

## Product datasheet for **MR226230**

### Prkce (NM\_011104) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Prkce (NM_011104) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Prkce
Synonyms:	5830406C15Rik; Pkce; PKCepsilon; PKC[e]; R75156
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>MR226230 representing NM\_011104  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGTAGTGTTCAATGGCCTTCTTAAGATCAAATCTCGAGGCGGTGAGCTTGAAGCCACAGCCTGGT  
CGCTGCGCCATGCGGTGGGACCCCGGCCACAGAGTTCCTTTTGACCCCTACATTGCCCTTAACGTGGA  
CGACTCGCGCATCGGCCAAACAGCCACCAAGCAAAGACCAACAGCCCGCCTGGCACGATGAGTTCGTC  
ACCGATGTGTGAATGGGCGCAAGATCGAGCTGGCTGTCTTTCACGACGCTCCTATCGGCTACGACGACT  
TCGTGGCCAACTGCACCATCCAGTTCGAGGAGCTGCTGCAGAATGGGAGCCGTCACCTCGAGGACTGGAT  
TGACCTGGAGCCAGAAGGAAAAGTGTACGTGATCATCGATCTCTCGGGATCATCGGGTGAAGCCCTAAA  
GACAATGAAGAACGAGTGTTCAGGGAGCGTATGCGGCCAAGGAAGCGCAAGGGGCTGTCAGGCGCAGGG  
TCCACCAGGTCAATGGCCACAAGTTCATGGCCACCTACTTGCGGCAACCCACCTACTGCTCCCACTGCAG  
AGATTTTCACTGCGGTGTATAGGAAAACAGGGATATCAATGTCAAGTTTGCACCTGCGTGTCCACAAG  
CGATGTATGAGCTCATTATTACAAAGTGCCTGGGCTGAAGAAACAGGAAACCCCTGACGAGGTGGGCT  
CCCAACGGTTCAGCGTCAACATGCCCAACAAGTTCGGGATCCACAACCTACAAGTCCCAACGTTCTGTGA  
CCTGTGGGTCCTGCTCTGGGCTCTTTCGGCAGGGCTTGCAGTGTAAAGTCTGCAAAATGAATGTT  
CACCGCGATGTGAGACCAATGTGGCTCCCAACTGTGGGTAGACGCCAGAGGAATTGCCAAAGTCTGG  
CTGACCTTGGTGTACTCCAGACAAAATCACCAACAGTGGCCAAAGGAGGAAAAGCTCGCTGCTGGTGC  
TGAGTCCCACAGCCGGCTTCTGGAACTCCCATCTGAAGACGACCGATCCAAGTCAGCGCCCACTCC  
CCTTGTGACCAGGAACAAAAGAACTTGAACAACATTCGGAAGGCCTTGTCAATTTGACAACCGAGGAG  
AGGAGCACCGAGCGTCTGCGCCACCGATGGCCAGCTGGCAAGCCCGGAGAGAACGGGAAAGTCCGGCC  
AGGCCAGGCCAAGCGCTTGGGGCTGGATGAGTTCAACTTCATCAAGGTGTTGGGCAAGGAGCTTGGC  
AAGGTCATGTTGGCGGAACTCAAAGCAAAGATGAAGTCTACGCTGTGAAGGCTTGAAGAAGGACGTTA  
TCCTACAAGACGATGATGTGGACTGCACAATGACAGAGAAGAGGATTTTGGCTCTGGCTCGGAAACACC  
TTATCTAACCAACTCTATTGCTGCTTCCAGACCAAGGACCGCTCTTCTTCGTCATGGAATATGTAAT  
GGTGGAGACCTCATGTTCCAGATTCAGCGGTCCCGAAAATTTGATGAGCCTCGTTCGTTCTATGCCG  
CAGAGGTCACATCAGCCCTCATGTTTCTCCACCAGCACGGAGTGTCTACAGGGATTTGAACTGGACAA  
CATCCTTCTAGATGCAGAAGGCCACTGCAAGCTGGCTGACTTTGGGATGTGCAAGGAAGGGATTATGAAT  
GGTGTGACAACTACCACCTTCTGTGGACTCCTGACTACATAGCTCCAGAGATCCTACAGGAGTTGGAGT  
ACGGCCCTCAGTGGACTGGTGGCCCTGGGGTGTGATGTACGAGATGATGGCTGGGCAGCCCCCTT  
TGAAGCTGACAACGAGGACGACTTGTTCGAATCCATCCTTCATGATGATGTTCTCTATCCTGTCTGGCT  
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CAGCGCAGAACGGGAGGACGCCATCAAGCAACATCCATTCTCAAGGAGATTGACTGGGTACTGCTGGA  
GCAGAAGAAAATCAAGCCCCCTTCAAGCCGAGAATTAACCAAAAGAGATGTCAATAACTTTGACCAA  
GACTTTACGCGGAAGAGCCAATACTTACACTTGTGGATGAAGCAATCATTAAAGCAGATCAACCAGGAAG  
AATTCAAAGGCTTCTCTACTTTGGTGAAGACCTGATGCC

