

NEDD1 (m): 293T Lysate: sc-121989

BACKGROUND

NEDD1 (neural precursor cell expressed, developmentally downregulated 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 (γ TuRC) 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 γ TuRC 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 γ TuRC 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.

REFERENCES

1. Kumar, S., et al. 1994. Induction of apoptosis by the mouse Nedd2 gene, which encodes a protein similar to the product of the *Caenorhabditis elegans* cell death gene ced-3 and the mammalian IL-1 β -converting enzyme. *Genes Dev.* 8: 1613-1626.
2. Kumar, S., et al. 1994. Molecular cloning and biological activity of a novel developmentally regulated gene encoding a protein with β -transducin-like structure. *J. Biol. Chem.* 269: 11318-11326.
3. Takai, S., et al. 1995. Assignment of the developmentally regulated gene NEDD1 to human chromosome 12q22 by fluorescence *in situ* hybridization. *Hum. Genet.* 95: 96-98.
4. Koul, S., et al. 2004. Characteristic promoter hypermethylation signatures in male germ cell tumors. *Mol. Cancer* 1: 8-8.
5. Haren, L., et al. 2006. NEDD1-dependent recruitment of the γ -Tubulin ring complex to the centrosome is necessary for centriole duplication and spindle assembly. *J. Cell Biol.* 172: 505-515.
6. Lüders, J., et al. 2006. GCP-WD is a γ -Tubulin targeting factor required for centrosomal and chromatin-mediated microtubule nucleation. *Nat. Cell Biol.* 8: 137-147.

CHROMOSOMAL LOCATION

Genetic locus: Nedd1 (mouse) mapping to 10 C2.

PRODUCT

NEDD1 (m): 293T Lysate represents a lysate of mouse NEDD1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

NEDD1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NEDD1 antibodies. Recommended use: 10-20 μ l per lane.

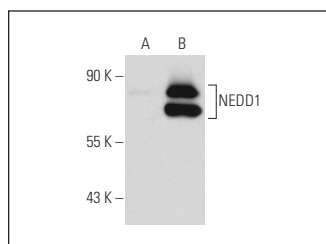
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NEDD1 (39-J): sc-100961 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse NEDD1 expression in NEDD1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

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.

RESEARCH USE

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