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Product datasheet for RC202472

PKC zeta (PRKCZ) (NM_002744) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PKC zeta (PRKCZ) (NM_002744) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PKC zeta
Synonyms:	PKC-ZETA; PKC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC202472 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCCAGCAGGACCGGCCCCAAGATGGAAGGGAGCGGCGGCCGCGTCCGCCTCAAGGCGCATTACGGGG
GGGACATCTTCATCACCAGCGTGGACGCCGCCACGACCTTCGAGGAGCTCTGTGAGGAAGTGAGAGACAT
GTGTCGTCTGCACCAGCAGCACCCGCTCACCCTCAAGTGGGTGGACAGCGAAGGTGACCCTTGCACGGTG
TCCTCCCAGATGGAGCTGGAAGAGGCTTTCCGCCTGGCCCGTCAGTGCAGGGATGAAGGCCTCATCATTC
ATGTTTTCCCGAGCACCCCTGAGCAGCCTGGCCTGCCATGTCCGGGAGAAGACAAATCTATCTACCGCCG
GGGAGCCAGAAGATGGAGGAAGCTGTACCGTGCCAACGGCCACCTCTTCCAAGCCAAGCGCTTTAACAGG
AGAGCGTACTGCGGTCAGTGCAGCGAGAGGATATGGGGCCTCGCGAGGCAAGGCTACAGGTGCATCAACT
GCAAACTGCTGGTCCATAAGCGCTGCCACGGCCTCGTCCCGCTGACCTGCAGGAAGCATATGGATTCTGT
CATGCCTTCCCAAGAGCCTCCAGTAGACGACAAGAACGAGGACGCCGACCTTCCTTCCGAGGAGACAGAT
GGAATTGCTTACATTTCCTCATCCCGGAAGCATGACAGCATTAAAGACGACTCGGAGGACCTTAAGCCAG
TTATCGATGGGATGGATGGAATCAAAATCTCTCAGGGGCTTGGGCTGCAGGACTTTGACCTAATCAGAGT
CATCGGGCGCGGGAGCTACGCCAAGGTTCTCCTGGTGCGGTTGAAGAAGAATGACCAAATTTACGCCATG
AAAGTGGTGAAGAAAGAGCTGGTGCATGATGACGAGGATATTGACTGGGTACAGACAGAGAAGCACGTGT
TTGAGCAGGCATCCAGCAACCCCTTCCTGGTCGGATTACACTCCTGCTTCCAGACGACAAGTCGGTTGTT
CCTGGTCATTGAGTACGTCAACGGCGGGGACCTGATGTTCCACATGCAGAGGCAGAGGAAGCTCCCTGAG
GAGCACGCCAGGTTCTACGCGGCCGAGATCTGCATCGCCCTCAACTTCCTGCACGAGAGGGGGATCATCT
ACAGGGACCTGAAGCTGGACAACGTCCTCCTGGATGCGGACGGGCACATCAAGCTCACAGACTACGGCAT
GTGCAAGGAAGGCCTGGGCCCTGGTGACACAACGAGCACTTTCTGCGGAACCCCGAATTACATCGCCCCC
GAAATCCTGCGGGGAGAGGAGTACGGGTTCAGCGTGGACTGGTGGGCGCTGGGAGTCCTCATGTTTGAGA
TGATGGCCGGGCGCTCCCCGTTCGACATCATCACCGACAACCCGGACATGAACACAGAGGACTACCTTTT
CCAAGTGATCCTGGAGAAGCCCATCCGGATCCCCCGGTTCCTGTCCGTCAAAGCCTCCCATGTTTTAAAA
GGATTTTTAAATAAGGACCCCAAAGAGAGGCTCGGCTGCCGGCCACAGACTGGATTTTCTGACATCAAGT
CCCACGCGTTCTTCCGCAGCATAGACTGGGACTTGCTGGAGAAGAAGCAGGCGCTCCCTCCATTCCAGCC
ACAGATCACAGACGACTACGGTCTGGACAACTTTGACACACAGTTCACCAGCGAGCCCGTGCAGCTGACC
CCAGACGATGAGGATGCCATAAAGAGGATCGACCAGTCAGAGTTCGAAGGCTTTGAGTATATCAACCCAT
TATTGCTGTCCACCGAGGAGTCGGTG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC202472 protein sequence
Red=Cloning site Green=Tags(s)

