

Fibrillarin (Nop1p) Antibody
Mouse monoclonal antibody
Catalog # AN1141**Specification**

Fibrillarin (Nop1p) Antibody - Product Information

Application	WB, IF
Primary Accession	P15646
Reactivity	Human, Rat
Host	mouse
Clonality	monoclonal
Isotype	IgG1
Calculated MW	34 KDa

Fibrillarin (Nop1p) Antibody - Additional Information

Gene ID	851548
Gene Name	NOP1

Other Names

rRNA 2'-O-methyltransferase fibrillarin, 211-, Histone-glutamine methyltransferase, U3 small nucleolar RNA-associated protein NOP1, Nucleolar protein 1, U3 snoRNA-associated protein NOP1, NOP1, LOT3

Target/Specificity

Yeast nuclear preparations.

Dilution

WB~~ 1:1000

IF~~ 1:500

Format

Total IgG fraction

Antibody Specificity

Specific for the ~34kDa Fibrillarin /Nop1p protein.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Fibrillarin (Nop1p) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

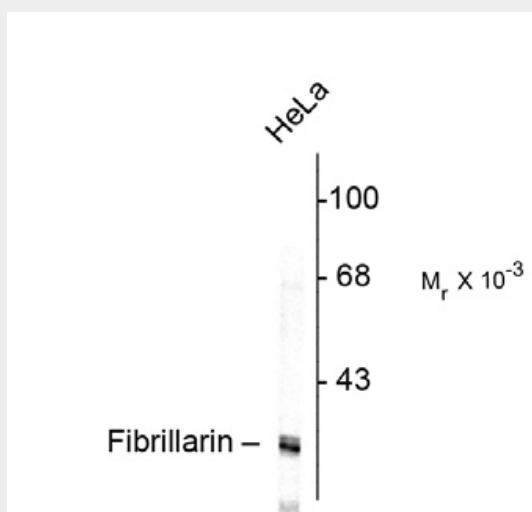
Blue Ice

Fibrillarin (Nop1p) Antibody - Protocols

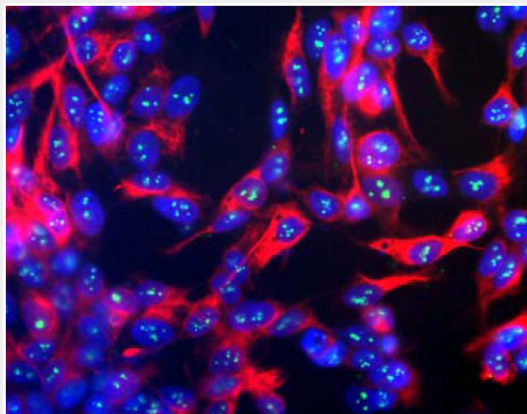
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Fibrillarin (Nop1p) Antibody - Images



Western blot of HeLa lysate showing specific immunolabeling of the ~ 34k fibrillarin protein.



Human SH-SY5Y cells stained with mouse-anti-fibrillarin, showing prominent specular nucleolar staining. The nuclei are counter stained with blue DAPI DNA stain, so these spots appear very pale blue.

Fibrillarin (Nop1p) Antibody - Background

Nop1p was originally identified as a nucleolar protein of bakers yeast, *Saccharomyces cerevisiae*. The Nop1p protein is 327 amino acids in size (34.5kDa), is essential for yeast viability, and is localized in the nucleoli (1). The systematic name for *S. cerevisiae* Nop1 is YDL014W, and it is now known to be part of the small subunit processome complex, involved in the processing of pre-18S ribosomal RNA. Nop1p is the yeast homologue of a protein found in all eukaryotes and archaea

generally called fibrillarin (2). Fibrillarin/Nop1p is extraordinarily conserved, so that the yeast and human proteins are 67% identical, and the human protein can functionally replace the yeast protein. Patients with the autoimmune disease scleroderma often have strong circulating autoantibodies to a ~34kDa protein which was subsequently found to be fibrillarin. Recent studies show that knock-out of the fibrillarin gene in mice results in embryonic lethality, although mice with only one functional fibrillarin/Nop1p gene were viable (3). This antibody is becoming widely used as a convenient marker for nucleoli in a wide variety of species (e.g. 4-6).

Fibrillarin (Nop1p) Antibody - References

1. Ochs RL, Lischwe MA, Spohn WH, Busch H. Fibrillarin: a new protein of the nucleolus identified by autoimmune sera. *Biol Cell* 54:123-133 (1985).
2. 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).
3. 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.* 23:8519-8527 (2003).
4. Tyagi S and Alsmadi O. Imaging native beta-actin mRNA in motile fibroblasts. *Biophys J.* 87:4153-62 (2004).
5. Paeschke1 K, Simonsson T, Postberg J, Rhodes D, Lipps H-J. Telomere end-binding proteins control the formation of G-quadruplex DNA structures in vivo *Nature Structural & Molecular Biology* 12, 847-854 (2005).
6. Vermaak D, Henikoff S, Malik HS. Positive selection drives the evolution of rhino, a member of the heterochromatin protein 1 family in *Drosophila*. *PLoS Genetics* 1:96-108 (2005).