abcam

ab204939

Anti-eIF5A antibody [4E10F6]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human EIF5A. Database link P63241
Clone number	4E10F6
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/200 - 1/400
Notes	-

Predicted

Species	Mouse, Rat, Rabbit, Chicken, Cow
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

Predicted

Species	Mouse, Rat, Rabbit, Chicken, Cow
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Predicted

Species	Mouse, Rat, Rabbit, Chicken, Cow
Dilution info	-
Notes	-

Target data

See full target information EIF5A

Function	Translation factor that promotes translation elongation and termination, particularly upon ribosome stalling at specific amino acid sequence contexts (PubMed:33547280). 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 (By similarity). 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 (PubMed:16987817). With syntenin SDCBP, functions as a regulator of p53/TP53 and p53/TP53-dependent apoptosis (PubMed:15371445). Also regulates TNF-mediated apoptosis (PubMed:15452064, PubMed:17187778). Mediates effects of polyamines on neuronal process extension and survival (PubMed:17360499). Is required for autophagy by assisting the ribosome in translating the ATG3 protein at a specific amino acid sequence, the 'ASP-ASP-Gly' motif, leading to the increase of the efficiency of ATG3 translation and facilitation of LC3B lipidation and autophagosome formation (PubMed:29712776). (Microbial infection) Cellular cofactor of human T-cell leukemia virus type I (HTLV-1) Rex protein and of human immunodeficiency virus type 1 (HIV-1) Rev protein, essential for mRNA export of retroviral transcripts.

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

Supplementary info

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

Activity summary	EIF5A also known as eukaryotic translation initiation factor 5A is a small protein with a molecular mass of approximately 18 kDa. It plays a significant mechanical role in the translation process by facilitating the formation of the first peptide bond in protein synthesis. eIF5A is expressed ubiquitously across various tissues and is noted for being the only protein known to undergo the unique post-translational modification called hypusination which is necessary for its function.
Biological function summary	EIF5A participates in regulating translation cell proliferation and apoptosis. eIF5A functions as part of a complex involved in ribosome-associated protein synthesis supporting the elongation of polyproline-containing peptides. It helps in maintaining cellular homeostasis by modulating the translation of specific sets of mRNAs that are critical for various cellular responses.
Pathways	EIF5A's role is particularly relevant in translation elongation and mRNA turnover pathways. It interacts closely with the elongation factors eEF2 and eEF1A to promote efficient protein synthesis. In the mRNA turnover pathway eIF5A has connections with proteins such as Dcp2 and Xrn1 which play a role in the degradation of mRNA thereby influencing mRNA stability and turnover.
Associated diseases and disorders	EIF5A is linked to cancer and neurodegenerative diseases. Alterations in its function and expression levels have been observed in several cancer types highlighting its role in tumor progression. The protein's connection to apoptosis pathways suggests its involvement in neurodegenerative disorders such as Alzheimer's disease where cell death and tissue degeneration are prevalent. eIF5A associates with proteins like Bcl-2 in cancer and Tau in neurodegeneration indicating its varied impact on disease processes.

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

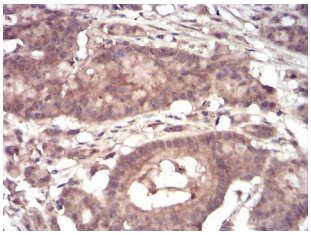
We do not recommend this combination. It is not covered by our product promise.

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.

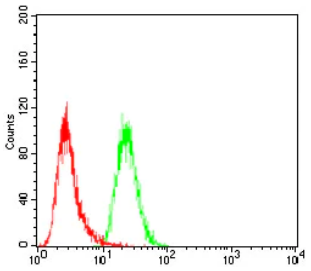
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eIF5A antibody [4E10F6] (ab204939)

EIF5A Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-eIF5A antibody

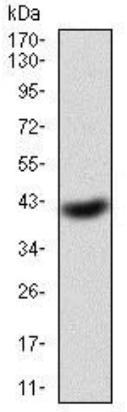
Immunohistochemical analysis of paraffin-embedded Human colon cancer tissue labeling eIF5A with ab204939 at 1/200 dilution with DAB staining.



Flow Cytometry - Anti-eIF5A antibody [4E10F6] (ab204939)

EIF5A Flow Cytometry staining using mouse Anti-eIF5A antibody

Flow cytometric analysis of HeLa cells labeling eIF5A with ab204939 at 1/200 dilution (green), compared to a negative control (red).

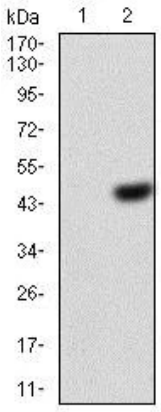


Western blot - Anti-eIF5A antibody [4E10F6] (ab204939)

Expected MWt is 42.8 kDa.
All lanes:
Western blot - Anti-eIF5A antibody [4E10F6] (ab204939) at 1/500 dilution

All lanes:
Recombinant Human eIF5A protein

Predicted band size: 16 kDa



Western blot - Anti-eIF5A antibody [4E10F6] (ab204939)

All lanes:
Western blot - Anti-eIF5A antibody [4E10F6] (ab204939) at 1/500 dilution

Lane 1:
HEK293 cell lysate

Lane 2:
eIF5A (aa1-154)-hIgGFc transfected HEK293 cell lysate

Predicted band size: 16 kDa

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