

# NOP17 (18Y9): sc-101000

## BACKGROUND

NOP17 (nucleolar protein 17), also known as PIH1D1, is a phylogenetically conserved protein essential for efficient processing of pre-rRNA through its association with a class of small nucleolar RNAs (snRNAs) during ribosomal biogenesis. SnoRNAs are associated in ribonucleoprotein particles localized to the nucleolus. NOP17 is a 290 amino acid unstable protein that is stabilized through an interaction with HSP 90 $\alpha$ / $\beta$ . NOP17 interacts with a core box C/D snoRNP protein Nop58, indicating a function of NOP17 in mediating the nucleolar retention or proper assembly of the box C/D snoRNP. A mutation in NOP17 gene may lead to a temperature-sensitive phenotype along with delocalization of key NOP proteins that are essential for snoRNP assembly.

## REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611480. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Rual, J.F., et al. 2005. Towards a proteome-scale map of the human protein-protein interaction network. *Nature* 437: 1173-1178.
3. Granato, D.C., et al. 2005. Nop53p, an essential nucleolar protein that interacts with NOP17p and Nip7p, is required for pre-rRNA processing in *S. cerevisiae*. *FEBS J.* 272: 4450-4463.

## CHROMOSOMAL LOCATION

Genetic locus: PIH1D1 (human) mapping to 19q13.33.

## SOURCE

NOP17 (18Y9) is a mouse monoclonal antibody raised against recombinant NOP17 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NOP17 (18Y9) is recommended for detection of NOP17 of human origin by Western Blotting (starting dilution 1:200, 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), 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 NOP17 siRNA (h): sc-97385, NOP17 shRNA Plasmid (h): sc-97385-SH and NOP17 shRNA (h) Lentiviral Particles: sc-97385-V.

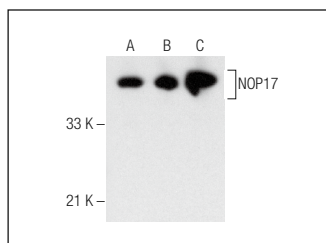
Molecular Weight of NOP17: 32 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HeLa whole cell lysate: sc-2200 or MOLT-4 cell lysate: sc-2233.

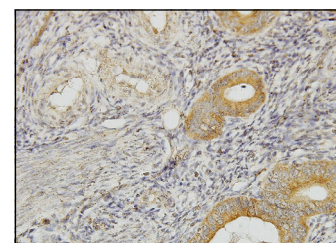
## RECOMMENDED SUPPORT REAGENTS

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™ 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



NOP17 (18Y9): sc-101000. Western blot analysis of NOP17 expression in HL-60 (A), HeLa (B) and MOLT-4 (C) whole cell lysates.



NOP17 (18Y9): sc-101000. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human endometrium tissue showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Mir, R.A., et al. 2015. A novel interaction of ecdysoneless (ECD) protein with R2TP complex component RUVBL1 is required for the functional role of ECD in cell cycle progression. *Mol. Cell. Biol.* 36: 886-899.
2. Olou, A.A., et al. 2017. Mammalian ECD protein is a novel negative regulator of the PERK arm of the unfolded protein response. *Mol. Cell. Biol.* 37: e00030-17.
3. Kiguchi, T., et al. 2021. Identification and characterization of R2TP in the development of oral squamous cell carcinoma. *Biochem. Biophys. Res. Commun.* 548: 161-166.
4. Seraphim, T.V., et al. 2022. Assembly principles of the human R2TP chaperone complex reveal the presence of R2T and R2P complexes. *Structure* 30: 156-171.e12.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.