SANTA CRUZ BIOTECHNOLOGY, INC.

NUDE1 (36-T): sc-100328

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NUDE1 (nuclear distribution protein nudE homolog 1) is a 346 amino acid cytoplasmic protein belonging to the nudE protein family (whose members include NUDE1 and NDEL1). Phosphorylated during mitosis, NUDE1 is essential for the formation and function of the mitotic spindle in M phase and functions to regulate the Dynein-mediated transport of kinetochore proteins, as well as centrosome duplication during interphase. NUDE1 is thought to interact with NDEL1, LIS1 and Dynein IC1/2, cytosolic in a signaling pathway that regulates the formation of neurons and is fundamental to the development of the cerebral cortex. Mutations in the NUDE1 gene result in a reduced cerebral cortex size caused by defects in mitotic progression and chromosomal localization of cortical progenitors. NUDE1 is expressed as two isoforms produced by alternative splicing of the primary gene transcript.

REFERENCES

1. Kitagawa, M., et al. 2000. Direct association of LIS1, the lissencephaly gene product, with a mammalian homologue of a fungal nuclear distribution protein, rNUDE. FEBS Lett. 479: 57-62.
2. Feng, Y., et al. 2000. LIS1 regulates CNS lamination by interacting with mNUDE, a central component of the centrosome. Neuron 28: 665-679.
3. Meyer, G., et al. 2002. Selective expression of doublecortin and LIS1 in developing human cortex suggests unique modes of neuronal movement. Cereb. Cortex 12: 1225-1236.

CHROMOSOMAL LOCATION

Genetic locus: NDE1 (human) mapping to 16p13.11.

SOURCE

NUDE1 (36-T) is a mouse monoclonal antibody raised against recombinant NUDE1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NUDE1 (36-T) is recommended for detection of NUDE1 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).

Suitable for use as control antibody for NUDE1 siRNA (h): sc-106779, NUDE1 shRNA Plasmid (h): sc-106779-SH and NUDE1 shRNA (h) Lentiviral Particles: sc-106779-V.

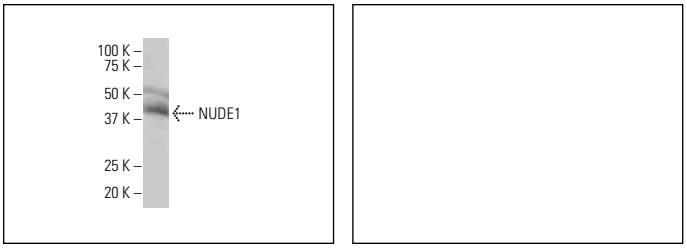
Molecular Weight of NUDE1: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

DATA



NUDE1 (36-T): sc-100328. Western blot analysis of NUDE1 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Reddy, B.J., et al. 2016. Load-induced enhancement of Dynein force production by LIS1-NudE *in vivo* and *in vitro*. Nat. Commun. 7: 12259.
2. Kumari, A., et al. 2021. Phosphorylation and Pin1 binding to the LIC1 subunit selectively regulate mitotic dynein functions. J. Cell Biol. 220: e202005184.
3. Chomiak, A.A., et al. 2022. Nde1 is required for heterochromatin compaction and stability in neocortical neurons. iScience 25: 104354.
4. Wang, L., et al. 2022. Regulators of Tubulin polyglutamylation control nuclear shape and cilium disassembly by balancing microtubule and Actin assembly. Cell Res. 32: 190-209.

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.