**ACGCGT**ACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR226230 representing NM\_011104  
 Red=Cloning site Green=Tags(s)

MVVFNGLLKIKICEAVSLKPTAWSLRHAVGPRPQTFLLDPIYALNVDDSRIGQTATKQKTNSPAWHDEFV  
 TDVCNKRKIELAVFHDAPIGYDDFVANCTIQFEELLQNGSRHFEDWIDLEPEGKVYVYIDLSGSSGEAPK  
 DNEERVFRERMRPRKRQGAVERRRVHVQVNGHKFMATYLRQPTYCSHCRDFIWGVIGKQGYQCQVCTCVVHK  
 RCHELIITKCAGLKKQETPDEVGSQRFVSNMPHKFGIHNKVPVTFCDHCGSLLWGLLRQGLQCKVCKMNV  
 HRRCETNVAPNCVGDARGIAKVLADLGVTDPDKITNSGQRRKLAAGAESPQPASGNPSSEDDRSKSAPTS  
 PCDQELKELENNIRKALSFDNRGEEHRASSATDQQLASPGENGEVRPGQAKRLGLDEFNFIKVLGKGSFG  
 KVMLAELKKGDEVYAVKVLKQDILQDDVDCTMTEKRILALARKHPYLTQLYCCFQTKDRLFFVMEYVN  
 GGDLMFQIQRSRKFDEPRSRFYAAEVTLSALMFLHQHGVYRDLKLDNILLDAEGHCKLADFGMCKEGIMN  
 GVTTFCTGTPDYIAPEILQELEYGPSVDWWALGVLMEYMMAGQPPFEADNEDDLFESILHDDVL YPVWL  
 SKEAVSILKAFMTKNPHKRLGCVAAQNGEDA IKQHPFFKEIDWVLEQKKIKPPFKPRIKTRDNNFDQ  
 DFTREEPILTLVDEAIKQINQEEFKGSYFGEDLMP

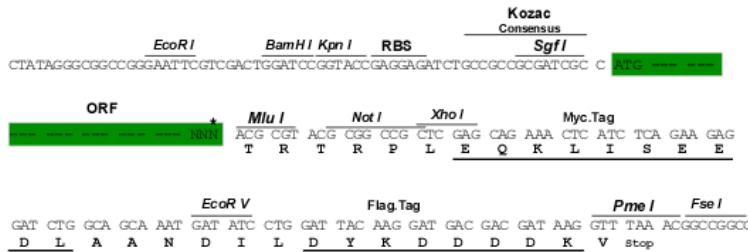
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mm9009\\_g04.zip](https://cdn.origene.com/chromatograms/mm9009_g04.zip)

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

ACCN: NM\_011104

ORF Size: 2211 bp

OTI Disclaimer: 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](#)

