

# PDK1 (N-terminus) Peptide

Cat. # PX1415

Size 50 µg

## **Background:**

3-Phosphoinositide-dependent kinase 1 (PDK1), also known as PKB kinase, was identified as the activator of the survival kinase Akt/PKB. Several important substrates of PDK1 include p70S6 kinase, PKAs, PKCs, SGKs, RSKs, and PAKs. PDK1 is a member of the AGC superfamily of serine/threonine kinases. Through the phosphorylation of downstream kinases, like Akt, PDK1 has been shown to be involved in several different cell functions, such as protein synthesis, cell survival, glucose metabolism, and cell adhesion and migration. The regulation of PDK1 occurs through lipid second messengers and phosphorylation. Multiple serine sites are phosphorylated on PDK1. Serine 241 phosphorylation is required for PDK1 activity, while serine 396 has been implicated in PDK1 nuclear translocation. Tyrosine phosphorylation may also regulate PDK1 activity. Tyrosines 9 and 373/376 are phosphorylated by c-Src in vitro. Tyr-373/Tyr-376 are important for PDK1 activity, while Tyr-9 phosphorylation permits Tyr-373/Tyr-376 phosphorylation by c-Src. In addition, Tyr-9 may be important during angiotensin-II-induced focal adhesion formation.

## **References**

Park, J. et al. (2001) J Biol. Chem. 276(40):37459.  
Taniyama, Y. et al. (2003) Mol Cell. Biol. 23(22):8019.  
Scheid, M.P. et al. (2005) Mol. Cell. Biol. 25(6):2347.

## **Peptide Sequence:**

PDK1 synthetic peptide corresponds to amino acids in the N-terminus of human PDK1. This sequence is highly conserved in rat and mouse PDK1.

## **Buffer and Storage:**

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

## **Applications:**

Blocking 1:1,000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.  
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.  
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

## **Specificity:**

The peptide is specifically recognized by anti-PDK1 (N-terminus) antibody (PP1411) in ELISA, and has been shown to block the reactivity of PP1411 during Western blot. In addition, the peptide is recommended for use in blocking PP1411 reactivity in immunocytochemistry.

## **Related Products:**

PP1431 PDK1 (Tyr-9), phospho-specific Rabbit Polyclonal  
PX1435 phospho-PDK1 (Tyr-9) Peptide  
PP3891 PDK1 (Ser-241), phospho-specific Rabbit Polyclonal  
PM1461 PDK1 (C-terminal Region) Mouse Monoclonal  
PK6400 PDK1 Phospho-Regulation Antibody Sampler Kit

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www.ecmbiosciences.com  
telephone: 859-879-2075  
toll-free: 1-800-859-8202  
email: info@ecmbiosciences.com

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