

pyridoxal phosphatase (H-5): sc-398850

BACKGROUND

Pyridoxal phosphatase (PLPase) is an autoantigen comprising 296 amino acids. PLPase catalyzes the dephosphorylation of pyridoxal 5'-phosphate (the active form of vitamin B6) and exhibits a high level of expression various parts of the central nervous system, especially the brain. PLPase activity is catalyzed by haloacid dehalogenase (HAD), and it is the cofactor of both aromatic L-amino acid decarboxylase and glutamate decarboxylase. Autoantibodies against pyridoxal phosphatase show a strong correlation with certain types of cancer.

REFERENCES

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- Jang, Y.M., et al. 2003. Human pyridoxal phosphatase. Molecular cloning, functional expression, and tissue distribution. *J. Biol. Chem.* 278: 50040-50046.
- Boe, A.S., et al. 2004. Pyridoxal phosphatase is a novel cancer autoantigen in the central nervous system. *Br. J. Cancer* 91: 1508-1514.
- Kawai, S., et al. 2004. Cytosolic NADP phosphatases I and II from *Arthrobacter* sp. strain KM: implication in regulation of NAD⁺/NADP⁺ balance. *J. Basic Microbiol.* 44: 185-196.
- Kang, J.H., et al. 2004. Genomic organization, tissue distribution and deletion mutation of human pyridoxine 5'-phosphate oxidase. *Eur. J. Biochem.* 271: 2452-2461.
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CHROMOSOMAL LOCATION

Genetic locus: PDXP (human) mapping to 22q13.1; Pdxp (mouse) mapping to 15 E1.

SOURCE

pyridoxal phosphatase (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 214-235 near the C-terminus of pyridoxal phosphatase of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398850 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

pyridoxal phosphatase (H-5) is recommended for detection of pyridoxal phosphatase of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 pyridoxal phosphatase siRNA (h): sc-61425, pyridoxal phosphatase siRNA (m): sc-61426, pyridoxal phosphatase shRNA Plasmid (h): sc-61425-SH, pyridoxal phosphatase shRNA Plasmid (m): sc-61426-SH, pyridoxal phosphatase shRNA (h) Lentiviral Particles: sc-61425-V and pyridoxal phosphatase shRNA (m) Lentiviral Particles: sc-61426-V.

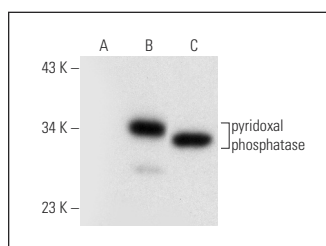
Molecular Weight of pyridoxal phosphatase: 32 kDa.

Positive Controls: pyridoxal phosphatase (h): 293T Lysate: sc-117114 or mouse brain extract: sc-2253.

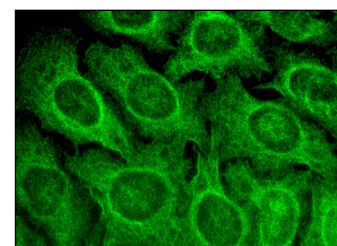
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



pyridoxal phosphatase (H-5): sc-398850. Western blot analysis of pyridoxal phosphatase expression in non-transfected: sc-117752 (A) and human pyridoxal phosphatase transfected: sc-117114 (B) 293T whole cell lysates and mouse brain tissue extract (C).



pyridoxal phosphatase (H-5): sc-398850. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

RESEARCH USE

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

PROTOCOLS

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