

Nop17 (I-16): sc-168777

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 *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.
7. Zhao, R., et al. 2008. Molecular chaperone Hsp90 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; Pih1d1 (mouse) mapping to 7 B4.

SOURCE

Nop17 (I-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Nop17 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-168777 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Nop17 (I-16) is recommended for detection of Nop17 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Nop family members.

Nop17 (I-16) is also recommended for detection of Nop17 in additional species, including equine, canine, bovine and porcine.

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.

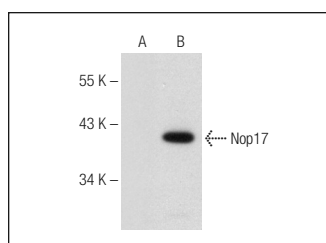
Molecular Weight of Nop17: 32 kDa.

Positive Controls: Nop17 (h): 293T Lysate: sc-177634.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Nop17 (I-16): sc-168777. 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.