

# PN-1 (C-12): sc-365650

## BACKGROUND

The serine protease inhibitors (serpins) compose a superfamily of proteins with a diverse set of functions, including the control of blood coagulation, complement activation, programmed cell death and development. Serpins are secreted glycoproteins that contain a stretch of peptide that mimics a true substrate for a corresponding serine protease. Protease nexin-1 (PN-1) is a serpin that inactivates several proteases, including thrombin, urokinase, plasminogen activators (PA) and plasmin. It is involved in tissue remodeling, cellular invasiveness, matrix degradation and tumor growth. PN-1 expression is abundant in the nervous system, where it inhibits thrombin, thereby playing a role in neural injury and repair processes. An imbalance between PN-1 and thrombin may be a contributing factor in the pathology of Alzheimer's disease.

## REFERENCES

1. Mulligan, L.P., et al. 1991. Protease nexin-1 activity in cultured Schwann cells. *Neurosci. Lett.* 128: 42-46.
2. Vaughan, P.J., et al. 1994. Protease nexin-1, a potent thrombin inhibitor, is reduced around cerebral blood vessels in Alzheimer's disease. *Brain Res.* 668: 160-170.
3. Smith-Swintosky, V.L., et al. 1995. Protease nexin-1 and thrombin modulate neuronal  $Ca^{2+}$  homeostasis and sensitivity to glucose deprivation-induced injury. *J. Neurosci.* 15: 5840-5850.
4. Guttridge, D.C., et al. 1996. Characterization of the human protease nexin-1 promoter and its regulation by Sp1 through a G/C-rich activation domain. *J. Neurochem.* 67: 498-507.

## CHROMOSOMAL LOCATION

Genetic locus: SERPINE2 (human) mapping to 2q36.1; Serpine2 (mouse) mapping to 1 C4.

## SOURCE

PN-1 (C-12) is a mouse monoclonal antibody raised against amino acids 246-314 mapping within an internal region of PN-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PN-1 (C-12) is available conjugated to agarose (sc-365650 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365650 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365650 PE), fluorescein (sc-365650 FITC), Alexa Fluor® 488 (sc-365650 AF488), Alexa Fluor® 546 (sc-365650 AF546), Alexa Fluor® 594 (sc-365650 AF594) or Alexa Fluor® 647 (sc-365650 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365650 AF680) or Alexa Fluor® 790 (sc-365650 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

PN-1 (C-12) is recommended for detection of PN-1 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), 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).

Suitable for use as control antibody for PN-1 siRNA (h): sc-45254, PN-1 siRNA (m): sc-45255, PN-1 shRNA Plasmid (h): sc-45254-SH, PN-1 shRNA Plasmid (m): sc-45255-SH, PN-1 shRNA (h) Lentiviral Particles: sc-45254-V and PN-1 shRNA (m) Lentiviral Particles: sc-45255-V.

Molecular Weight of PN-1: 44 kDa.

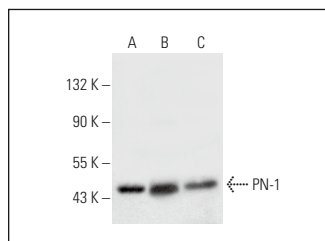
Positive Controls: rat brain extract: sc-2392, Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

## RECOMMENDED SUPPORT REAGENTS

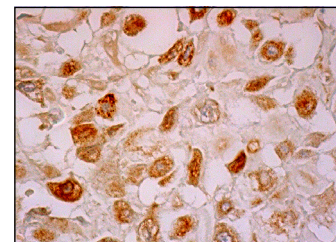
To ensure optimal results, the following support reagents are recommended:

- 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.
- 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



PN-1 (C-12): sc-365650. Western blot analysis of PN-1 expression in rat brain tissue extract (A) and Hep G2 (B) and A549 (C) whole cell lysates.



PN-1 (C-12): sc-365650. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells.

## SELECT PRODUCT CITATIONS

1. Li, X., et al. 2022. LHX2 enhances the malignant phenotype of esophageal squamous cell carcinoma by upregulating the expression of SERPINE2. *Genes* 13: 1457.

## STORAGE

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