

# NP2 (C-14): sc-12128

## 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

1. Hsu, Y.C. and Perin, M.S. 1995. Human neuronal pentraxin II (NPTX2): conservation, genomic structure, and chromosomal localization. *Genomics* 28: 220-227.
2. Dodds, D.C., et al. 1997. Neuronal pentraxin receptor, a novel putative integral membrane pentraxin that interacts with neuronal pentraxin 1 and 2 and taipoxin-associated calcium-binding protein 49. *J. Biol. Chem.* 272: 21488-21494.
3. Kirkpatrick, L.L., et al. 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.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 600750. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Park, J.K., et al. 2007. Quantitative analysis of NPTX2 hypermethylation is a promising molecular diagnostic marker for pancreatic cancer. *Pancreas* 35: e9-e15.

## CHROMOSOMAL LOCATION

Genetic locus: NPTX2 (human) mapping to 7q22.1; Nptx2 (mouse) mapping to 5 G2.

## SOURCE

NP2 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NP2 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-12128 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

NP2 (C-14) is recommended for detection of NP2 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).

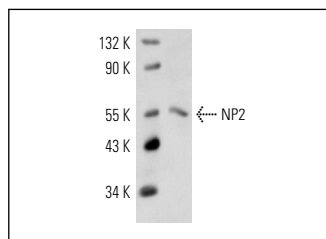
NP2 (C-14) is also recommended for detection of NP2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for NP2 siRNA (h): sc-42095, NP2 siRNA (m): sc-42096, NP2 shRNA Plasmid (h): sc-42095-SH, NP2 shRNA Plasmid (m): sc-42096-SH, NP2 shRNA (h) Lentiviral Particles: sc-42095-V and NP2 shRNA (m) Lentiviral Particles: sc-42096-V.

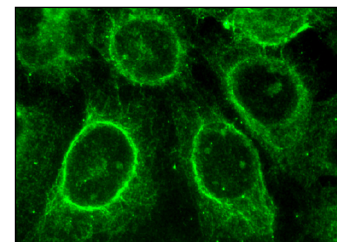
Molecular Weight of NP2: 55 kDa.

Positive Controls: H4 cell lysate: sc-2408.

## DATA



NP2 (C-14): sc-12128. Western blot analysis of NP2 expression in H4 whole cell lysate.



NP2 (C-14): sc-12128. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Centurione, L., et al. 2004. Increased and pathologic emperipolesis of neutrophils within megakaryocytes associated with marrow fibrosis in GATA-1 (low) mice. *Blood* 104: 3573-3580.
2. Vannucchi, A.M., et al. 2005. A patho-biological pathway linking thrombopoietin, GATA-1 and TGFβ1 in the development of myelofibrosis. *Blood* 105: 3493-3501.
3. Abad, M.A., et al. 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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Try **NP2 (G-9): sc-166035** or **NP2 (G-2): sc-365759**, our highly recommended monoclonal alternatives to NP2 (C-14).