

## Product datasheet for **RC227011**

### **CAMK2D (NM\_172129) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CAMK2D (NM_172129) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CAMK2D
Synonyms:	CAMKD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC227011 representing NM\_172129  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTTCGACCACAACCTGCACCAGGTTACGGACGAGTATCAGCTTTTCGAGGAGCTTGAAAGGGG  
 CATTCTCAGTGGTGAGAAGATGTATGAAAATTCCTACTGGACAAGAATATGCTGCCAAAATTATCAACAC  
 CAAAAAGCTTTCTGCTAGGGATCATCAGAACTAGAAAGAGAAGCTAGAATCTGCCGCTTTTGAAGCAC  
 CCTAATATTGTGCGACTTCATGATAGCATATCAGAAGAGGGCTTTCCTACTTGGTGTGTTGATTTAGTTA  
 CTGGAGGTGAAGTGTGTTGAAGACATAGTGGCAAGAGAATACTACAGTGAAGCTGATGCCAGTCATTGTAT  
 ACAGCAGATTCTAGAAAGTGTAAATCATTGTACCTAAATGGCATAGTTCACAGGGACCTGAAGCCTGAG  
 AATTTGCTTTTAGCTAGCAAATCCAAGGGAGCAGCTGTGAAATGGCAGACTTTGGCTTAGCCATAGAAG  
 TTCAAGGGGACCAGCAGGCGTGGTTTGGTTTTGCTGGCACACCTGGATATCTTTCTCAGAAGTTTTACG  
 TAAAGATCCTTATGGAAGCCAGTGGATATGTGGGCATGTGGTGCATTCTATATTCTACTTGTGGGG  
 TATCCACCCTTCTGGGATGAAGACCAACACAGACTCTATCAGCAGATCAAGGCTGGAGCTTATGATTTTC  
 CATCACCAGAATGGGACACGGTGACTCCTGAAGCCAAAGACCTCATCAATAAAATGCTTACTATCAACCC  
 TGCCAAACGCATCACAGCCTCAGAGGCACTGAAGCACCCATGGATCTGTCAACGTTCTACTGTTGCTTCC  
 ATGATGCACAGACAGGAGACTGTAGACTGCTTGAAGAAATTTAATGCTAGAAGAAAATAAAGGGTGCCA  
 TCTTGACAACATAGCTGGCTACAAGGAATTTCTCAGCAGCCAAGAGTTTGTGGAAGAACCATGGAGT  
 AAAGAAAAGGAAGTCCAGTTCGAGTGTTCAGATGATGGAGTCACTGAGAGTTCAAATACAACAATTGAG  
 GATGAAGATGTGAAAGCACGAAAGCAAGAGATTATCAAAGTCACTGAACAACCTGATCGAAGCTATCAACA  
 ATGGGGACTTTGAAGCCTACACAAAATCTGTGACCCAGGCCTTACTGCTTTTGAACCTGAAGCTTTGGG  
 TAATTTAGTGGAAGGGATGGATTTTACCAGTCTACTTTGAAAATGCTTTGTCCAAAAGCAATAAACCA  
 ATCCACACTATTATTCTAAACCCTCATGTACATCTGGTAGGGGATGATGCCGCCTGCATAGCATATATTA  
 GGCTCACACAGTACATGGATGGCAGTGGAAATGCCAAAGACAATGCAGTCAGAAGAGACTCGTGTGTGGCA  
 CCGCCGGGATGGAAGTGGCAGAATGTTCAATTTTCATCGCTCGGGGTACCAACAGTACCCATCAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC227011 representing NM\_172129  
 Red=Cloning site Green=Tags(s)

MASTTTCTRFDEYQLFEELGKGAFSVVRRCKIPTGQEYAAKIINTKKLSARDHQKLEREARICRLLKH  
 PNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIQQIILESVNHCHLNGIVHRDLKPE  
 NLLLASKSKGAAVKLADFLAIEVQGDQQAWFAGTPLYLSPVLRKDPYGKPVDMWACGVILYILLVG  
 YPPFWDEDQHRLYQIKAGAYDFPSPEWDTVTPEAKDLINKMLTINPAKRITASEALKHPWICQRSTVAS  
 MMHRQETVDLKKFNARRKLGAILTTMLATRNFSAAKSLLLKPKDGVKKRSSSSVQMMESTESSNTTIE  
 DEDVKARKQEIIKVTEQLIEAINNNGDFEAYTKICDPGLTAFEPEALGNLVEGMDFHRFYFENALSKSNKP  
 IHTIILNPHVHLVGDDAACIAYIRLTQYMDGSGMPKTMQSEETRVWHRDQKQWQNVHFHRSGSPTVPIK

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8062\\_h12.zip](https://cdn.origene.com/chromatograms/mk8062_h12.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_172129

**ORF Size:** 1467 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\\_172129.1](#), [NP\\_742127.1](#)

**RefSeq ORF:** 1470 bp

**Locus ID:** 817

**UniProt ID:** [Q13557](#)

**Cytogenetics:** 4q26

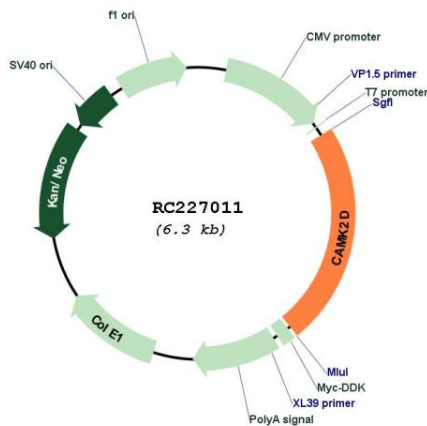
**Protein Families:** Druggable Genome, Protein Kinase

**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

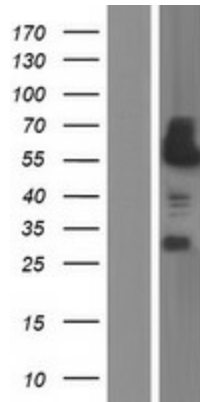
**MW:** 55.2 kDa

**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 delta chain. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Distinct isoforms of this chain have different expression patterns.[provided by RefSeq, Nov 2008]

**Product images:**



Circular map for RC227011



Western blot validation of overexpression lysate (Cat# [LY430342]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC227011 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).