

PNP (h): 293T Lysate: sc-111683

BACKGROUND

Purine nucleoside phosphorylase (PNP), also designated inosine phosphorylase, forms a homotrimer. 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

1. Narayana, S.V., et al. 1997. Refined structure of purine nucleoside phosphorylase at 2.75 Å resolution. *Acta Crystallogr. D Biol. Crystallogr.* 53: 131-142.
2. Fleischman, A., et al. 1998. Adenosine deaminase deficiency and purine nucleoside phosphorylase deficiency in common variable immunodeficiency. *Clin. Diagn. Lab. Immunol.* 5: 399-400.
3. Carlucci, F., et al. 2003. Capillary electrophoresis in diagnosis and monitoring of adenosine deaminase deficiency. *Clin. Chem.* 49: 1830-1838.
4. Zang, Y., et al. 2005. Identification of a subversive substrate of trichomonas vaginalis purine nucleoside phosphorylase and the crystal structure of the enzyme-substrate complex. *J. Biol. Chem.* 280: 22318-22325.
5. Canduri, F., et al. 2005. Crystal structure of human PNP complexed with hypoxanthine and sulfate ion. *Biochem. Biophys. Res. Commun.* 326: 335-338.
6. Canduri, F., et al. 2005. New catalytic mechanism for human purine nucleoside phosphorylase. *Biochem. Biophys. Res. Commun.* 327: 646-649.

CHROMOSOMAL LOCATION

Genetic locus: PNP (human) mapping to 14q11.2.

PRODUCT

PNP (h): 293T Lysate represents a lysate of human PNP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

PNP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PNP antibodies. Recommended use: 10-20 µl per lane.

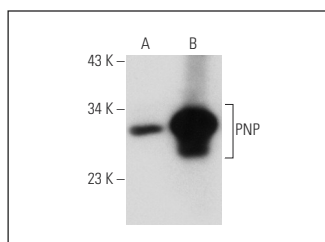
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PNP (D-11): sc-271890 is recommended as a positive control antibody for Western Blot analysis of enhanced human PNP expression in PNP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

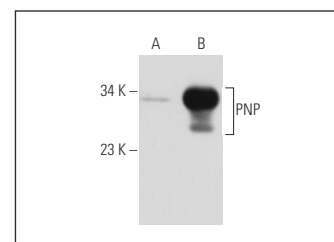
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



PNP (D-11): sc-271890. Western blot analysis of PNP expression in non-transfected: sc-117752 (A) and human PNP transfected: sc-111683 (B) 293T whole cell lysates.



PNP (D-8): sc-365132. Western blot analysis of PNP expression in non-transfected: sc-117752 (A) and human PNP transfected: sc-111683 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.