

Phospho-PNK1 (Ser114/Thr118) Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	59	Rabbit	#Q96T60	11284

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

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

Specificity/Sensitivity

Phospho-PNK1 (Ser114/Thr118) Antibody detects endogenous levels of PNK1 only when phosphorylated on Ser114 and Thr118.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues around Ser114 and Thr118 of human PNK1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

PNK (polynucleotide kinase) is a DNA repair enzyme that participates in single strand break repair and non-homologous end rejoining (NHEJ) for double strand breaks. PNK possesses a 5'-DNA kinase activity and a 3'-DNA phosphatase activity (1,2). It has three domains, a C-terminal kinase domain, a central phosphatase domain, and an N-terminal forkhead associated (FHA) domain that is responsible for protein-protein interactions. Reduction in expression of PNK by RNAi sensitizes cells to ionizing radiation and topoisomerase I inhibitors (3). Phosphorylation of PNK1 at Ser114/ Thr118 was independently identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's MS/MS platform for phosphorylation site discovery. Phosphorylation of PNK1 at Ser114/ Thr118 was observed in extracts of various cell lines following UV treatment. For additional information please visit PhosphoSitePlus®, CST's modification site knowledgebase, at www.phosphosite.org.

Background References

1. Jilani, A. et al. (1999) *J Biol Chem* 274, 24176-86.
2. Dobson, C.J. and Allinson, S.L. (2006) *Nucleic Acids Res* 34, 2230-7.
3. Bernstein, N.K. et al. (2008) *Anticancer Agents Med Chem* 8, 358-67.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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