SANTA CRUZ BIOTECHNOLOGY, INC.

NUDCD3 (H-10): sc-514016

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Nuclear migration is essential for growth, development and cellular function of multicellular organisms. NUDCD3 (NudC domain containing 3) is a 361 amino acid protein that contains one CS domain and is phosphorylated upon DNA damage by either ATR or ATM. Ubiquitously expressed, NUDCD3 has been observed to co-localize with Golgi marker proteins during interphase of mitosis in HeLa cells, and is found at low levels in brain, ovary and heart. The gene encoding NUDCD3 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Tsipouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. J. Clin. Invest. 72: 1262-1267.
2. Iwasaki, S., et al. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. Arch. Otolaryngol. Head Neck Surg. 127: 705-708.
3. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. Neuromolecular Med. 8: 547-565.
4. Zhou, T., et al. 2006. A mammalian NudC-like protein essential for dynein stability and cell viability. Proc. Natl. Acad. Sci. USA 103: 9039-9044.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610296. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: NUDCD3 (human) mapping to 7p13; Nudcd3 (mouse) mapping to 11 A1.

SOURCE

NUDCD3 (H-10) is a mouse monoclonal antibody raised against amino acids 224-361 mapping at the C-terminus of NUDCD3 of human origin.

PRODUCT

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

NUDCD3 (H-10) is available conjugated to agarose (sc-514016 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514016 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514016 PE), fluorescein (sc-514016 FITC), Alexa Fluor® 488 (sc-514016 AF488), Alexa Fluor® 546 (sc-514016 AF546), Alexa Fluor® 594 (sc-514016 AF594) or Alexa Fluor® 647 (sc-514016 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514016 AF680) or Alexa Fluor® 790 (sc-514016 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

NUDCD3 (H-10) is recommended for detection of NUDCD3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NUDCD3 siRNA (h): sc-89414, NUDCD3 siRNA (m): sc-150098, NUDCD3 shRNA Plasmid (h): sc-89414-SH, NUDCD3 shRNA Plasmid (m): sc-150098-SH, NUDCD3 shRNA (h) Lentiviral Particles: sc-89414-V and NUDCD3 shRNA (m) Lentiviral Particles: sc-150098-V.

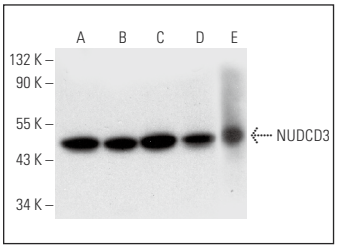
Molecular Weight of NUDCD3: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or MCF7 whole cell lysate: sc-2206.

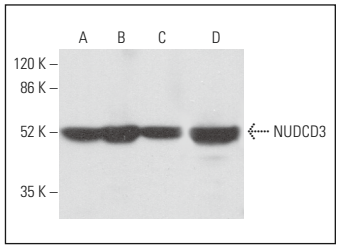
RECOMMENDED SUPPORT REAGENTS

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



NUDCD3 (H-10): sc-514016. Western blot analysis of NUDCD3 expression in HeLa (**A**), Jurkat (**B**) and MCF7 (**C**) whole cell lysates and human liver (**D**) and human lateral ventricle (**E**) tissue extracts.



NUDCD3 (H-10): sc-514016. Western blot analysis of NUDCD3 expression in Jurkat (**A**), MIA PaCa-2 (**B**), Hep G2 (**C**) and NIH/3T3 (**D**) whole cell lysates.

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.