

## Product datasheet for **SC126553**

### PKC alpha (PRKCA) (NM\_002737) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PKC alpha (PRKCA) (NM_002737) Human Untagged Clone
Tag:	Tag Free
Symbol:	PKC alpha
Synonyms:	AAG6; PKC-alpha; PKCA; PKCalpha; PKCI+/-; PRKACA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_002737, the custom clone sequence may differ by one or more nucleotides

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ATGGCTGACGTTTTCCCGGGCAACGACTCCACGGCGTCTCAGGACGTGGCCAACCGCTTCGCCCGCAAAG
GGGCGCTGAGGCAGAAGAACGTGCACGAGGTGAAGGACCACAAATTCATCGCGCGCTTCTCAAGCAGCC
CACCTTTCGAGCCACTGCACCGACTTCATCTGGGGTGGGAAACAAGGCTTCCAGTGCCAAGTTTGC
TGTTTTGGTCCACAAGAGGTGCCATGAATTTGTTACTTTTTCTGTCCGGGTGCGGATAAGGGACCCG
ACACTGATGACCCAGGACCAAGCACAAGTTCAAATCCACACTTACGGAAGCCCCACCTTCTGCGATCA
CTGTGGTCACTGCTCTATGGACTTATCCATCAAGGGATGAAATGTGACACCTGCGATATGAACGTTTAC
AAGCAATGCGTCATCAATGTCCCAGCCTCTGCGGAATGGATCACACTGAGAAGAGGGGGCGGATTTACC
TAAAGGCTGAGGTTGCTGATGAAAAGCTCCATGTCACAGTACGAGATGCAAAAAATCTAATCCCTATGGA
TCCAAACGGGCTTTCAGATCCTTATGTGAAGCTGAACTTATTCCTGATCCCAAGAAATGAAAGCAAGCAA
AAAACAAAACCATCCGCTCCACACTAAATCCGCAGTGGAAATGAGTCCTTACATTCAAATGAAACCTT
CAGACAAAAGCCGACTGTCTGTAGAAATCTGGGACTGGGATCGAACAACAAGGAATGACTTCATGGG
ATCCCTTTCCTTTGGAGTTTCGGAGCTGATGAAGATGCCGGCCAGTGGATGGTACAAGTTGCTTAACCAA
GAAGAAGGTGAGTACTACAACGTACCCATTCCGGAAGGGGACGAGGAAGGAAACATGGAACCTCAGGCAGA
AATTCGAGAAAGCCAAACTTGGCCCTGCTGGCAACAAAGTCATCAGTCCCTCTGAAGACAGGAAACAACC
TCCAACAACCTTGACCGAGTAAAACACGGACTTCAATTTCTCATGGTGTGGGAAAGGGGAGTTTT
GGAAAGGTGATGCTTGCCGACAGGAAGGGCACAGAAGAACTGTATGCAATCAAAATCCTGAAGAAGGATG
TGGTGATTCAGGATGATGACGTGGAGTGCACCATGGTAGAAAAGCGAGTCTTGGCCCTGCTTGACAAACC
CCGTTCTTGACGACGTGCACCTCTGCTCCAGACAGTGGATCGGCTGTACTTCGTATGGAATATGTC
AACCGTGGGACCTCATGTACCACATTAGCAAGTAGGAAAATTAAGGAACCAAGCAGTATTCTATG
CGGCAGAGATTTCCATCGGATTGTTCTTCTTCATAAAAAGAGGAATCATTATAGGGATCTGAAGTTAGA
TAACGTATGTTGGATTAGAAGGACATATCAAAATGCTGACTTTGGGATGTGCAAGGAACACATGATG
GATGGAGTCACGACCAGGACCTTCTGTGGGACTCCAGATTATATCGCCCCAGAGATAATCGCTTATCAGC
CGTATGAAAAATCTGTGGACTGGTGGCCATGGCGTCTGTTGTATGAAATGCTTGCCGGGCAGCCTCC
ATTTGATGGTGAAGATGAAGACGAGCTATTTAGTCTATCATGGAGCACAACGTTTCTATCCAAAATCC
TTGTCCAAGGAGGCTGTTCTATCTGCAAAGGACTGATGACCAACACCCAGCCAAGCGGCTGGGCTGTG
GGCCTGAGGGGGAGAGGGACGTGAGAGAGCATGCCTTCTCCGGAGGATCGACTGGGAAAAACTGGAGAA
CAGGGAGATCCAGCCACCATTCAAGCCAAAGTGTGTGGCAAAGGAGCAGAGAACTTTGACAAGTCTTC
ACACGAGGACAGCCCGTCTTAACACCACCTGATCAGCTGGTTATTGCTAACATAGACCAGTCTGATTTTG
AAGGGTCTCGTATGTCAACCCCAAGTTTGTGCACCCCATCTTACAGAGTGCAGTATGA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_002737 unedited

