

# PNP (K-12): sc-47335

## BACKGROUND

Purine nucleoside phosphorylase (PNP), also designated inosine phosphorylase, forms a homotrimer with a molecular weight of approximately 100 kDa. It belongs to the PNP/MTAP phosphorylase family of proteins. Human PNP catalyzes the reversible phosphorolysis of ribonucleosides and 2'-deoxyribonucleosides with specificity for guanine, hypoxanthine and their analogs. PNP deficiency is a rare autosomal recessive genetic disease associated with a severe defect in T-lymphocyte function and neurologic disorder in children, comprising four percent of combined immunodeficiency cases. Children with PNP deficiency are highly prone to infections, autoimmune disorders, neurological impairment and cancer.

## REFERENCES

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3. Carlucci, F., Tabucchi, A., Aiuti, A., Rosi, F., Floccari, F., Pagani, R. and Marinello, E. 2003. Capillary electrophoresis in diagnosis and monitoring of adenosine deaminase deficiency. *Clin. Chem.* 49: 1830-1838.
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5. Canduri, F., Fadel, V., Dias, M.V., Basso, L.A., Palma, M.S., Santos, D.S. and de Azevedo, W.F., Jr. 2005. Crystal structure of human PNP complexed with hypoxanthine and sulfate ion. *Biochem. Biophys. Res. Commun.* 326: 335-338.

## CHROMOSOMAL LOCATION

Genetic locus: Np (human) mapping to 14q13.1; Pnp (mouse) mapping to 14 B-C1.

## SOURCE

PNP (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PNP of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47335 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PNP (K-12) is recommended for detection of PNP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PNP siRNA (h): sc-45991, PNP siRNA (m): sc-45992, PNP shRNA Plasmid (h): sc-45991-SH, PNP shRNA Plasmid (m): sc-45992-SH, PNP shRNA (h) Lentiviral Particles: sc-45991-V and PNP shRNA (m) Lentiviral Particles: sc-45992-V.

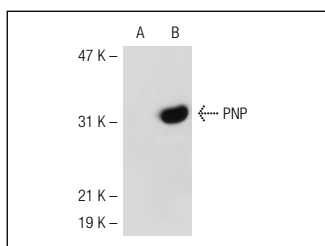
Molecular Weight of PNP: 32 kDa.

Positive Controls: mouse spleen extract: sc-2391 or PNP (h): 293T Lysate: sc-111683.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PNP (K-12): sc-47335. Western blot analysis of PNP expression in non-transfected: sc-117752 (A) and human PNP transfected: sc-111683 (B) 293T whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **PNP (F-10): sc-365551** or **PNP (H-7): sc-365081**, our highly recommended monoclonal alternatives to PNP (K-12).