

## Product datasheet for **RG212648**

### **CAMK2D (NM\_001221) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CAMK2D (NM_001221) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CAMK2D
Synonyms:	CAMKD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG212648 representing NM\_001221  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTTCGACCACAACCTGCACCAGGTTACGGACGAGTATCAGCTTTTCGAGGAGCTTGAAAGGGG  
 CATTCTCAGTGGTGAGAAGATGTATGAAAATTCCTACTGGACAAGAATATGCTGCCAAAATTATCAACAC  
 CAAAAAGCTTTCTGCTAGGGATCATCAGAACTAGAAAGAGAAGCTAGAATCTGCCGCTTTTGAAGCAC  
 CCTAATATTGTGCGACTTCATGATAGCATATCAGAAGAGGGCTTTCCTACTTGGTGTGGATTTAGTTA  
 CTGGAGGTGAAGTGTGAAAGACATAGTGGCAAGAGAATACTACAGTGAAGCTGATGCCAGTCATTGTAT  
 ACAGCAGATTCTAGAAAGTGTAAATCATTGTACCTAAATGGCAGTTCACAGGGACCTGAAGCCTGAG  
 AATTTGCTTTAGCTAGCAAATCCAAGGGAGCAGCTGTGAAATGGCAGACTTTGGCTTAGCCATAGAAG  
 TTCAAGGGGACCAGCAGGCGTGGTTTGGTTTTGCTGGCACACCTGGATATCTTTCTCAGAAGTTTTACG  
 TAAAGATCCTTATGAAAAGCCAGTGGATATGTGGGCATGTGGTGCATTCTATATTCTACTTGTGGG  
 TATCCACCCTTCTGGGATGAAGACCAACACAGACTCTATCAGCAGATCAAGGCTGGAGCTTATGATTTTC  
 CATCACCAGAATGGGACACGGTGACTCCTGAAGCCAAAGACCTCATCAATAAAATGCTTACTATCAACCC  
 TGCCAAACGCATCACAGCCTCAGAGGCACTGAAGCACCCATGGATCTGTCAACGTTCTACTGTTGCTTCC  
 ATGATGCACAGACAGGAGACTGTAGACTGCTTGAAGAAATTTAATGCTAGAAGAAAATAAAGGGTGCCA  
 TCTTGACAACATAGCTGGCTACAAGGAATTTCTCAGCAGCCAAGAGTTTGTGGAAGAACAGATGGAGT  
 AAAGGAGTCAACTGAGAGTTCAAATAACAACATGAGGATGAAGATGTGAAAGCAGCAAAGCAAGAGATT  
 ATCAAAGTCACTGAACAACGATCGAAGCTATCAACAATGGGGACTTTGAAGCCTACACAAAAATCTGTG  
 ACCCAGGCTTACTGCTTTTGAACCTGAAGCTTTGGGTAATTTAGTGAAGGGATGGATTTTACCAGT  
 CTACTTTGAAAATGCTTTTCCAAAAGCAATAAACCAATCCACACTATTATTCTAAACCTCATGTACAT  
 CTGGTAGGGGATGATGCCGCTGCATAGCATATATTAGGCTCACACAGTACATGGATGGCAGTGGAAATGC  
 CAAAGACAATGCAGTCAGAAGAGACTCGTGTGGCACCGCCGGGATGAAAAGTGGCAGAAATGTTTCAAT  
 TCATCGCTCGGGTCAACACAGTACCCATCAAGCCACCTGTATTCCAATGGGAAAGAAAATCTCTCA  
 GGAGGCACCTCTTTGTGGCAAACATC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG212648 representing NM\_001221  
 Red=Cloning site Green=Tags(s)

MASTTTCTRFDEYQLFEELGKGAFSVVRRCKIPTGQEYAAKIINTKKLSARDHQKLEREARICRLLKH  
 PNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCIQQILESVDHCHLNGIVHRDLKPE  
 NLLLASKSKGAAVKLADFLAIEVQGDQQAQWFGFAGTPGYLSPEVLRKDPYGKPVDMWACGVILYILLVG  
 YPPFWDEDQHRLYQIKAGAYDFPSPEWDTVTPEAKDLINKMLTINPAKRITASEALKHPWICQRSTVAS  
 MMHRQETVDCLKKFNARRKLGAILTTMLATRNFSAAKSLKPKPDGVKESTESSNTTIEDEDVKARKQEI  
 IKVTEQLIEAINNGDFEAYTKICDPGLTAFEPEALGNLVEGMDFHRFYFENALSKSNKPIHTIILNPHVH  
 LVGDAAACIAYIRLTQYMDGSGMPKTMQSEETRVWHRDQKQVNHVHRSVGSPTVPIKPPCIPNGKENFS  
 GGTSLWQNI

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001221

**ORF Size:** 1497 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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).

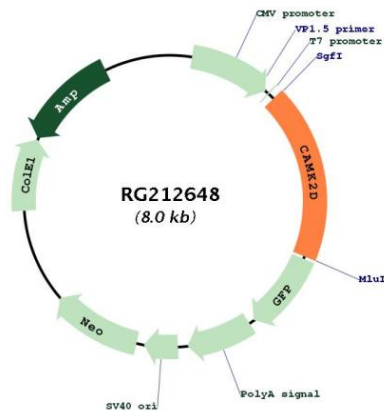
**Reconstitution Method:**

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\\_001221.4](#)

RefSeq Size:	2140 bp
RefSeq ORF:	1500 bp
Locus ID:	817
UniProt ID:	<a href="#">Q13557</a>
Cytogenetics:	4q26
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:	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 RG212648