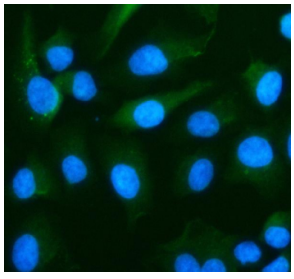
RPS19 Antibody / 40S ribosomal protein S19 (FY12399)

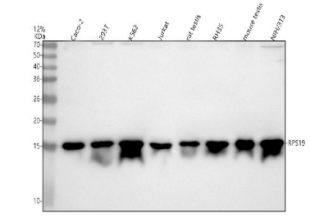
Catalog No.	Formulation	Size
FY12399	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

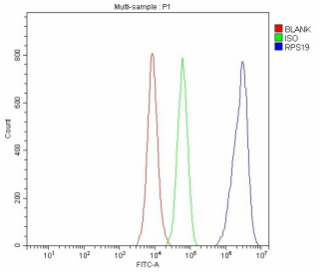
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P39019
Applications	Western Blot: 0.25-0.5ug/ml Immunocytochemistry: 5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml Immunoprecipitation: 2ug per 500ug of lysate
Limitations	This RPS19 antibody is available for research use only.



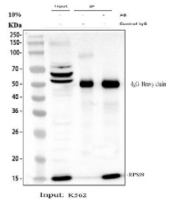
Immunofluorescent staining of RPS19 using anti-RPS19 antibody (green). RPS19 was detected in an immunocytochemical section of cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-RPS19 antibody overnight at 4oC. DyLight 488 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 RPS19 using anti-RPS19 antibody. Lane 1: human Caco-2 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human Jurkat whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: rat RH35 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-RPS19 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 RPS19 is ~16 kDa.



Flow Cytometry analysis of 293T cells using anti-RPS19 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-RPS19 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.



Immunoprecipitation of RPS19 protein from 500ug of human K562 whole cell lysate with 2ug of RPS19 antibody.

Description

The RPS19 antibody targets 40S ribosomal protein S19, a structural component of the small ribosomal subunit encoded by the RPS19 gene. This protein is essential for ribosome biogenesis, rRNA maturation, and translation initiation. 40S ribosomal protein S19 interacts with ribosomal RNA and multiple assembly factors to promote 40S subunit stability and cytoplasmic export. The RPS19 antibody provides researchers with a high-specificity reagent to study ribosome assembly, protein synthesis, and ribosomopathies associated with defective ribosome production.

40S ribosomal protein S19 is synthesized in the cytoplasm and imported into the nucleolus, where ribosome assembly begins. It binds pre-rRNA intermediates and contributes to proper folding and cleavage of the 18S rRNA precursor. The RPS19 antibody enables detection of this essential component within ribosomal particles, supporting studies of translational regulation and nucleolar dynamics. Its nucleolar localization reflects its participation in early 40S subunit maturation steps.

Mutations in RPS19 are the most common cause of Diamond-Blackfan anemia (DBA), a congenital erythroid aplasia characterized by defective red blood cell production. Loss of 40S ribosomal protein S19 impairs ribosome biogenesis, activates p53-mediated stress responses, and reduces erythroid progenitor survival. The RPS19 antibody supports investigation of these pathogenic mechanisms by enabling quantification of protein levels in patient-derived cells and experimental models. It also helps identify how ribosomal stress contributes to bone marrow failure and developmental abnormalities.

In addition to its ribosomal role, 40S ribosomal protein S19 has extra-ribosomal functions in apoptosis regulation,

inflammation, and cell signaling. It can be released extracellularly where it acts as a chemotactic factor for macrophages. The RPS19 antibody provides a valuable means of analyzing these non-canonical functions, revealing how ribosomal proteins can serve signaling roles beyond translation. Dysregulation of RPS19 has also been observed in several cancers, linking ribosome synthesis with oncogenic growth control.

The RPS19 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry, yielding characteristic nucleolar and cytoplasmic staining. NSJ Bioreagents supplies this antibody with high specificity and reproducibility for molecular and cellular biology research. By enabling precise detection of 40S ribosomal protein S19, the RPS19 antibody supports studies of ribosome assembly, erythropoiesis, and human ribosomopathies.

Application Notes

Optimal dilution of the RPS19 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RPS19 recombinant protein (Position: M1-H145) was used as the immunogen for the RPS19 antibody.

Storage

After reconstitution, the RPS19 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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