

Product datasheet for **RC208502**

PKC gamma (PRKCG) (NM_002739) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PKC gamma (PRKCG) (NM_002739) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PKC gamma
Synonyms:	PKC-gamma; PKCC; PKCG; PKCgamma; PKCI(3); SCA14
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide
Sequence:

>RC208502 ORF sequence

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**ATGGCTGGTCTGGGCCCCGGCGTAGGCGATTAGAGGGGGACCCCGCCCTGTTTTGCAGAAAGGGG
CCCTGAGGCAGAAGGTGGTCCACGAAGTCAAGAGCCACAAGTTCACCGCTCGCTTCTCAAGCAGCCAC
CTTCTGCAGCCACTGCACCGACTTCATCTGGGGTATCGGAAAGCAGGGCCTGCAATGTCAAGTCTGCAGC
TTTGTGGTTATCGACGATGCCACGAATTTGTGACCTTCGAGTGTCCAGGCGCTGGGAAGGGCCCCAGA
CGGATGACCCCCGAACAAACACAAGTTCCGCCTGCATAGCTACAGCAGCCACCTTCTGCAGCCACTG
TGGCTCCCTCCTACGGGCTTGTGCACAGGGCATGAAATGCTCCTGCTGCGAGATGAACGTGCACCGG
CGCTGTGTGCGTAGCGTGCCCTCCCTGTGCGGTGTGGACCACCCGAGCGCCGGGGCGCCTGCAGCTGG
AGATCCGGGCTCCACAGCAGATGAGATCCACGTAACCTGTTGGCAGGCCCGTAACCTAATTCCTATGGA
CCCCAATGGTCTCTGTATCCCTATGTGAAACTGAAGCTCATCCAGACCCTCGAACCTGACGAAACAG
AAGACCCGAACGGTGAAAGCCACGCTAAACCCTGTGTGGAATGAGACCTTTGTGTCAACCTGAAGCCAG
GGGATGTGGAGCGCCGGCTCAGCGTGGAGGTGTGGGACTGGGACCGGACCTCCCGCAACGACTTCATGGG
GGCCATGTCTTTGGCGTCTCGGAGCTGCTCAAGGCGCCCGTGGATGGCTGGTACAAGTTACTGAACCAG
GAGGAGGGCGAGTATTACAATGTCCCGTGGCCGATGCTGACAACTGCAGCCTCCTCCAGAAGTTTGAGG
CTTGTAACACCCCTGGAATTTGATGAGCGGGTGGGATGGGCCCTTCTCCTCCCATCCCCCCCC
TTCCCCAGTCCCACCGACCCCAAGCGCTGCTTCTCGGGGCGAGTCCAGGACGCTGCACATCTCCGAC
TTCAGCTTCTCATGGTCTAGGAAAAGGCAGTTTTGGGAAGGTGATGCTGGCCGAGCGCAGGGGCTCTG
ATGAGCTACGCCATCAAGATCTTAAAAAGGACGTGATCGTCCAGGACGACGATGTGGATGCACGCT
GGTGGAGAAACGTGTGCTGGCGCTGGGGGCGGGGTCCTGGCGGCCGGCCCACTTCTCACCCAGCTC
CACTCCACCTTCCAGACCCCGGACCGCCTGTATTTCTGTATGGAGTACGTCACCGGGGAGACTTGATGT
ACCACATTCAACAGCTGGGCAAGTTTAAGGAGCCCATGCAGCGTTCTACGCGGCAGAAATCGTATCGG
CCTCTTCTCCTTCACAATCAGGGCATCATCTACAGGGACCTGAAGCTGGACAATGTGATGCTGGATGCT
GAGGGACACATCAAGATCACTGACTTTGGCATGTGTAAGGAGAACGCTTCCCCGGGACGACAACCCGCA
CCTTCTGCGGGACCCCGGACTACATAGCCCCGGAGATCATTGCCTACCAGCCATGGGAAGTCTGTGGA
TTGGTGGTCTTTGGAGTCTGCTGTATGAGATGTTGGCAGGACAGCCTCCCTTCGATGGGAGGACGAG
GAGGAGCTGTTTCAGGCCATCATGGAACAACTGTACCTACCCCAAGTCGCTTCCCGGAAGCCGTGG
CCATCTGCAAGGGTTCCCTGACCAAGCACCCAGGGAAGCGCTGGGCTCAGGGCCTGATGGGGAACCTAC
CATCCGTGCACATGGCTTTTTCCGCTGGATTGACTGGGAGCGGCTGGAACGATTGGAGATCCCGCCTCCT
TTCAGACCCCGCCGTGTGGCCGCAGCGGCGAGAACTTTGACAAGTTCTTACGCGGGCGGGCCAGCGC
TGACCCCTCCAGACCGCCTAGTCTGGCCAGCATCGACCAGGCCGATTTCCAGGGCTTACCTACGTGAA
CCCCGACTTCGTGACCCGGATGCCCGCAGCCCCACCAGCCAGTGCCTGTGCCCGTCATG**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC208502 protein sequence
 Red=Cloning site Green=Tags(s)

