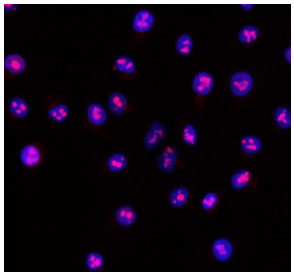
RSL24D1 Antibody / Ribosomal L24 domain-containing protein 1 (FY13250)

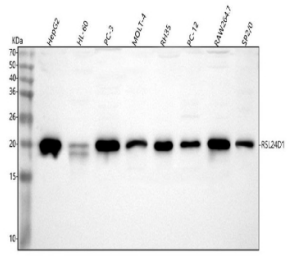
Catalog No.	Formulation	Size
FY13250	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

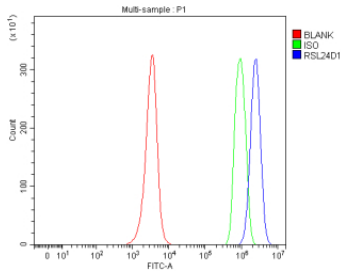
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9UHA3
Localization	Nucleolus
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This RSL24D1 antibody is available for research use only.



Immunofluorescent staining of RSL24D1 using anti-RSL24D1 antibody (red). RSL24D1 was detected in an immunocytochemical section of 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-RSL24D1 antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was 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 RSL24D1 using anti-RSL24D1 antibody. Lane 1: human HepG2 whole cell lysates, Lane 2: human HL-60 whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human MOLT-4 whole cell lysates, Lane 5: rat RH35 whole cell lysates, Lane 6: rat PC-12 whole cell lysates, Lane 7: mouse RAW264.7 whole cell lysates, Lane 8: mouse SP2/0 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-RSL24D1 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. A specific band was detected for RSL24D1 at approximately 20 kDa. The expected molecular weight of RSL24D1 is ~20 kDa.



Flow Cytometry analysis of JK cells using anti-RSL24D1 antibody. Overlay histogram showing JK 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-RSL24D1 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.

Description

RSL24D1 antibody detects Ribosomal L24 domain-containing protein 1, a nucleolar factor involved in ribosome biogenesis and pre-rRNA processing. The UniProt recommended name is Ribosomal L24 domain-containing protein 1 (RSL24D1). This protein plays a key role in the maturation of the large 60S ribosomal subunit and the assembly of functional ribosomes necessary for protein synthesis and cell growth.

Functionally, RSL24D1 antibody identifies a 332-amino-acid nucleolar protein that associates with preribosomal complexes during 60S subunit assembly. RSL24D1 interacts with rRNA intermediates and ribosomal proteins to facilitate cleavage and folding events required for ribosome maturation. It participates in the late steps of rRNA processing, ensuring proper incorporation of 28S rRNA into the large subunit. RSL24D1 is functionally conserved across eukaryotes, underscoring its central role in ribosome biogenesis.

The RSL24D1 gene is located on chromosome 15q25.2 and is expressed in proliferative tissues such as bone marrow, testis, and liver, where active ribosome production supports rapid cell growth. Expression levels correlate with translational demand and are tightly controlled by growth factor and nutrient signaling pathways that regulate ribosome assembly.

Pathologically, dysregulation of RSL24D1 affects ribosomal homeostasis and has been linked to cancer and ribosomopathies. Overexpression promotes cell proliferation and is associated with tumor growth, while loss of function leads to impaired ribosome production and nucleolar stress. RSL24D1 interacts with tumor suppressor pathways, including p53 activation in response to ribosomal imbalance. Research using RSL24D1 antibody supports studies in translation regulation, cancer biology, and ribosome assembly mechanisms.

RSL24D1 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect nucleolar ribosome assembly proteins. NSJ Bioreagents provides RSL24D1 antibody reagents optimized for research in RNA processing, ribosome maturation, and cell proliferation control.

Structurally, Ribosomal L24 domain-containing protein 1 contains a conserved L24-like domain characteristic of large ribosomal subunit proteins, facilitating interactions with rRNA and assembly factors. Its C-terminal region mediates

nucleolar localization and binding to preribosomal complexes. This antibody enables detailed investigation of RSL24D1's role in ribosome biogenesis, translational control, and cellular growth regulation.

Application Notes

Optimal dilution of the RSL24D1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RSL24D1 recombinant protein (Position: M1-P163) was used as the immunogen for the RSL24D1 antibody.

Storage

After reconstitution, the RSL24D1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.