

Product datasheet for **MG227245**

Pdpk1 (NM_001080773) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pdpk1 (NM_001080773) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pdpk1
Synonyms:	Pdk1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG227245 representing NM_001080773
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCAGGACCACCAGCCAGCTGTATGACGCTGTGCCATTTCAGTCCAGTGTGGTGTATGTTCTGCC
 CATCCCCATCAATGGTGAGGTCCCAGACTGAGCCGGTTCGTCCTGGCATTCCCTAGTGGTGTAGCAG
 GCAGGGATCCACCATGGATGGCACCACAGCTGAAGCCGACCAAGCACCACCCCTTGCAGCAGCACCT
 GCCCAGCTGCCACCACAGCCTCGCAAGAAACGCCCTGAAGACTTCAAGTTTGGGAAAATTCTTGGCGAGG
 GCTCTTTTTCAACAGTTGTTCTGGCCGAGAAGTGGCCACTTCCAGAGAATATGCTATTAATAATTCTGGA
 GAAACGTCATATTATAAAAGAAAACAAAGTTCGGTATGTAAGTACAGAGAGAGATGTGATGTCACGCCTG
 GATCACCCCTTCTTTGTAAACTTTATTTTACATTTTCAGGACGACGAAAAGCTGTATTTTGGCCTTAGTT
 ATGCCAAAAATGGAGAGCTACTTAAATACATCCGCAAAATGGCTCATTTGATGAGACCTGTACCCGGTT
 TTACACGGCTGAGATTGTGTCTGCTTTAGAGTACTTGCATGGCAAGGGCATCATTACAGAGACCTTAA
 CCAGAAAAACATTTTGTTAAATGAAGACATGCACATCCAGATCACAGATTTTGGAAACGAAAAAGTGTAT
 CCCAGAGAGCAAAACAGCCAGGGCCAACCTCATTTGTAGGAACAGCACAGTATGTTTCTCCAGAGCTGCT
 CACAGAGAAGTCGGCGTGTAAAAGTTTCCAGACTTTGGCCCTTGGATGTATAATCTATCAGCTCGTGGCA
 GGACTCCCACCATTCCAGAGCCGGGAATGAATATCTTATATTTTCAAGATCATTAAAGCTGGAATATCATT
 TCCCAGAAAAATCTTCCCTAAGGCTAGAGATCTTGTGGAAAACTCTTGGTTTTAGATGCCACAAAAGCG
 TTTAGGCTGTGAAGAGATGGAAGGTACGGCCTCTCAAAGCTCATCCATTCTTTGAGACCATCACTTGG
 GAGAATTTGCACCAGCAGACACCTCCGAAGCTCACAGCTTACCTACCAGCCATGTCAGAGGATGATGAAG
 ACTGCTATGGCAACTACGACAATCTCTGAGCCAGTTTGGCTTCATGCAGGTGTCATCCTCCTCCTCTTC
 CCACTCCCTGTCTACGGTGGAAAACAGCCTGCCCCAGAGGTCGGGCAGCAACATAGAGCAGTACATCCAT
 GATTTGGACACTAACTCTTTTGAAGTACTTACAGTTTTTCAAGATGAAAAAGGTTGTTATTGGAAA
 AGCAAGCCGGTGGAAACCCTTGGCACCAGTTTGTAGAAAATAATCTAATATTAATAATGGGTCCAGTGG
 TAAGCGAAAGGTTTATTTGCAAGACGACGACAGTTTACTCACAGAAGGGCCACATTTATATTATGTT
 GATCCTGTCAACAAGGCTTGAAGGTGAAATCCCATGGTCACAAGAAGTCCGACCAGAAGCAAGAATT
 TAAAACTTTCTTTGTCCACACGATG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG227245 representing NM_001080773
 Red=Cloning site Green=Tags(s)

MARTTSQLYDAVPIQSSVVLCSPPSPMSVRSQTEPGSSPGIPSGVSRQGSTMDGTTAEARPSTNPLQQHP
 AQLPPQPRKKRPEDFKFGKILGEGSFSTVVLARELATSREYAIKILEKRHIKENKVPYVTRERDMSRL
 DHPFFVKLYFTFQDDEKLYFGLSYAKNGELLKYIRKIGSFDECTRFYTAEIVSALEYLHGKGIHHRDLK
 PENILLNEDMHIQITDFGTAKVLSPEKQARANSFVGTQYVSPPELLTEKSACKSSDLWALGCIYQLVA
 GLPPFRAGNEYLIFQKI IKLEYHFPEKFFPKARDLVEKLLVLDATKRLGCEEMEGYGPLKAHPFFETITW
 ENLHQQTTPPKLTAYLPAMSEDEDCYGNYNLLSQFGFMQVSSSSSSHSLSTVETSLPQRSNGSNIQYIH
 DLDTNSFELDLQFSEDEKRLLEKQAGGNPWHQFVENNLIKMGVPDKRGLFARRRQLLLTEGPHLYYV
 DPVNVKLVKGEIPWSQELRPEAKNFKTFVHTM

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001080773

ORF Size: 1566 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.

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_001080773.2](#), [NP_001074242.1](#)

RefSeq Size: 1778 bp

RefSeq ORF: 1569 bp

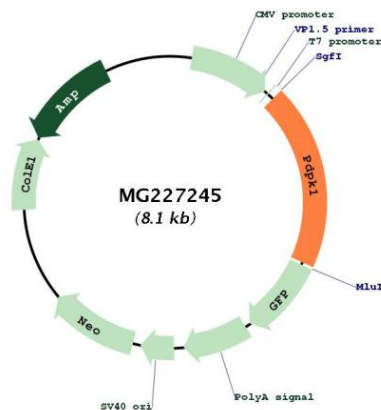
Locus ID: 18607

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]

Product images:



Circular map for MG227245