abcam

ab151550

Anti-RPS10 antibody [EPR8545]

Anti-RPS10 antibody [EPR8545] (ab151550) is a rabbit monoclonal antibody detecting RPS10 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 20 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR8545
Purification technique	Affinity purification Protein A
Concentration	1.19 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human

Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/50 - 1/100
Notes	See . Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information 40S ribosomal protein S10

Function	Component of the 40S ribosomal subunit (PubMed:23636399). The ribosome is a large ribonucleoprotein complex responsible for the synthesis of proteins in the cell (PubMed:23636399).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Notes

What is this antibody validated in?
Anti-RPS10 antibody [EPR8545] (ab151550) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of RPS10?
Anti-RPS10 [EPR8545] (ab151550) specifically detects a band for RPS10 (UniProt: P46783) at a molecular weight of 19kDa.

Trusted by the scientific community
Anti-RPS10 [EPR8545] (ab151550) was first used in a scientific publication in 2012 and has been cited over 20 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR8545] also available for your convenience: ab151550, Alexa Fluor® 647 - ab225202, Alexa Fluor® 488 - ab225203, Carrier free - ab238926, PE - ab305916, APC - ab305917, HRP - ab305918, Alkaline Phosphatase - ab308694, Alexa Fluor® 594 - ab310403, Alexa Fluor® 555 - ab311930, Alexa Fluor® 568 - ab312401, Alexa Fluor® 750 - ab321128

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

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

Activity summary	RPS10 also known as 40S ribosomal protein S10 is a component of the small ribosomal subunit essential for protein synthesis. It weighs approximately 18.7 kDa. The protein is expressed in various tissues including the liver kidney and brain. Its primary role involves participating in the assembly and function of ribosomes by interacting with rRNA and supporting the translation of mRNA into amino acids.
Biological function summary	RPS10 contributes to the formation and stability of the ribosomal 40S subunit. It works as part of the ribosome complex important for initiating and propelling protein synthesis. This ribosomal complex performs a central role in cellular growth and proliferation as it aids in assembling polypeptide chains that proteins need for diverse cellular processes. By doing so it supports a wide range of physiological functions.
Pathways	RPS10 contributes to protein synthesis through the translational initiation and elongation pathways. Its participation supports the accurate decoding and synthesis of proteins which are critical to cellular metabolism and growth. RPS10 interacts with other ribosomal proteins such as RPS12 and RPS14 to maintain these pathways' function and efficiency helping regulate cellular homeostasis and response to environmental stimuli.
Associated diseases and disorders	RPS10 mutations can link to Diamond-Blackfan Anemia a condition marked by failed red blood cell production impacting patient health. Moreover aberrations in RPS10 link to various cancers such as breast cancer due to its role in protein synthesis and cell growth. RPS10 interacts with proteins like RPL5 another ribosomal protein within these disease contexts suggesting a broader contribution of ribosomal dysfunction in disease pathogenesis.

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

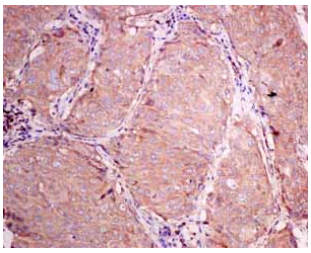
We do not recommend this combination. It is not covered by our product promise.

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.

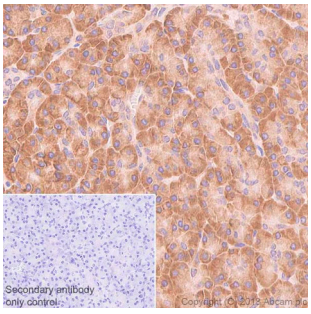
15 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

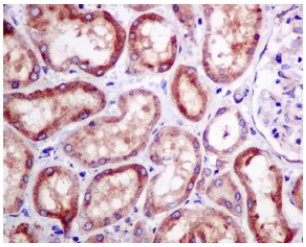
Immunohistochemical analysis of paraffin embedded Human Lung carcinoma tissue using ab151550 showing +ve staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

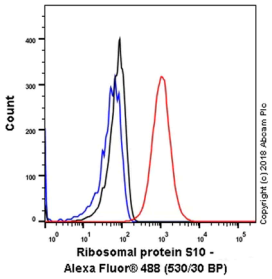
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human pancreas tissue sections labeling RPS10 with Purified ab151550 at 1:100 dilution (11.86 µg/ml). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101)was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling RPS10 with ab151550 at 1/50 dilution.

