

**Anti-PNP Picoband Antibody**  
Catalog # ABO12910**Specification****Anti-PNP Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P00491</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Purine nucleoside phosphorylase(PNP) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-PNP Picoband Antibody - Additional Information**

**Gene ID** 4860

**Other Names**

Purine nucleoside phosphorylase, PNP, 2.4.2.1, Inosine phosphorylase, Inosine-guanosine phosphorylase, PNP, NP

**Calculated MW**

32118 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat  
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

**Subcellular Localization**

Cytoplasm, cytoskeleton . Cytoplasm .

**Tissue Specificity**

Expressed in red blood cells; overexpressed in red blood cells (cytoplasm) of patients with hereditary non- spherocytic hemolytic anemia of unknown etiology. .

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>N.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human PNP (161-189aa AMSDAYDRMTMRQRALSTWKQMGEQRELQE), different from the related mouse sequence by six amino acids, and from the related rat sequence by five amino acids.

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-PNP Picoband Antibody - Protein Information****Name** PNP**Synonyms** NP**Function**

Catalyzes the phosphorolytic breakdown of the N-glycosidic bond in the beta-(deoxy)ribonucleoside molecules, with the formation of the corresponding free purine bases and pentose-1-phosphate (PubMed: [23438750](http://www.uniprot.org/citations/23438750), PubMed: [9305964](http://www.uniprot.org/citations/9305964)). Preferentially acts on 6-oxopurine nucleosides including inosine and guanosine (PubMed: [9305964](http://www.uniprot.org/citations/9305964)).

**Cellular Location**

Cytoplasm.

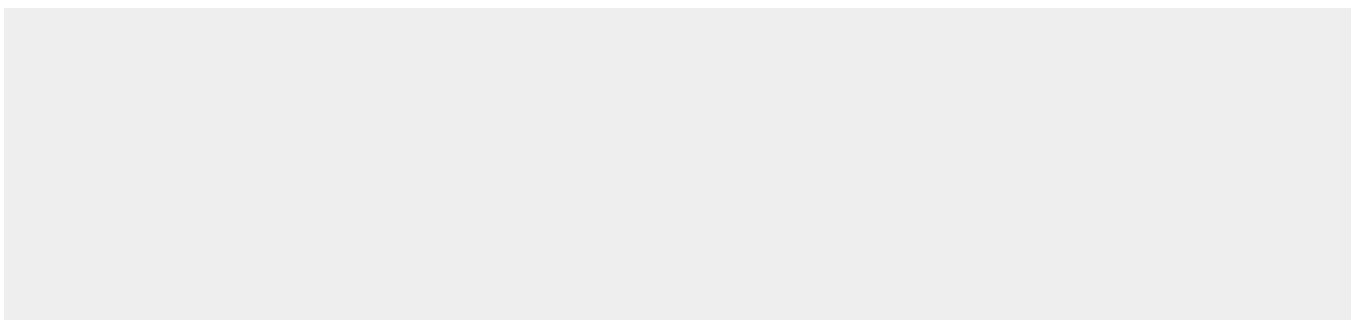
**Tissue Location**

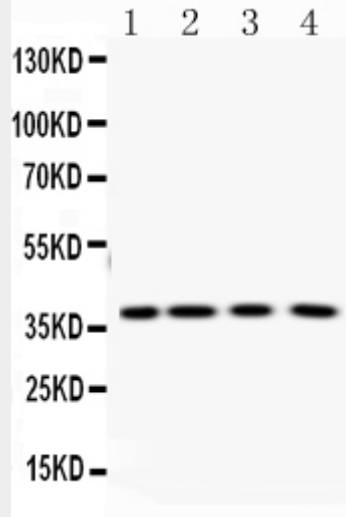
Expressed in red blood cells; overexpressed in red blood cells (cytoplasm) of patients with hereditary non-spherocytic hemolytic anemia of unknown etiology.

**Anti-PNP Picoband Antibody - Protocols**

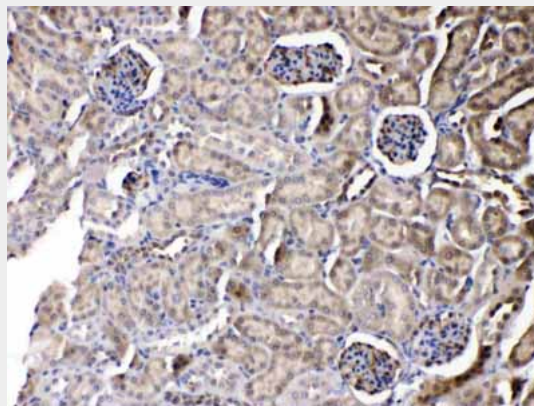
Provided below are standard protocols that you may find useful for product applications.

