abcam

ab225578

Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR20770
Purification technique	Affinity purification Protein A
Concentration	1.001 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Dot

Tested

Species	Synthetic peptide
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-

Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Target data

See full target information RPS6 pS240 + S244

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab225578 is the carrier-free version of ab215214.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

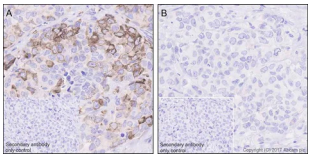
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images



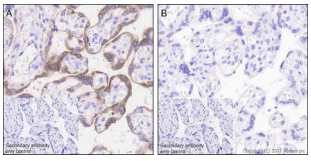
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

RPS6 (phospho S240 + S244) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS6 (phospho S240 + S244) antibody

Immunohistochemical analysis of paraffin-embedded human breast cancer tissue labeling RPS6 (phospho S240 + S244) with ab215214 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP), ready to use. Cytoplasmic staining on human breast cancer (image A), no signal was detected when tissues were treated with alkaline phosphatase (image B). Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP), ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

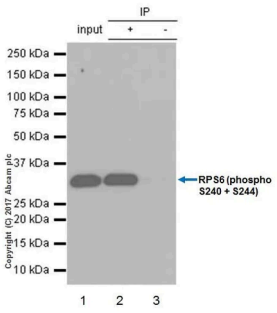


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

Immunohistochemical analysis of paraffin-embedded human placenta tissue labeling RPS6 (phospho S240 + S244) with ab215214 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP), ready to use. Cytoplasmic staining on human placenta (image A), no signal was detected when tissues were treated with alkaline phosphatase (image B). Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP), ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

RPS9 (phospho S240 + S244) was immunoprecipitated from 0.35 mg of MCF7 (human breast adenocarcinoma cell line), grown in serum-free media overnight, then grown in 20% FBS media for 30 minutes, lysate with ab215214 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab215214 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: MCF7 grown in serum-free media overnight, then grown in 20% FBS media for 30 minutes, whole cell lysate 10 µg (Input).

Lane 2: ab215214 IP in MCF7 grown in serum-free media overnight, then grown in 20% FBS media for 30 minutes, whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab215214 in MCF7 grown in serum-free media overnight, then grown in 20% FBS media for 30 minutes, whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.

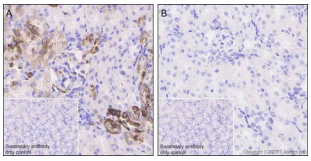
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).

All lanes:
Immunoprecipitation - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] (ab215214)

Predicted band size: 29 kDa

Observed band size: 32 kDa

Exposure time: 10s



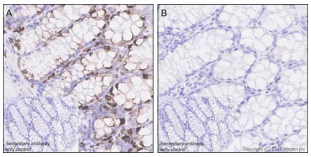
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

RPS6 (phospho S240 + S244) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS6 (phospho S240 + S244) antibody

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling RPS6 (phospho S240 + S244) with ab215214 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP), ready to use. Cytoplasmic staining on rat kidney (image A), no signal was detected when tissues were treated with alkaline phosphatase (image B). Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP), ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



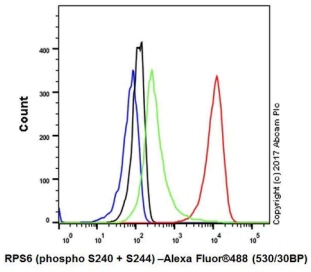
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

RPS6 (phospho S240 + S244) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RPS6 (phospho S240 + S244) antibody

Immunohistochemical analysis of paraffin-embedded mouse colon tissue labeling RPS6 (phospho S240 + S244) with ab215214 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP), ready to use. Cytoplasmic staining on mouse colon (image A), no signal was detected when tissues were treated with alkaline phosphatase (image B). Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP), ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).

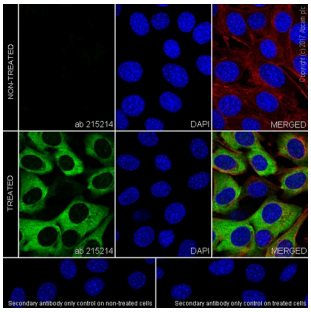
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

RPS6 (phospho S240 + S244) Flow Cytometry (Intracellular) staining using rabbit Anti-RPS6 (phospho S240 + S244) antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast cell line) grown in serum-free media for 4 hours, then grown in 20% FBS media for 30 minutes (red) or NIH/3T3 grown in serum-free media for 4 hours (green), cell line labeling RPS6 (phospho S240 + S244) with ab215214 at 1/600 dilution compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).



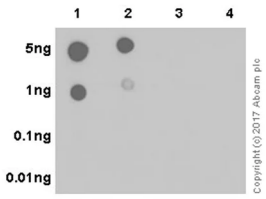
Immunocytochemistry/ Immunofluorescence - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

RPS6 (phospho S240 + S244) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RPS6 (phospho S240 + S244) antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (mouse embryonic fibroblast cell line) cells labeling RPS6 (phospho S240 + S244) with ab215214 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Cytoplasmic staining was increased after treatment with 20% FBS for 30 minutes on NIH/3T3 cells. Cells were FBS deprived for 4 hours before the treatment.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).



Dot Blot - Anti-RPS6 (phospho S240 + S244) antibody [EPR20770] - BSA and Azide free (ab225578)

Dot blot analysis of RPS6 (phospho S240 + S244) labeled with ab215214 at 1/1000 dilution.
Lane 1: RPS6 (phospho S240 + S244) peptide.

Lane 2: RPS6 (phospho S240) peptide.

Lane 3: RPS6 (phospho S244) peptide.

Lane 4: RPS6 non-phospho peptide.

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution was used as secondary antibody.

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: 3 minutes.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215214).

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