

NOP17 (h): 293T Lysate: sc-177634

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.

CHROMOSOMAL LOCATION

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

PRODUCT

NOP17 (h): 293T Lysate represents a lysate of human NOP17 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

NOP17 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NOP17 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

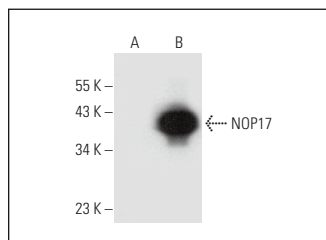
NOP17 (A-10): sc-514127 is recommended as a positive control antibody for Western Blot analysis of enhanced human NOP17 expression in NOP17 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

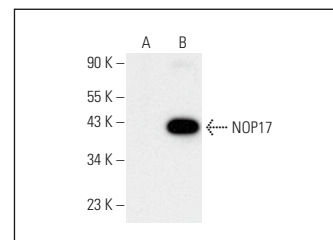
To ensure optimal results, the following support reagents are recommended:

- 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.

DATA



NOP17 (A-10): sc-514127. Western blot analysis of NOP17 expression in non-transfected: sc-117752 (A) and human NOP17 transfected: sc-177634 (B) 293T whole cell lysates.



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.

RESEARCH USE

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