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

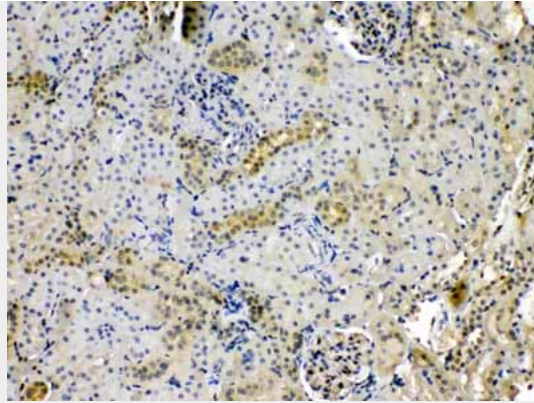
**Anti-PNP Picoband Antibody - Images**



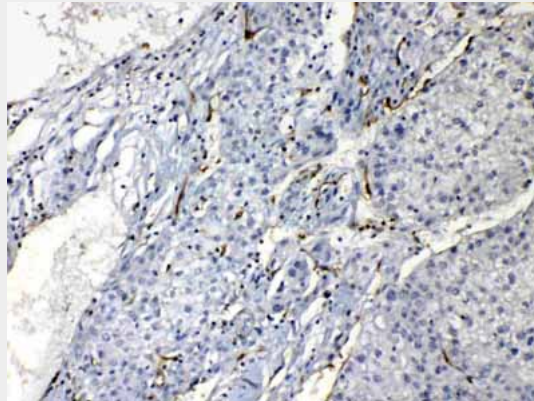
**Figure 1. Western blot analysis of PNP using anti-PNP antibody (ABO12910).** Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat thymus tissue lysates, Lane 2: rat ovary tissue lysates, Lane 3: mouse liver tissue lysates, Lane 4: human placenta tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PNP antigen affinity purified polyclonal antibody (Catalog # ABO12910) at 0.5  $\mu$ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for PNP at approximately 38KD. The expected band size for PNP is at 38KD.



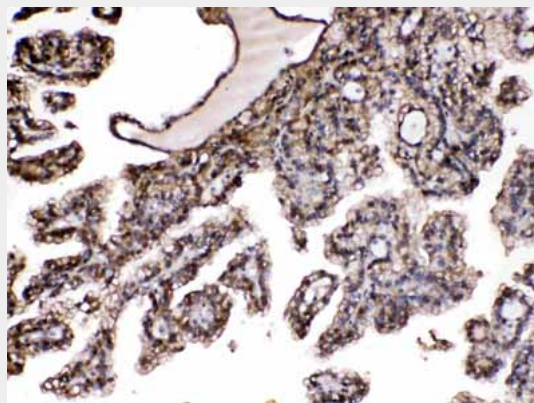
**Figure 2. IHC analysis of PNP using anti-PNP antibody (ABO12910).** PNP was detected in paraffin-embedded section of mouse kidney tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1  $\mu$ g/ml rabbit anti-PNP Antibody (ABO12910) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



**Figure 3. IHC analysis of PNP using anti-PNP antibody (ABO12910).** PNP was detected in paraffin-embedded section of rat kidney tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\frac{1}{4}$ g/ml rabbit anti-PNP Antibody (ABO12910) overnight at 4 $\text{^\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $\text{^\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



**Figure 4. IHC analysis of PNP using anti-PNP antibody (ABO12910).** PNP was detected in paraffin-embedded section of human liver cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\frac{1}{4}$ g/ml rabbit anti-PNP Antibody (ABO12910) overnight at 4 $\text{^\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $\text{^\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



**Figure 5. IHC analysis of PNP using anti-PNP antibody (ABO12910).** PNP was detected in

paraffin-embedded section of human renal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti-PNP Antibody (ABO12910) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

#### **Anti-PNP Picoband Antibody - Background**

The PNP gene encodes purine nucleoside phosphorylase, an enzyme that catalyzes the reversible phosphorolysis of the purine nucleosides and deoxynucleosides inosine, guanosine, deoxyinosine, and deoxyguanosine. It is presented results from gene dosage studies consistent with assignment of the PNP locus to band 14q13. PNP is expressed in most tissues, with markedly greater expression in lymphoid tissues. Genetic deficiencies of PNP result in severely compromised T $\gamma$ lymphocyte function and neurologic dysfunction.