

Product datasheet for **MC219393**

Prkcz (NM_008860) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Prkcz (NM_008860) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Prkcz
Synonyms:	AI098070; aPKCzeta; C80388; nPKC-zeta; Pkcz; R74924; zetaPKC
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC219393 representing NM_008860
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCAGCAGGACGGACCCCAAGATGGACCGGAGCGGCCGGCGTCCGTCTGAAGGCGCACTACGGCG
 GGGACATCCTGATTACCAGCGTGGATGCCATGACAACATTCAAGGACCTCTGTGAGGAAGTGCGAGACAT
 GTGTGGCCTGCACCAGCAGCACCCACTCACCTCAAGTGGGTGGACAGTGAAGGTGACCCTTGACTGTG
 TCCTCACAGATGGAGCTGGAGGAGGCCCTCCGCCTGGTCTGTGAGGGCAGGGACGAAGTGCTCATCATTC
 ATGTTTTCCCAAGCATCCAGAGCAGCCGGGATGCCCTTGTCTGGAGAAGACAAGTCCATCTACCGCCG
 TGGAGCCAGAAGATGGAGGAAGCTGTACCAGCCAACGGCCACCTTCCAAGCCAAGCGCTTAAACAGG
 GGAGCGTACTGCGGCCAGTGCAGCGAAAGGATATGGGGTCTCTCGAGGCAGGGCTACAGGTGCATCACT
 GCAAGCTGCTGGTCCATAAACGCTGCCACGTCTCGTCCCGCTGACCTGCAGGAGGCATATGGATTCTGT
 CATGCCTCCCAAGAGCCTCCAGTAGATGACAAGAACGATGGTGTAGACCTTCTTCAGAAGAACTGAT
 GGAATTGCTTATATTTCTTCATCTCGGAAACATGATAATATCAAAGATGATTCTGAGGACCTTAAGCCTG
 TCATCGATGGGGTGGATGGGATCAAATCTCTCAGGGGCTGGGGCTGCAAGACTTCGACCTCATCAGAGT
 CATCGGGCGTGAAGCTATGCCAAGTCCCTCTGGTGGGTTGAAGAAAAACGACCAGATTTACGCCATG
 AAGGTGGTAAAGAAGGAGCTTGTCCACGACGACGAGGATATCGACTGGGTGCAGACAGAGAAACATGTGT
 TTGAGCAGGCGTCCAGCAACCCCTTCTGGTGGCTTACACTCTGCTTCCAGACAACGAGCCGGTTGTT
 CCTGGTCATCGAGTATGTCAATGGCGGGACCTCATGTTCCACATGCAGAGGCAGAGAAACTTCCAGAG
 GAGCATGCCAGGTTCTATGCTGCTGAGATCTGTATCGTCTCAACTTCTGCATGAGAGGGGATCATCT
 ACCGGGACCTAAAACGGACAACGTCCTCCTTGTATGCCGACGGACACATTAAGCTGACGGACTACGGCAT
 GTGCAAGGAAGGTCTAGGCCCGGTGATACAACAAGCACTTTTTGTGGAACCCCGAACTATATCGCCCCC
 GAAATCTGCGAGGAGAAGAGTACGGGTTACGCGTGGACTGGTGGGCACTGGGTGTCCTTATGTTTGAGA
 TGATGGCTGGGCCTCCCCCTTTGACATCATCACGGACAACCCTGACATGAACACTGAAGACTACCTTTT
 CCAAGTTATCCTGGAAGCCAAATCCGGATTCCCCGTTTCTGTCTGTCAAGGCCACACGCTCTAAAA
 GGATTTTTAAATAAGGATCCCAAAGAGAGGCTTGGCTGCCGGCCACAGACTGGGTTTTCCGACATCAAGT
 CTCATGCTTTCTCCGACGATAGACTGGGACCTGCTGAAAAGAAGCAGACCCTGCCTCCCTTCCAGCC
 CCAGATCACAGATGACTATGGCCTGGACAACCTTGGACACGAGTTCACCAGCGAGCTGTGCAGCTGACC
 CCAGATGATGAGGACGTATAAAGAGGATCGACCAGTCCGAATTTGAAGGCTTTGAGTACATCAACCCAC
 TTCTGCTGTCTGCTGAGGAGTCCGT**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_008860

Insert Size: 1779 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_008860.3](#), [NP_032886.2](#)

RefSeq Size: 4311 bp

RefSeq ORF: 1779 bp

Locus ID: 18762

UniProt ID: [Q02956](#)

Cytogenetics: 4 86.17 cM

Gene Summary:

Calcium- and diacylglycerol-independent serine/threonine-protein kinase that functions in phosphatidylinositol 3-kinase (PI3K) pathway and mitogen-activated protein (MAP) kinase cascade, and is involved in NF-kappa-B activation, mitogenic signaling, cell proliferation, cell polarity, inflammatory response and maintenance of long-term potentiation (LTP). Upon lipopolysaccharide (LPS) treatment in macrophages, or following mitogenic stimuli, functions downstream of PI3K to activate MAP2K1/MEK1-MAPK1/ERK2 signaling cascade independently of RAF1 activation. Required for insulin-dependent activation of AKT3, but may function as an adapter rather than a direct activator. Upon insulin treatment may act as a downstream effector of PI3K and contribute to the activation of translocation of the glucose transporter SLC2A4/GLUT4 and subsequent glucose transport in adipocytes. In EGF-induced cells, binds and activates MAP2K5/MEK5-MAPK7/ERK5 independently of its kinase activity and can activate JUN promoter through MEF2C. Through binding with SQSTM1/p62, functions in interleukin-1 signaling and activation of NF-kappa-B with the specific adapters RIPK1 and TRAF6. Participates in TNF-dependent transactivation of NF-kappa-B by phosphorylating and activating IKBKB kinase, which in turn leads to the degradation of NF-kappa-B inhibitors. In migrating astrocytes, forms a cytoplasmic complex with PARD6A and is recruited by CDC42 to function in the establishment of cell polarity along with the microtubule motor and dynein. In association with FEZ1, stimulates neuronal differentiation in PC12 cells. In the inflammatory response, is required for the T-helper 2 (Th2) differentiation process, including interleukin production, efficient activation of JAK1 and the subsequent phosphorylation and nuclear translocation of STAT6. May be involved in development of allergic airway inflammation (asthma), a process dependent on Th2 immune response. In the NF-kappa-B-mediated inflammatory response, can relieve SETD6-dependent repression of NF-kappa-B target genes by phosphorylating the RELA subunit at 'Ser-311'. In vein endothelial cells treated with the oxidant peroxynitrite, phosphorylates STK11 leading to nuclear export of STK11, subsequent inhibition of PI3K/Akt signaling, and increased apoptosis. Phosphorylates VAMP2 in vitro (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (a).