

**PNKP Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP14116a**

**Specification**

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**PNKP Antibody (N-term) - Product Information**

|                   |                             |
|-------------------|-----------------------------|
| Application       | WB,E                        |
| Primary Accession | <a href="#">O96T60</a>      |
| Other Accession   | <a href="#">NP_009185.2</a> |
| Reactivity        | Human                       |
| Host              | Rabbit                      |
| Clonality         | Polyclonal                  |
| Isotype           | Rabbit IgG                  |
| Calculated MW     | 57076                       |
| Antigen Region    | 109-138                     |

**PNKP Antibody (N-term) - Additional Information**

**Gene ID** 11284

**Other Names**

Bifunctional polynucleotide phosphatase/kinase, DNA 5'-kinase/3'-phosphatase, Polynucleotide kinase-3'-phosphatase, Polynucleotide 3'-phosphatase, 2'(3')-polynucleotidase, Polynucleotide 5'-hydroxyl-kinase, PNKP

**Target/Specificity**

This PNKP antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 109-138 amino acids from the N-terminal region of human PNKP.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

PNKP Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**PNKP Antibody (N-term) - Protein Information**

**Name** PNKP {ECO:0000303|PubMed:10446192, ECO:0000312|HGNC:HGNC:9154}

**Function** Plays a key role in the repair of DNA damage, functioning as part of both the non-homologous end-joining (NHEJ) and base excision repair (BER) pathways (PubMed:[10446192](#), PubMed:[10446193](#), PubMed:[15385968](#), PubMed:[20852255](#), PubMed:[28453785](#)). Through its two catalytic activities, PNK ensures that DNA termini are compatible with extension and ligation by either removing 3'-phosphates from, or by phosphorylating 5'-hydroxyl groups on, the ribose sugar of the DNA backbone (PubMed:[10446192](#), PubMed:[10446193](#)).

#### Cellular Location

Nucleus. Chromosome. Note=Localizes to site of double-strand breaks.

#### Tissue Location

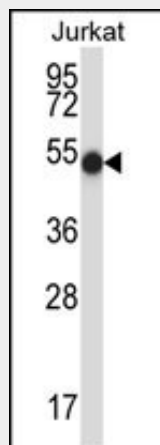
Expressed in many tissues with highest expression in spleen and testis, and lowest expression in small intestine (PubMed:10446192). Expressed in higher amount in pancreas, heart and kidney and at lower levels in brain, lung and liver (PubMed:10446193)

### PNKP Antibody (N-term) - Protocols

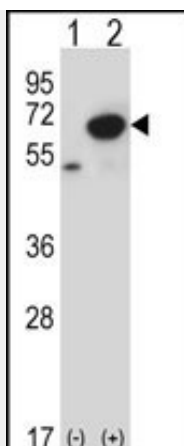
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### PNKP Antibody (N-term) - Images



PNKP Antibody (N-term) (Cat. #AP14116a) western blot analysis in Jurkat cell line lysates (35ug/lane). This demonstrates the PNKP antibody detected the PNKP protein (arrow).



Western blot analysis of PNKP (arrow) using rabbit polyclonal PNKP Antibody (N-term) (Cat. #AP14116a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PNKP gene.

#### **PNKP Antibody (N-term) - Background**

This locus represents a gene involved in DNA repair. In response to ionizing radiation or oxidative damage, the protein encoded by this locus catalyzes 5' phosphorylation and 3' dephosphorylation of nucleic acids. Mutations at this locus have been associated with microcephaly, seizures, and developmental delay.

#### **PNKP Antibody (N-term) - References**

Arora, M., et al. Leukemia 24(8):1470-1475(2010)  
Thyagarajan, B., et al. Biol. Blood Marrow Transplant. 16(8):1084-1089(2010)  
Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010)  
Shen, J., et al. Nat. Genet. 42(3):245-249(2010)  
Ali, A.A., et al. Nucleic Acids Res. 37(5):1701-1712(2009)