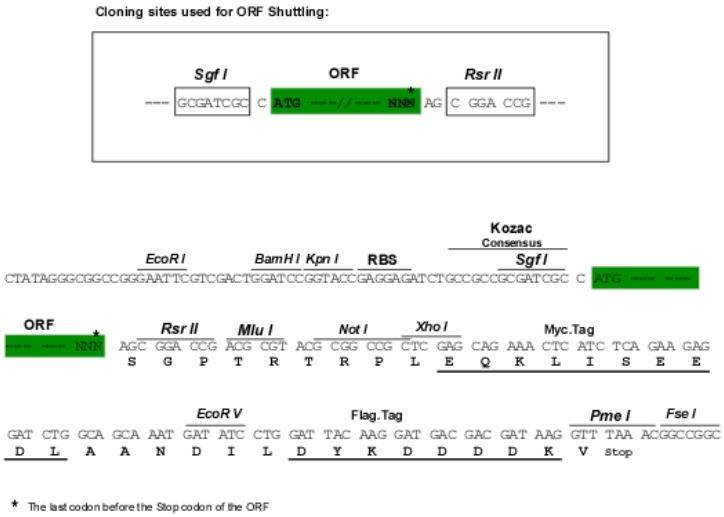
MPSRTGPKMEGSGGRVRLKAHYGGDIFITSVDAATTFEELCEEVRDMCRLHQQHPLTLKWVDSEGDPCTV
SSQMELEEAFRLARQCRDEGLIIHVFPSTPEQPGLPCPGEDKSIYRRGARRWRKLYRANGHLFQAKRFNR
RAYCGQCSERIWGLARQGYRCINCKLLVHKRCHGLVPLTCRKHMDSVMPSQEPPVDDKNEDADLPSEETD
GIAYISSSRKHDSIKDDSEDLKPVIDGMDGIKISQGLGLQDFDLIRVIGRGSYAKVLLVRLKKNDQIYAM
KVVKKELVHDDEDIDWVQTEKHVFEQASSNPFLVGLHSCFQTTSRLFLVIEYVNGGDLMFHMQRQRKLPE
EHARFYAAEICIALNFLHERGIIYRDLKLDNVLLDADGHIKLTDYGMCKEGLGPGDTTSTFCGTPNYIAP
EILRGEEYGFSVDWWALGVLMFEMMAGRSPFDIITDNPDMNTEDYLFQVILEKPIRIPRFLSVKASHVLK
GFLNKDPKERLGCRPQTGFSDIKSHAFFRSIDWDLLEKKQALPPFQPQITDDYGLDNFDTQFTSEPVQLT
PDDEDAIKRIDQSEFEGFEYINPLLLSTEESV

SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6190_f02.zip

Restriction Sites: SgfI-RsrII

Cloning Scheme:



ACCN: NM_002744

ORF Size: 1776 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.

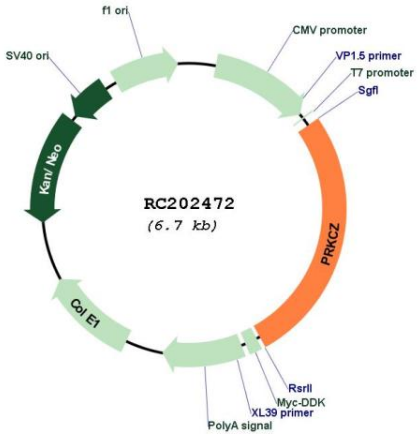
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.

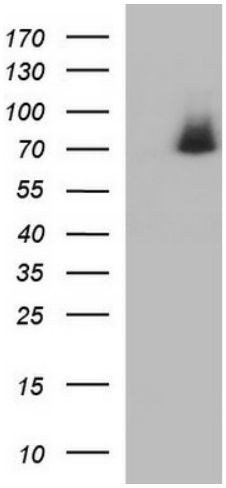
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_002744.6
RefSeq Size:	2359 bp
RefSeq ORF:	1779 bp
Locus ID:	5590
UniProt ID:	Q05513
Cytogenetics:	1p36.33
Domains:	PB1, pkinase, S_TK_X, TyrKc, DAG_PE-bind, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Chemokine signaling pathway, Endocytosis, Insulin signaling pathway, Tight junction, Type II diabetes mellitus
MW:	67.7 kDa
Gene Summary:	Protein kinase C (PKC) zeta is a member of the PKC family of serine/threonine kinases which are involved in a variety of cellular processes such as proliferation, differentiation and secretion. Unlike the classical PKC isoenzymes which are calcium-dependent, PKC zeta exhibits a kinase activity which is independent of calcium and diacylglycerol but not of phosphatidylserine. Furthermore, it is insensitive to typical PKC inhibitors and cannot be activated by phorbol ester. Unlike the classical PKC isoenzymes, it has only a single zinc finger module. These structural and biochemical properties indicate that the zeta subspecies is related to, but distinct from other isoenzymes of PKC. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

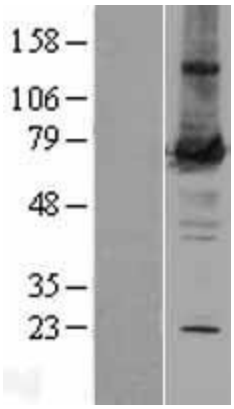
Product images:



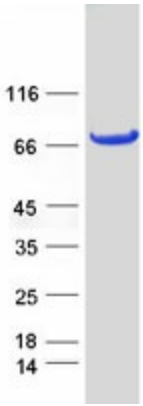
Circular map for RC202472



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PRKCZ (Cat# RC202472, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PRKCZ(Cat# [TA590141]). Positive lysates [LY400967] (100ug) and [LC400967] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400967]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202472 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRKCZ protein (Cat# [TP302472]). The protein was produced from HEK293T cells transfected with PRKCZ cDNA clone (Cat# RC202472) using MegaTran 2.0 (Cat# [TT210002]).