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Anti-RPL13A Antibody Picoband™ (monoclonal, 4C9)

Catalog # ABO15064

Product Information

Application	WB, IF, ICC, FC
Primary Accession	P40429
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-RPL13A Antibody Picoband™ (monoclonal, 4C9) . Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	23521
Other Names	Large ribosomal subunit protein uL13, 23 kDa highly basic protein, 60S ribosomal protein L13a, RPL13A
Calculated MW	23577
Application Details	Western blot, 0.25-0.5 □g/ml, Human Immunocytochemistry/Immunofluorescence, 5 □g/ml, Human Flow Cytometry, 1-3 □g/1x10^6 cells, Human
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Clone Names	Clone: 4C9
Immunogen	E.coli-derived human RPL13A recombinant protein (Position:A2-V203).
Purification	Immunogen affinity purified.
Storage	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.

Protein Information

Name	RPL13A

Function	Associated with ribosomes but is not required for canonical ribosome function and has extra-ribosomal functions (PubMed:14567916, PubMed:17218275, PubMed:23636399, PubMed:32669547). Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes (PubMed:23071094). Upon interferon-gamma activation and subsequent phosphorylation dissociates from the ribosome and assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation (PubMed:23071094). In the GAIT complex interacts with m7G cap-bound eIF4G at or near the eIF3-binding site and blocks the recruitment of the 43S ribosomal complex (PubMed:23071094). Involved in methylation of rRNA (PubMed:17921318).
Cellular Location	Cytoplasm

Background

60S ribosomal protein L13ais aproteinthat in humans is encoded by theRPL13Agene. It is mapped to 19q13.33. Ribosomes, the organelles that catalyze protein synthesis, consist of a small 40S subunit and a large 60S subunit. Together these subunits are composed of 4 RNA species and approximately 80 structurally distinct proteins. This gene encodes a member of the L13P family of ribosomal proteins that is a component of the 60S subunit. The encoded protein also plays a role in the repression of inflammatory genes as a component of the IFN-gamma-activated inhibitor of translation (GAIT) complex. This gene is co-transcribed with the small nucleolar RNA genes U32, U33, U34, and U35, which are located in the second, fourth, fifth, and sixth introns, respectively. As is typical for genes encoding ribosomal proteins, there are multiple processed pseudogenes of this gene dispersed throughout the genome. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene.

Images

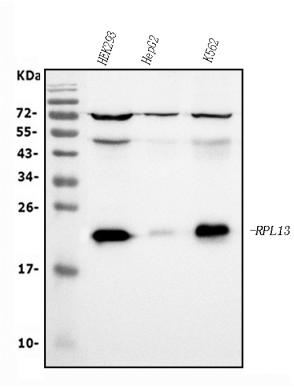
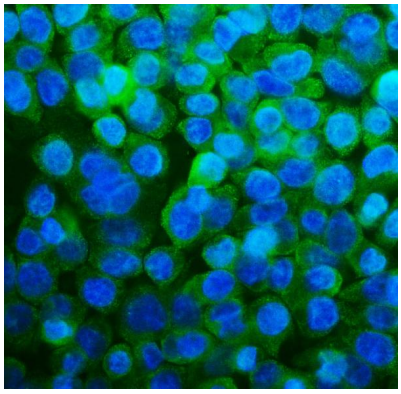


Figure 1. Western blot analysis of RPL13A using anti-RPL13A antibody (M03571).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30ug of sample under reducing conditions.
Lane 1: human Hek293 whole cell lysates,
Lane 2: human Hela whole cell lysates,
Lane 3: human K562 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.
Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-RPL13A antigen affinity purified monoclonal antibody (Catalog # M03571) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for RPL13A at approximately 24KD. The expected band size for RPL13A is at 24KD.

Figure 2. IF analysis of RPL13A using anti-RPL13A antibody (M03571).



RPL13A was detected in immunocytochemical section of CACO-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-RPL13A Antibody (M03571) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

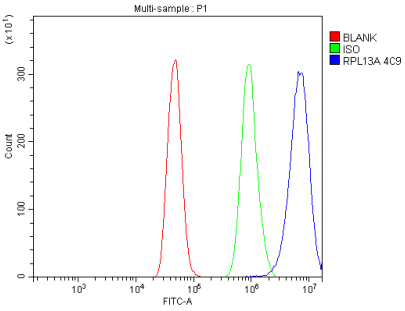


Figure 3. Flow Cytometry analysis of A431 cells using anti-RPL13A antibody (M03571).
Overlay histogram showing A431 cells stained with M03571 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-RPL13A Antibody (M03571, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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