

# NEDD1 (H-3): sc-398733

## 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  $\gamma$ -Tubulin ring complex ( $\gamma$ TuRC) and plays an important role in mitosis. During mitosis NEDD1 is phosphorylated and functions in forming the association of  $\gamma$ -Tubulin with the spindle. The state of phosphorylation of NEDD1 is also important for determining its cellular localization. NEDD1 is responsible for targeting  $\gamma$ 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  $\gamma$ 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 $\beta$ -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  $\beta$ -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 12q23.1 by fluorescence *in situ* hybridization. *Hum. Genet.* 95: 96-98.
4. Koul, S., et al. 2002. Characteristic promoter hypermethylation signatures in male germ cell tumors. *Mol. Cancer* 1: 8.

## CHROMOSOMAL LOCATION

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

## SOURCE

NEDD1 (H-3) is a mouse monoclonal antibody raised against amino acids 61-360 mapping near the N-terminus of NEDD1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NEDD1 (H-3) is available conjugated to agarose (sc-398733 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398733 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398733 PE), fluorescein (sc-398733 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398733 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398733 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398733 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398733 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398733 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398733 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

NEDD1 (H-3) is recommended for detection of NEDD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 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.

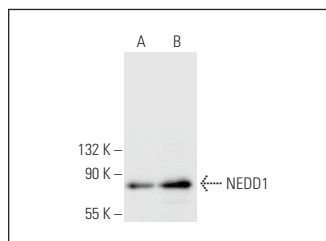
Molecular Weight of NEDD1: 74 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

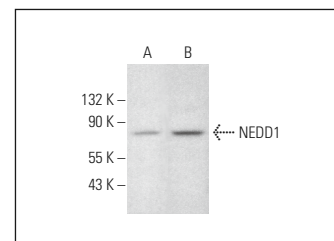
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



NEDD1 (H-3): sc-398733. Western blot analysis of NEDD1 expression in HeLa (A) and Jurkat (B) whole cell lysates.



NEDD1 (H-3): sc-398733. Western blot analysis of NEDD1 expression in BW5147 (A) and Sol8 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Bucko, P.J., et al. 2020. Gravin-associated kinase signaling networks coordinate  $\gamma$ -Tubulin organization at mitotic spindle poles. *J. Biol. Chem.* 295: 13784-13797.

## 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.