abcam

ab251075

Anti-eIF3g antibody [EPR16146] - 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	EPR16146
Concentration	1.005 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Rat, Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Rat, Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information EIF3G

Function	RNA-binding component of the eukaryotic translation initiation factor 3 (eIF-3) complex, which is required for several steps in the initiation of protein synthesis (PubMed:17581632, PubMed:25849773, PubMed:27462815). The eIF-3 complex associates with the 40S ribosome and facilitates the recruitment of eIF-1, eIF-1A, eIF-2:GTP:methionyl-tRNAi and eIF-5 to form the 43S pre-initiation complex (43S PIC). The eIF-3 complex stimulates mRNA recruitment to the 43S PIC and scanning of the mRNA for AUG recognition. The eIF-3 complex is also required for disassembly and recycling of post-termination ribosomal complexes and subsequently prevents premature joining of the 40S and 60S ribosomal subunits prior to initiation (PubMed:17581632). The eIF-3 complex specifically targets and initiates translation of a subset of mRNAs involved in cell proliferation, including cell cycling, differentiation and apoptosis, and uses different modes of RNA stem-loop binding to exert either translational activation or repression (PubMed:25849773). This subunit can bind 18S rRNA. (Microbial infection) In case of FCV infection, plays a role in the ribosomal termination-reinitiation event leading to the translation of VP2 (PubMed:18056426).

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

ab251075 is the carrier-free version of ab191422.

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	The eIF3g also known as eukaryotic translation initiation factor 3 subunit G is a part of the eIF3 complex. It has a mass of approximately 39 kDa. This protein is expressed in various tissues throughout the body. Mechanically eIF3g participates in the process of initiation during protein synthesis by binding to the small ribosomal subunit and assisting in the recruitment of mRNA and initiator tRNA. This helps in the assembly of the functional ribosome making the translation process efficient.
Biological function summary	EIF3g plays an important role in gene expression by being part of the eIF3 complex which is important for starting translation. As a component of the eIF3 complex eIF3g influences cell growth differentiation and survival by regulating the protein synthesis rates. Researchers have identified that its presence in multiple tissues is essential for the proper functioning of cellular activities indicating its broad importance in maintaining cellular physiology.
Pathways	Experts recognize that eIF3g is integral to the mTOR signaling pathway which governs cell growth in response to nutrient availability. It also plays a significant role in the regulation of the EIF4E activity an important protein in initiating translation. eIF3g influences these pathways by acting together with other subunits of the eIF3 complex and interacting with translation-related proteins.
Associated diseases and disorders	Disruptions in eIF3g function link to certain cancers such as breast cancer where increased expression levels of eIF3g have been associated with tumor progression. Additionally abnormalities in eIF3g may contribute to neurodegenerative diseases like Alzheimer's disease given its role in protein synthesis and cell survival. In

these contexts eIF3g operates alongside proteins like eIF4E and the eIF3 complex to influence disease development and progression.

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

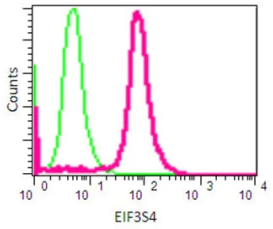
We do not recommend this combination. It is not covered by our product promise.

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.

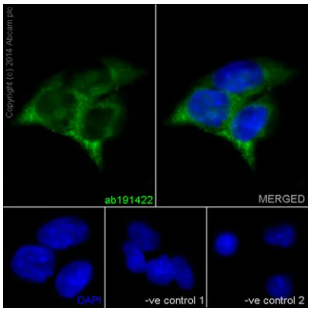
6 product images



Flow Cytometry (Intracellular) - Anti-eIF3g antibody [EPR16146] - BSA and Azide free (ab251075)

EIF3g Flow Cytometry (Intracellular) staining using rabbit Anti-eIF3g antibody

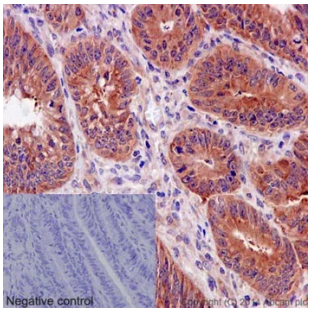
This data was developed using ab191422, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of 2% paraformaldehyde fixed 293T cells labeling eIF3g using ab191422 at a 1/80 dilution (pink). Goat anti rabbit IgG (FITC) used as the secondary at a 1/150 dilution. Isotype control Rabbit monoclonal IgG (green).



