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Product datasheet for MC220746

Prkcq (NM_008859) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Prkcq (NM_008859) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Prkcq
Synonyms:	A130035A12Rik; AW494342; PKC-0; PKC-theta; Pkcq; PKCtheta
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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Fully Sequenced ORF:

>MC220746 representing NM_008859
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCACCGTTTCTTCGAATCGGTTTATCCAACTTTGACTGTGGGACCTGCCAAGCTTGTCAGGGAGAGG
CAGTGAACCCCTACTGCGCTGTGCTTGTCAAAGAGTATGTGGAATCAGAAAATGGGCAGATGTACATCCA
GAAAAAGCCAACCATGTACCCACCTTGGGACAGCACCTTTGACGCCCACATTAACAAGGGAAGGGTGATG
CAGATCATCGTGAAGGGCAAGAATGTAGACCTCATCTCAGAAACAACCGTGGAACTCTACTCCCTGGCGG
AGAGATGCCGCAAGAACAATGGGCGGACAGAAATATGGTTAGAGCTGAAACCTCAAGGCCGAATGCTAAT
GAATGCAAGATACTTTCTGGAAATGAGTGACACAAAGGACATGAGTGAGTTTGAGAATGAAGGATTCTTT
GCACTGCATCAGCGCCGAGGAGCCATCAAACAGGCCAAAGTCCACCATGTCAAGTGTCACGAGTTCACGG
CCACCTTTTTCCCTCAACCCACATTTTGCTCTGTCTGCCATGAATTTGTCTGGGGCCTGAACAAGCAGGG
TTACCAGTGCCGACAGTGTAATGCAGCGATTCACAAGAAGTGCATTGATAAAGTGATAGCCAAGTGCACA
GGATCCGCAATCAATAGCCGAGAAACCATGTTCCATAAGGAGAGATTCAAGATCGACATGCCACACAGAT
TCAAAGTCTACAACTACAAGAGTCCAACCTTCTGTGAGCACTGTGGTACCCTGCTCTGGGGGCTGGCGAG
GCAAGGACTCAAATGTGATGCATGTGGCATGAACGTCCACCACCGATGCCAGACAAAGGTTGCCAATCTT
TGTGGTATAAACCAGAAGCTAATGGCTGAAGCACTAGCGATGATTGAAAGCACCCAACAGGCTCGCTCCT
TACGAGATTCAGAACACATCTTCCGAGAAGGCCCAGTTGAAATTGGTCTCCCATGCTCCACCAAAAACGA
AACCAGGCCACCATGCGTACCAACACCTGGGAAAAGAGAACCCCAGGGCATTTCCTGGGATTCCCCTTTG
GATGGGTCAAATAAATCGGCCGGTCCTCCTGAACCCGAAGTGAGCATGCGCAGGACTTCACTGCAGCTGA
AACTGAAGATCGATGACTTCATCCTGCACAAGATGTTGGGAAAAGGAAGTTTTGGCAAGGTCTTCCTGGC
AGAGTTCAAGAGAACCAATCAGTTTTTCGCAATAAAAGCCTTAAAGAAAGATGTGGTGTTGATGGATGAT
GACGTCGAGTGTACAATGGTGGAAAAGAGGGTTCTGTCCTTGGCATGGGAGCATCCATTTCTAACACACA
TGTTCTGCACATTCCAGACCAAGGAAAATCTCTTTTTCGTGATGGAGTATCTCAATGGAGGCGACTTAAT
GTACCACATCCAAAGTTGCCACAAATTTGATCTTTCCAGAGCCACGTTTTATGCTGCTGAGGTCATCCTT
GGTCTGCAGTTCCTTCATTCCAAAGGAATTGTCTACAGGGACCTGAAGCTTGATAATATCCTGTTAGACA
GAGATGGACATATCAAAATAGCAGACTTTGGGATGTGCAAAGAGAACATGCTAGGAGATGCGAAGACAAA
TACTTTCTGTGGAACTCCTGACTACATTGCTCCGGAGATCTTGCTGGGTCAGAAGTACAACCATTCCGTC
GACTGGTGGTCCTTCGGGGTGCTCGTTTATGAGATGCTGATTGGCCAGTCCCCCTTCCACGGGCAGGACG
AGGAGGAGCTGTTCCACTCCATCCGCATGGACAACCCCTTCTACCCGAGGTGGCTCGAAAGGGAGGCCAA
GGACCTTCTAGTGAAGCTTTTTGTGAGAGAACCTGAGAAGAGGCTGGGAGTGAGAGGAGACATCCGCCAG
CATCCTTTGTTTCGAGAGATCAACTGGGAAGAGCTTGAAAGGAAAGAGATTGACCCACCCTTCAGACCAA
AAGTGAAATCACCATATGACTGTAGCAATTTCGACAAGGAATTCCTAAGTGAGAAACCCCGGCTATCATT
CGCCGACAGAGCACTCATCAACAGCATGGACCAGAACATGTTCAGCAACTTTTCCTTCATTAACCCAGGG
ATGGAGACTCTCATTTGCTCCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_008859

