

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 (snoRNAs) 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 α / β . 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.
4. Gonzales, F.A., et al. 2005. Characterization of *Saccharomyces cerevisiae* NOP17p, a novel NOP58p-interacting protein that is involved in pre-rRNA processing. *J. Mol. Biol.* 346: 437-455.
5. Bennett, D., et al. 2006. Towards a comprehensive analysis of the protein phosphatase 1 interactome in *Drosophila*. *J. Mol. Biol.* 364: 196-212.
6. McKeegan, K.S., et al. 2007. A dynamic scaffold of pre-snoRNP factors facilitates human box C/D snoRNP assembly. *Mol. Cell. Biol.* 27: 6782-6793.
7. Zhao, R., et al. 2008. Molecular chaperone HSP 90 stabilizes PIH1/NOP17 to maintain R2TP complex activity that regulates snoRNA accumulation. *J. Cell Biol.* 180: 563-578.
8. Goldfeder, M.B., et al. 2008. CWC24p, a novel *Saccharomyces cerevisiae* nuclear ring finger protein, affects pre-snoRNA U3 splicing. *J. Biol. Chem.* 283: 2644-2653.

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 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

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 μ g per 100-500 μ 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.

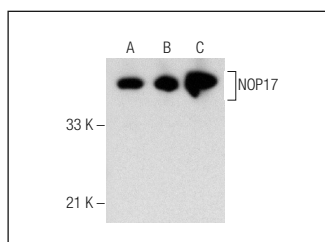
Molecular Weight of NOP17: 32 kDa.

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

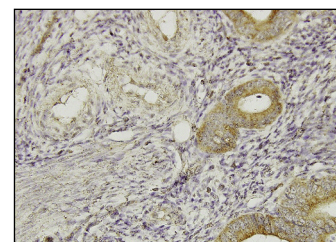
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 κ 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.

STORAGE

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