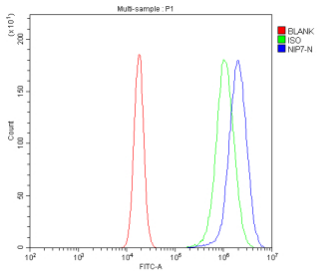
NIP7 Antibody / Nucleolar pre-rRNA processing protein NIP7 (FY12481)

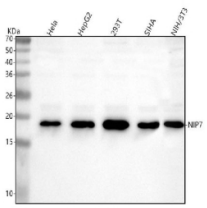
Catalog No.	Formulation	Size
FY12481	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse
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	Q9Y221
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This NIP7 antibody is available for research use only.



Flow Cytometry analysis of 293T cells using anti-NIP7 antibody. Overlay histogram showing 293T 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-NIP7 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 (Red line) was also used as a control.



Western blot analysis of NIP7 using anti-NIP7 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human SIHA whole cell lysates, Lane 5: mouse NIH/3T3 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-NIP7 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 NIP7 is ~20 kDa.

Description

NIP7 antibody detects Nucleolar pre-rRNA processing protein NIP7, a highly conserved factor involved in the biogenesis of the small ribosomal subunit. NIP7 participates in pre-rRNA processing and ribosome assembly within the nucleolus, contributing to the accurate formation of mature 18S rRNA. The NIP7 antibody is commonly used in molecular and cellular biology research to examine ribosome biogenesis, nucleolar function, and RNA processing mechanisms that sustain cell growth and proliferation.

NIP7 is encoded by the NIP7 gene located on human chromosome 18q12.1. The protein is approximately 20 kilodaltons in size and localized predominantly in the nucleolus, where it associates with pre-ribosomal particles. Structurally, NIP7 contains an Sm-like fold and RNA-binding motifs enabling it to interact with ribosomal RNA precursors and small nucleolar RNAs. It forms complexes with NOP8 and RRP12, essential for the processing of 20S pre-rRNA and export of pre-40S subunits to the cytoplasm. These interactions make NIP7 a critical factor in maintaining ribosome synthesis efficiency.

The NIP7 antibody is valuable for detecting nucleolar proteins by western blot or immunocytochemistry. Western blot typically shows a distinct band at approximately 25 kilodaltons, while immunofluorescence highlights punctate nucleolar localization that co-stains with fibrillarin or nucleolin. Depletion of NIP7 disrupts 18S rRNA maturation, leading to defective ribosome assembly and impaired cell growth. Beyond ribosome synthesis, NIP7 may participate in broader RNA processing pathways, linking ribosome production to cell cycle progression and metabolic control.

NIP7 is evolutionarily conserved from yeast to humans, emphasizing its fundamental role in RNA biology. Altered expression has been noted in certain cancers and stress conditions that perturb ribosome biogenesis. NSJ Bioreagents offers a validated NIP7 antibody optimized for western blot and flow cytometry, enabling detailed exploration of ribosome formation, RNA maturation, and nucleolar organization in eukaryotic cells.

Application Notes

Optimal dilution of the NIP7 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NIP7 recombinant protein (Position: E14-T180) was used as the immunogen for the NIP7 antibody.

Storage

After reconstitution, the NIP7 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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