SANTA CRUZ BIOTECHNOLOGY, INC.

NP1 (B-8): sc-374199

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

NP1 (B-8) is a mouse monoclonal antibody raised against amino acids 158-235 mapping within an internal region of NP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NP1 (B-8) is available conjugated to agarose (sc-374199 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374199 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374199 PE), fluorescein (sc-374199 FITC), Alexa Fluor® 488 (sc-374199 AF488), Alexa Fluor® 546 (sc-374199 AF546), Alexa Fluor® 594 (sc-374199 AF594) or Alexa Fluor® 647 (sc-374199 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374199 AF680) or Alexa Fluor® 790 (sc-374199 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NP1 (B-8) is recommended for detection of NP1 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 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.

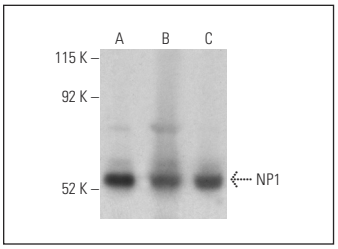
Molecular Weight of NP1: 50 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or human brain extract: sc-364375.

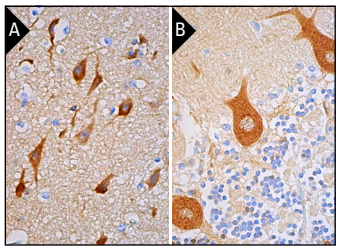
RECOMMENDED SUPPORT REAGENTS

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



NP1 (B-8): sc-374199. Western blot analysis of NP1 expression in human brain (**A**), mouse brain (**B**) and rat brain (**C**) tissue extracts. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



NP1 (B-8): sc-374199. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplamsic staining of neuronal cells and neuropil staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells and cells in granular layer (**B**).

SELECT PRODUCT CITATIONS

1. Liu, H., et al. 2017. Mkrn3 functions as a novel ubiquitin E3 ligase to inhibit Nptx1 during puberty initiation. Oncotarget 8: 85102-85109.
2. Qu, Z. and D'Mello, S.R. 2018. Proteomic analysis identifies NPTX1 and HIP1R as potential targets of histone deacetylase-3-mediated neurodegeneration. Exp. Biol. Med. 243: 627-638.
3. Simmnacher, K., et al. 2020. Unique signatures of stress-induced senescent human astrocytes. Exp. Neurol. 334: 113466.
4. Sticco, M.J., et al. 2021. C1QL3 promotes cell-cell adhesion by mediating complex formation between ADGRB3/BAI3 and neuronal pentraxins. FASEB J. 35: e21194.
5. Du, X., et al. 2021. Expression and diagnostic value of NPTX1 in thymoma patients. Zhongguo Fei Ai Za Zhi 24: 1-6.

STORAGE

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

RESEARCH USE

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