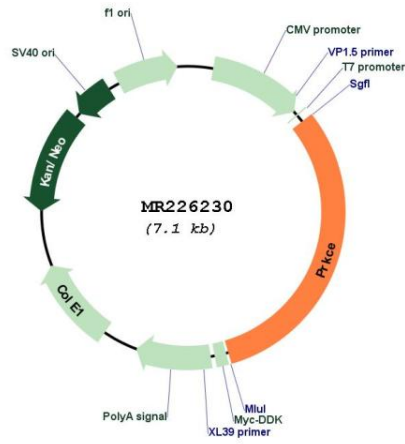
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_011104.3</a></u> , <u><a href="#">NP_035234.1</a></u>
<b>RefSeq Size:</b>	6254 bp
<b>RefSeq ORF:</b>	2214 bp
<b>Locus ID:</b>	18754
<b>UniProt ID:</b>	<u><a href="#">P16054</a></u>
<b>Cytogenetics:</b>	17 E4
<b>MW:</b>	84 kDa

**Gene Summary:**

Calcium-independent, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that plays essential roles in the regulation of multiple cellular processes linked to cytoskeletal proteins, such as cell adhesion, motility, migration and cell cycle, functions in neuron growth and ion channel regulation, and is involved in immune response, cancer cell invasion and regulation of apoptosis. Mediates cell adhesion to the extracellular matrix via integrin-dependent signaling, by mediating angiotensin-2-induced activation of integrin beta-1 (ITGB1) in cardiac fibroblasts. Phosphorylates MARCKS, which phosphorylates and activates PTK2/FAK, leading to the spread of cardiomyocytes. Involved in the control of the directional transport of ITGB1 in mesenchymal cells by phosphorylating vimentin (VIM), an intermediate filament (IF) protein. In epithelial cells, associates with and phosphorylates keratin-8 (KRT8), which induces targeting of desmoplakin at desmosomes and regulates cell-cell contact. Phosphorylates IQGAP1, which binds to CDC42, mediating epithelial cell-cell detachment prior to migration. During cytokinesis, forms a complex with YWHAB, which is crucial for daughter cell separation, and facilitates abscission by a mechanism which may implicate the regulation of RHOA. In cardiac myocytes, regulates myofilament function and excitation coupling at the Z-lines, where it is indirectly associated with F-actin via interaction with COPB1. During endothelin-induced cardiomyocyte hypertrophy, mediates activation of PTK2/FAK, which is critical for cardiomyocyte survival and regulation of sarcomere length. Plays a role in the pathogenesis of dilated cardiomyopathy via persistent phosphorylation of troponin I (TNNI3). Involved in nerve growth factor (NFG)-induced neurite outgrowth and neuron morphological change independently of its kinase activity, by inhibition of RHOA pathway, activation of CDC42 and cytoskeletal rearrangement. May be involved in presynaptic facilitation by mediating phorbol ester-induced synaptic potentiation. Phosphorylates gamma-aminobutyric acid receptor subunit gamma-2 (GABRG2), which reduces the response of GABA receptors to ethanol and benzodiazepines and may mediate acute tolerance to the intoxicating effects of ethanol. Upon PMA treatment, phosphorylates the capsaicin- and heat-activated cation channel TRPV1, which is required for bradykinin-induced sensitization of the heat response in nociceptive neurons. Is able to form a complex with PDLIM5 and N-type calcium channel, and may enhance channel activities and potentiates fast synaptic transmission by phosphorylating the pore-forming alpha subunit CACNA1B (CaV2.2). Downstream of TLR4, plays an important role in the lipopolysaccharide (LPS)-induced immune response by phosphorylating and activating TICAM2/TRAM, which in turn activates the transcription factor IRF3 and subsequent cytokines production. In differentiating erythroid progenitors, is regulated by EPO and controls the protection against the TNFSF10/TRAIL-mediated apoptosis, via BCL2. May be involved in the regulation of the insulin-induced phosphorylation and activation of AKT1. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR226230