

# NUDE1 (D-19): sc-168801

## 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

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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.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609449. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Yan, X., et al. 2003. Human Nudel and NudE as regulators of cytoplasmic dynein in poleward protein transport along the mitotic spindle. *Mol. Cell. Biol.* 23: 1239-1250.
6. Feng, Y., et al. 2004. Mitotic spindle regulation by Nde1 controls cerebral cortical size. *Neuron* 44: 279-293.
7. Brandon, N.J., et al. 2005. Subcellular targeting of DISC1 is dependent on a domain independent from the Nudel binding site. *Mol. Cell. Neurosci.* 28: 613-624.
8. Guo, J., et al. 2006. Nudel contributes to microtubule anchoring at the mother centriole and is involved in both dynein-dependent and -independent centrosomal protein assembly. *Mol. Biol. Cell* 17: 680-689.
9. Hirohashi, Y., et al. 2006. Centrosomal proteins Nde1 and Su48 form a complex regulated by phosphorylation. *Oncogene* 25: 6048-6055.

## CHROMOSOMAL LOCATION

Genetic locus: NDE1 (human) mapping to 16p13.11; Nde1 (mouse) mapping to 16 A1.

## SOURCE

NUDE1 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NUDE1 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-168801 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NUDE1 (D-19) is recommended for detection of NUDE1 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); non cross-reactive with NDEL1.

NUDE1 (D-19) is also recommended for detection of NUDE1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for NUDE1 siRNA (h): sc-106779, NUDE1 siRNA (m): sc-150099, NUDE1 shRNA Plasmid (h): sc-106779-SH, NUDE1 shRNA Plasmid (m): sc-150099-SH, NUDE1 shRNA (h) Lentiviral Particles: sc-106779-V and NUDE1 shRNA (m) Lentiviral Particles: sc-150099-V.

Molecular Weight of NUDE1: 40 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](http://www.scbt.com) or our catalog for detailed protocols and support products.