abcam

ab284714

Anti-eIF4B antibody [EP2299Y] - BSA and Azide free

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	EP2299Y
Purity	Tissue culture supernatant

Reactivity data

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information EIF4B

Function	Required for the binding of mRNA to ribosomes. Functions in close association with EIF4-F and EIF4-A. Binds near the 5'-terminal cap of mRNA in presence of EIF-4F and ATP. Promotes the ATPase activity and the ATP-dependent RNA unwinding activity of both EIF4-A and EIF4-F.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C

Notes

ab284714 is the carrier-free version of ab68474

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.

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	EIF4B also known as eukaryotic translation initiation factor 4B is a protein that enhances the RNA helicase activity of the eIF4A protein during the initiation of translation. It weighs approximately 80 kDa. eIF4B interacts directly with RNA stimulating the unwinding of mRNA secondary structures allowing the ribosome to access the mRNA strand for translation. It is expressed in most cell types playing an essential role in efficient protein synthesis.
Biological function summary	EIF4B supports the recruitment of ribosomal subunits to mRNA by interacting with eIF3 and the large ribosomal subunit. It forms part of the larger eIF4F complex which is important for the cap-dependent initiation of translation. By working with eIF4A and eIF4G eIF4B facilitates the scanning process of the ribosome to the start codon on mRNA leading to proper protein translation.
Pathways	EIF4B participates in the mTOR signaling pathway a central regulator of cellular growth and metabolism. It also contributes to the PI3K/AKT/mTOR pathway affecting cell proliferation and survival. Additionally eIF4B interacts with other proteins like eIF4E and eIF5 linking its function to these pathways and ensuring effective coordination of translation initiation as well as regulation under various conditions.
Associated diseases and disorders	Aberrant eIF4B activity has connections to cancer and neurodegenerative diseases. Overexpression or dysregulation of eIF4B is often observed in various cancers due to its role in promoting protein synthesis necessary for tumor growth. It also

indirectly interacts with oncogenic proteins such as mTOR highlighting its importance in cancer. In neurodegenerative disorders eIF4B's role in protein homeostasis is disrupted contributing to disease progression alongside pathways involving proteins like eIF4A.

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

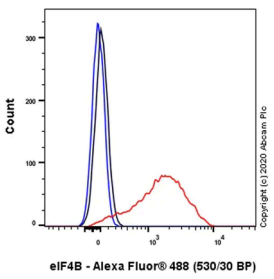
We do not recommend this combination. It is not covered by our product promise.

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.

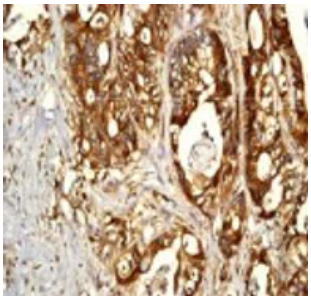
3 product images



Flow Cytometry (Intracellular) - Anti-eIF4B antibody [EP2299Y] - BSA and Azide free (ab284714)

EIF4B Flow Cytometry (Intracellular) staining using rabbit Anti-eIF4B antibody

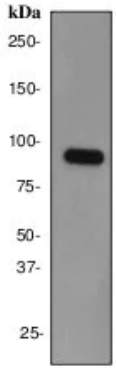
This data was developed using ab68474, the same antibody clone in a different buffer formulation. Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling eIF4B with ab68474 at 1/200 dilution (1 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000 dilution. 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-eIF4B antibody [EP2299Y] - BSA and Azide free (ab284714)

EIF4B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-eIF4B antibody

This data was developed using ab68474, the same antibody clone in a different buffer formulation.Human prostate adenocarcinoma stained with ab68474 at 1/100 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-eIF4B antibody [EP2299Y] - BSA and Azide free (ab284714)

This data was developed using ab68474, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-eIF4B antibody [EP2299Y] (ab68474) at 1/200000 dilution

All lanes:
HeLa cell lysate at 10 µg

Secondary

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

Predicted band size: 69 kDa

Observed band size: 90 kDa

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