

Product datasheet

Anti-eIF4A3 antibody [EPR14301(B)] ab180573

Recombinant **RabMAb**

★★★★★ 3 Abreviews 3 References 6 Images

Overview

Product name	Anti-eIF4A3 antibody [EPR14301(B)]
Description	Rabbit monoclonal [EPR14301(B)] to eIF4A3
Host species	Rabbit
Tested applications	Suitable for: WB, Flow Cyt, IHC-P, ICC/IF, IP
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Chicken, Cow, Pig, Xenopus laevis, Zebrafish, Cynomolgus monkey, Xenopus tropicalis
Immunogen	Synthetic peptide within Human eIF4A3 aa 50-150. The exact sequence is proprietary. Database link: P38919
Positive control	MCF7, HeLa, Raji and HepG2 whole cell lysate (ab7900); MCF7 and HeLa cells; Human prostate tissue.
General notes	

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 production

For more information [see here](#).

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb[®] patents](#).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA

Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR14301(B)
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab180573** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	1/1000 - 1/2000. Detects a band of approximately 47 kDa (predicted molecular weight: 47 kDa).
Flow Cyt		1/160. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF	★★★★★	1/500.
IP	★★★★☆	1/30.

Target

Function

ATP-dependent RNA helicase. Component of a splicing-dependent multiprotein exon junction complex (EJC) deposited at splice junction on mRNAs. The EJC is a dynamic structure consisting of a few core proteins and several more peripheral nuclear and cytoplasmic associated factors that join the complex only transiently either during EJC assembly or during subsequent mRNA metabolism. Core components of the EJC, that remains bound to spliced mRNAs throughout all stages of mRNA metabolism, functions to mark the position of the exon-exon junction in the mature mRNA and thereby influences downstream processes of gene expression including mRNA splicing, nuclear mRNA export, subcellular mRNA localization, translation efficiency and nonsense-mediated mRNA decay (NMD). Constitutes at least part of the platform anchoring other EJC proteins to spliced mRNAs. Its RNA-dependent ATPase and RNA-helicase activities are induced by CASC3, but abolished in presence of the MAGOH/RBM8A heterodimer, thereby trapping the ATP-bound EJC core onto spliced mRNA in a stable conformation. The inhibition of ATPase activity by the MAGOH/RBM8A heterodimer increases the RNA-binding affinity of the EJC. Involved in translational enhancement of spliced mRNAs after formation of the 80S ribosome complex. Binds spliced mRNA in sequence-independent manner, 20-24 nucleotides upstream of mRNA exon-exon junctions. Shows higher affinity for single-stranded RNA in an ATP-bound core EJC complex than after the ATP is hydrolyzed.

Tissue specificity

Ubiquitously expressed.

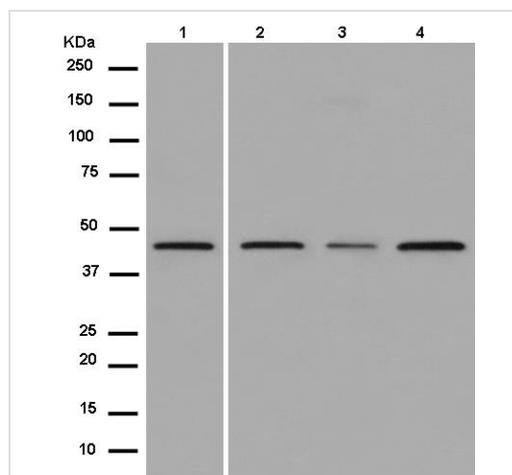
Sequence similarities

Belongs to the DEAD box helicase family. eIF4A subfamily.
Contains 1 helicase ATP-binding domain.
Contains 1 helicase C-terminal domain.

Cellular localization

Nucleus. Nucleus speckle. Cytoplasm. Nucleocytoplasmic shuttling protein. Travels to the cytoplasm as part of the exon junction complex (EJC) bound to mRNA. Detected in dendritic layer as well as the nuclear and cytoplasmic (somatic) compartments of neurons. Colocalizes with STAU1 and FMR1 in dendrites.

Images



Western blot - Anti-eIF4A3 antibody [EPR14301(B)]
(ab180573)

All lanes : Anti-eIF4A3 antibody [EPR14301(B)] (ab180573) at 1/1000 dilution

Lane 1 : MCF7 cell line with NFDM

Lane 2 : HeLa cell line with NFDM

Lane 3 : Raji cell line with NFDM

Lane 4 : HepG2 cell line with NFDM

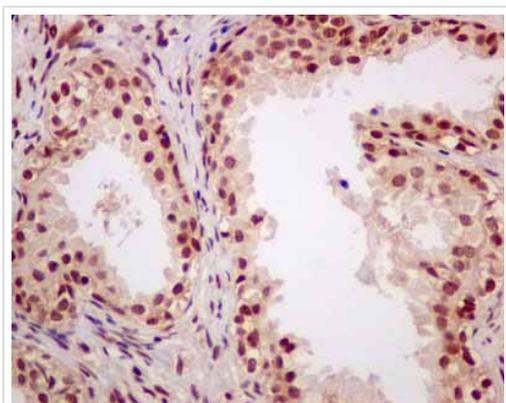
Lysates/proteins at 20 µg per lane.

