SANTA CRUZ BIOTECHNOLOGY, INC.

PSP (L-18): sc-8685

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neurotrophic factors are soluble proteins that are involved in the development and maintenance of the peripheral and central nervous systems. Glial cell line-derived neurotrophic factor (GDNF) and neurturin (NTN) are members of a family of neurotrophic factors that is distantly related to the TGFβ superfamily. A third member of this family, Persephin (PSP), is 40% identical to GDNF and NTN. PSP, like GDNF and NTN, promotes survival and inhibits degeneration of dopaminergic neurons. Unlike GDNF and NTN, however, PSP does not appear to support peripheral neurons. While PSP also plays a role in kidney development, as do GDNF and NTN, it does not promote enteric proliferation or survival. PSP is widely distributed throughout the nervous system, and it is thought to be of astroglial and neuronal origin. The signaling mechanism of PSP appears to be similar to that of GDNF and NTN, requiring the Ret receptor tyrosine kinase and a GPI-linked ligand-binding domain subunit.

REFERENCES

1. Shen, L., et al. 1997. Recent progress in studies of neurotrophic factors and their clinical implications. J. Mol. Med. 75: 637-644.
2. Pachnis, V., et al. 1998. Role of the RET signal transduction pathway in development of the mammalian enteric nervous system. Am. J. Physiol. 275: G183-G186.
3. Milbrandt, J., et al. 1998. Persephin, a novel neurotrophic factor related to GDNF and neurturin. Neuron 20: 245-253.
4. Heuckeroth, R.O., et al. 1998. Neuturin and GDNF promote proliferation and survival of enteric neuron and glial progenitors *in vitro*. Dev. Biol. 200: 116-129.
5. Jaszai, J., et al. 1998. GDNF-related factor persephin is widely distributed throughout the nervous system. J. Neurosci. Res. 53: 494-501.
6. Enokido, Y., et al. 1998. GFR α-4 and the tyrosine kinase Ret form a functional receptor complex for persephin. Curr. Biol. 8: 1019-1022.

CHROMOSOMAL LOCATION

Genetic locus: Pspn (mouse) mapping to 17 D.

SOURCE

PSP (L-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PSP 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-8685 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

PSP (L-18) is recommended for detection of persephin (PSP) of mouse and rat 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 PSP siRNA (m): sc-41971, PSP shRNA Plasmid (m): sc-41971-SH and PSP shRNA (m) Lentiviral Particles: sc-41971-V.

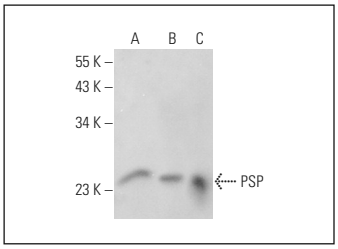
Molecular Weight of PSP: 17 kDa.

Positive Controls: mouse brain extract: sc-2253, mouse cerebellum extract: sc-2403 or rat cerebellum extract: sc-2398.

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



PSP (L-18): sc-8685. Western blot analysis of PSP expression in mouse brain (**A**), mouse cerebellum (**B**) and rat cerebellum (**C**) tissue extracts.

RESEARCH USE

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

PROTOCOLS

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