N4BP1 (H-300): sc-135312



The Power to Question

BACKGROUND

N4BP1 (NEDD4 binding protein 1) is an 896 amino acid protein that belongs to the N4BP1 family. N4BP1 primarily localizes to nucleolus, however it also localizes to PML nuclear bodies when desumoylated. Detected in heart, lung, brain, liver, skeletal muscle, pancreas, kidney, spleen, testis and ovary, N4BP1 is phosphorylated upon DNA damage probably by ATM or ATR. N4BP1 interacts with Nedd4, a protein with a wide range of activities including modification of ubiquitin-protein ligase, regulation of membrane channels and potentiating hormone-dependent activation of transcription. N4BP1 inhibits the E3 ubiquitin-protein ligase ITCH, by interacting with the second WW domain of ITCH thereby competing with ITCH's substrates and impairing ubiquitination of substrates. N4BP1 has no obvious transmembrane regions, which raises the possibility that N4BP1 represents a soluble adaptor that could sequester ITCH within the cytosol. The N4BP1 gene maps to chromosome 16q12.1.

REFERENCES

- Gorringe, K.L., et al. 2005. Novel regions of chromosomal amplification at 6p21, 5p13, and 12q14 in gastric cancer identified by array comparative genomic hybridization. Genes Chromosomes Cancer 42: 247-259.
- Oberst, A., et al. 2007. The Nedd4-binding partner 1 (N4BP1) protein is an inhibitor of the E3 ligase ltch. Proc. Natl. Acad. Sci. USA 104: 11280-11285.
- 3. Melino, G., et al. 2008. Itch: a HECT-type E3 ligase regulating immunity, skin and cancer. Cell Death Differ. 15: 1103-1112.
- 4. Gay, D.L., et al. 2008. Cbl- and Nedd4-family ubiquitin ligases: balancing tolerance and immunity. Immunol. Res. 42: 51-64.
- Levy, D., et al. 2008. A regulatory circuit controlling ltch-mediated p73 degradation by Runx. J. Biol. Chem. 283: 27462-27468.
- Rotin, D., at al. 2009. Physiological functions of the HECT family of ubiquitin ligases. Nat. Rev. Mol. Cell Biol. 10: 398-409.
- 7. Sharma, P., et al. 2010. N4BP1 is a newly identified nucleolar protein that undergoes SUMO-regulated polyubiquitylation and proteasomal turnover at promyelocytic leukemia nuclear bodies. J. Cell Sci. 123: 1227-1234.
- Sayan, B.S., et al. 2010. Differential control of TAp73 and δNp73 protein stability by the ring finger ubiquitin ligase PIR2. Proc. Natl. Acad. Sci. USA 107: 12877-12882.

CHROMOSOMAL LOCATION

Genetic locus: N4BP1 (human) mapping to 16q12.1; N4bp1 (mouse) mapping to 8 C3.

SOURCE

N4BP1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of N4BP1 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

N4BP1 (H-300) is recommended for detection of N4BP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

N4BP1 (H-300) is also recommended for detection of N4BP1 in additional species, including bovine and porcine.

Suitable for use as control antibody for N4BP1 siRNA (h): sc-92981, N4BP1 siRNA (m): sc-149777, N4BP1 shRNA Plasmid (h): sc-92981-SH, N4BP1 shRNA Plasmid (m): sc-149777-SH, N4BP1 shRNA (h) Lentiviral Particles: sc-92981-V and N4BP1 shRNA (m) Lentiviral Particles: sc-149777-V.

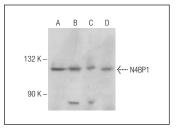
Molecular Weight of N4BP1: 100 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, F9 cell lysate: sc-2245 or 3T3-L1 cell lysate: sc-2243.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



N4BP1 (H-300): sc-135312. Western blot analysis of N4BP1 expression in PC-12 (A), F9 (B) and 3T3-L1 (C) whole cell lysates and rat adrenal glands tissue extract (D).

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.

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