



## Nop2p (22G1): sc-57941

### 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. The yeast NOP2 gene codes for the protein Nop2p, which is located primarily in the nucleolus and is involved in the maintenance of nucleolar structure. Nop2p may also play roles both as an RNA methyltransferase and a *trans*-acting factor in rRNA processing and large ribosomal subunit biogenesis. Nop2p has substantial homology with human p120, the proliferation-associated nucleolar antigen that is overexpressed in many human cancers.

### REFERENCES

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2. Hong, B., Brockenbrough, J.S., Wu, P. and Aris, J.P. 1997. Nop2p is required for pre-rRNA processing and 60S ribosome subunit synthesis in yeast. *Mol. Cell. Biol.* 17: 378-388.
3. Gustafson, W.C., Taylor, C.W., Valdez, B.C., Henning, D., Phippard, A., Ren, Y., Busch, H. and Durban, E. 1998. Nucleolar protein p120 contains an arginine-rich domain that binds to ribosomal RNA. *Biochem. J.* 331: 387-393.
4. Wu, P., Brockenbrough, J.S., Paddy, M.R. and Aris, J.P. 1998. NCL1, a novel gene for a non-essential nuclear protein in *Saccharomyces cerevisiae*. *Gene* 220: 109-117.
5. King, M., Ton, D. and Redman, K.L. 1999. A conserved motif in the yeast nucleolar protein Nop2p contains an essential cysteine residue. *Biochem. J.* 337: 29-35.
6. Hong, B., Wu, K., Brockenbrough, J.S., Wu, P. and Aris, J.P. 2001. Temperature sensitive Nop2 alleles defective in synthesis of 25S rRNA and large ribosomal subunits in *Saccharomyces cerevisiae*. *Nucleic Acids Res.* 29: 2927-2937.
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### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

### SOURCE

Nop2p (22G1) is a mouse monoclonal antibody raised against a nuclear preparation of *S. cerevisiae* origin.

### PRODUCT

Each vial contains 250 µl culture supernatant containing IgG<sub>1</sub> with < 0.1% sodium azide.

### APPLICATIONS

Nop2p (22G1) is recommended for detection of Nop2p of *S. cerevisiae* origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:500-1:2500) and immunofluorescence (starting dilution to be determined by researcher, dilution range 1:100-1:2500).

Molecular Weight of Nop2p: 120 kDa.

### RESEARCH USE

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