SANTA CRUZ BIOTECHNOLOGY, INC.

NLP (N-18): sc-85794

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The EF-hand domain is a 12 amino acid loop motif that is commonly found in proteins that participate in calcium-binding events within the cell. EF-hand domains generally exist in a pair that, together, form a stable four-helix bundle that enables the binding of calcium ions. NLP (ninein-like protein), also known as NINL, is a 1,382 amino acid protein that localizes to both the cytoplasm and the centrosome and contains 4 EF-hand domains. Interacting with γ-Tubulin, NLP is involved in microtubule organization in interphase cells and, when over-expressed, causes lysosomal dispersion and interferes with mitotic spindle assembly. NLP is subject to post-translational phosphorylation by Plk, an event which disrupts the association of NLP with centrosomes.

REFERENCES

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2. Casenghi, M., et al. 2003. Polo-like kinase 1 regulates NLP, a centrosome protein involved in microtubule nucleation. Dev. Cell 5: 113-125.
3. Casenghi, M., et al. 2005. Phosphorylation of NLP by Plk1 negatively regulates its Dynein-Dynactin-dependent targeting to the centrosome. J. Cell Sci. 118: 5101-5108.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609580. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Wang, Y. and Zhan, Q. 2007. Cell cycle-dependent expression of centrosomal ninein-like protein in human cells is regulated by the anaphase-promoting complex. J. Biol. Chem. 282: 17712-17719.
6. Qu, D., et al. 2008. Increased expression of NLP, a potential oncogene in ovarian cancer, and its implication in carcinogenesis. Gynecol. Oncol. 110: 230-236.
7. van Wijk, E., et al. 2009. Usher syndrome and Leber congenital amaurosis are molecularly linked via a novel isoform of the centrosomal ninein-like protein. Hum. Mol. Genet. 18: 51-64.

CHROMOSOMAL LOCATION

Genetic locus: NINL (human) mapping to 20p11.21.

SOURCE

NLP (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NLP 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-85794 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NLP (N-18) is recommended for detection of NLP of 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).

NLP (N-18) is also recommended for detection of NLP in additional species, including equine and canine.

Suitable for use as control antibody for NLP siRNA (h): sc-75931, NLP shRNA Plasmid (h): sc-75931-SH and NLP shRNA (h) Lentiviral Particles: sc-75931-V.

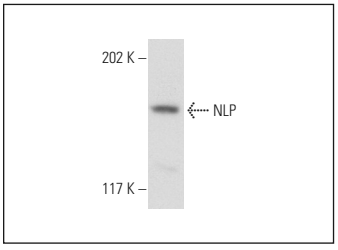
Molecular Weight of NLP: 156 kDa.

Positive Controls: TE671 cell lysate: sc-2416.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



NLP (N-18): sc-85794. Western blot analysis of NLP expression in TE671 whole cell lysate.

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.