

Product datasheet for **MG207804**

Prkcd (BC051416) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Prkcd (BC051416) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Prkcd
Synonyms:	PKC[d], PKCdelta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG207804 representing BC051416
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCACCCCTTCCTGCGCATCTCCTTCAATTCCTATGAGCTGGGCTCCCTGCAAGTTGAGGACGAAGCAA
 GCCAGCCTTTCTGTGCTGTGAAGATGAAGGAGGCACTCAGCACAGAGCGAGGGAAGACACTGGTACAGAA
 GAAGCCCACCATGTATCCTGAGTGAAGACAACGTTTCGACGCCACATCTATGAAGGCCGTGTATCCAG
 ATTGTGCTGATGCGGGCAGCTGAAGACCCGTGTCTGAGGTCACGGTGGGCGTGTGACTGGCTGAGC
 GCTGCAAGAAGAACAACGGCAAGGCTGAGTTCTGGCTGGATCTGCAGCCTCAGGCCAAGGTGCTGATGTG
 TGTGCAGTATTTCTGGAGGATGGGATTGCAACAGTCTATGCGTAGTGAGGAGGAGGCAAAAGTTTCCA
 ACCATGAACCGCTGTGGAGCCATTAACAGGCCAAGTCCACTACATCAAGAACCAGGATTTATCGCCA
 CCTTCTCGGGCAGCCACCTTCTGTTCTGTGCAAAGAGTTTGTCTGGGGCTCAACAAGCAAGGCTA
 CAAATGCAGGCAATGCAACGCTGCCATCCACAAGAAATGCATTGACAAGATTATCGGCCGCTGCACTGGC
 ACTGCCACCAATAGCCGGGACACCATCTCCAGAAAGAACGCTTCAACATCGACATGCCTCACCGATTCA
 AGGTTTATAACTACATGAGCCCCACCTTCTGTGACCCTGTGGCAGTTTGTCTGGGGACTGGTGAAGCA
 GGGATTAAGTGTGAAGATTGTGGCATGAATGTGCACCACAAATGCCGGGAGAAGGTGGCCAACCTGTGT
 GGTATCAACAAAAGCTCTTGGCTGAGGCTTGAACCAAGTGACCAGAGATCTTCCCGAAGCTGGACA
 CAACAGAGTCTGTGGAATATACCAGGGATTTGAGAAGAAGCCAGAAGTCTCTGGGAGTGACATCTAGA
 CAACAACGGGACCTATGGCAAGATCTGGGAGGGGAGCACCCTGACCCCTTGAAGACTTCACTTCCAA
 AAAGTACTTGGCAAAGGACGCTTGGCAAGGTGCTGCTGGCAGAGCTGAAGGGCAAAGACAAGTACTTTG
 CAATCAAGTGTCTGAAGAAGGACGTGGTGTGATTGACGATGATGTAGAGTGTACCATGGTGGAGAAGCG
 GGTGCTGGCGCTCGCCTGGGAGAGTCCCTTCTCACCCACCTCATCTGTACCTTCCAGACCAAGGACCAC
 CTGTTCTTCTGTGATGGAGTTTCTCAATGGGGTGACCTGATGTTCCACATTCAGGACAAAGGCCGCTTCG
 AACTCTACCGGGCTACGTTTTATGCAGCTGAGATCATCTGCGGACTGCAGTTTCTACACAGCAAAGGCAT
 TATTTACAGGTATTGTTGGTGTGGGGCCGTGGGGAGGACTTCTGGGAAGGCTGTTGCT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG207804 representing BC051416
 Red=Cloning site Green=Tags(s)

