

Product datasheet for **SC323469**

PKC gamma (PRKCG) (NM_002739) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PKC gamma (PRKCG) (NM_002739) Human Untagged Clone
Tag:	Tag Free
Symbol:	PKC gamma
Synonyms:	PKC-gamma; PKCC; PKCG; PKCgamma; PKCI(3); SCA14
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC323469 sequence for NM_002739 edited (data generated by NextGen Sequencing)

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ATGGCTGGTCTGGGCCCGGCGTAGGCGATTAGAGGGGGGACCCCGGCCCTGTTTTGC
AGAAAGGGGGCTCTGAGGCAGAAGGTGGTCCACGAAGTCAAGAGCCACAAGTTCACCGCT
CGCTTCTTCAAGCAGCCACCTTCTGCAGCCACTGCACCGACTTCATCTGGGGTATCGGA
AAGCAGGGCCTGCAATGTCAAGTCTGCAGCTTTGTGGTTTCATCGACGATGCCACGAATTT
GTGACCTTCGAGTGTCCAGGCGCTGGGAAGGGCCCCAGACGGACGACCCCGGAACAAA
CACAAAGTCCGCCTGCATAGCTACAGCAGCCCCACCTTCTGCGACCACTGTGGCTCCCTC
CTCTACGGGCTTGTGCACCAGGGCATGAAATGCTCCTGCTGCGAGATGAACGTGCACCGG
CGCTGTGTGCGTAGCGTGCCCTCCCTGTGCGGTGTGGACCACACCGAGCGCCGCGGGCGC
CTGCAGCTGGAGATCCGGGCTCCCACAGCAGATGAGATCCACGTAACGTGGGAGGGCC
CGTAACCTAATTCCTATGGACCCCAACGGTCTCTCTGATCCCTATGTGAAACTGAAGCTC
ATCCCAGACCCTCGAACCTGACGAAACAGAAGACCCGAACGGTGAAGCCACGCTAAAC
CCTGTGTGGAATGAGACCTTTGTGTTCAACCTGAAGCCAGGGGATGTGGAGCGCCGGCTC
AGCGTGGAGGTGTGGGACTGGGACCGGACCTCCCGCAACGACTTCATGGGGGCCATGTCC
TTTGGCGTCTCGGAGCTGCTCAAGGCGCCCGTGGATGGCTGGTACAAGTTACTGAACCAG
GAGGAGGGCGAGTATTACAATGTGCCGGTGGCCGATGCTGACAACCTGCAGCTCCTCCAG
AAGTTTGAAGGCTTGTAACTACCCCTGGAATTGTATGAGCGGGTGCAGATGGGCCCTCT
TCCTCTCCCATCCCCTCCCCTTCCCCTAGTCCCACCGACCCCAAGCGCTGCTTCTTCGGG
GCGAGTCCAGGACGCCTGCACATCTCCGACTTCAGCTTCTCATGGTTCTAGGAAAAGGC
AGTTTTGGGAAGGTGATGCTGGCCGAGCGCAGGGGCTCTGATGAGCTCTACGCCATCATG
ATCTTGAAAAAGGACGTGATCGTCCAGGACGACGATGTGGACTGCACGCTGGTGGAGAAA
CGTGTGCTGGCGCTGGGGGGCCGGGGTCTGGCGGCGGCCCACTTCTCACCCAGCTC
CACTCCACCTTCCAGACCCCGGACCGCCTGTATTTTCGTGATGGAGTACGTACCGGGGA
GACTTGATGTACCACATTCAACAGCTGGGCAAGTTTAAGGAGCCCATGCAGCGTTCTAC
GCGGCAGAAATCGCTATCGGCCTTCTTCTTCCACAATCAGGGCATCATCTACAGGGAC
CTGAAGCTGGACAATGTGATGCTGGATGCTGAGGGACACATCAAGATCACTGACTTTGGC
ATGTGTAAGGAGAACGTCTTCCC CGGACGACAACCCGCACCTTCTGCGGGACCCCGGAC
TACATAGCCCCGAGATCATTGCCTACCAGCCCTATGGGAAGTCTGTGCGATTGGTGGTCC
TTTGGAGTTCTGCTGTATGAGATGTTGGCAGGACAGCCTCCCTTCGATGGGGAGGACGAG
GAGGAGCTGTTTCAGGCCATCATGGAACAACTGTCACCTACCCCAAGTCGCTTTCCTGG
GAAGCCGTGGCCATCTGCAAGGGGTTCTGACCAAGCACCCAGGGAAGCGCTGGGCTCA
GGGCTGATGGGGAACCTACCATCCGTGCACATGGCTTTTTCCGCTGGATTGACTGGGAG
CGGCTGGAACGATTGGAGATCCCGCCTCCTTTCAGACCCCGCCGTGTGGCCGACGCGGC
GAGAACTTTGACAAGTTCTTACGCGGGCGGCGCCAGCGCTGACCCCTCCAGACCGCCTA
GTCCTGGCCAGCATCGACCAGGCCGATTTCCAGGGCTTACCTACGTGAACCCCGACTTC
GTGACCCCGGATGCCCGACGCCACCAGCCAGTGCCTGTGCCCGTCATGTAA
    
