

# PDK1 Phospho-Regulation Antibody Sampler Kit

Catalog # PK6400

## Kit Components:

Catalog#	Description	Host	Size	Applications	Species Reactivity	MW (kDa)
PP3891	PDK1 (Ser-241), phospho-specific	Rabbit pAb	50 µl	WB, E, IHC	H, R, M	65
PP1431	PDK1 (Tyr-9), phospho-specific	Rabbit pAb	50 µl	WB, E	H, R, M	65
PM1461	PDK1 (C-terminal region)	Mouse mAb	50 µl	WB, E, ICC	H, R, M	65
MS3001	Anti-Mouse Ig:HRP	Donkey pAb	100 µl	WB, E		
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 µl	WB, E		

Applications: WB = Western blot, E = ELISA, ICC = Immunocytochemistry, IHC = immunohistochemistry. Species: H = Human, R = Rat, M = Mouse

## Kit Summary:

The PDK1 phospho-regulation antibody sampler kit can be used to examine phosphorylation of PDK1 at Ser-241 and Tyr-9. The kit also includes a monoclonal antibody to monitor total expression levels of PDK1, as well as secondary reagents for antibody detection.

## Buffers and Storage:

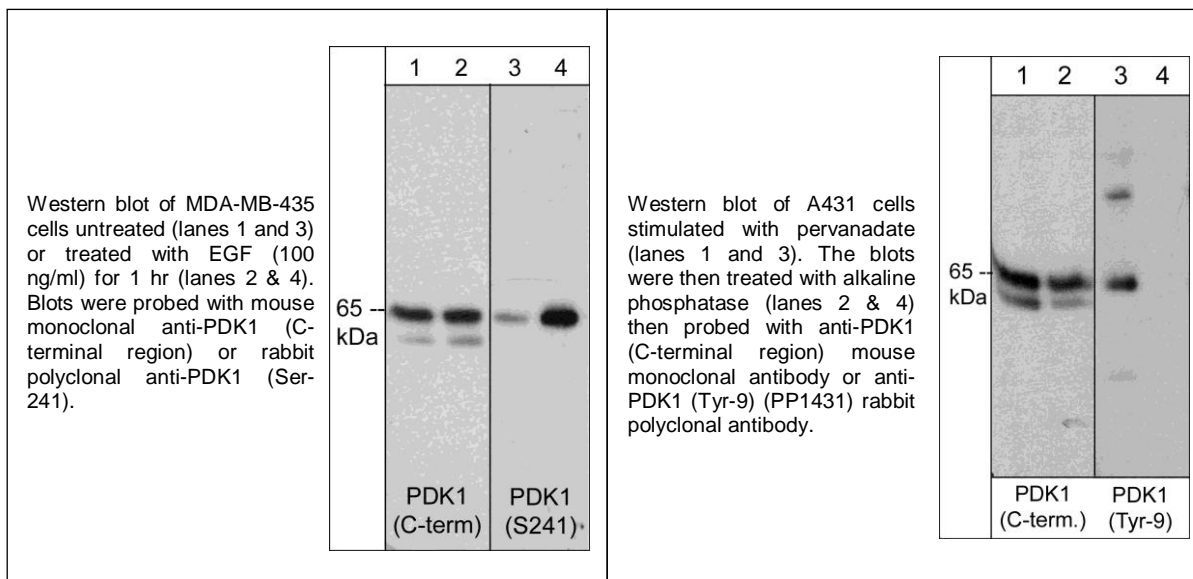
Mouse monoclonal and rabbit polyclonal antibodies are supplied in 50µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Secondary reagents are supplied in the same buffer with no azide. Store at -20°C. Do not aliquot. Stable for 1 year.

## 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 is 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:

- Mariner, D.J. et al. (2001) J. Biol. Chem. 276:28006.  
 Reynolds, A.B. & Rocznik-Ferguson, A. (2004) Oncogene 23:7947.  
 Fukumoto, Y. et al. (2008) Exp. Cell Res. 314:52.



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