SANTA CRUZ BIOTECHNOLOGY, INC.

NP2 (G-9): sc-166035

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

SOURCE

NP2 (G-9) is a mouse monoclonal antibody raised against amino acids 382-431 mapping at the C-terminus of NP2 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.

NP2 (G-9) is available conjugated to agarose (sc-166035 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166035 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166035 PE), fluorescein (sc-166035 FITC), Alexa Fluor® 488 (sc-166035 AF488), Alexa Fluor® 546 (sc-166035 AF546), Alexa Fluor® 594 (sc-166035 AF594) or Alexa Fluor® 647 (sc-166035 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166035 AF680) or Alexa Fluor® 790 (sc-166035 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NP2 (G-9) is recommended for detection of NP2 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).

NP2 (G-9) is also recommended for detection of NP2 in additional species, including equine.

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.

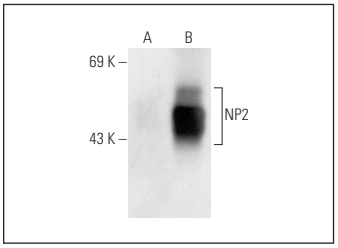
Molecular Weight of NP2: 55 kDa.

Positive Controls: H4 cell lysate: sc-2408 or NP2 (h4): 293T Lysate: sc-172406.

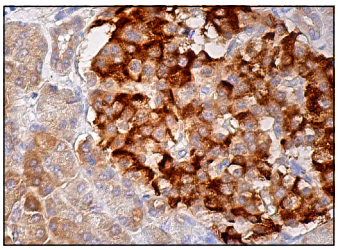
RECOMMENDED SUPPORT REAGENTS

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



NP2 (G-9): sc-166035. Western blot analysis of NP2 expression in non-transfected: sc-117752 (**A**) and human NP2 transfected: sc-172406 (**B**) 293T whole cell lysates.



NP2 (G-9): sc-166035. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells.

SELECT PRODUCT CITATIONS

1. Anastas, J.N., et al. 2019. Re-programing chromatin with a bifunctional LSD1/HDAC inhibitor induces therapeutic differentiation in DIPG. Cancer Cell 36: 528-544.e10.
2. Kovács, R.A., et al. 2020. Identification of neuronal pentraxins as synaptic binding partners of C1q and the involvement of NP1 in synaptic pruning in adult mice. Front. Immunol. 11: 599771.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.