Immunocytochemistry/ Immunofluorescence - Anti-eIF3g antibody [EPR16146] - BSA and Azide free (ab251075)

EIF3g Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-eIF3g antibody

This data was developed using ab191422, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde fixed HepG2 cells labeling eIF3g using ab191422 at a 1/150 dilution. A Goat anti rabbit IgG (Alexa Fluor®488) (ab150077) was used as the secondary at a 1/200 dilution. Counterstain DAPI. Cells were permeabilized using 0.1% Triton X-100. The two negative controls: Primary ab concentration (anti-EIF3G), Secondary ab (Goat anti mouse IgG (Alexa Fluor®594)) is 1/400 dilution.

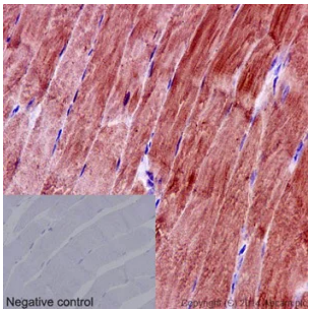


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eIF3g antibody [EPR16146] - BSA and Azide free (ab251075)

EIF3g Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-eIF3g antibody

This data was developed using ab191422, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human colonic carcinoma tissue sections labeling eIF3g using ab191422 at a 1/50 dilution. A ready to use HRP polymer for Rabbit IgG was used as the secondary. Hematoxylin counterstain. Negative control uses PBS instead of primary antibody.

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

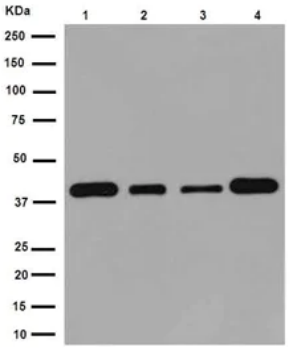


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eIF3g antibody [EPR16146] - BSA and Azide free (ab251075)

EIF3g Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-eIF3g antibody

This data was developed using ab191422, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin embedded rat skeletal muscle tissue sections labeling eIF3g using ab191422 at a 1/50 dilution. A ready to use HRP polymer for Rabbit IgG was used as the secondary. Hematoxylin counterstain. Negative control uses PBS instead of primary antibody.

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



Western blot - Anti-eIF3g antibody [EPR16146] - BSA and Azide free (ab251075)

This data was developed using ab191422, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-eIF3g antibody [EPR16146] - N-terminal (ab191422) at 1/10000 dilution

Lane 1:
293T cell lysate at 20 µg

Lane 2:
Molt-4 cell lysate at 20 µg

Lane 3:
HepG2 cell lysate at 20 µg

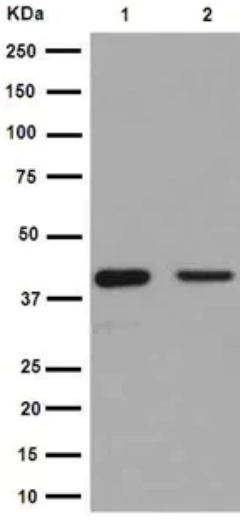
Lane 4:
K562 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 36 kDa

Observed band size: 40 kDa



Western blot - Anti-eIF3g antibody [EPR16146] - BSA and Azide free (ab251075)

This data was developed using ab191422, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-eIF3g antibody [EPR16146] - N-terminal (ab191422) at 1/1000 dilution

Lane 1:
PC-12 cell lysate at 10 µg

Lane 2:
NIH/3T3 cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 36 kDa

Observed band size: 40 kDa

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