

Certificate of Analysis
Product: Affinity Purified Anti-PNK (Polynucleotide Kinase) [Rabbit]

Code: 600-401-480

Lot # 19241

Size: 100 µg

Physical State: Liquid (sterile filtered)

Antibody Concentration: 1.46 mg/ml (by UV absorbance at 280 nm)

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

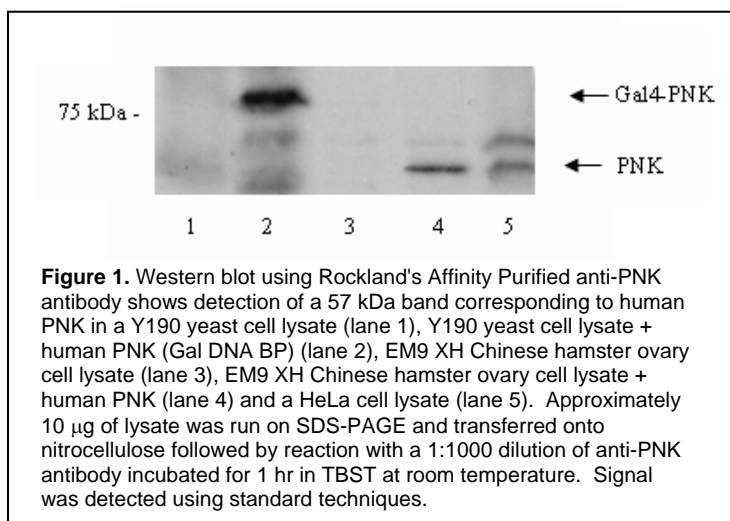
Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Storage Conditions: Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

Background: Mammalian PNK (also known as PNKP, Polynucleotide kinase 3'-phosphatase, DNA 5'-kinase/3'-phosphatase and Polynucleotide kinase) catalyzes the 5' phosphorylation of nucleic acids and can have associated 3' phosphatase activity, predictive of an important function in DNA repair following ionizing radiation or oxidative damage. PNK is a nuclear protein that is expressed in many tissues with highest expression in spleen and testis, and lowest expression in small intestine.

Application Note(s): This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 57 kDa in size corresponding to PNK by western blotting in the appropriate cell lysate or extract.


Recommended Dilutions:

ELISA	1:3,000 - 1:12,000
WESTERN BLOT	1:300 - 1:1,500
IF MICROSCOPY	User Optimized
OTHER APPLICATIONS	User Optimized

Purity and Specificity: This affinity purified antibody is directed against human PNK protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest reactivity with this protein from human and chimpanzee based on 100% homology for the immunogen sequence. Expect cross-reactivity with PNK from dog, mouse and rat sources, as only two amino acid residues change within the immunogen sequence (83% positive by BLAST). Cross-reactivity with PNK homologues from other sources has not been determined.

Relevant Link(s): Swiss Prot: [Q96T60](#) NCBI Link [NP_009185](#)

Immunogen: This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region of human PNK protein.

General References:

Mani,R.S., Karimi-Busheri,F., Fanta,M., Cass,C.E. and Weinfeld,M. (2003) Spectroscopic studies of DNA and ATP binding to human polynucleotide kinase: evidence for a ternary complex. *Biochemistry* **42** (41), 12077-12084.

Chappell,C., Hanakahi,L.A., Karimi-Busheri,F., Weinfeld,M. and West,S.C. (2002) Involvement of human polynucleotide kinase in double-strand break repair by non-homologous end joining. *EMBO J.* **21** (11), 2827-2832.

Karimi-Busheri,F., Daly,G., Robins,P., Canas,B., Pappin,D.J., Sgouros,J., Miller,G.G., Fakhrai,H., Davis,E.M., Le Beau,M.M. and Weinfeld,M. (1999) Molecular characterization of a human DNA kinase. *J. Biol. Chem.* **274** (34), 24187-24194.

Jilani,A., Ramotar,D., Slack,C., Ong,C., Yang,X.M., Scherer,S.W. and Lasko,D.D. (1999) Molecular cloning of the human gene, PNKP, encoding a polynucleotide kinase 3'-phosphatase and evidence for its role in repair of DNA strand breaks caused by oxidative damage. *J. Biol. Chem.* **274** (34), 24176-24186.

Related Products:

- #[611-703-127](#) Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10
- #[611-132-122](#) IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10
- #[MB-070](#) Blocking Buffer for Fluorescent Western Blotting
- #[KIA-003](#) **MaxTag**[™] Anti-RABBIT IgG Kit for Immunoblotting
- #[MB-070](#) Blocking Buffer for Fluorescent Western Blotting

USDA Certification: All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.