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Clone variation with respect to NM_002739.3
 72 c=>t;567 t=>c;1139 a=>t

5' Read Nucleotide Sequence:	>OriGene 5' read for mutant NM_002739 unedited ACCGCCGTATCAGCAACTGGGCGGTAGGCGCTGTACGGTGGGAGGTCTATATAAGCAGAGCTCATTTAGG TGACACTATAGAATAACAAGCTACTTGTCTTTTTGCAGCGGCCGGAATTCGGCACGAGGCCCTGGCGGA GCCGGCGCGCCCGGGGTGCCGCTCCCTGCCTGGCGCGCTCCGCACCTGGAGGTGCCTTGGCCCTCTCCTG CCCACCTCGGAATTTCCCTGTGGCTCCTTTGATCCTTCGAGTCTCCAGCTCCTCTCCCTTCCACCTGTTT CCCCAAGAAAGGCAGGATCCTGGTCCCTGCTACGTTTCTGGGGCCATGGCTGGTCTGGGCCCGGCGT AGGCGATTCAGAGGGGGGACCCCGGCCCTGTTTTGCAAAAAGGGGGCTCTGAAGGCAGAAAGGTGGT CCACAAAAGTCAAGAACCACAATTTACCGCCTCGCTTCTTCAACCACCCACCTTTCTGCAGCACCTGG ACCGACTTCTTCTGGGTATCGAAAGGCAGGGCCCGCATGGTCAAGTCTGACGCTTTGGGTAAATCAC CAATGCCACGAATTTTTGACCTTCATGTGTCCAGCCCTGGAAAGGGCCCCAAACGGAAACCCCGGAACA AACAAAGTTTCCCTCTGTATATCACAGACCCTTTGTGACACAGGGGGCTCCCTCTACGGTTGGCCAAG GCTAGAAATCTCTGCGGATATAATGTCACGCCTTTCATCAGGCCCTCGTCGCGTGGCCACACGAGCCCG CGCCCGGCGGGAGTATGGGGCGCACAAGT
Kinase Domain Sequence:	>SC323469 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation TYTYMKGGATCTAGGAAGGCAGTTTTGGGAGGTGATGCTGGCCGAGCGCAGGGGCTCTGATGAGCTCTAC GCCATCATGATCTTAAAAAGGACGTGATCGTCCAGGACGACGATGTGGACTGCACGCTGGTGGAGAAAC GTGTGCTGGCGTGGGGGCGGGGTCTGGCGGCCGCCCACTTCTCACCAGCTCCACTCCACCTT CCAGACCCCGGACCGCTGTATTTCTGATGGAGTACGTCACCGG
Restriction Sites:	Please inquire
ACCN:	NM_002739
Insert Size:	3500 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 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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell, 2008 May p536-548.
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:	<ol style="list-style-type: none">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_002739.3 , NP_002730.1
RefSeq Size:	3143 bp
RefSeq ORF:	2094 bp
Locus ID:	5582
UniProt ID:	P05129
Cytogenetics:	19q13.42
Domains:	C2, pkinase, S_TK_X, TyrKc, DAG_PE-bind, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Calcium signaling pathway, ErbB signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, Leukocyte transendothelial migration, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Natural killer cell mediated cytotoxicity, Non-small cell lung cancer, Pathways in cancer, Phosphatidylinositol signaling system, Tight junction, Vascular smooth muscle contraction, VEGF signaling pathway, Vibrio cholerae infection, Wnt signaling pathway
Gene Summary:	<p>Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and 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 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 distinct roles in cells. The protein encoded by this gene is one of the PKC family members. This protein kinase is expressed solely in the brain and spinal cord and its localization is restricted to neurons. It has been demonstrated that several neuronal functions, including long term potentiation (LTP) and long term depression (LTD), specifically require this kinase. Knockout studies in mice also suggest that this kinase may be involved in neuropathic pain development. Defects in this protein have been associated with neurodegenerative disorder spinocerebellar ataxia-14 (SCA14). Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2015]</p> <p>Transcript Variant: This variant (2) differs in the 3' UTR and coding sequence compared to variant 1. The resulting isoform (2) has a shorter and distinct C-terminus compared to isoform 1.</p>