Blocking peptides at 5 % per lane.

Secondary

All lanes : Goat Anti-rabbit HRP at 1/1000 dilution

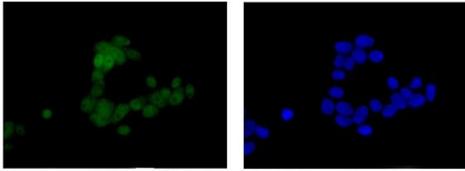
Predicted band size: 47 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-eIF4A3 antibody [EPR14301(B)] (ab180573)

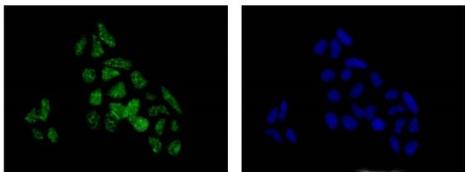
Immunohistochemical analysis of paraffin-embedded Human prostate tissue labeling eIF4A3 with ab180573 at 1/100 dilution. Prediluted (ready to use) HRP Polymer for Rabbit IgG was used as a secondary antibody. Counter stain: Hematoxylin.

Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



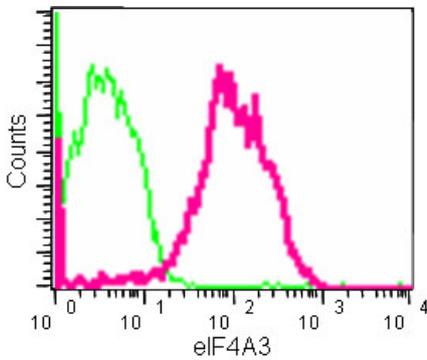
Immunocytochemistry/ Immunofluorescence - Anti-eIF4A3 antibody [EPR14301(B)] (ab180573)

Immunofluorescent analysis of 4% paraformaldehyde MCF7 cells labeling eIF4A3 with ab180573 at 1/500 dilution (green), or with Dapi counter stain (blue). Goat anti rabbit IgG (Dylight 488) was used as a secondary antibody, at a dilution of 1/200.



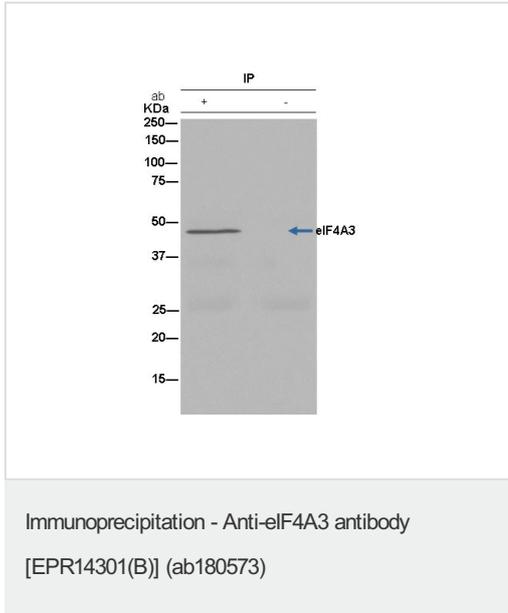
Immunocytochemistry/ Immunofluorescence - Anti-eIF4A3 antibody [EPR14301(B)] (ab180573)

Immunofluorescent analysis of 4% paraformaldehyde HeLa cells labeling eIF4A3 with ab180573 at 1/500 dilution (green), or with Dapi counter stain (blue). Goat anti rabbit IgG (Dylight 488) was used as a secondary antibody at a dilution of 1/200.



Flow Cytometry - Anti-eIF4A3 antibody [EPR14301(B)] (ab180573)

Flow cytometric analysis of 2% paraformaldehyde MCF7 cells labeling eIF4A3 with ab180573 at 1/160 dilution, or a rabbit monoclonal IgG isotype control. Secondary antibody used was goat anti rabbit IgG (FITC) at a 1/150 dilution.



Immunoprecipitation of HeLa labeling eIF4A3 using ab180573 at a 1/30 dilution (lane 1). Lane 2 shows the negative control. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG was used as a secondary antibody at a dilution of 1/1500. Blocking/dilution buffer and concentration: 5% NFDM/TBST.

All lanes : Anti-eIF4A3 antibody [EPR14301(B)] (ab180573) at 1/30 dilution

Lane 1 : HeLa cell lysate with NFDM

Lane 2 : Negative control with NFDM

Blocking peptides at 5 % per lane.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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