CGAGCCGTCAACAACGGTGACTTTGAGGCTACGCGAAAAATCTGTGACCCAGGGCTGACCTCGTTTGAG  
 CCTGAAGCACTGGCAACCTGGTTGAAGGGATGGACTTCCACAGATTCTACTTCGAGAACCTGCTGGCCA  
 AGAACAGCAAGCCGATCCACACGACCATCCTGAACCCACACGTCACGTCATTGGAGAGGATGCCGCTG  
 CATCGTTACATCCGGCTCACGCAGTACATTGACGGGCAGGGCCGCCCCGACCCAGCCAGTCTGAGGAG  
 ACCCGCGTGTGGCACCGCCGCGACGGCAAGTGGCAGAACGTGCACCTCCACTGCTCGGGCGCCTGTGG  
 CCCCCTGCAG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG219723 representing NM\_172080  
 Red=Cloning site Green=Tags(s)

MATTVTCTRFDTDEYQLYEDIGKGAFSVRRRCVKLCTGHEYAAKIINTKKLSARDHQKLEREARICRLLKH  
 SNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIQQILEAVLHCHQMGVVHRDLKPE  
 NLLLASKCKGAAVKLADFLAIEVQGDQQAWFAGTGYLSPEVLRKEAYGKPVDIWACGVILYILLVG  
 YPPFWDEDQHKLYQIKAGAYDFPSPEWDTVTPEAKNLINQMLTINPAKRITAHEALKHPWVCQRSTVAS  
 MMHRQETVECLKKFNARRKLGAILTTMLATRNFSAKSLLNKKADGVKPKQTNSTKNSAAATSPKGLPPA  
 ALEPQTTVIHNPVDGIKESSDSANTTIEDEDAKARKQEIKTTEQLIEAVNNGDFEAYAKICDPGLTSFE  
 PEALGNLVEGMDFHRFYFENLLAKNSKPIHTTILNPHVHVIGEDAACIAYIRLTQYIDGQGRPRTSQSEE  
 TRVWHRDQKQNVVHFHCSGAPVAPLQ

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI



<b>ACCN:</b>	NM_172080
<b>ORF Size:</b>	1551 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>	<a href="#">NM_172080.3</a>
<b>RefSeq Size:</b>	1991 bp
<b>RefSeq ORF:</b>	1554 bp
<b>Locus ID:</b>	816
<b>UniProt ID:</b>	<a href="#">Q13554</a>
<b>Cytogenetics:</b>	7p13
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Calcium signaling pathway, ErbB signaling pathway, Glioma, GnRH signaling pathway, Long-term potentiation, Melanogenesis, Neurotrophin signaling pathway, Olfactory transduction, Oocyte meiosis, Wnt signaling pathway
<b>Gene Summary:</b>	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]