

## Product datasheet for **MC229206**

### **Pkn1 (NM\_001199593) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Pkn1 (NM_001199593) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pkn1
Synonyms:	DBK; F730027O18Rik; PAK1; Pkn; PRK1; Prkcl1; Stk3
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC229206 representing NM\_001199593  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAGCTGATCCCCCTTTGGATTTCGGAGCTGGAGAGTGAAGCTCGAAGCTGGTCGCTGCTGGAACAGC  
 TGGGTCTGGCTGGGGCTGACCTGGCAGCCCCGGGGTGCAGCAACAGCTGGAGTTAGAGCGAGAGCGACT  
 GAAGCGGGAGATACGGAAGGAGCTGAAGCTGAAGGAGGGCGCTGAGAACCTGAGGCGAGCCACCACTGAC  
 CTGGGCGGTAGCCTGGCCCTGTGGAGCTGCTGCTGCGGGGCTCCGCTCGACGCCTAGACTTACTGCACC  
 AGCAGCTGCAGGAGCTGCATGCACATGTGGTGTGCTGCTGACCCTGCAGCTGGAAGCGATGCTACCCAATC  
 CCTTGCAGAGGGCAGCCCTATCTGCTCATCCCAACCTGAGCAGAGTGGCTGGGCTGGAGAAGCAGCTG  
 GCCATTGAGCTCAAGGTCAAACAGGGGGCAGAGAACATGATCCAGACCTATAGCAATGCCAGCAGCAAGG  
 ACCGGAAGCTGTTGTTGACAGCCAGCAGATGCTGCAGGACAGTAAGACCAAGATTGACATCATCCGCAT  
 GCAGCTTGAAGAGCGCTCCAGGCACTACAGGCTGGAGAGCTGGAGAGTCAAGGAGCTCCTGATGAAGCC  
 CAAGGAGATCCAGAACTGGGAGCCGTAGAGCTACGCATTGAGGAGCTACGACACCAATTTTCGAGTGGAGC  
 ATGCAGTGGCAGAAGGTGCCAAGAATGTCTGCGCCTGCTCAGTGGGGCAAAGGCCCCAGACCGCAAGGC  
 AGTCAGCGAGGCTCAGGAGAAATGACTGAGTCCAACCAGAAGCTGGGCTTGTGCGGGAATCACTGGAG  
 AGGCGCCTTGGGGAGTTGCTGCGGATCACCCCAAGGGGCGGCTGCTTCGGGAGGAGCTCACTGCAGCCT  
 CGTCTCAGCCTTCAAGGCCATACTGCCTGGGCCCTTCCCTGCCACTCACTACAGCACCTTGAGCAAAGCC  
 TGCACCGCTCACAGGGACCTGGAAGTACGAGTGGTGGGCTGCAAAAACCTTCCCGAGACCATCCCTGG  
 AGCCCTCCCCCTCAGTGGGGCATCTGGGACCCCGAAAAGCCGCACTCCGTTCTGAGTCGCCCCGCTC  
 GGGGCTTTACAGCCGGAGTGAAGCTTAGTGGACGGAGCAGCCTCAGAGGGGAGGCAGAGAATGCCAC  
 TGAGGTCAGCACCGTGCTCAAGCTGGACAACACAGTGGTGGGGCAAACAGCCTGGAAGCCATGCGGCCCC  
 AATGCCTGGGACCAAGCTTTACCTGGAGCTGGAGAGGCTCGGGAGCTGGAGCTGGCTGTGTTCTGGC  
 GAGACCAGAGGGGTCTGTGTCTCTCAAATTTCTGAAGTTGGAGGACTTCTTGGACAACGAGAGGCATGA  
 GGTGCAGCTGGACATGGAACCCAGGGTGCCTGGTGGCTGAGGTCACCTTCCGAAACCCCATCATCGAG  
 CGGATCCCTAGGCTCAAAGGCAGAAAAAATCTTCTCCAAGCAGCAAGGGAAGGCATTTTCAGCGAGCCA  
 GACAGATGAACATAGATGTGGCGACTTGGGTGCGGCTGCTCCGTAGACTCATCCCTAGTGTGTGGCCAC  
 TGGCACCTTCAGTCCCAATGCATCTCCAGGTGCTGAGATCCGGCACACTGGAGACATATCCATGGAGAAA  
 TTGAATCTCGGTGCTGACTCAGACAGCTCGTCCAAAAGAGCCACCAGGGCTGCCCTCCACCTCATGCA  
 GCCTGAGTTCTCAACCCATGAATCCACCACATCTCCAGAGCTGCCTTCCAGAGACCAGGAGACTCCAGG  
 CCCTGGCCTGTGCAGCCCTTGAGAAAATCGCCCTGACACTTGAGGACTTCAAGTTCCTGGCCGTGCTT  
 GGCCGGGGTCACTTTGAAAAGGTGCTGCTGTGAATTCGCTCCAGTGGGGAGCTCTTGGCCATCAAAG  
 CCTTGAAGAAAGGTGACATTGTAGCCCGAGATGAGGTTGAGAGCCTGATGTGTGAGAAGCGGATTTTGGC  
 GGCCGTGACCAGGGCAGGACATCCCTTCTGGTGAACCTTTTCGGCTGTTTCCAGACCCAGAGCACGTG  
 TGCTTTGTGATGGAGTACTCGGCGGGTGGAGACCTGATGCTGCACATTCATAGCGACGTGTTCTCAGAGC  
 CTCGGGCTGTCTTCTATTCGGCTGTGTGGTGTGGGACTGCAGTTCCTCCATGAACACAAGATTGTCTA  
 CAGGGACCTGAAGTTGGACAATTTGCTCCTGGATACTGAGGGCTACGTCAGATCGCAGACTTTGGCCTC  
 TGCAAGGAGGGGATGGGCTATGGGGACCGGACCAGCACGTTCTGCGGAACTCCGGAGTTCCTGGCCCGG  
 AAGTGCTCACAGACACATCCTACACGCGAGCAGTGGACTGGTGGGGACTGGGCGTGTGCTCATAGAGAT  
 GTTGGTTGGAGAGTCTCCGTTCCCTGGGGATGATGAGGAGGAGGTATTTGACAGCATTGTCAACGACGAA  
 GTTCGCTATCCCCGCTTCTGTCTGCAGAGGCCATCGGCATCATGAGAAGGCTACTGCGGAGGAACCCGG  
 AGCGGAGGCTGGGGTCCACTGAGCGGATGCAGAAGATGTGAAAAACAGCCTTTCTCCGGTCTCTGGG  
 CTGGGATGCTGCTGGCCCGCCGCTTGCTCCACCCTTCGTGCCTACACTTTTCAGGGCGCACAGATGTC  
 AGCAACTTCGATGAGGAGTTCAGTGGGAGGCCCCACACTGAGTCTCCCGGGATGCACGGCCCTCA  
 CAGCTGCGGAGCAGGCAGCCTTCCGGGATTCGACTTTGTGGCCGGAGGCTACTAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

