

pyridoxal kinase (H-91): sc-67361

BACKGROUND

Pyridoxal kinase belongs to the pyridoxine kinase family and phosphorylates vitamin B6, a step necessary for the conversion of vitamin B6 to pyridoxal 5' phosphate (PLP), the active form of vitamin B6. PLP acts as a coenzyme and functions to maintain homeostasis. Pyridoxal kinase is a 312 amino acid cytoplasmic protein that may act as a homodimer and is expressed ubiquitously. There are three known isoforms of pyridoxal kinase, and isoform 3 expression is observed in adult testis and spermatozoa. The optimum pH for pyridoxal kinase is between 5.5 and 6.0. PDXK, the gene that encodes the pyridoxal kinase protein, maps to chromosome 21q22.3 and may be a candidate gene for autoimmune polyglandular disease type 1, a genetic disorder that has been mapped to the same region on chromosome 21.

REFERENCES

- Hanna, M.C., et al. 1997. Human pyridoxal kinase. cDNA cloning, expression, and modulation by ligands of the benzodiazepine receptor. *J. Biol. Chem.* 272: 10756-10760.
- Lee, H.S., et al. 2000. Human pyridoxal kinase: overexpression and properties of the recombinant enzyme. *Mol. Cells* 10: 452-459.

CHROMOSOMAL LOCATION

Genetic locus: PDXK (human) mapping to 21q22.3; Pdxk (mouse) mapping to 10 C1.

SOURCE

pyridoxal kinase (H-91) is a rabbit polyclonal antibody raised against amino acids 221-312 mapping at the C-terminus of pyridoxal kinase of human origin.

PRODUCT

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

APPLICATIONS

pyridoxal kinase (H-91) is recommended for detection of pyridoxal kinase 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

pyridoxal kinase (H-91) is also recommended for detection of pyridoxal kinase in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for pyridoxal kinase siRNA (h): sc-61423, pyridoxal kinase siRNA (m): sc-61424, pyridoxal kinase shRNA Plasmid (h): sc-61423-SH, pyridoxal kinase shRNA Plasmid (m): sc-61424-SH, pyridoxal kinase shRNA (h) Lentiviral Particles: sc-61423-V and pyridoxal kinase shRNA (m) Lentiviral Particles: sc-61424-V.

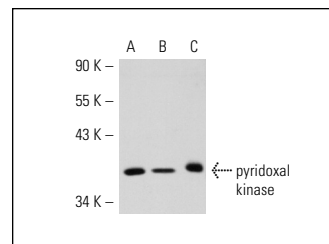
Molecular Weight of pyridoxal kinase: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hs68 cell lysate: sc-2230 or mouse testis extract: sc-2405.

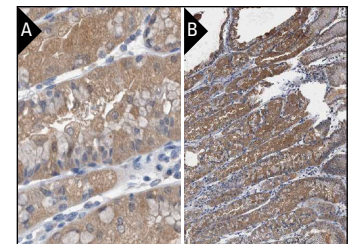
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



pyridoxal kinase (H-91): sc-67361. Western blot analysis of pyridoxal kinase expression in Hs68 (A) and HeLa (B) whole cell lysates and mouse testis tissue extract (C).



pyridoxal kinase (H-91): sc-67361. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach showing cytoplasmic staining of glandular cells at high (A) and low (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

STORAGE

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

PROTOCOLS

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



Try **pyridoxal kinase (E-2): sc-365173** or **pyridoxal kinase (F-12): sc-390082**, our highly recommended monoclonal alternatives to pyridoxal kinase (H-91).