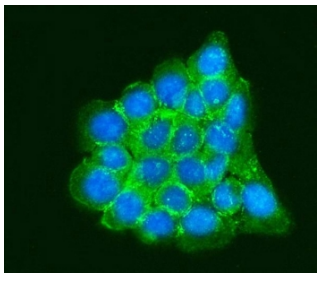
RPLP0 Antibody / 60S acidic ribosomal protein P0 (RQ6798)

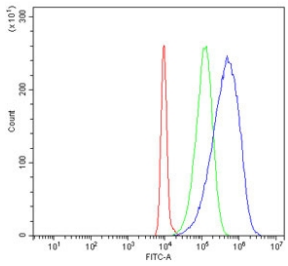
Catalog No.	Formulation	Size
RQ6798	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

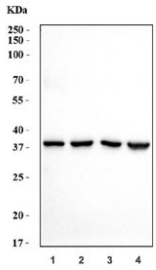
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P05388
Localization	Cytoplasmic, nuclear
Applications	Western blot: 1-2ug/ml Immunofluorescence (FFPE): 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This RPLP0 antibody is available for research use only.



RPLP0 Antibody IF. Immunofluorescent staining of FFPE human A431 cells using RPLP0 Antibody / Ribosomal Protein P0 Antibody demonstrates strong cytoplasmic and perinuclear green fluorescence consistent with the intracellular localization of RPLP0. As a core component of the 60S ribosomal subunit and ribosomal stalk complex, RPLP0 plays an essential role in protein synthesis by facilitating interactions between the ribosome and translation factors required for efficient mRNA translation. The observed staining pattern is consistent with the widespread cytoplasmic distribution expected for a ribosomal protein involved in cellular protein production and translational regulation. Nuclei are counterstained with DAPI (blue). HIER was performed by steaming sections in pH 6 citrate buffer for 20 minutes prior to staining. Green = RPLP0 antibody; Blue = DAPI nuclear stain.



RPLP0 Antibody FACS. Flow cytometry analysis of human HL60 cells stained with RPLP0 Antibody / Ribosomal Protein P0 Antibody demonstrates a clear rightward shift of the antibody-stained population (blue) relative to the isotype control (green), consistent with positive detection of RPLP0 expression. RPLP0 is a highly conserved component of the 60S ribosomal subunit and serves as the central structural protein of the ribosomal stalk complex involved in protein synthesis and translational regulation. The observed fluorescence shift supports expression of RPLP0 in HL60 cells and is consistent with the ubiquitous cellular distribution expected for a ribosomal protein required for efficient mRNA translation and cellular protein production. Cells were stained with 1 ug antibody per million cells following blocking with goat serum. Red = cells alone; Green = isotype control; Blue = RPLP0 antibody.



RPLP0 Antibody WB. Western blot analysis of human 293T (lane 1), HeLa (lane 2), Jurkat (lane 3), and A375 (lane 4) cell lysates using RPLP0 Antibody / Ribosomal Protein P0 Antibody demonstrates strong immunoreactive bands at approximately 34 kDa in all samples tested. RPLP0 is a highly conserved component of the 60S ribosomal subunit and serves as the central structural protein of the ribosomal stalk complex, where it facilitates interactions between ribosomes and translation factors required for efficient protein synthesis. The consistent detection of RPLP0 across multiple human cell lines reflects its ubiquitous expression and essential role in cellular protein production, translational regulation, and maintenance of normal cellular function. Predicted molecular weight: approximately 34 kDa.

Description

RPLP0 Antibody / Ribosomal Protein P0 Antibody detects RPLP0, a highly conserved component of the 60S ribosomal subunit that plays a central role in cellular protein synthesis. RPLP0 functions as the core structural protein of the ribosomal stalk complex, where it interacts with acidic ribosomal phosphoproteins and translation factors required for efficient elongation during mRNA translation. Because protein synthesis is fundamental to virtually all cellular activities, RPLP0 is expressed in a wide range of tissues and cell types and serves as an important marker of ribosomal function and translational capacity. RPLP0 Antibody is widely used for studies of ribosome biology, gene expression, cellular metabolism, and protein synthesis.

The ribosomal stalk complex is essential for communication between the ribosome and translation factors that regulate protein elongation. As the central organizing component of this structure, RPLP0 facilitates recruitment of elongation factors and supports efficient translation of mRNA into functional proteins. Through these activities, RPLP0 contributes to cellular growth, differentiation, metabolism, stress responses, and maintenance of normal physiological function. The highly conserved nature of RPLP0 across eukaryotic species reflects its indispensable role in cellular biology.

Because of its broad and relatively stable expression, RPLP0 is frequently utilized as a reference protein in molecular biology and gene expression studies. Researchers often examine RPLP0 expression when evaluating translational activity, cellular homeostasis, and protein production across diverse biological systems. Its ubiquitous distribution makes RPLP0 valuable for investigations of both normal physiology and disease-associated alterations in ribosome function.

Ribosomal proteins are increasingly recognized as participants in biological processes extending beyond protein synthesis. In addition to its canonical role within the ribosome, RPLP0 has been investigated in studies of cellular growth regulation, stress adaptation, apoptosis, and disease-associated translational control mechanisms. Alterations in ribosome function and translational regulation have been implicated in developmental disorders, cancer, and metabolic disease, highlighting the importance of proteins such as RPLP0 in maintaining cellular homeostasis.

RPLP0 expression is commonly observed in proliferating tissues, metabolically active cell populations, and developing organs where sustained protein synthesis is required to support growth and differentiation. Consequently, RPLP0 serves as a useful marker for studying fundamental cellular processes that depend on efficient translation and ribosomal activity.

The protein remains an important target for researchers investigating the molecular machinery that controls gene expression at the translational level.

RPLP0 Antibody / Ribosomal Protein P0 Antibody is useful for researchers studying ribosome biology, protein synthesis, translational regulation, cellular metabolism, gene expression, developmental biology, cancer biology, and mechanisms that govern cellular growth and homeostasis. Validation may include immunohistochemistry, western blotting, immunofluorescence, flow cytometry, and related protein expression applications when supported by experimental data.

Explore our Cell Biology Antibodies page for additional markers involved in ribosome biology, protein synthesis, translational regulation, cellular metabolism, and gene expression.

Application Notes

Optimal dilution of the RPLP0 antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-D271) was used as the immunogen for the RPLP0 antibody.

Storage

After reconstitution, the RPLP0 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

RPLP0 Antibody, Ribosomal Protein P0 Antibody, 60S Acidic Ribosomal Protein P0 Antibody, Large Ribosomal Protein P0 Antibody, Ribosomal Stalk Protein Antibody, Acidic Ribosomal Phosphoprotein P0 Antibody

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