MAPFLRISFNSYELGSLQVEDEASQPFCAVKMKEALSTERGKTLVQKKPTMYPEWKTTFDAHIYEGRVIQ
 IVLMRAAEDPVSEVTVGVSVLAERCKKNNGKAEFWLDLQPQAKVLMCVQYFLEDGCKQSMRSEEEAKFP
 TMNRRGAIKQAKIHYIKNHEFIATFFGQPTFCVCKEFVWGLNKQGYKCRQCNAAIHKKCIDKIIIGRCTG
 TATNSRDTIFQKERFNIDMPHRFKVYNYMSPTFCDHCGSLLWGLVKQGLKCEDCGMNVHHKCREKANLNC
 GINQKLLAEALNQVTQRSSRKLDTTESVGIYQGFEEKPEVSGSDILDNNGTYGKIWEGSTRCTLENFTFQ
 KVLGKGSFGKVLAEALGKDKYFAIKCLKKDVVLIIDDVECTMVEKRVLALAWESPFLTHLICTFQTKDH
 LFFVMEFLNNGDLMFHIQDKGRFELYRATFYAAEIIICGLQFLHSGKGIYRYCWCWGPWGGTSGKAVA

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-Mlul

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: [BC051416.1](#)

RefSeq Size: 2517 bp

RefSeq ORF: 1463 bp

Locus ID: 18753

Cytogenetics: 14 18.82 cM

Gene Summary:

Calcium-independent, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that plays contrasting roles in cell death and cell survival by functioning as a pro-apoptotic protein during DNA damage-induced apoptosis, but acting as an anti-apoptotic protein during cytokine receptor-initiated cell death, is involved in tumor suppression, is required for oxygen radical production by NADPH oxidase and acts as positive or negative regulator in platelet functional responses. Negatively regulates B cell proliferation and also has an important function in self-antigen induced B cell tolerance induction. Upon DNA damage, activates the promoter of the death-promoting transcription factor BCLAF1/Btf to trigger BCLAF1-mediated p53/TP53 gene transcription and apoptosis. In response to oxidative stress, interact with and activate CHUK/IKKA in the nucleus, causing the phosphorylation of p53/TP53. In the case of ER stress or DNA damage-induced apoptosis, can form a complex with the tyrosine-protein kinase ABL1 which trigger apoptosis independently of p53/TP53. In cytosol can trigger apoptosis by activating MAPK11 or MAPK14, inhibiting AKT1 and decreasing the level of X-linked inhibitor of apoptosis protein (XIAP), whereas in nucleus induces apoptosis via the activation of MAPK8 or MAPK9. Upon ionizing radiation treatment, is required for the activation of the apoptosis regulators BAX and BAK, which trigger the mitochondrial cell death pathway. Can phosphorylate MCL1 and target it for degradation which is sufficient to trigger for BAX activation and apoptosis. Is required for the control of cell cycle progression both at G1/S and G2/M phases. Mediates phorbol 12-myristate 13-acetate (PMA)-induced inhibition of cell cycle progression at G1/S phase by up-regulating the CDK inhibitor CDKN1A/p21 and inhibiting the cyclin CCNA2 promoter activity. In response to UV irradiation can phosphorylate CDK1, which is important for the G2/M DNA damage checkpoint activation. Can protect glioma cells from the apoptosis induced by TNFSF10/TRAIL, probably by inducing increased phosphorylation and subsequent activation of AKT1. Can also act as tumor suppressor upon mitogenic stimulation with PMA or TPA. In N-formyl-methionyl-leucyl-phenylalanine (fMLP)-treated cells, is required for NCF1 (p47-phox) phosphorylation and activation of NADPH oxidase activity, and regulates TNF-elicited superoxide anion production in neutrophils, by direct phosphorylation and activation of NCF1 or indirectly through MAPK1/3 (ERK1/2) signaling pathways. May also play a role in the regulation of NADPH oxidase activity in eosinophil after stimulation with IL5, leukotriene B4 or PMA. In collagen-induced platelet aggregation, acts a negative regulator of filopodia formation and actin polymerization by interacting with and negatively regulating VASP phosphorylation. Downstream of PAR1, PAR4 and CD36/GP4 receptors, regulates differentially platelet dense granule secretion; acts as a positive regulator in PAR-mediated granule secretion, whereas it negatively regulates CD36/GP4-mediated granule release. Phosphorylates MUC1 in the C-terminal and regulates the interaction between MUC1 and beta-catenin. The catalytic subunit phosphorylates 14-3-3 proteins (YWHAB, YWHAZ and YWHAH) in a sphingosine-dependent fashion. Phosphorylates ELAVL1 in response to angiotensin-2 treatment (By similarity). [UniProtKB/Swiss-Prot Function]