

## Product datasheet for **MC228204**

### **Pdpk1 (NM\_001286662) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Pdpk1 (NM_001286662) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pdpk1
Synonyms:	Pdk1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC228204 representing NM\_001286662  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTGAGGTCCCAGACTGAGCCCGTTTCGTCCTGGCATTCTAGTGGTGTAGCAGGCAGGGATCCA  
 CCATGGATGGCACCACAGCTGAAGCCCGACCAAGCACCACCCCTTGACGACGACCCTGCCAGCTGCC  
 ACCACAGCCTCGCAAGAAACGCCCTGAAGACTTCAAGTTTGGGAAAATTCTTGGCAGGGCTCTTTTTCA  
 ACAGTTGTTCTGGCCGAGAAGTGGCCACTTCCAGAGAATATGCTATTAATTTCTGGAGAAACGTCATA  
 TTATAAAAGAAAACAAAGTTCGGTATGTAAGTACAGAGAGAGATGTGATGTACGCCTGGATCACCCCTT  
 CTTTGTGAAACTTTATTTTACATTTTCCAGGACGACGAAAAGCTGTATTTGGCCTTAGTTATGCCAAAAAT  
 GGAGAGCTACTTAAATACATCCGCAAAATTGGCTCATTTGATGAGACCTGTACCCGGTTTTACACGGCTG  
 AGATTGTGTCTGCTTTAGAGTACTTGCATGGCAAGGGCATCATTACAGAGACCTTAAACCAGAAAACAT  
 TTTGTTAAATGAAGACATGCACATCCAGATCACAGATTTTGGAAACAGCAAAAGTGTATCCCCAGAGAGC  
 AAACAAGCCAGGGCCAACCTCATTTGTAGGAACAGCACAGTATGTTTCTCCAGAGCTGCTCACAGAGAAGT  
 CGGCGTGTAAAAGTTCAGACCTTTGGGCCCTTGGATGTATAATCTATCAGCTCGTGGCAGGACTCCCACC  
 ATTCAGAGCCGGGAATGAATATCTTATATTTTCAAGAGATCATTAAAGTGGAAATATCATTTCCAGAAAA  
 TTCTTCCCTAAGGCTAGAGATCTTGTGGAAAACTCTTGGTTTTAGATGCCACAAAGCGTTTAGGCTGTG  
 AAGAGATGGAAGGGTACGGGCCTCTCAAAGCTCATCCATCTTTGAGACCATCACTTGGGAGAAATTTGCA  
 CCAGCAGACACCTCCGAAGCTCACAGCTTACCTACCAGCCATGTCAGAGGATGATGAAGACTGCTATGGC  
 AACTACGACAATCTCCTGAGCCAGTTTGGCTTCATGCAGGTGTCATCCTCCTCCTTCCCACTCCCTGT  
 CTACGGTGGAAACCAGCCTGCCAGAGGTCGGGCAGCAACATAGAGCAGTACATCCATGATTTGGACAC  
 TAACTCTTTTGAAGTACACTTACAGTTTTTCAAGAGATGAAAAAGGTTGTTATTGGAAAAGCAAGCCGGT  
 GGAAACCCTTGGCACCAGTTTGTAGAAAATAATCTAATATTAATAATGGGTCCAGTGGATAAGCGAAAGG  
 GTTATTTTGAAGACGACGACAGTTATTACTCACAGAAGGGCCACATTTATATTATGTTGATCCTGTCAA  
 CAAGGTCTTGAAGGTGAAATCCCATGGTCACAAGAACTCCGACCAGAAGCAAGAAATTTTAAACTTTT  
 TTTGTCCACAGCCTAACAGGACGTACTACCTGATGGATCCAAGCGGGAATGCTCACAGTGGTGCAGAA  
 AGATCCAGGAGGTTTGGAGGCAGCAGTACCAGAGCAATCCAGATGCTGCTGTGCAG**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM\_001286662
- Insert Size:** 1599 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).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- 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\\_001286662.1](#), [NP\\_001273591.1](#)

**RefSeq Size:** 7078 bp

**RefSeq ORF:** 1599 bp

**Locus ID:** 18607

**Cytogenetics:** 17 A3.3

**Gene Summary:**

Serine/threonine kinase which acts as a master kinase, phosphorylating and activating a subgroup of the AGC family of protein kinases. Its targets include: protein kinase B (PKB/AKT1, PKB/AKT2, PKB/AKT3), p70 ribosomal protein S6 kinase (RPS6KB1), p90 ribosomal protein S6 kinase (RPS6KA1, RPS6KA2 and RPS6KA3), cyclic AMP-dependent protein kinase (PRKACA), protein kinase C (PRKCD and PRKCZ), serum and glucocorticoid-inducible kinase (SGK1, SGK2 and SGK3), p21-activated kinase-1 (PAK1), protein kinase PKN (PKN1 and PKN2). Plays a central role in the transduction of signals from insulin by providing the activating phosphorylation to PKB/AKT1, thus propagating the signal to downstream targets controlling cell proliferation and survival, as well as glucose and amino acid uptake and storage. Negatively regulates the TGF-beta-induced signaling by: modulating the association of SMAD3 and SMAD7 with TGF-beta receptor, phosphorylating SMAD2, SMAD3, SMAD4 and SMAD7, preventing the nuclear translocation of SMAD3 and SMAD4 and the translocation of SMAD7 from the nucleus to the cytoplasm in response to TGF-beta. Activates PPARG transcriptional activity and promotes adipocyte differentiation. Activates the NF-kappa-B pathway via phosphorylation of IKKB. The tyrosine phosphorylated form is crucial for the regulation of focal adhesions by angiotensin II. Controls proliferation, survival, and growth of developing pancreatic cells. Participates in the regulation of Ca(2+) entry and Ca(2+)-activated K(+) channels of mast cells. Essential for the motility of vascular endothelial cells (ECs) and is involved in the regulation of their chemotaxis. Plays a critical role in cardiac homeostasis by serving as a dual effector for cell survival and beta-adrenergic response. Plays an important role during thymocyte development by regulating the expression of key nutrient receptors on the surface of pre-T cells and mediating Notch-induced cell growth and proliferative responses. Provides negative feedback inhibition to toll-like receptor-mediated NF-kappa-B activation in macrophages.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) has an alternate 5' exon, which results in translation initiation at a downstream start codon, compared to variant 1. The resulting isoform (C) has a shorter N-terminus, compared to isoform A. 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.