

# NP1 (K-15): sc-12123

## BACKGROUND

Long pentraxins are a family of highly conserved proteins that are expressed in the brain and central nervous system, and form multimeric complexes. Neuronal pentraxin 1 (NP1), NP2, and neuronal pentraxin receptor (NPR) are members of the long pentraxins that represent a neuronal uptake pathway that may function during synapse formation and remodeling. The NP1 gene is located on chromosome 17q25.3 and the protein product mediates the uptake of synaptic material, including the presynaptic snake venom toxin, taipoxin. NP2, whose function is unknown, is located on chromosome 7q22.1 and like NP1 contains several potential N-linked glycosylation sites. NPR is expressed on the cell membrane and can form heteropentamers with NP1 and NP2 that can be released from the cell membrane by proteolysis.

## REFERENCES

- Hsu, Y.C. and Perin, M.S. 1995. Human neuronal pentraxin II (NPTX2): conservation, genomic structure, and chromosomal localization. *Genomics* 28: 220-227.
- Goodman, A.R., Cardozo, T., Abagyan, R., Altmeyer, A., Wisniewski, H.G. and Vilcek, J. 1996. Long pentraxins: an emerging group of proteins with diverse functions. *Cytokine Growth Factor Rev.* 7: 191-202.
- Omeis, I.A., Hsu, Y.C. and Perin, M.S. 1996. Mouse and human neuronal pentraxin I (NPTX1): conservation, genomic structure, and chromosomal localization. *Genomics* 36: 543-545.
- Polentarutti, N., Bottazzi, B., Di Santo, E., Blasi, E., Agnello, D., Ghezzi, P., Introna, M., Bartfai, T., Richards, G. and Mantovani, A. 2000. Inducible expression of the long pentraxin PTX3 in the central nervous system. *J. Neuroimmunol.* 106: 87-94.
- Kirkpatrick, L.L., Matzuk, M.M., Dodds, D.C. and Perin, M.S. 2000. Biochemical interactions of the neuronal pentraxins. Neuronal pentraxin (NP) receptor binds to taipoxin and taipoxin-associated calcium-binding protein 49 via NP1 and NP2. *J. Biol. Chem.* 275: 17786-17792.

## CHROMSOMAL LOCATION

Genetic locus: NPTX1 (human) mapping to 17q25.3; Nptx1 (mouse) mapping to 11 E2.

## SOURCE

NP1 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NP1 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.

Blocking peptide available for competition studies, sc-12123 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

NP1 (K-15) is recommended for detection of NP1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

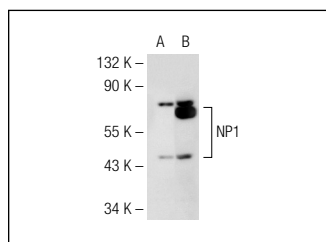
NP1 (K-15) is also recommended for detection of NP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NP1 siRNA (h): sc-42093, NP1 siRNA (m): sc-42094, NP1 shRNA Plasmid (h): sc-42093-SH, NP1 shRNA Plasmid (m): sc-42094-SH, NP1 shRNA (h) Lentiviral Particles: sc-42093-V and NP1 shRNA (m) Lentiviral Particles: sc-42094-V.

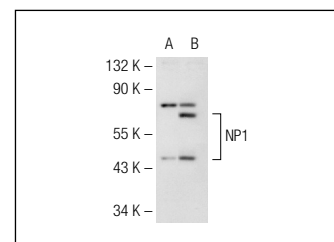
Molecular Weight of NP1: 50 kDa.

Positive Controls: NP1 (h2): 293T Lysate: sc-177638, rat brain extract: sc-2392 or mouse brain extract: sc-2253.

## DATA



NP1 (K-15): sc-12123. Western blot analysis of NP1 expression in non-transfected: sc-117752 (A) and human NP1 transfected: sc-177638 (B) 293T whole cell lysates.



NP1 (K-15): sc-12123. Western blot analysis of NP1 expression in non-transfected: sc-117752 (A) and human NP1 transfected: sc-177637 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Sanvordeker, D.R. 1976. Photochromism of an anticonvulsant, 1-diphenylmethyl-4-(6-methyl-2-pyridylmethylene-amino) piperazine, in the solid state. *J. Pharm. Sci.* 65: 1452-1456.
- Abad, M.A., Enguita, M., DeGregorio-Rocasolano, N., Ferrer, I. and Trullas, R. 2006. Neuronal pentraxin 1 contributes to the neuronal damage evoked by amyloid-β and is overexpressed in dystrophic neurites in Alzheimer's brain. *J. Neurosci.* 26: 12735-12747.

## RESEARCH USE

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

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Satisfaction  
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Try **NP1 (B-8): sc-374199**, our highly recommended monoclonal alternative to NP1 (K-15).