

# Nop5p (34B12): sc-57942

## BACKGROUND

Nop1p (nucleolar protein 1) is a phylogenetically conserved protein essential for efficient processing of pre-rRNA through its association with a class of small nucleolar RNAs during ribosomal biogenesis. Small nucleolar RNAs (snoRNAs) are associated in ribonucleoprotein particles localized to the nucleolus (snoRNPs). Nop1p is structurally and functionally homologous to vertebrate Fibrillarin and is essential for viability. The *Saccharomyces cerevisiae* NOP1 gene encodes a protein resembling the dense fibrillar region of mammalian nucleoli. Nop5p functions with Nop1p in the execution of early pre-rRNA processing steps that lead to formation of 18 S rRNA. In *Archaea*, Fibrillarin and Nop5p comprise the core complex of box C/D snoRNAs, which are responsible for site-specific 2'-hydroxyl methylation of ribosomal and transfer RNAs.

## REFERENCES

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3. Nelson, S.A., et al. 2000. Multiple growth factor induction of a murine early response gene that complements a lethal defect in yeast ribosome biogenesis. *J. Biol. Chem.* 275: 13835-13841.
4. Verheggen, C., et al. 2001. Box C/D small nucleolar RNA trafficking involves small nucleolar RNP proteins, nucleolar factors and a novel nuclear domain. *EMBO J.* 20: 5480-5490.
5. Aittaleb, M., et al. 2003. Structure and function of archaeal box C/D sRNP core proteins. *Nat. Struct. Biol.* 10: 256-263.
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7. Bortolin, M.L., et al. 2003. *In vitro* RNP assembly and methylation guide activity of an unusual box C/D RNA, *cis*-acting archaeal pre-tRNA (Trp). *Nucleic Acids Res.* 31: 6524-6535.
8. Aittaleb, M., et al. 2004. Structural and thermodynamic evidence for a stabilizing role of Nop5p in S-adenosyl-L-methionine binding to Fibrillarin. *J. Biol. Chem.* 279: 41822-41829.
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## SOURCE

Nop5p (34B12) is a mouse monoclonal antibody raised against a yeast nucleolar preparation.

## PRODUCT

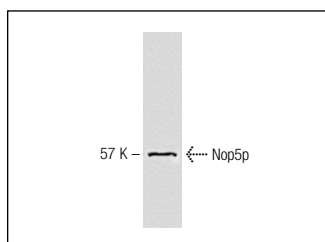
Each vial contains 500  $\mu$ l culture supernatant containing IgG with PBS and < 0.1% sodium azide.

## APPLICATIONS

Nop5p (34B12) is recommended for detection of Nop5p of *S. cerevisiae* origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:1000-1:5000), immunoprecipitation [2-4  $\mu$ l per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution to be determined by researcher, dilution range 1:5000-1:25000).

Molecular Weight of Nop5p: 58 kDa.

## DATA



Nop5p (34B12): sc-57942. Western blot analysis of Nop5p expression in yeast cell extract.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## 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.