SANTA CRUZ BIOTECHNOLOGY, INC.

NUDC (P-13): sc-163175

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NUDC (nuclear distribution gene C homolog, *A. nidulans),* also known as HNUDC, MNUDC or NPD011, is a ubiquitously expressed protein that is conserved from fungus to human. Highly expressed in proliferating cells, NUDC localizes to the cytoplasm and nucleus, contains a CS domain and participates in neurogenesis, mitosis, nuclear migration and cytokinesis. At the onset of mitosis, NUDC is phosphorylated by Plk. This modification of NUDC is required for proper mitotic spindle formation, chromosome separation during mitosis, cytokinesis and cell proliferation. In neurons and fibroblasts, NUDC forms a complex with LIS1 that localizes to the microtubule network and microtubule-organizing center and facilitates nuclear movement and transport in migrating neurons. In addition, the NUDC/LIS1 complex can associate with the minus-end directed Dynein/dynactin motor complex and, together, these complexes cooperate in the regulation of cytokinesis.

REFERENCES

1. Matsumoto, N., et al. 1999. Molecular cloning and characterization of the human NUDC gene. Hum. Genet. 104: 498-504.
2. Miller, B.A., et al. 1999. A homolog of the fungal nuclear migration gene NUDC is involved in normal and malignant human hematopoiesis. Exp. Hematol. 27: 742-750.
3. Zhang, M.Y., et al. 2002. Involvement of the fungal nuclear migration gene NUDC human homolog in cell proliferation and mitotic spindle formation. Exp. Cell Res. 273: 73-84.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610325. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Aumais, J.P., et al. 2003. Role for NUDC, a Dynein-associated nuclear movement protein, in mitosis and cytokinesis. J. Cell Sci. 116: 1991-2003.
6. Pan, R.M., et al. 2005. A microtubule associated protein (hNUDC) binds to the extracellular domain of thrombopoietin receptor (Mpl). J. Cell. Biochem. 96: 741-750.
7. Nishino, M., et al. 2006. NUDC is required for Plk1 targeting to the kinetochore and chromosome congression. Curr. Biol. 16: 1414-1421.

CHROMOSOMAL LOCATION

Genetic locus: NUDC (human) mapping to 1p36.11; Nudc (mouse) mapping to 4 D2.3.

SOURCE

NUDC (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NUDC 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-163175 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NUDC (P-13) is recommended for detection of NUDC 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NUDC (P-13) is also recommended for detection of NUDC in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for NUDC siRNA (h): sc-88034, NUDC siRNA (m): sc-150096, NUDC shRNA Plasmid (h): sc-88034-SH, NUDC shRNA Plasmid (m): sc-150096-SH, NUDC shRNA (h) Lentiviral Particles: sc-88034-V and NUDC shRNA (m) Lentiviral Particles: sc-150096-V.

Molecular Weight (predicted) of NUDC: 38 kDa.

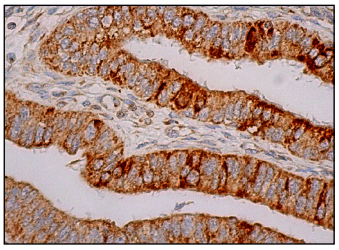
Molecular Weight (observed) of NUDC: 42 kDa.

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

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



NUDC (P-13): sc-163175. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells.

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.