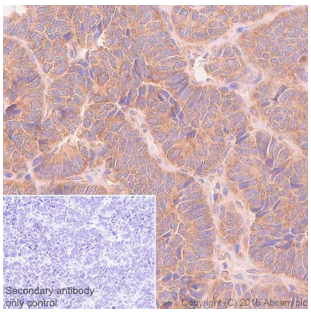


Flow Cytometry (Intracellular) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Flow Cytometry (Intracellular) staining using rabbit Anti-RPS10 antibody

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling RPS10 with Purified ab151550 at 1/1000 dilution (1µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was

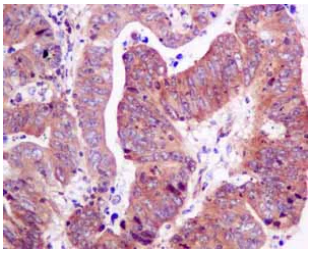
used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

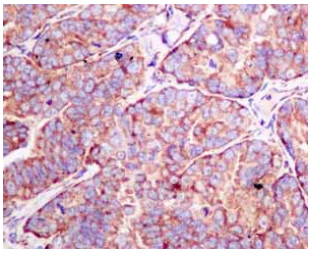
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human gastric carcinoma tissue sections labeling RPS10 with Purified ab151550 at 1:100 dilution (11.86 µg/ml). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101)was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

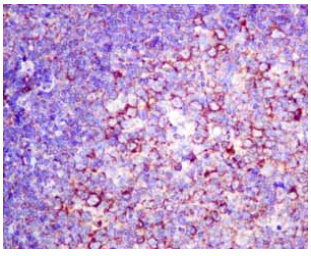
Immunohistochemical analysis of paraffin embedded Human Colonic adenocarcinoma tissue using ab151550 showing +ve staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

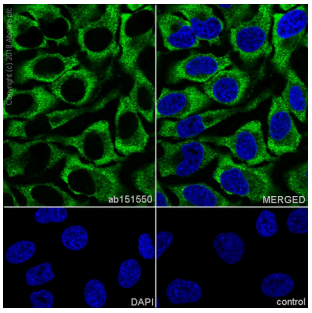
Immunohistochemical analysis of paraffin embedded Human Ovarian carcinoma tissue using ab151550 showing +ve staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

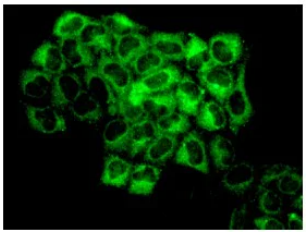
Immunohistochemical analysis of paraffin embedded normal Human tonsil tissue using ab151550 showing +ve staining.



Immunocytochemistry/ Immunofluorescence - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPS10 antibody

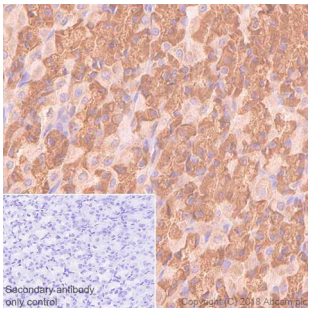
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling RPS10 with Purified ab151550 at 1:250 dilution (4.7 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunocytochemistry/ Immunofluorescence - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPS10 antibody

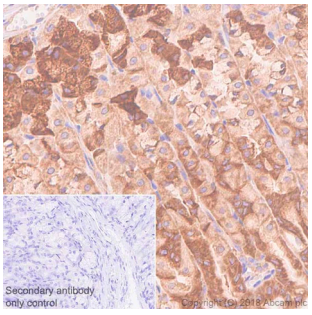
Immunofluorescent analysis of HeLa cells labelling RPS10 with ab151550 at 1/250 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

