

PSPH (FL-225): sc-98683

BACKGROUND

Serine is an amino acid required for protein and nucleotide synthesis that may also be involved in cell to cell signaling. PSPH, also known as phosphoserine phosphatase or PSP, is a 225 amino acid Mg^{2+} -dependent enzyme that catalyzes the last and irreversible step in the biosynthesis of serine from carbohydrates, which is the hydrolysis of O-phosphoserine. In the embryonic brain, PSPH is highly expressed in periventricular neural progenitors where it may have a role in neural stem cell proliferation. A lack of PSPH in humans has been shown to cause pre- and postnatal growth retardation as well as moderate psychomotor retardation.

REFERENCES

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- Wang, Y., et al. 2006. DNA microarray reveals novel genes induced by mechanical forces in fetal lung type II epithelial cells. *Pediatr. Res.* 60: 118-124.
- Nakano, I., et al. 2007. Phosphoserine phosphatase is expressed in the neural stem cell niche and regulates neural stem and progenitor cell proliferation. *Stem Cells* 25: 1975-1984.

CHROMOSOMAL LOCATION

Genetic locus: PSPH (human) mapping to 7p11.2; PspH (mouse) mapping to 5 G1.3.

SOURCE

PSPH (FL-225) is a rabbit polyclonal antibody raised against amino acids 1-225 representing full length PSPH of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

PSPH (FL-225) is recommended for detection of PSPH of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

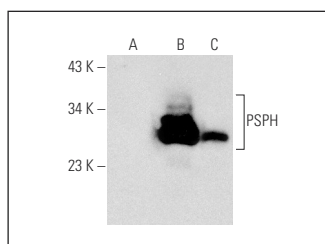
PSPH (FL-225) is also recommended for detection of PSPH in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PSPH siRNA (h): sc-76125, PSPH siRNA (m): sc-76126, PSPH shRNA Plasmid (h): sc-76125-SH, PSPH shRNA Plasmid (m): sc-76126-SH, PSPH shRNA (h) Lentiviral Particles: sc-76125-V and PSPH shRNA (m) Lentiviral Particles: sc-76126-V.

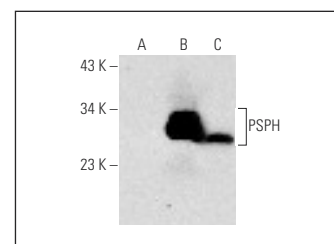
Molecular Weight of PSPH: 25 kDa.

Positive Controls: PSPH (m): 293T Lysate: sc-122827, PSPH (h): 293T Lysate: sc-116691 or SK-N-SH cell lysate: sc-2410.

DATA



PSPH (FL-225): sc-98683. Western blot analysis of PSPH expression in non-transfected 293T: sc-117752 (A), mouse PSPH transfected 293T: sc-122827 (B) and SK-N-SH (C) whole cell lysates.



PSPH (FL-225): sc-98683. Western blot analysis of PSPH expression in non-transfected 293T: sc-117752 (A), human PSPH transfected 293T: sc-116691 (B) and SK-N-SH (C) whole cell lysates.

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 **PSPH (H-10): sc-271421** or **PSPH (H-11): sc-365183**, our highly recommended monoclonal alternatives to PSPH (FL-225).