NAP1L2 (P-15): sc-131194



The Power to Overtin

BACKGROUND

Proper nucleosome assembly is critical for compacting DNA into chromatin. In human and mouse there are 5 protein-coding genes which comprise the nucleosome assembly protein (NAP) family. NAP1L1 (NAP1) and NAP1L4 (NAP2) are ubiquitously expressed family members which have been the most extensively studied. The remaining three family members, NAP1L2, NAP1L3 and NAP1L5 are neuron-specific nucleosome assembly proteins translated from intronless genes which are monoallelically expressed. NAP1L2 (nucleosome assembly protein 1-like 2), also known as BPX (brain specific protein, X-linked), is a 460 amino acid protein containing acidic domains which are thought to mediate histone interactions. NAP1L2 binds to chromatin and interacts with Histones H3 and H4. The function of NAP1L2 is not clearly defined although evidence suggests that NAP1L2 influences histone acetylation and therefore may play a significant role in regulating transcription in developing neurons.

REFERENCES

- Rougeulle, C. and Avner, P. 1996. Cloning and characterization of a murine brain specific gene Bpx and its human homologue lying within the Xic candidate region. Hum. Mol. Genet. 5: 41-49.
- Heard, E., Kress, C., Mongelard, F., Courtier, B., Rougeulle, C., Ashworth, A., Vourc'h, C., Babinet, C. and Avner, P. 1996. Transgenic mice carrying an Xist-containing YAC. Hum. Mol. Genet. 5: 441-450.
- McDonell, N., Ramser, J., Francis, F., Vinet, M.C., Rider, S., Sudbrak, R., Riesselman, L., Yaspo, M.L., Reinhardt, R., Monaco, A.P., Ross, F., Kahn, A., Kearney, L., Buckle, V. and Chelly, J. 2000. Characterization of a highly complex region in Xq13 and mapping of three isodicentric breakpoints associated with preleukemia. Genomics 64: 221-229.
- Rogner, U.C., Spyropoulos, D.D., Le Novère, N., Changeux, J.P. and Avner, P. 2000. Control of neurulation by the nucleosome assembly protein-1-like 2. Nat. Genet. 25: 431-435.
- Rogner, U.C., Danoy, P., Matsuda, F., Moore, G.E., Stanier, P. and Avner, P. 2002. SNPs in the CpG island of NAP1L2: a possible link between DNA methylation and neural tube defects? Am. J. Med. Genet. 110: 208-214.
- 6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300026. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 7. Attia, M., Rachez, C., De Pauw, A., Avner, P. and Rogner, U.C. 2007. Nap1l2 promotes histone acetylation activity during neuronal differentiation. Mol. Cell. Biol. 27: 6093-6102.

CHROMOSOMAL LOCATION

Genetic locus: NAP1L2 (human) mapping to Xq13.2; Nap1l2 (mouse) mapping to X D.

SOURCE

NAP1L2 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NAP1L2 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-131194 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NAP1L2 (P-15) is recommended for detection of NAP1L2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NAP1L2 (P-15) is also recommended for detection of NAP1L2 in additional species, including equine and canine.

Suitable for use as control antibody for NAP1L2 siRNA (h): sc-90987, NAP1L2 siRNA (m): sc-149824, NAP1L2 shRNA Plasmid (h): sc-90987-SH, NAP1L2 shRNA Plasmid (m): sc-149824-SH, NAP1L2 shRNA (h) Lentiviral Particles: sc-90987-V and NAP1L2 shRNA (m) Lentiviral Particles: sc-149824-V.

Molecular Weight of NAP1L2: 53 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**