

NUDC (C-3): sc-365782

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/>

CHROMOSOMAL LOCATION

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

SOURCE

NUDC (C-3) is a mouse monoclonal antibody raised against amino acids 61-331 mapping at the C-terminus of NUDC of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NUDC (C-3) is available conjugated to agarose (sc-365782 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365782 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365782 PE), fluorescein (sc-365782 FITC), Alexa Fluor® 488 (sc-365782 AF488), Alexa Fluor® 546 (sc-365782 AF546), Alexa Fluor® 594 (sc-365782 AF594) or Alexa Fluor® 647 (sc-365782 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365782 AF680) or Alexa Fluor® 790 (sc-365782 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NUDC (C-3) is recommended for detection of NUDC of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

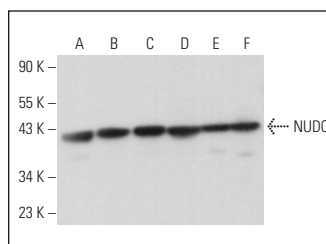
Suitable for use as control antibody for NUDC siRNA (h): sc-88034, NUDC siRNA (m): sc-150096, NUDC shRNA Plasmid (h): sc-88034-SH, NUDC shRNA Plasmid (m): sc-150096-SH, NUDC shRNA (h) Lentiviral Particles: sc-88034-V and NUDC shRNA (m) Lentiviral Particles: sc-150096-V.

Molecular Weight (predicted) of NUDC: 38 kDa.

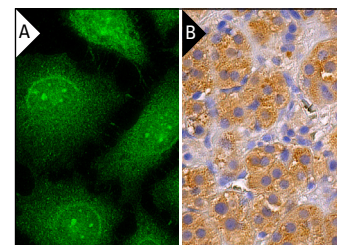
Molecular Weight (observed) of NUDC: 42 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, c4 whole cell lysate: sc-364186 or Jurkat whole cell lysate: sc-2204.

DATA



NUDC (C-3): sc-365782. Western blot analysis of NUDC expression in NIH/3T3 (A), c4 (B), Jurkat (C), PC-3 (D), U-251-MG (E) and A549 (F) whole cell lysates.



NUDC (C-3): sc-365782. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Yin, H., et al. 2021. Echinoderm microtubule associated protein like 1 is indispensable for oocyte spindle assembly and meiotic progression in mice. *Front. Cell Dev. Biol.* 9: 687522.

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.

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