SANTA CRUZ BIOTECHNOLOGY, INC.

NEDD1 (39-J): sc-100961

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NEDD1 (neural precursor cell expressed, developmentally down-regulated 1), also known as GCP-WD, is a homolog of the *Drosophila* protein known as Dgp71WD. It is a ubiquitously expressed, evolutionarily conserved protein and contains eight WD40 repeats and a coiled coil domain at the C-terminus. NEDD1 is a subunit of the γ-Tubulin ring complex (γTuRC) and plays an important role in mitosis. During mitosis NEDD1 is phosphorylated and functions in forming the association of γ-Tubulin with the spindle. The state of phosphorylation of NEDD1 is also important for determining its cellular localization. NEDD1 is responsible for targeting γTuRC to the centrosome and spindle and is therefore required for centrosomal and chromatin-mediated microtubule nucleation. The inhibition of NEDD1 results in the loss of γTuRC from the centrosome and a sequential loss of microtubule nucleation. Due to its critical role in mitosis, NEDD1 may be a potential target for anticancer therapies.

CHROMOSOMAL LOCATION

Genetic locus: NEDD1 (human) mapping to 12q23.1; Nedd1 (mouse) mapping to 10 C2.

SOURCE

NEDD1 (39-J) is a mouse monoclonal antibody raised against recombinant NEDD1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

NEDD1 (39-J) is recommended for detection of NEDD1 of mouse, rat and 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), 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 NEDD1 siRNA (h): sc-72378, NEDD1 siRNA (m): sc-72379, NEDD1 shRNA Plasmid (h): sc-72378-SH, NEDD1 shRNA Plasmid (m): sc-72379-SH, NEDD1 shRNA (h) Lentiviral Particles: sc-72378-V and NEDD1 shRNA (m) Lentiviral Particles: sc-72379-V.

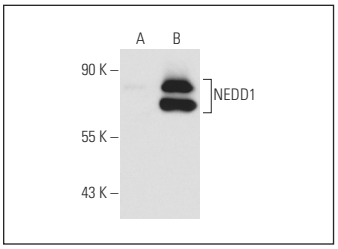
Molecular Weight of NEDD1: 74 kDa.

Positive Controls: NEDD1 (m): 293T Lysate: sc-121989 or HeLa nuclear extract: sc-2120.

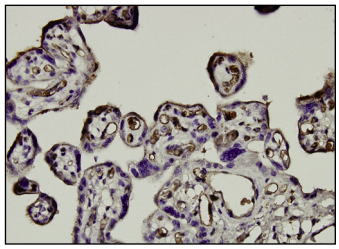
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NEDD1 (39-J): sc-100961. Western blot analysis of NEDD1 expression in non-transfected: sc-117752 (**A**) and mouse NEDD1 transfected: sc-121989 (**B**) 293T whole cell lysates.



NEDD1 (39-J): sc-100961. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing membrane localization.

SELECT PRODUCT CITATIONS

1. De Zio, D., et al. 2015. Apaf1-deficient cortical neurons exhibit defects in axonal outgrowth. Cell. Mol. Life Sci. 72: 4173-4191.
2. Chu, C.W., et al. 2016. Prickle3 synergizes with Wtip to regulate basal body organization and cilia growth. Sci. Rep. 6: 24104.
3. Chen, J.V., et al. 2017. A splice variant of centrosomin converts mitochondria to microtubule-organizing centers. Curr. Biol. 27: 1928-1940.e6.
4. Muroyama, A., et al. 2018. Genetically induced microtubule disruption in the mouse intestine impairs intracellular organization and transport. Mol. Biol. Cell 29: 1533-1541.
5. Holdgaard, S.G., et al. 2019. Selective autophagy maintains centrosome integrity and accurate mitosis by turnover of centriolar satellites. Nat. Commun. 10: 4176.
6. Zhang, Y., et al. 2022. Reconstitution and mechanistic dissection of the human microtubule branching machinery. J Cell Biol. 221: e202109053.

RESEARCH USE

For research use only, not for use in diagnostic procedures.