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TTACGCGCCCGTTGCCGCTTAGGGCGGTAGGCGGTACGGTGGGNAGGTCTATATAAGCA
GAGCTCATTTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGACGCGGCCGCGA
ATTCGGCACGAGGCGGCTCCGGCTCCCGCTCCCGCAGCACCAGCCGACTCTC
CCCGGCCCGCGCGCCCTCGCCGCGACCTCGGCCACCGCCCGCGCCCGCGCCCG
GGGTGCCCCGAGCCGACCTCTCCCCGCGCCCGCCACCCGGCCCTCCGCGGCC
GCAGCTCCCCGGCGGAGGCAAGAGGTGTTGGGGGGACCATGGCTGACGTTTTCCCGG
CAACGACTCCACGGCGTCTCAGGACGTGGCCAACCGCTTCGCCCGCAAAGGGCGCTGAG
GCAGAAGAAGCTGCACGAGGTGAAGGACCACAAATTCATCGCGCGCTTCTCAAGCAGCC
CACCTTTCGAGCCACTGCACCGACTTCATCTGGGGTGGGAAACAAGGCTTCCAGTG
CCAAGTTTGCTGTTTTGGTCCACAAGAGGTGCCATGAATTTGTTACTTTTTCTGTCC
GGGTGCGGATAATGGACCCGACACTGATGACCCAGGAGCAAGCAAGTTCAAATCCA
CACTTACGGAAGCCCCACCTTCTGCGATCACTGTGGTCACTGCTCTATGGACTTATCCA
TCAAGGGATGAAATGTGACACCTGCGATATGAACGTTCAAGCAATGCGTCATCAATGT
CCCCAGCTCTGCGGAATGGATCACACTGAGAAGAAGGGGCGGGATTTACCTAAGGCTGA
AGTTGCTGATGAAAGCTCCATGTCACAGTACGAGATGCAAAAAATCTATCCTATGATCCC
CTTNTTGAAGTTTCGGGCTGATAANAAGCC
    
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_002737 unedited TGCACTCCAGGCCAGGAGAGGCACTGGGGAGGGGTCACAGGGATGCCACCCGGGATCTG TTCAGGAAACAGCTATGACCCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTGTTTTT GTTATTAAGGTTTATTATAAACATGCAAAATTCATTGCATGATGCATTTGCAAAACGTAT TAAATCCTTCTATTAACAAAACATCTTTGAGCTGTTAGGCATCCGGTTTCCTGATTCT ACAGCTCCAGGCCTGTCATTCAACGTGAAGTGAAGTGGGAACCAAAACCATATTTCTTT TATCCCTAAGTGGACATCCAGGGCTAGAGAAGGGAGGAAAATCAATCGGTAGAGGCTGAT GCTAGAGTCAGCACTTCCATTAAGTTACTGTACATCGTACTTTTCATAAGCGACTGCAG CCTATTAATAAAATAAGCACAAAAGGGGAGAGGGCGTACACTTCAGCTTCTTGAGAAGGA TAACAAGGTAGGCAGCAAAATGTTGGTGTGTGGGGGTTGGTGTNGCNAAACAACACTG GTGAGTAGTGGCATGATTACTGATGGCACCCCTGGATGGAAAAATAATCTCCAGAGATTA AAATGAACATATGTACACTGGCTTATCCTTGATCTGAAATGATTTACACGCTTGTTCT AACACGCTCTTAGACGATTTTGGCCTCTACAAAGAATGAAAAGTATCAAGACGGTTAT CAACCCAGGAAGGTACCAGATGACAGATTAC
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_002737
<b>Insert Size:</b>	3200 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>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
<b>Gene Summary:</b>	<p>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]</p>