abcam

ab248154

Anti-eIF5A2 + eIF5A antibody [EPR7411-6] - 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	EPR7411-6
Purification technique	Affinity purification Protein A
Dissociation constant	5.5 x 10^{-11} M
Concentration	0.962 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-

Notes	-

Target data

See full target information Eukaryotic translation initiation factor 5A-2

Function	Translation factor that promotes translation elongation and termination, particularly upon ribosome stalling at specific amino acid sequence contexts (PubMed:14622290). Binds between the exit (E) and peptidyl (P) site of the ribosome and promotes rescue of stalled ribosome: specifically required for efficient translation of polyproline-containing peptides as well as other motifs that stall the ribosome. Acts as a ribosome quality control (RQC) cofactor by joining the RQC complex to facilitate peptidyl transfer during CAT tailing step (By similarity). Also involved in actin dynamics and cell cycle progression, mRNA decay and probably in a pathway involved in stress response and maintenance of cell wall integrity (By similarity).

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

ab248154 is the carrier-free version of ab126735.

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	EIF5A2 also known as EIF5A isoform 2 and eIF5A or EIF5A isoform 1 play important mechanical roles in protein synthesis. eIF5A2 has a molecular mass of approximately 17 kDa while eIF5A shares a similar molecular weight. Both proteins are expressed throughout different tissues with higher levels observed in certain cancers and rapidly proliferating cells. eIF5A2 is particularly expressed in various tumor tissues and cell lines whereas eIF5A is expressed more ubiquitously.
Biological function summary	These proteins facilitate the translation elongation process during protein synthesis. As part of the translation machinery they interact with ribosomes to promote the efficient synthesis of proteins. eIF5A and eIF5A2 are implicated in the hypusination pathway which activates them through a unique covalent modification. This modification is essential for their activity suggesting their critical involvement in cell growth and proliferation.
Pathways	The hypusination pathway involves these proteins undergoing a post-translational modification that activates them. eIF5A and eIF5A2 are part of the eukaryotic translational elongation pathway which enhances their functional relevance in translational regulation. Their activity links closely with other translation-related proteins such as the eukaryotic initiation factor eIF2 which controls the overall rate of protein synthesis.
Associated diseases and disorders	EIF5A2 and eIF5A have marked associations with cancer particularly colorectal and ovarian cancers. In these conditions overexpression and dysregulation of these proteins contribute to cancer progression and metastasis. Their connection with other proteins like the tumor suppressor p53 further highlights their role in tumor biology. Changes in eIF5A activity have also been linked to neurodegenerative diseases offering potential targets for therapeutic intervention.

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.

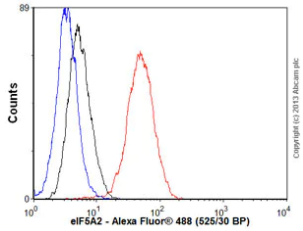
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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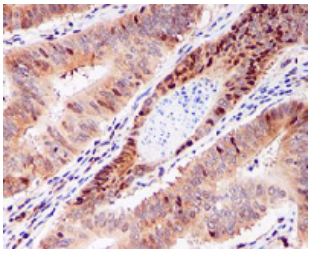
5 product images



Flow Cytometry (Intracellular) - Anti-eIF5A2 + eIF5A antibody [EPR7411-6] - BSA and Azide free (ab248154)

EIF5A2 + eIF5A Flow Cytometry (Intracellular) staining using rabbit Anti-eIF5A2 + eIF5A antibody

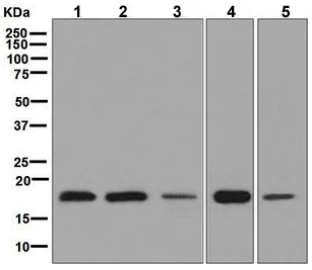
This data was developed using ab126735, the same antibody clone in a different buffer formulation.
Overlay histogram showing HeLa cells stained with ab126735 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab126735, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eIF5A2 + eIF5A antibody [EPR7411-6] - BSA and Azide free (ab248154)

EIF5A2 + eIF5A Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-eIF5A2 + eIF5A antibody

This data was developed using ab126735, the same antibody clone in a different buffer formulation.
ab126735 at 1/100 dilution, staining eIF5A2 + eIF5A in Formalin fixed Paraffin-embedded Human ovarian carcinoma tissue by Immunohistochemistry. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-eIF5A2 + eIF5A antibody [EPR7411-6] - BSA and Azide free (ab248154)

This data was developed using ab126735, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-eIF5A2 + eIF5A antibody [EPR7411-6] (ab126735) at 1/1000 dilution

Lane 1:
293T cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
A431 cell lysate at 10 µg

Lane 4:
CaCo-2 cell lysate at 10 µg

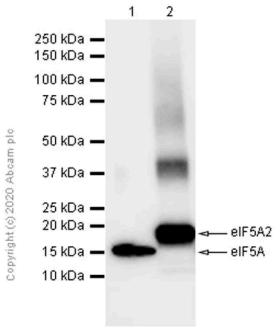
Lane 5:
HepG2 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 17 kDa



Western blot - Anti-eIF5A2 + eIF5A antibody [EPR7411-6] - BSA and Azide free (ab248154)

EIF5A2 + eIF5A Western blot staining using rabbit Anti-eIF5A2 + eIF5A antibody

Blocking buffer: 5% NFDM/TBST
This data was developed using ab126735, the same antibody clone in a different buffer formulation.

All lanes:
Western blot - Anti-eIF5A2 + eIF5A antibody [EPR7411-6] (ab126735) at 1/2000 dilution

Lane 1:
Western blot - Recombinant Human eIF5A protein (Tag Free) (ab87457) at 0.01 µg

Lane 2:
Western blot - Recombinant Human eIF5A2 protein (His tag N-Terminus) (ab99140) at 0.01 µg

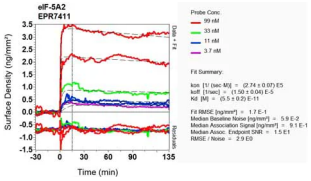
Secondary

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

Predicted band size: 17 kDa

Observed band size: 15 kDa, 20 kDa

Exposure time: 20s



OI-RD Scanning - Anti-eIF5A2 + eIF5A antibody [EPR7411-6] - BSA and Azide free (ab248154)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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