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-20°C

#30590

PTEN and PDK1 Antibody Sampler Kit II



Cell Signaling
TECHNOLOGY®

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New 07/20

For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
PTEN (D4.3) XP® Rabbit mAb	9188	20 µl	54 kDa	Rabbit IgG
Phospho-PTEN (Ser380/Thr382/383) (44A7) Rabbit mAb	9549	20 µl	54 kDa	Rabbit IgG
PDK1 (D37A7) Rabbit mAb	5662	20 µl	58-68 kDa	Rabbit IgG
Phospho-PDK1 (Ser241) (C49H2) Rabbit mAb	3438	20 µl	58-68 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

Description: The PTEN and PDK1 Antibody Sampler Kit II provides an economical means to evaluate two key enzymes that regulate multiple signaling pathways. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

Background: PTEN (phosphatase and tensin homologue deleted on chromosome ten), also referred to as MMAC (mutated in multiple advanced cancers) phosphatase, is a tumor suppressor implicated in a wide variety of human cancers (1). PTEN encodes a 403 amino acid polypeptide originally described as a dual-specificity protein phosphatase (2). The main substrates of PTEN are inositol phospholipids generated by the activation of the phosphoinositide 3-kinase (PI3K) (3). PTEN is a major negative regulator of the PI3K/Akt signaling pathway (1,4,5). PTEN possesses a carboxy-terminal, noncatalytic regulatory domain with three phosphorylation sites (Ser380, Thr382, and Thr383) that regulate PTEN stability and may affect its biological activity (6,7). PTEN regulates p53 protein levels and activity (8) and is involved in G protein-coupled signaling during chemotaxis (9,10).

Phosphoinositide-dependent protein kinase 1 (PDK1) plays a central role in many signal transduction pathways (11,12), including the activation of Akt and the PKC isoenzymes p70 S6 kinase and RSK (13). Through its effects on these kinases, PDK1 is involved in the regulation of a wide variety of processes, including cell proliferation, differentiation, and apoptosis.

Specificity/Sensitivity: PTEN (D4.3) XP® Rabbit mAb detects endogenous levels of total PTEN protein. Phospho-PTEN (Ser380/Thr382/383) (44A7) Rabbit mAb detects endogenous levels of PTEN when phosphorylated at Ser380, Thr382 and Thr383. It may also react with PTEN singly phosphorylated at Ser380. PDK1 (D37A7) Rabbit mAb detects endogenous levels of total PDK1 protein. Phospho-PDK1 (Ser241) (C49H2) Rabbit mAb detects PDK1 only when phosphorylated at Ser241.

Source/Purification: PTEN (D4.3) XP® Rabbit mAb is produced by immunizing animals with a synthetic peptide corresponding to residues in the carboxy-terminal sequence of human PTEN. Phospho-PTEN (Ser380/Thr382/383) (44A7) Rabbit mAb is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues around Ser380, Thr382 and Thr383 of human PTEN. PDK1 (D37A7) Rabbit mAb is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human PDK1 protein. Phospho-PDK1 (Ser241) (C49H2) Rabbit mAb is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues around Ser241 of human PDK1.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibodies.

Please visit www.cellsignal.com for validation data and a complete listing of recommended companion products.

Background References:

- (1) Cantley, L.C. and Neel, B.G. (1999) *Proc Natl Acad Sci USA* 96, 4240-5.
- (2) Myers, M.P. et al. (1997) *Proc Natl Acad Sci USA* 94, 9052-7.
- (3) Myers, M.P. et al. (1998) *Proc Natl Acad Sci USA* 95, 13513-8.
- (4) Wan, X. and Helman, L.J. (2003) *Oncogene* 22, 8205-11.
- (5) Wu, X. et al. (1998) *Proc Natl Acad Sci USA* 95, 15587-91.
- (6) Vazquez, F. et al. (2000) *Mol Cell Biol* 20, 5010-8.
- (7) Torres, J. and Pulido, R. (2001) *J Biol Chem* 276, 993-8.
- (8) Freeman, D.J. et al. (2003) *Cancer Cell* 3, 117-30.
- (9) Funamoto, S. et al. (2002) *Cell* 109, 611-23.
- (10) Iijima, M. and Devreotes, P. (2002) *Cell* 109, 599-610.
- (11) Belham, C. et al. (1999) *Curr Biol* 9, R93-6.
- (12) Toker, A. and Newton, A.C. (2000) *Cell* 103, 185-8.
- (13) Williams, M.R. et al. (2000) *Curr Biol* 10, 439-48.

U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected **Species enclosed in parentheses are predicted to react based on 100% homology.**