

## Recombinant Mouse Pdk1 Protein, Myc/DDK-tagged

Cat. No. Pdpk1-4777M Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Purified recombinant protein of mouse full-length 3-phosphoinositide dependent protein kinase 1 (Pdpk1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
<b>Species</b>	Mouse
<b>Source</b>	HEK293
<b>Description</b>	<p>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</p>

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adhesions by angiotensin II. Controls proliferation, survival, and growth of developing pancreatic cells. Participates in the regulation of Ca<sup>2+</sup> entry and Ca<sup>2+</sup>-activated K<sup>+</sup> 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.

**Molecular Mass** 64.2 kDa

**Purity** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Stability** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

**Storage** Store at -80 centigrade after receiving vials.

**Concentration** >50 µg/mL as determined by microplate BCA method

**Storage Buffer** 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

## GENE INFORMATION

**Gene Name** Pdk1 3-phosphoinositide dependent protein kinase 1 [ Mus musculus (house mouse) ]

**Official Symbol** Pdk1

**Synonyms** PDPK1; 3-phosphoinositide dependent protein kinase 1; 3-phosphoinositide-

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dependent protein kinase 1; mPDK1; Pkb kinase; 3-phosphoinositide dependent protein kinase-1; Pdk1

**Gene ID**

18607

**mRNA Refseq**


NM\_011062

**Protein Refseq**

NP\_035192

**UniProt ID**

Q9Z2A0

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