

PSAP (E-5): sc-390184

BACKGROUND

Puromycin-sensitive aminopeptidase (PSA or PSAP) is a 100 kDa zinc metallopeptidase which degrades neuropeptides by removing amino acid residues from the amino-terminus. The protein is the most abundant aminopeptidase in the brain, however it is not exclusive to that organ. It is localized primarily in the cytoplasm, and plays a role in the metabolism of neuropeptides in nerve terminals and synaptic clefts. The human PSA gene maps to chromosome 17q21.32.

REFERENCES

- Hui, M., et al. 1995. Changes in puromycin-sensitive aminopeptidases in postmortem schizophrenic brain regions. *Neurochem. Int.* 27: 433-441.
- Constam, D.B., et al. 1995. Puromycin-sensitive aminopeptidase. Sequence analysis, expression, and functional characterization. *J. Biol. Chem.* 270: 26931-26939.
- Tobler, A.R., et al. 1997. Cloning of the human puromycin-sensitive aminopeptidase and evidence for expression in neurons. *J. Neurochem.* 68: 889-897.
- Bauer, W.O., et al. 2001. Human puromycin-sensitive aminopeptidase: cloning of 3' UTR, evidence for a polymorphism at a.a. 140 and refined chromosomal localization to 17q21. *Cytogenet. Cell Genet.* 92: 221-224.
- Yamamoto, M., et al. 2002. Axonal transport of puromycin-sensitive aminopeptidase in rat sciatic nerves. *Neurosci. Res.* 42: 133-140.
- Kakuta, H., et al. 2003. Fluorescent bioprobes for visualization of puromycin-sensitive aminopeptidase in living cells. *Bioorg. Med. Chem. Lett.* 13: 83-86.

CHROMOSOMAL LOCATION

Genetic locus: NPEPPS (human) mapping to 17q21.32; Npepps (mouse) mapping to 11 D.

SOURCE

PSAP (E-5) is a mouse monoclonal antibody raised against amino acids 361-660 mapping within an internal region of PSAP of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PSAP (E-5) is available conjugated to agarose (sc-390184 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390184 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390184 PE), fluorescein (sc-390184 FITC), Alexa Fluor[®] 488 (sc-390184 AF488), Alexa Fluor[®] 546 (sc-390184 AF546), Alexa Fluor[®] 594 (sc-390184 AF594) or Alexa Fluor[®] 647 (sc-390184 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390184 AF680) or Alexa Fluor[®] 790 (sc-390184 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

PSAP (E-5) is recommended for detection of PSAP 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 PSAP siRNA (h): sc-44046, PSAP siRNA (m): sc-152533, PSAP shRNA Plasmid (h): sc-44046-SH, PSAP shRNA Plasmid (m): sc-152533-SH, PSAP shRNA (h) Lentiviral Particles: sc-44046-V and PSAP shRNA (m) Lentiviral Particles: sc-152533-V.

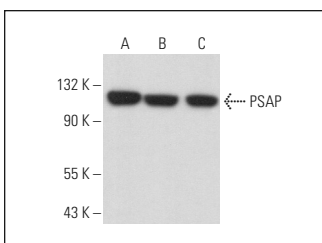
Molecular Weight of PSAP: 103 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or Hep G2 cell lysate: sc-2227.

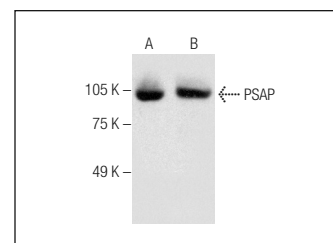
RECOMMENDED SUPPORT REAGENTS

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



PSAP (E-5): sc-390184. Western blot analysis of PSAP expression in Hep G2 (A), HeLa (B) and MCF7 (C) whole cell lysates.



PSAP (E-5): sc-390184. Western blot analysis of PSAP expression in human hippocampus tissue extract (A) and Hep G2 whole cell lysate (B).

SELECT PRODUCT CITATIONS

- Vacher, C.M., et al. 2021. Placental endocrine function shapes cerebellar development and social behavior. *Nat. Neurosci.* 24: 1392-1401.
- Kawashima, S., et al. 2022. Rapid imaging of lung cancer using a red fluorescent probe to detect dipeptidyl peptidase 4 and puromycin-sensitive aminopeptidase activities. *Sci. Rep.* 12: 9100.

STORAGE

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

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