Insert Size: 2124 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_008859.2, NP_032885.1
RefSeq Size:	3313 bp
RefSeq ORF:	2124 bp
Locus ID:	18761
UniProt ID:	Q02111
Cytogenetics:	2 8.42 cM

Gene Summary: Calcium-independent, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that mediates non-redundant functions in T-cell receptor (TCR) signaling, including T-cells activation, proliferation, differentiation and survival, by mediating activation of multiple transcription factors such as NF-kappa-B, JUN, NFATC1 and NFATC2. In TCR-CD3/CD28-co-stimulated T-cells, is required for the activation of NF-kappa-B and JUN, which in turn are essential for IL2 production, and participates in the calcium-dependent NFATC1 and NFATC2 transactivation. Mediates the activation of the canonical NF-kappa-B pathway (NFKB1) by direct phosphorylation of CARD11 on several serine residues, inducing CARD11 association with lipid rafts and recruitment of the BCL10-MALT1 complex, which then activates IKK complex, resulting in nuclear translocation and activation of NFKB1. May also play an indirect role in activation of the non-canonical NF-kappa-B (NFKB2) pathway. In the signaling pathway leading to JUN activation, acts by phosphorylating the mediator STK39/SPAK and may not act through MAP kinases signaling. Plays a critical role in TCR/CD28-induced NFATC1 and NFATC2 transactivation by participating in the regulation of reduced inositol 1,4,5-trisphosphate generation and intracellular calcium mobilization. After costimulation of T-cells through CD28 can phosphorylate CBLB and is required for the ubiquitination and subsequent degradation of CBLB, which is a prerequisite for the activation of TCR. During T-cells differentiation, plays an important role in the development of T-helper 2 (Th2) cells following immune and inflammatory responses, and, in the development of inflammatory autoimmune diseases, is necessary for the activation of IL17-producing Th17 cells. May play a minor role in Th1 response. Upon TCR stimulation, mediates T-cell protective survival signal by phosphorylating BAD, thus protecting T-cells from BAD-induced apoptosis, and by up-regulating BCL-X(L)/BCL2L1 levels through NF-kappa-B and JUN pathways. In platelets, regulates signal transduction downstream of the ITGA2B, CD36/GP4, F2R/PAR1 and F2RL3/PAR4 receptors, playing a positive role in 'outside-in' signaling and granule secretion signal transduction. May relay signals from the activated ITGA2B receptor by regulating the uncoupling of WASP and WIPF1, thereby permitting the regulation of actin filament nucleation and branching activity of the Arp2/3 complex. May mediate inhibitory effects of free fatty acids on insulin signaling by phosphorylating IRS1, which in turn blocks IRS1 tyrosine phosphorylation and downstream activation of the PI3K/AKT pathway. Phosphorylates MSN (moesin) in the presence of phosphatidylglycerol or phosphatidylinositol. Phosphorylates PDPK1 at 'Ser-504' and 'Ser-532' and negatively regulates its ability to phosphorylate PKB/AKT1.[UniProtKB/Swiss-Prot Function]