OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for SC323585

PKC beta 1 (PRKCB) (NM_002738) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PKC beta 1 (PRKCB) (NM_002738) Human Untagged Clone
Tag:	Tag Free
Symbol:	PKC beta 1
Synonyms:	PKC-beta; PKCB; PKCbeta; PKCI(2); PRKCB1; PRKCB2
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

Fully Sequenced ORF:

>OriGene ORF within SC323585 sequence for NM_002738 edited (data generated by NextGen Sequencing)

ATGGCTGACCCGGCTGCGGGGCCGCCGCCGAGCGAGGGCGAGGAGAGCACCGTGCGCTTC
GCCCGCAAAGGCGCCCTCCGGCAGAAGAACGTGCATGAGGTCAAGAACCACAAATTCACC
GCCCGCTTCTTCAAGCAGCCCACCTTCTGCAGCCACTGCACCGACTTCATCTGGGGCTTC
GGGAAGCAGGGATTCCAGTGCCAAGTTTGCTGCTTTGTGGTGCACAAGCGGTGCCATGAA
TTTGTCACATTCTCCTGCCCTGGCGCTGACAAGGGTCCAGCCTCCGATGACCCCCGCAGC
AAACACAAGTTTAAGATCCACACGTACTCCAGCCCCACGTTTTGTGACCACTGTGGGTCA
CTGCTGTATGGACTCATCCACCAGGGGATGAAATGTGACACCTGCATGATGAATGTGCAC
AAGCGCTGCGTGATGAATGTTCCCAGCCTGTGTGGCACGGACCACACGGAGCGCCGCGGC
CGCATCTACATCAAGGCCCACATCGACAGGGACGTCCTCATTGTCCTCGTAAGAGATGCT
AAAAACCTTGTACCTATGGACCCCAATGGCCTGTCAGATCCCTACGTAAAACTGAAACTG
ATTCCCGATCCCAAAAGTGAGAGCAAACAGAAGACCAAAACCATCAAATGCTCCCTCAAC
CCTGAGTGGAATGAGACATTTAGATTTCAGCTGAAAGAATCGGACAAAGACAGAAGACTG
TCAGTAGAGATTTGGGATTGGGATTTGACCAGCAGGAATGACTTCATGGGATCTTTGTCC
TTTGGGATTTCTGAACTTCAGAAAGCCAGTGTTGATGGCTGGTTTAAGTTACTGAGCCAG
GAGGAAGGCGAGTACTTCAATGTGCCTGTGCCACCAGAAGGAAGTGAGGCCAATGAAGAA
CTGCGGCAGAAATTTGAGAGGGCCAAGATCAGTCAGGGAACCAAGGTCCCGGAAGAAAAG
ACGACCAACACTGTCTCCAAATTTGACAACAATGGCAACAGAGACCGGATGAAACTGACC
GATTTTAACTTCCTAATGGTGCTGGGGAAAGGCAGCTTTGGCAAGGTCATGCTTTCAGAA
CGAAAAGGCACAGATGAGCTCTATGCTGTGATGATCCTGAAGAAGGACGTTGTGATCCAA
GATGATGACGTGGAGTGCACTATGGTGGAGAAGCGGGTGTTGGCCCTGCCCGGGAAGCCG
CCCTTCCTGACCCAGCTCCACTCCTGCTTCCAGACCATGGACCGCCTGTACTTTGTGATG
GAGTACGTGAATGGGGGCGACCTCATGTATCACATCCAGCAAGTCGGCCGGTTCAAGGAG
CCCCATGCTGTATTTTACGCTGCAGAAATTGCCATCGGTCTGTTCTTCTTACAGAGTAAG
GGCATCATTTACCGTGACCTAAAACTTGACAACGTGATGCTCGATTCTGAGGGACACATC
AAGATTGCCGATTTTGGCATGTGTAAGGAAAACATCTGGGATGGGGTGACAACCAAGACA
TTCTGTGGCACTCCAGACTACATCGCCCCCGAGATAATTGCTTATCAGCCCTATGGGAAG
TCCGTGGATTGGTGGGCATTTGGAGTCCTGCTGTATGAAATGCTGGCTGGGCAGGCACCC
TTTGAAGGGGAGGATGAAGATGAACTCTTCCAATCCATCATGGAACACAACGTAGCCTAT
CCCAAGTCTATGTCCAAGGAAGCTGTGGCCATCTGCAAAGGGCTGATGACCAAACACCCA
GGCAAACGTCTGGGTTGTGGACCTGAAGGCGAACGTGATATCAAAGAGCATGCATTTTTC
CGGTATATTGATTGGGAGAAACTTGAACGCAAAGAGATCCAGCCCCCTTATAAGCCAAAA
GCTTGTGGGCGAAATGCTGAAAACTTCGACCGATTTTTCACCCGCCATCCACCAGTCCTA
ACACCTCCCGACCAGGAAGTCATCAGGAATATTGACCAATCAGAATTCGAAGGATTTTCC
TTTGTTAACTCTGAATTTTTAAAACCCGAAGTCAAGAGCTAA