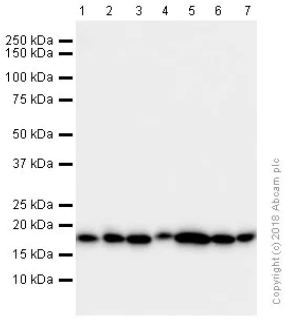
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat stomach tissue sections labeling RPS10 with Purified ab151550 at 1:100 dilution (11.86 µg/ml). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101)was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS10 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse stomach tissue sections labeling RPS10 with Purified ab151550 at 1:100 dilution (11.86 µg/ml). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101)was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-RPS10 antibody [EPR8545] (ab151550)

The blocking and dilution buffer is: 5% NFDM
All lanes:
Western blot - Anti-RPS10 antibody [EPR8545] (ab151550) at 1/5000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Lane 2:
K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysates at 20 µg

Lane 3:
Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysates at 20 µg

Lane 4:
C6 (Rat glial tumor glial cell) whole cell lysates at 20 µg

Lane 5:
RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysates at 20 µg

Lane 6:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates at 20 µg

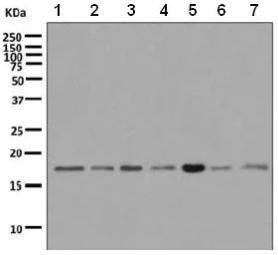
Lane 7:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 19 kDa

Observed band size: 19 kDa



Western blot - Anti-RPS10 antibody [EPR8545] (ab151550)

All lanes:
Western blot - Anti-RPS10 antibody [EPR8545] (ab151550) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
K562 cell lysate at 10 µg

Lane 3:
Raji cell lysate at 10 µg

Lane 4:
C6 cell lysate at 10 µg

Lane 5:
Raw264.7 cell lysate at 10 µg

Lane 6:
PC12 cell lysate at 10 µg

Lane 7:

NIH/3T3 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 19 kDa

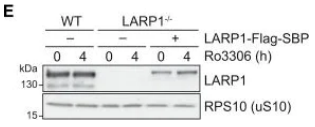


Image collected and cropped by CiteAb under a CC-BY license from the publication

Western blot - Anti-RPS10 antibody [EPR8545] (ab151550)

RPS10 western blot using anti-RPS10 antibody [EPR8545] ab151550. Publication image and figure legend from Haneke, K., Schott, J., et al., 2020, J Cell Biol, PubMed 32040547.

ab151550 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab151550 please see the product overview.

LARP1-dependent suppression of 5′TOP mRNA translation upon CDK1i. (A) For Ribo-Seq analysis, RPE1 cells were serum-starved for 48 h followed by a 4-h treatment with DMSO or Ro3306 (10 µM). Equal amounts of a yeast lysate were spiked into the DMSO- and Ro3306-treated samples. RDs (no. ribosome footprints/no. ORF-spanning reads in input RNA) were calculated after normalization to the yeast spike-in footprints from n = 3 biological repeat experiments. (B) Based on the Ribo-Seq analysis in A, the average RD was calculated after normalization (norm.) to the yeast spike-in. Statistical significance was determined by one-tailed ratio paired t test. (C) Based on the Ribo-Seq analysis in A, the fold change in RD (Δ RD) was calculated for IRES-containing mRNAs, 5′TOP mRNAs, and all other mRNAs. (D) Polysome association of 5′TOP (RPLP0 and PABPC4) and ORF size-matched non-TOP (EIF2S1 and NCL) mRNAs was analyzed by polysome fractionation and subsequent qPCR analysis from DMSO- or Ro3306-treated (10 µM, 4 h) HeLa cells. (E) Western blot analysis of LARP1 expression in HEK293T WT cells, HEK293T LARP1−/− cells, and HEK293T LARP1−/− + LARP1 cells expressing LARP1-Flag-SBP. RPS10 serves as loading control. (F) Polysome association of 5′TOP (RPS6 and RPS7) and ORF size-matched non-TOP (EIF2S1, CDKN1A) mRNAs was analyzed by polysome fractionation and subsequent qPCR analysis from DMSO- or Ro3306-treated (10 µM, 4 h) HEK293T WT, LARP1−/−, or LARP1−/− + LARP1 cells.

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