

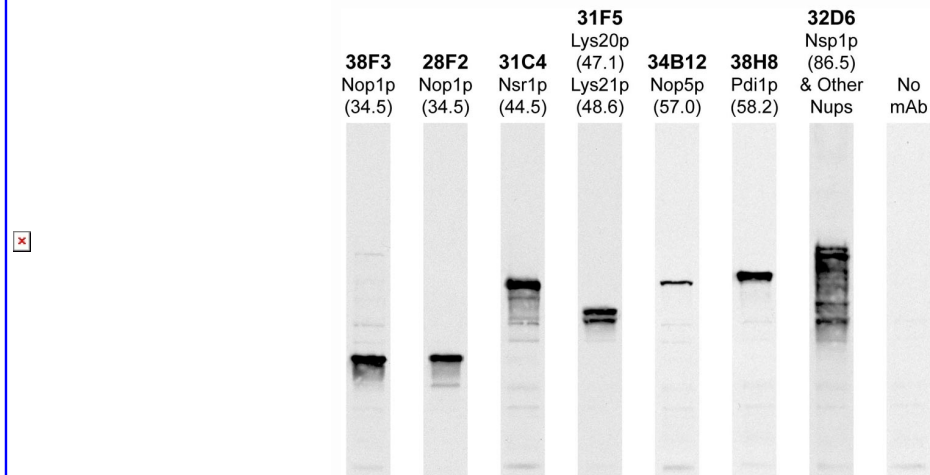
References:

1. Aris JP and Blobel G. Identification and characterization of a yeast nucleolar protein that is similar to a rat liver nucleolar protein. *J. Cell Biol.* 107:17-31 (1988).
2. Aris JP and Blobel G. cDNA cloning and sequencing of human fibrillarin, a conserved nucleolar protein recognized by autoimmune antisera. *Proc. Natl. Acad. Sci.* 88:931-5 (1991).
3. Ochs RL, Lischwe MA, Spohn WH, Busch H. Fibrillarin: a new protein of the nucleolus identified by autoimmune sera. *Biol. Cell.* 54:123-33 (1985).
4. Newton K, Petfalski E, Tollervey D, Caceres JF. Fibrillarin is essential for early development and required for accumulation of an intron-encoded small nucleolar RNA in the mouse. *Mol. Cell Biol.* 23:8519-27 (2003).
5. Okano Y, Steen VD, Medsger TA. Autoantibody to U3 nucleolar ribonucleoprotein (fibrillarin) in patients with systemic sclerosis. *Arth. Rheum.* 35:95-100 (1992).

Nop1p Mouse Monoclonal Antibody

MCA-28F2

Applications	Host	Isotype	Molecular Wt.	Species Cross-Reactivity
WB, ICC/IF, IP	Mouse	IgG3	34.5kDa	Sc



Western blots of whole yeast protein extracts with a collection of our antibodies. The blot for MCA-28F2 is in the indicated lane, and the number indicates the SDS-PAGE molecular weight in kiloDaltons.

Background:

Nop1p was originally identified as a nucleolar protein of the bakers yeast *Saccharomyces cerevisiae* (1). It was later found to be highly conserved in protein sequence and the mammalian homologue is fibrillarin, the two protein being 67% identical (2,3). Fibrillarin is a highly conserved component of a nucleolar small ribonucleoprotein complex in mammals, involved in the processing of ribosomal RNA during ribosomal biogenesis. Both proteins runs at ~35kDa on SDS-PAGE and is very rich in basic amino acids having a PI of 9.8. An alternate name for the protein is "U3 small nuclear ribonucleoprotein" (U3snRNP). The Nop1p/fibrillarin molecule consists of an N-terminal glycine and arginine rich region followed by a highly conserved globular domain. Embryonic knockout of the fibrillarin gene in mice is lethal, suggesting fundamental importance of this protein (4). Autoantibodies to fibrillarin are also seen in patients with the autoimmune disease systemic sclerosis (5).

MCA-28F2 does not recognize the mammalian fibrillarin, although we have several mouse, rabbit and chicken antibodies which do. From the same series of antibodies another clone binds both Nop1p and human fibrillarin, MCA-38F3. This has become widely used as a marker of nucleoli. Other EnCor antibodies were made against recombinant human fibrillarin, rabbit and chicken polyclonal antibodies RPCA-Fib and CPCA-Fib. An alternate mouse monoclonal antibody MCA-4A4 was also made against recombinant human fibrillarin.

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Abbreviation Key:

mAb—Monoclonal Antibody pAb—Polyclonal Antibody WB—Western Blot IF—Immunofluorescence ICC—Immunocytochemistry IHC—Immunohistochemistry E—ELISA Hu—Human Mo—Monkey Do—Dog Rt—Rat Ms—Mouse Co—Cow Pi—Pig Ho—Horse Ch—Chicken Dr—D. rerio Dm—D. melanogaster Sm—S. mutans Ce—C. elegans Sc—S. cerevisiae Sa—S. aureus Ec—E. coli.