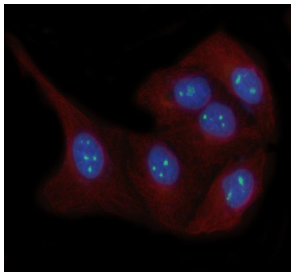
LYAR Antibody / Cell growth-regulating nucleolar protein (FY12393)

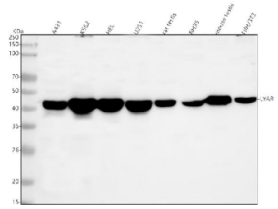
Catalog No.	Formulation	Size
FY12393	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

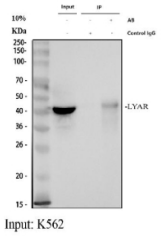
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9NX58
Localization	Nucleolus
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate ELISA : 0.1-0.5ug/ml
Limitations	This LYAR antibody is available for research use only.



Immunofluorescent staining of LYAR using anti-LYAR antibody (green) and anti-Beta Tubulin antibody (red). LYAR was detected in immunocytochemical section of human HeLa 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-LYAR antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of LYAR using anti-LYAR antibody. Lane 1: human whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human HEL whole cell lysates, Lane 4: human U251 whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: rat RH-35 whole cell lysates, Lane 7: mouse testis tissue lysates, Lane 8: 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-LYAR antibody at 0.25 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 LYAR is ~44 kDa.



Immunoprecipitation of LYAR in K562 whole cell lysate. Western blot analysis of LYAR using anti-LYAR antibody; Lane 1: K562 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-LYAR antibody in K562 whole cell lysate; Lane 3: anti-LYAR antibody (2ug) + K562 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-LYAR antibody at a dilution of 0.5 ug/ml and probed with a mouse anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. The expected molecular weight of LYAR is ~44 kDa.

Description

The LYAR antibody targets Cell growth-regulating nucleolar protein, a zinc finger nucleolar protein encoded by the LYAR gene. Originally identified in human leukemia cells, LYAR plays roles in ribosome biogenesis, rRNA processing, and cell proliferation. Cell growth-regulating nucleolar protein associates with pre-ribosomal complexes and contributes to ribosomal subunit maturation and export. The LYAR antibody provides an essential tool for investigating nucleolar function, ribosome assembly, and growth regulation in both normal and transformed cells.

Cell growth-regulating nucleolar protein contains a C2HC-type zinc finger motif and a nuclear localization signal, directing it to the nucleolus where ribosome synthesis occurs. It participates in the early stages of 60S ribosomal subunit formation by binding pre-rRNA and ribonucleoprotein complexes. The LYAR antibody enables detection of this nucleolar marker, supporting studies into the molecular events that control ribosome production and cellular growth rates. Its expression correlates with proliferative activity in rapidly dividing cells.

LYAR has emerged as a multifunctional protein involved in transcriptional regulation and cell cycle progression. It interacts with nucleolin and other nucleolar proteins to coordinate ribosomal RNA processing. Beyond ribosome synthesis, Cell growth-regulating nucleolar protein influences p53 signaling and apoptosis by modulating nucleolar stress responses. The LYAR antibody supports analysis of these pathways, helping define how nucleolar integrity links to cell cycle checkpoints and stress-induced growth arrest.

Overexpression of LYAR has been observed in several cancers, including colorectal, prostate, and hepatocellular carcinoma. It promotes cell proliferation and survival by enhancing rRNA synthesis and suppressing apoptosis. The LYAR antibody enables quantitative assessment of its expression in tumor tissues and cell models, aiding investigation into oncogenic mechanisms involving ribosome biogenesis. In contrast, depletion of LYAR impairs ribosomal maturation and reduces cell growth, underscoring its importance for proliferation control.

The LYAR antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, showing distinct nucleolar staining consistent with its localization. NSJ Bioreagents provides this antibody as a validated, high-specificity reagent for use in cell biology, cancer research, and molecular genetics. By supporting precise detection of Cell growth-regulating nucleolar protein, the LYAR antibody advances understanding of ribosome biogenesis, nucleolar stress, and their contributions to tumorigenesis.

Application Notes

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

Immunogen

E.coli-derived human LYAR recombinant protein (Position: M1-K379) was used as the immunogen for the LYAR antibody.

Storage

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