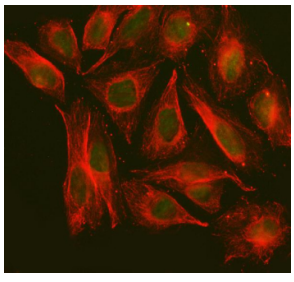
NOL9 Antibody / Nucleolar protein 9 (FY12432)

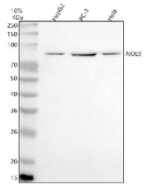
Catalog No.	Formulation	Size
FY12432	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

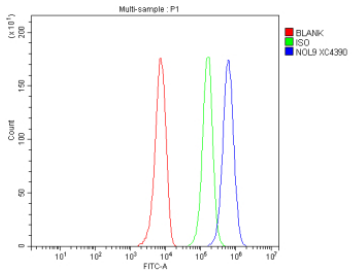
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q5SY16
Localization	Nuclear
Applications	Western Blot: 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This NOL9 antibody is available for research use only.



Immunofluorescent staining of NOL9 using anti-NOL9 antibody (green) and anti-Beta Tubulin antibody (red). NOL9 was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-NOL9 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and DyLight 594 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of NOL9 using anti-NOL9 antibody. Lane 1: human HepG2 whole cell lysates, Lane 2: human PC-3 whole cell lysates, Lane 3: human Hela whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NOL9 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of NOL9 is ~79 kDa.



Flow Cytometry analysis of HepG2 cells using anti-NOL9 antibody. Overlay histogram showing HepG2 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NOL9 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

The NOL9 antibody targets Nucleolar protein 9, a multifunctional nucleolar protein encoded by the NOL9 gene. Nucleolar protein 9 participates in ribosomal RNA (rRNA) processing, specifically catalyzing the 5'-end maturation of 28S and 5.8S rRNA during large subunit biogenesis. It possesses polynucleotide 5'-kinase activity that promotes efficient pre-rRNA cleavage and processing. The NOL9 antibody enables researchers to study rRNA maturation, nucleolar organization, and ribosome assembly in proliferating cells.

Nucleolar protein 9 localizes to the granular component of the nucleolus, where late steps of ribosome biogenesis occur. It interacts with the Las1L complex, which couples endonucleolytic cleavage with phosphorylation of the pre-rRNA substrate. The NOL9 antibody supports detailed localization studies, showing characteristic punctate nucleolar staining consistent with ribosome assembly regions. Depletion of NOL9 disrupts pre-rRNA maturation and impairs large ribosomal subunit formation, leading to nucleolar stress and p53 activation.

Beyond ribosome biogenesis, Nucleolar protein 9 has been linked to cell growth regulation and stress responses. It participates in pathways that maintain nucleolar integrity under conditions of transcriptional or metabolic stress. The NOL9 antibody allows researchers to assess these processes and to investigate how nucleolar function integrates with global gene-expression control. Its activity is upregulated during proliferation, reflecting the dependence of ribosome production on cellular growth signals.

Disruption or downregulation of NOL9 has been observed in cancer and developmental disorders associated with defective ribosome synthesis. The NOL9 antibody provides a tool for analyzing expression patterns in tumor and normal tissues, supporting exploration of ribosome biogenesis as a therapeutic target. Elevated NOL9 expression correlates with high ribosomal demand in rapidly dividing cells, making it a marker of proliferative capacity.

The NOL9 antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, showing strong nucleolar localization. NSJ Bioreagents provides this antibody with verified specificity and reliability for use in ribosome biogenesis, nucleolar biology, and molecular cell research. By enabling accurate detection of Nucleolar protein 9, the NOL9 antibody advances understanding of rRNA processing, ribosomal maturation, and the cellular mechanisms that link nucleolar activity to growth and disease.

Application Notes

Optimal dilution of the NOL9 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NOL9 recombinant protein (Position: E131-N636) was used as the immunogen for the NOL9 antibody.

Storage

After reconstitution, the NOL9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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