MAGLPGVGDSEGGPRPLFCRKALRQKVVHEVKSHKFTARFFKQPTFCSHCTDFIWGIGKQGLQCQVCS
 FVVHRRCHEFVTFECPGAGKGPQTDDPRNKHKFRHLHSYSSPTFCDHCGSLLYGLVHQGMKSCCEMNVHR
 RCVRSVPSL CGVDHTERRGLQLEIRAPTADEIHVTVGEARNLIPMDPNGLSDPYVKLKLIPDPRNLTKQ
 KTRTVKATLNPVWNETFVFNLPKPGDVERRLSVEVWDWDRTSRNDFMGAMSGVSELLKAPVDGWYKLLNQ
 EEEGYYNVPVADADNCSLLQKFEACNYPLELYERVWMPSSSPIPSPSPSPTDPKRCFFGASPGRLHISD
 FSFLMVLGKGSFGKVMLAERRGSDLEYAIKILKKDVIVQDDVDCTLVEKRVLALGGRGPGGRPHFLTQL
 HSTFQTPDRLYFVMEYVTGGDLMYHIQQLGKFKEPAAFYAAEIAIGLFFLHNQGIYRDLKLDNVMLDA
 EGHIKITDFGMCKENVFPGTTTRTFCGTPDYIAPEIIAYQPYGKSVDWWSFGVLLYEMLAGOPPFDEGEDE
 EELFQAIMEQTVTPKLSREAVAICKGFLTKHPGKRLGSGPDGEPTIRAHGFFRWIDWERLERLEIPPP
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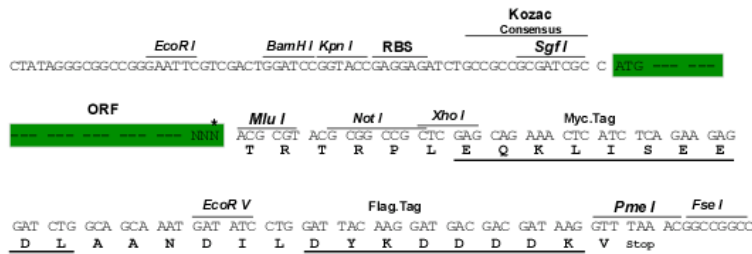
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6293_f12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_002739

ORF Size: 2091 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 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_002739.2](#)

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

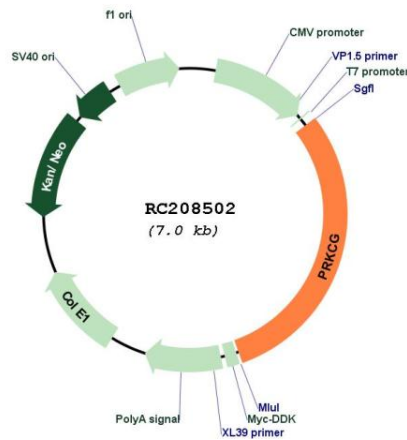
Protein Pathways: Calcium signaling pathway, ErbB signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, Leukocyte transendothelial migration, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Natural killer cell mediated cytotoxicity, 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

MW: 78.4 kDa

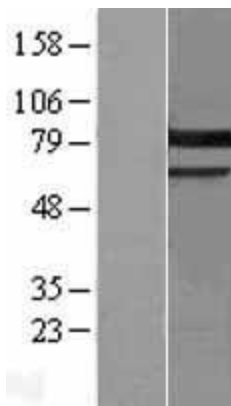
Gene Summary:

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]

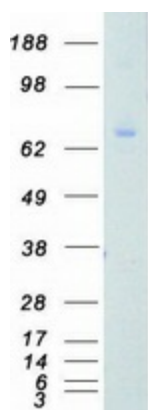
Product images:



Circular map for RC208502



Western blot validation of overexpression lysate (Cat# [LY419134]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208502 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRKCG protein (Cat# [TP308502]). The protein was produced from HEK293T cells transfected with PRKCG cDNA clone (Cat# RC208502) using MegaTran 2.0 (Cat# [TT210002]).