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Anti-PNP Antibody Picoband™ (monoclonal, 7G5)

Catalog # ABO15037

Product Information

Application	WB, IHC, IF, ICC
Primary Accession	P00491
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-PNP Antibody Picoband™ (monoclonal, 7G5) . Tested in IF, IHC, ICC, WB applications. This antibody reacts with Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Application Details	Western blot, 0.25-0.5 □g/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5 □g/ml, Human Immunocytochemistry/Immunofluorescence, 5 □g/ml, Human
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Clone Names	Clone: 7G5
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human PNP, different from the related mouse sequence by six amino acids, and from the related rat sequence by five amino acids.
Purification	Immunogen affinity purified.
Storage	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.

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, PubMed:3029074, PubMed:9305964). Preferentially acts on 6-oxopurine nucleosides including inosine and guanosine (PubMed:9305964).
Cellular Location	Cytoplasm, cytosol
Tissue Location	Expressed in red blood cells; overexpressed in red blood cells (cytoplasm) of patients with hereditary non-spherocytic hemolytic anemia of unknown etiology.

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 Tlymphocyte function and neurologic dysfunction.

Images

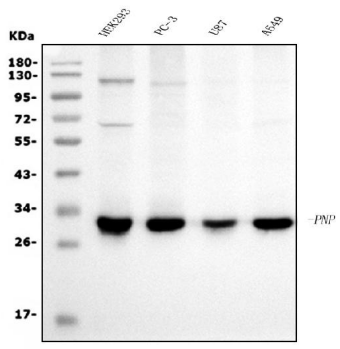
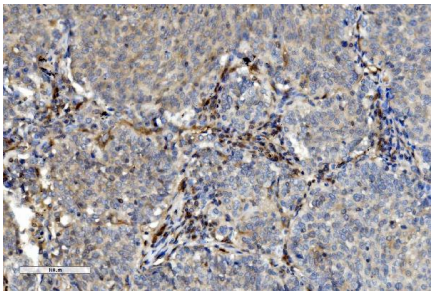


Figure 1. Western blot analysis of PNP using anti-PNP antibody (M00988).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions.
Lane 1: human HEK293 whole cell lysates,
Lane 2: human PC-3 whole cell lysates,
Lane 3: human U87 whole cell lysates,
Lane 4: human A549 whole cell 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 mouse anti-PNP antigen affinity purified monoclonal antibody (Catalog # M00988) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse 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 (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for PNP at approximately 32KD. The expected band size for PNP is at 32KD.

Figure 2. IHC analysis of PNP using anti-PNP antibody (M00988).
PNP was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen



retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-PNP Antibody (M00988) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

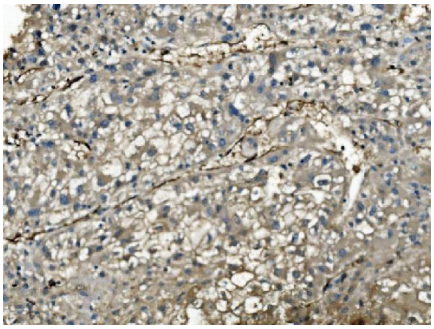


Figure 3. IHC analysis of PNP using anti-PNP antibody (M00988).
PNP was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-PNP Antibody (M00988) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

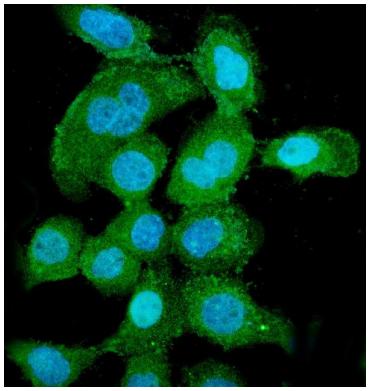


Figure 4. IF analysis of PNP using anti-PNP antibody (M00988).
PNP was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-PNP Antibody (M00988) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.