abcam

ab313428

Anti-RPS6 antibody [RP23040083]

Lab Essentials | Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Multiclonal
Immunogen	Recombinant Fragment Protein within Human RPS6. The exact immunogen used to generate this antibody is proprietary information. Database link P62753
Clone number	RP23040083
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Species	Mouse

Dilution info	10 µg/mL
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	2 µg/mL
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	0.5-1 µg/mL
Notes	-

Species	Rat
Dilution info	1 µg/mL
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1-3 µg for 10^6 Cells
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information RPS6

Function

Component of the 40S small ribosomal subunit (PubMed:23636399, PubMed:8706699). Plays an important role in controlling cell growth and proliferation through the selective translation of particular classes of mRNA (PubMed:17220279). Part of the small subunit (SSU) processome, first precursor of the small eukaryotic ribosomal subunit. During the assembly of the SSU processome in the nucleolus, many ribosome biogenesis factors, an RNA chaperone and ribosomal proteins associate with the nascent pre-rRNA and work in concert to generate RNA folding, modifications, rearrangements and cleavage as well as targeted degradation of pre-ribosomal RNA by the RNA exosome (PubMed:34516797).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	RPS6 also known as Ribosomal Protein S6 is a component of the 40S ribosomal subunit with a molecular weight of approximately 28 kDa. This protein mainly localizes in the cytoplasm where ribosomes are fixed during protein synthesis. The ribosomal machinery uses RPS6 to translate mRNA into polypeptides operating as an essential part of protein biosynthesis. It expresses in various tissues with higher levels in highly proliferative cells which need extensive protein production for growth.
Biological function summary	RPS6 is integral to the formation of the ribosomal complex. This complex is essential for the translation initiation process. RPS6 controls the translation capacity of ribosomes and functions in growth and development by regulating protein synthesis rates. Alterations in RPS6 activity can impact cellular growth and size due to its role in ribosome biogenesis.
Pathways	RPS6 plays a significant role in the mTOR and PI3K/AKT signaling pathways. These pathways link nutrient availability to protein synthesis influencing cellular growth and metabolism. RPS6 interacts with proteins like S6K1 which is a downstream target in the mTOR pathway to modulate translation and cell growth processes.
Associated diseases and disorders	RPS6 has connections to cancer and metabolic syndromes. Abnormal RPS6 activation can lead to dysregulated cell growth contributing to oncogenesis. In the context of cancer mTOR signaling where RPS6 functions is often upregulated

leading to uncontrolled proliferation. Moreover in metabolic disorders the disrupted pathway activity involves other proteins like AKT fostering insulin resistance and metabolic imbalance.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

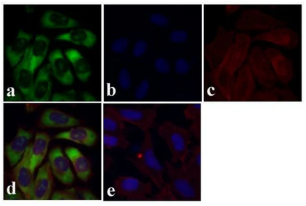
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

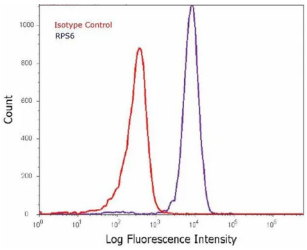
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-RPS6 antibody [RP23040083] (ab313428)

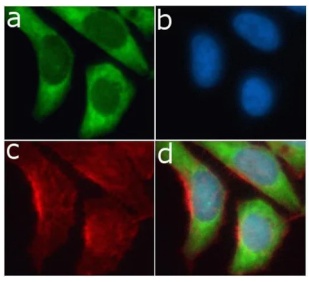
RPS6 Immunocytochemistry/ Immunofluorescence staining of U2OS cells using rabbit Anti-RPS6 antibody

Immunofluorescent analysis of 70% confluent log phase U-2 OS cells fixed with 4% paraformaldehyde for 15 minutes, and blocked with 5% BSA for 1 hour at room temperature labeling RPS6 with ab313428 at 1 µg/mL, followed by Alexa Fluor 488 Goat anti-Rabbit IgG Secondary Antibody at a dilution of 1/400 for 30 minutes at room temperature (Panel a/ green). Nuclei (Panel b/ blue) were stained with DAPI. F-actin (Panel c/ red) was stained with Alexa Fluor 594 Phalloidin. Panel d is a merged image showing cytoplasmic localization and panel e is a no primary antibody control. The images were captured at 20X magnification.



