

NOP17 (G-10): sc-398517

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/>
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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 *Saccharomyces 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.
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CHROMOSOMAL LOCATION

Genetic locus: PIH1D1 (human) mapping to 19q13.33; Pih1d1 (mouse) mapping to 7 B4.

SOURCE

NOP17 (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 32-53 near the N-terminus of NOP17 of human origin.

PRODUCT

Each vial contains 200 μ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398517 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NOP17 (G-10) is recommended for detection of NOP17 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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 siRNA (m): sc-150031, NOP17 shRNA Plasmid (h): sc-97385-SH, NOP17 shRNA Plasmid (m): sc-150031-SH, NOP17 shRNA (h) Lentiviral Particles: sc-97385-V and NOP17 shRNA (m) Lentiviral Particles: sc-150031-V.

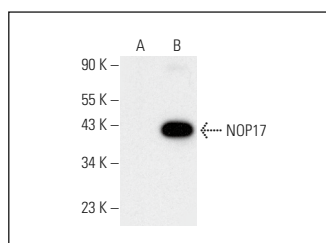
Molecular Weight of NOP17: 32 kDa.

Positive Controls: NOP17 (h): 293T Lysate: sc-177634.

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 L-Agarose: sc-2336 (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.

DATA



NOP17 (G-10): sc-398517. Western blot analysis of NOP17 expression in non-transfected: sc-117752 (A) and human NOP17 transfected: sc-177634 (B) 293T whole cell lysates.

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 for detailed protocols and support products.