

Anti-PNK (Polynucleotide Kinase) (RABBIT) Antibody
PNK Antibody
Catalog # ASR5252**Specification**

Anti-PNK (Polynucleotide Kinase) (RABBIT) Antibody - Product Information

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Chimpanzee, Human
Clonality	Polyclonal
Application	WB, E, I, LCI
Application Note	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.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
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.
Preservative	0.01% (w/v) Sodium Azide

Anti-PNK (Polynucleotide Kinase) (RABBIT) Antibody - Additional Information**Gene ID** 11284**Other Names**
11284**Purity**

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.

Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-PNK (Polynucleotide Kinase) (RABBIT) Antibody - 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.

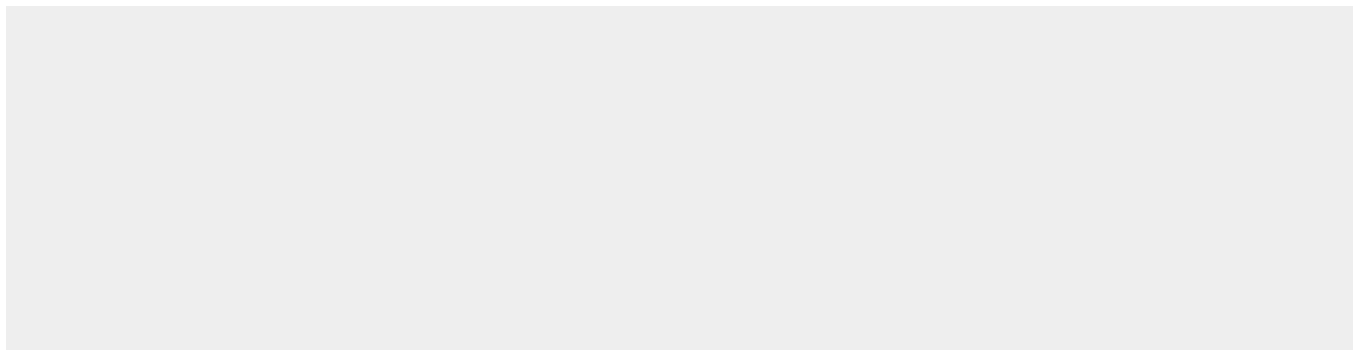
Tissue Location

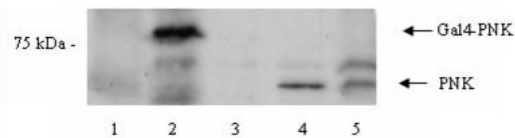
Expressed in many tissues with highest expression in spleen and testis, and lowest expression in small intestine (PubMed:10446192). Expressed in higher amount in pancreas, heart and kidney and at lower levels in brain, lung and liver (PubMed:10446193)

Anti-PNK (Polynucleotide Kinase) (RABBIT) Antibody - 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](#)

Anti-PNK (Polynucleotide Kinase) (RABBIT) Antibody - Images



Western blot using Rockland's Affinity Purified anti-PNK antibody shows detection of a 57 kDa band corresponding to human PNK in a Y190 yeast cell lysate (lane 1), Y190 yeast cell lysate + human PNK (Gal DNA BP) (lane 2), EM9 XH Chinese hamster ovary cell lysate (lane 3), EM9 XH Chinese hamster ovary cell lysate + human PNK (lane 4) and a HeLa cell lysate (lane 5). Approximately 10 µg of lysate was run on SDS-PAGE and transferred onto nitrocellulose followed by reaction with a 1:1000 dilution of anti-PNK antibody incubated for 1 hr in TBST at room temperature. Signal was detected using standard techniques.

Anti-PNK (Polynucleotide Kinase) (RABBIT) Antibody - 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.