Clone variation with respect to NM_002738.6
493 c=>a;1112 a=>t;1191 t=>c;1603 t=>c

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_002738 unedited
ACCGCCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGA
ACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGCACCTCTCGGGCT
CCGGCTCCCCGCGCGCAAGATGGCTGACCCGGCTGCGGGGCCGCCGCCGAGCGAGGGCGAGGAGAGCACC
GTGCGCTTCGCCCGCAAAGGCGCCCTCCGGCAGAAGAACGTGCATGAGGTCAAGAACCACAAATTCACCG
CCCGCTTCTTCAAGCAGCCCACCTTCTGCAGCCACTGCACCGACTTCATCTGGGGCTTCGGGAAGCAGGG
ATTCCAGTGCCAAGTTTGCTGCTTTGTGGTGCACAAGCGGTGCCATGAATTTGTCACATTCTCCTGCCCT
GCGCTGACAAGGGTCCAGCCTCCGATGACCCCCGCAGCAAACACAGGTTTAGGATCCACACGTACTCAGC
CCCACGTTTTTGTGACCACTGGTGGGTCACTGCTTGTATGGACTCATCCACCAGGGATGAATGGTGCCAC
CTTGCATGATGATGGTCACACAAGCCGCTTGCTTGATGATTGTCCAAGCTTGTTTGACACGGAACCAACC
GGAAGCGCCGGGCCGAACTCTCACTACAGGGCCACAACTGCACGGGACACTGCTCCATATGGCTCCTTGA
TAAGATGTGCTAAAACCTGTGACACATAGGGACCAATTGGCCGTGCATATCCCCAACGTAACCGTGACCG
ATATCGAGTATCCTATGTGAAGCGCCACGGACACTACCTAAAGTGCCTCAACCCGATGGGTGGAAGACTT
TATATTCTCTGATTGCGCAACGCAGACGTCGTCTGAATTGGATGTGTTTGACGAGATCTGGGACTGCCTG
AATTTCATCTAAAACCCCGTGATGACGCGGTATTCTGAA

Kinase Domain Sequence:

>SC323585 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation
CTTCTATGATGCTGGGGAAGGCAGCTTTGGCAGGTCATGCTTTCAGAACGAAAAGGCACAGATGAGCTCT
ATGCTGTGATGATCCTGAAGAAGGACGTTGTGATCCAAGATGATGACGTGGAGTGCACTATGGTGGAGAA
GCGGGTGTTGGCCCTGCCCGGGAAGCCGCCCTTCCTGACCCAGCTCCACTCCTGCTTCCAGACCATGGAC
CGCCTGTACTTTGTGATGGAGTACGTGAATGGGGGCGACCTCATG

Restriction Sites: Please inquire

ACCN: NM_002738

Insert Size: 2900 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:	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_002738.5, NP_002729.2
RefSeq Size:	3411 bp
RefSeq ORF:	2022 bp
Locus ID:	5579
UniProt ID:	P05771
Cytogenetics:	16p12.2-p12.1
Domains:	C2, pkinase, S_TK_X, TyrKc, DAG_PE-bind, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	B cell receptor signaling pathway, Calcium signaling pathway, Chemokine 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, 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 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 protein kinase has been reported to be involved in many different cellular functions, such as B cell activation, apoptosis induction, endothelial cell proliferation, and intestinal sugar absorption. Studies in mice also suggest that this kinase may also regulate neuronal functions and correlate fear-induced conflict behavior after stress. Alternatively spliced transcript variants encoding distinct isoforms have been reported. [provided by RefSeq, Jul 2008] Transcript Variant: This variant (2) represents the longer transcript and encodes the longer isoform (2). Sequence Note: This RefSeq record was created from transcript and genomic sequence data because no single transcript was available for the full length of the gene. The extent of this transcript is supported by transcript alignments.