<b>ACCN:</b>	NM_001199593
<b>Insert Size:</b>	2856 bp
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
<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>NM_001199593.1, NP_001186522.1</u>
<b>RefSeq Size:</b>	3325 bp
<b>RefSeq ORF:</b>	2856 bp
<b>Locus ID:</b>	320795
<b>UniProt ID:</b>	<u>P70268</u>
<b>Cytogenetics:</b>	8 40.22 cM

**Gene Summary:**

PKC-related serine/threonine-protein kinase involved in various processes such as regulation of the intermediate filaments of the actin cytoskeleton, cell migration, tumor cell invasion and transcription regulation. Part of a signaling cascade that begins with the activation of the adrenergic receptor ADRA1B and leads to the activation of MAPK14. Regulates the cytoskeletal network by phosphorylating proteins such as VIM and neurofilament proteins NEFH, NEFL and NEFM, leading to inhibit their polymerization. Phosphorylates 'Ser-575', 'Ser-637' and 'Ser-669' of MAPT/Tau, lowering its ability to bind to microtubules, resulting in disruption of tubulin assembly. Acts as a key coactivator of androgen receptor (ANDR)-dependent transcription, by being recruited to ANDR target genes and specifically mediating phosphorylation of 'Thr-11' of histone H3 (H3T11ph), a specific tag for epigenetic transcriptional activation that promotes demethylation of histone H3 'Lys-9' (H3K9me) by KDM4C/JMJD2C. Phosphorylates HDAC5, HDAC7 and HDAC9, leading to impair their import in the nucleus. Phosphorylates 'Thr-38' of PPP1R14A, 'Ser-159', 'Ser-163' and 'Ser-170' of MARCKS, and GFAP. Able to phosphorylate RPS6 in vitro.[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (1) encodes the longer protein (isoform 1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.