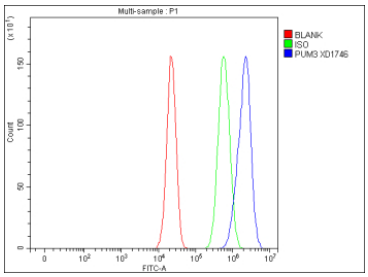
PUM3 Antibody / Pumilio 3 (FY12760)

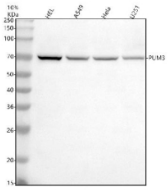
Catalog No.	Formulation	Size
FY12760	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q15397
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This PUM3 antibody is available for research use only.



Flow Cytometry analysis of cells using anti-PUM3 antibody. Overlay histogram showing 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-PUM3 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.



Western blot analysis of PUF-A/KIAA0020/PUM3 using anti-PUM3 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HEL whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human U251 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-PUM3 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 an ECL Plus Western Blotting Substrate. The expected molecular weight of PUM3 is at ~74 kDa.

Description

PUM3 antibody detects Pumilio homolog 3 (also known as Pumilio domain-containing protein 3), an RNA-binding protein that participates in post-transcriptional gene regulation and ribosome biogenesis. Encoded by the PUM3 gene on chromosome 9q34.11, this protein is a member of the PUF (Pumilio and FBF) family characterized by their RNA recognition repeats that bind specific sequences in target transcripts. Unlike classical cytoplasmic Pumilio proteins (PUM1 and PUM2), PUM3 is localized to the nucleus and nucleolus, where it regulates pre-rRNA processing and ribosome maturation.

PUM3 contains eight PUF RNA-binding domains arranged in a crescent-shaped architecture that recognizes conserved 5'-UGUANAUA-3' motifs in RNA targets. It binds ribosomal RNA precursors and ribosome assembly factors, influencing the processing of 28S and 5.8S rRNA. Depletion of PUM3 results in rRNA maturation defects, altered nucleolar morphology, and reduced ribosome production. Beyond ribosome biogenesis, PUM3 may also modulate mRNA stability and translation through interactions with additional RNA-binding proteins and components of the exosome complex.

The PUM3 antibody is used in molecular biology, RNA regulation, and ribosome assembly research to detect Pumilio homolog 3 protein and analyze its cellular localization. Western blot analysis identifies a 74 kilodalton band, while immunofluorescence reveals prominent nucleolar staining overlapping with fibrillarin. Because of its role in nucleolar RNA metabolism, this antibody provides a tool to study gene expression regulation at the post-transcriptional level.

Recent studies suggest that PUM3 interacts with factors controlling RNA stability and surveillance, positioning it as a regulator of RNA quality control. The PUM3 antibody facilitates the exploration of these processes and supports studies of nucleolar function, gene expression, and RNA-protein network organization. NSJ Bioreagents provides this antibody validated for its applications, ensuring specificity and reliability for RNA metabolism research.

Application Notes

Optimal dilution of the PUM3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PUF-A/KIAA0020/PUM3 recombinant protein (Position: Q318-K631) was used as the immunogen for the PUM3 antibody.

Storage

After reconstitution, the PUM3 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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