

# NNP-1 (A-6): sc-398970

## BACKGROUND

Novel nuclear protein 1 (NNP-1), also known as RRP1-like protein or nucleolar protein Nop52, is a 461 amino acid protein belonging to the RRP1 family. Localized to the nucleolus, NNP-1 has simian virus 40-type and bipartite nuclear localization signals and four coiled-coil domains within its C-terminal region. NNP-1 has been found to play an important role in the generation of 28S rRNA in the late processing steps of ribosome biogenesis. At the end of mitosis, nucleolar proteins assemble in a sequential order during the rebuilding of the nucleolus. NNP-1 assembles after Fibrillarin and C23, and simultaneously with B23 and POP1 in the prenucleolar body pathway.

## REFERENCES

- Jansen, E., et al. 1997. The NNP-1 gene (D21S2056E), which encodes a novel nuclear protein, maps in close proximity to the cystatin B gene within the EPM1 and APECED critical region on 21q22.3. *Genomics* 42: 336-341.
- Savino, T.M., et al. 1999. The nucleolar antigen Nop52, the human homologue of the yeast ribosomal RNA processing RRP1, is recruited at late stages of nucleoleogenesis. *J. Cell Sci.* 112: 1889-1900.
- Savino, T.M., et al. 2001. Nucleolar assembly of the rRNA processing machinery in living cells. *J. Cell Biol.* 153: 1097-1110.
- Scherl, A., et al. 2002. Functional proteomic analysis of human nucleolus. *Mol. Biol. Cell* 13: 4100-4109.
- Zharskaia, O.O. and Zatschina, O.V. 2005. Assembly of nucleolus-derived foci in various cultured mammalian cells during mitosis. *Tsitologiya* 47: 780-788.

## CHROMOSOMAL LOCATION

Genetic locus: RRP1 (human) mapping to 21q22.3; Rrp1 (mouse) mapping to 10 C1.

## SOURCE

NNP-1 (A-6) is a mouse monoclonal antibody raised against amino acids 102-189 mapping within an internal region of NNP-1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NNP-1 (A-6) is available conjugated to agarose (sc-398970 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398970 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398970 PE), fluorescein (sc-398970 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398970 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398970 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398970 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398970 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398970 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398970 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

NNP-1 (A-6) is recommended for detection of NNP-1 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 NNP-1 siRNA (h): sc-91534, NNP-1 siRNA (m): sc-150012, NNP-1 shRNA Plasmid (h): sc-91534-SH, NNP-1 shRNA Plasmid (m): sc-150012-SH, NNP-1 shRNA (h) Lentiviral Particles: sc-91534-V and NNP-1 shRNA (m) Lentiviral Particles: sc-150012-V.

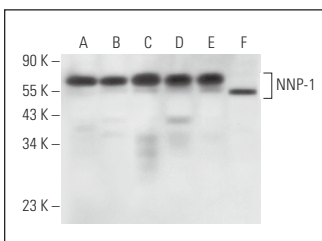
Molecular Weight of NNP-1: 52 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, Sol8 nuclear extract: sc-2157 or RAW 264.7 nuclear extract: sc-24961.

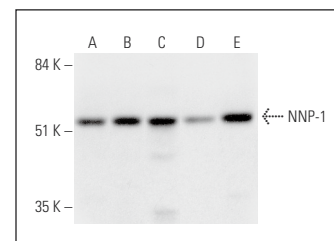
## RECOMMENDED SUPPORT REAGENTS

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<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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



NNP-1 (A-6): sc-398970. Western blot analysis of NNP-1 expression in RAW 264.7 (A), NIH/3T3 (B), F9 (C), Sol8 (D), LADMAC (E) and KNRK (F) nuclear extracts.



NNP-1 (A-6): sc-398970. Western blot analysis of NNP-1 expression in Jurkat (A) and HeLa (B) nuclear extracts and Hep G2 (C), RT-4 (D) and Raji (E) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Chiang, S.K., et al. 2019. DOCK1 regulates growth and motility through the RRP1B-claudin-1 pathway in claudin-low breast cancer cells. *Cancers* 11: 1762.

## STORAGE

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