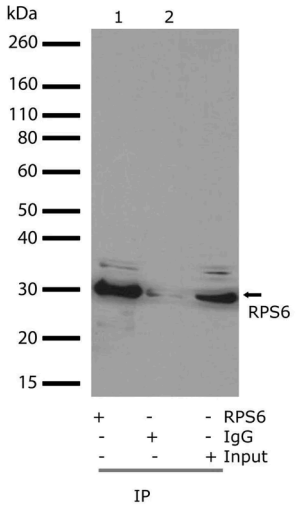
Flow Cytometry - Anti-RPS6 antibody [RP23040083] (ab313428)

Flow cytometry analysis of FIX & PERM reagent fixed Hela cells labeling RPS6 with ab313428. Detection was performed using an Alexa Fluor 488 Goat anti-Rabbit IgG (right peak) compared to an isotype control (left peak).



Immunocytochemistry/ Immunofluorescence - Anti-RPS6 antibody [RP23040083] (ab313428)

Immunofluorescent analysis of HeLa cells fixed using 4% formaldehyde (reconstituted in 1X PBS) for 10 min at room temperature and permeabilized using 0.1 % Triton X-100 in PBS for 15 min at room temperature labeling RPS6 with ab313428 followed by detection using an Alexa Fluor 488-conjugated Goat anti-Rabbit secondary antibody (green) (Image A). Nuclei were stained using DAPI (Image B) and actin stained with Alexa Fluor 594 phalloidin (red) (image C). Image D is a composite image showing cytoplasmic localization of RPS6.



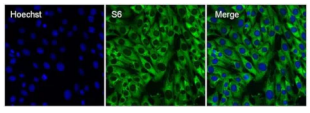
Immunoprecipitation - Anti-RPS6 antibody [RP23040083] (ab313428)

RPS6 was immunoprecipitated from HeLa cells whole cell lysate with ab313428 at 2 µg/mL. Western blot was performed from the immunoprecipitate using ab313428 at 1 µg/mL. Rabbit IgG was used as a IP control.
All lanes:
Immunoprecipitation - Anti-RPS6 antibody [RP23040083] (ab313428) at 1 µg/mL

Lane 1:
Immunoprecipitated HeLa cell lysate

Lane 2:
Rabbit IgG control

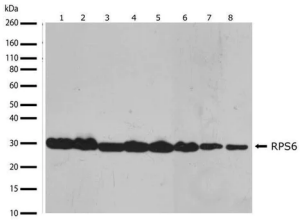
Predicted band size: 29 kDa



Immunocytochemistry/ Immunofluorescence - Anti-RPS6 antibody [RP23040083] (ab313428)

RPS6 Immunocytochemistry/ Immunofluorescence staining of 3T3 cells using rabbit Anti-RPS6 antibody

Immunofluorescent analysis of 3T3 cells permeabilized with 0.1% Triton X-100 in TBS for 15 minutes, and blocked with 3% Blocker BSA in PBS for 15 minutes at room temperature labeling S6 ribosomal protein (green) with ab313428 at 10 µg/mL in blocking buffer for at least 1 hour at room temperature, and then incubated with a Goat anti-Rabbit IgG secondary antibody, Alexa Fluor 488 conjugate at a dilution of 1/1000 for 30 minutes at room temperature (green). Nuclei (blue) were stained with Hoechst 33342 dye. Images were taken on a Thermo Scientific ToxInsight Instrument at 20X magnification.



Western blot - Anti-RPS6 antibody [RP23040083] (ab313428)

All lanes:
Western blot - Anti-RPS6 antibody [RP23040083] (ab313428) at 1 µg/mL

Lane 1:
TNF alpha treated HeLa cell lysate

Lane 2:
Untreated HeLa cell lysate

Lane 3:
A431 cell lysate

Lane 4:
HepG2 cell lysate

Lane 5:
Jurkat cell lysate

Lane 6:
HEK293 cell lysate

Lane 7:
MCF7 cell lysate

Lane 8:
PC12 cell lysate

Developed using the ECL technique.

Predicted band size: 28.681 kDa

Observed band size: 31 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.