

## Product datasheet for **RG211893**

### PKC alpha (PRKCA) (NM\_002737) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PKC alpha (PRKCA) (NM_002737) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PKC alpha
Synonyms:	AAG6; PKC-alpha; PKCA; PKCalpha; PKCI+/-; PRKACA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>RG211893 representing NM\_002737  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGCATCGCC

ATGGCTGACGTTTTCCCGGGCAACGACTCCACGGCGTCTCAGGACGTGGCCAACCGCTTCGCCCGCAAAG  
 GGGCGCTGAGGCAGAAGAACGTGCACGAGGTGAAGGACCACAAATTCATCGCGCGCTTCTCAAGCAGCC  
 CACCTTCTGCAGCCACTGCACCGACTTCATCTGGGGTTTGGGAAACAAGGCTTCCAGTGCCAAGTTTGC  
 TGTTTTGTGTTCCACAAGAGGTGCCATGAATTTGTACTTTTTCTGTCCGGGTGCGGATAAGGGACCCG  
 AACTGATGACCCAGGAGCAAGCACAAGTTCAAATCCACACTTACGGAAGCCCACTTCTGCGATCA  
 CTGTGGTCACTGCTCTATGGACTTATCCATCAAGGGATGAAATGTGACACCTGCGATATGAACGTTAC  
 AAGCAATGCGTCATCAATGTCCCAGCCTCTGCGGAATGGATCACACTGAGAAGAGGGGGCGGATTTACC  
 TAAAGGCTGAGGTTGCTGATGAAAAGCTCCATGTCACAGTACGAGATGCAAAAAATCTAATCCCTATGGA  
 TCCAAACGGGCTTTCAGATCCTTATGTGAAGCTGAACTTATTCTGATCCCAAGATGAAAGCAAGCAA  
 AAAACCAAAACCTCCGCTCCACACTAAATCCGCAAGTGAATGAGTCCTTACATTCAAATGAAACCTT  
 CAGACAAAGACCGACGACTGTCTGTAGAAATCTGGGACTGGGATCGAACAACAAGGAATGACTTCATGGG  
 ATCCCTTTCCTTTGGAGTTTCGGAGCTGATGAAGATGCCGGCCAGTGGATGGTACAAGTTGCTTAACCAA  
 GAAGAAGTGAGTACTACAACGTACCCATTCCGGAAGGGGACGAGGAAGGAAACATGGAACCTCAGGCAGA  
 AATTCGAGAAAGCCAACTTGGCCCTGCTGGCAACAAAGTCATCAGTCCCTCTGAAGACAGGAAACAACC  
 TTCCAACAACCTTGACCGAGTAACTCACGGACTTCAATTTCTCATGGTGTGGGAAAGGGGAGTTTT  
 GGAAAGGTGATGCTTGGCAGCAGGAAGGGCACAGAAGAAGTGTATGCAATCAAAATCCTGAAGAAGGATG  
 TGGTGATTCAGGATGATGACGTGGAGTGCACCATGGTAGAAAAGCGAGTCTTGGCCCTGCTTGACAAACC  
 CCGGTTCTTGACGACGCTGCACTCCTGCTTCCAGACAGTGGATCGGCTGTACTTCGTCATGGAATATGTC  
 AACGGTGGGACCTCATGTACCACATTCAGCAAGTAGGAAAATTAAGGAACCACAAGCAGTATTCTATG  
 CGGCAGAGATTTCCATCGGATTGTTCTTTCTTCAAAAAGAGGAATCATTTATAGGGATCTGAAGTTAGA  
 TAACGTCATGTTGGATTGAGAAGGACATATCAAAATTGCTGACTTTGGGATGTGCAAGGAACACATGATG  
 GATGGAGTCACGACCAGGACCTTCTGTGGGACTCCAGATTATATCGCCCCAGAGATAATCGCTTATCAGC  
 CGTATGGAAAATCTGTGGACTGGTGGCCATGGCGTCTGTTGTATGAAATGCTTGCCGGGCAGCCTCC  
 ATTTGATGGTGAAGATGAAGACGAGCTATTTAGTCTATCATGGAGCACAAAGTTTCTATCCAAAATCC  
 TTGTCCAAGGAGGCTGTTTCTATCTGCAAAGGACTGATGACCAAAACCCAGCCAAGCGGCTGGGCTGTG  
 GGCTGAGGGGGAGAGGGACGTGAGAGAGCATGCCTTCTCCGGAGGATCGACTGGGAAAAACTGGAGAA  
 CAGGGAGATCCAGCCACCATTCAAGCCAAAGTGTGTGGCAAAGGAGCAGAGAATTTGACAAGTTCTTC  
 ACACGAGGACAGCCGCTTAAACACCACCTGATCAGCTGGTTATTGCTAACATAGACCAGTCTGATTTTG  
 AAGGGTTCTCGTATGTCAACCCCGATTTGTGCACCCATCTTACAGAGTGCAGTA

ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG211893 representing NM\_002737  
 Red=Cloning site Green=Tags(s)

MADVFPGNSTASQDVANRFARKGALRQKNVHEVKDHKFIARFFKQPTFCSHCTDFIWGFGKQGFQCQVC  
 CFVVKRCHEFVTFSCPGADKGPDTDDPRSKHKFKIHTYGSPTFCDHCGSLLYGLIHQGMKCDTCDMNVH  
 KQCVINVPSLCGMDHTEKRGRIYLKAEVADEKLHVTVRDAKNLIPMDPNGLSDPYVKLKLIPDPKNESKQ  
 KTKTIRSTLNPQWNESTFKLKPSPDKDRRLSVEIWDWDRTRNDFMGSLSFVSELMKMPASGWYKLLNQ  
 EGEYYNVPIPEGDEEGNMLRQKFEKAKLGPAGNKVISPSEDRKQPSNNLDRVKLTDFNFMVLGKGSF  
 GKVMLADRKGTEELYAIKILKKDVVIQDDVECTMVEKRVLALLDKPPFLTQLHSCFQTVDRLYFVMEYV  
 NGGDLMYHIQQVGKFKEPQAVFYAAEISIGLFFLHKRGIYRDLKLDNVMLDSEGHKIIDFGMCKEHMM  
 DGVVTRTRFCGTPDYIAPEIIAYQPYGKSVDDWYAGVLLYEMLAGQPPFDGEDEDELQSIMEHNVSPYK  
 LSKEAVSICKGLMTKHPAKRLGCGPEGERDVREHAFFRRIDWEKLENREIQPPFKPKVCGKGAENFDKFF  
 TRGQPVLTTPDQLVIANIDQSDFEFGFSYVNPQFVHPILQSAV

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



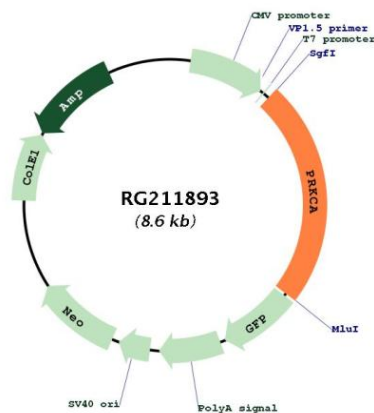
**ACCN:** NM\_002737

**ORF Size:** 2016 bp

<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <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_002737.2</a> , <a href="#">NP_002728.1</a>
<b>RefSeq Size:</b>	8787 bp
<b>RefSeq ORF:</b>	2019 bp
<b>Locus ID:</b>	5578
<b>UniProt ID:</b>	<a href="#">P17252</a>
<b>Cytogenetics:</b>	17q24.2
<b>Domains:</b>	C2, pkinase, S_TK_X, TyrKc, DAG_PE-bind, S_TKc
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase
<b>Protein Pathways:</b>	Calcium signaling pathway, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Leukocyte transendothelial migration, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Natural killer cell mediated cytotoxicity, Non-small cell lung cancer, Pathogenic Escherichia coli infection, Pathways in cancer, Phosphatidylinositol signaling system, Tight junction, Vascular smooth muscle contraction, VEGF signaling pathway, Vibrio cholerae infection, Wnt signaling pathway

**Gene Summary:**

Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and the second messenger diacylglycerol. PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways. PKC family members also serve as major receptors for phorbol esters, a class of tumor promoters. Each member of the PKC family has a specific expression profile and is believed to play a distinct role in cells. The protein encoded by this gene is one of the PKC family members. This kinase has been reported to play roles in many different cellular processes, such as cell adhesion, cell transformation, cell cycle checkpoint, and cell volume control. Knockout studies in mice suggest that this kinase may be a fundamental regulator of cardiac contractility and Ca(2+) handling in myocytes. [provided by RefSeq, Jul 2008]

**Product images:**

Circular map for RG211893