abcam

ab250752

Anti-EIF2S2/EIF2B antibody [EPR15833(B)] - 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	EPR15833(B)
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information EIF2S2

Function Component of the eIF2 complex that functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA (PubMed:31836389). This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form the 43S pre-initiation complex (43S PIC). Junction of the 60S ribosomal subunit to form the 80S initiation complex is preceded by hydrolysis of the GTP bound to eIF2 and release of an eIF2-GDP binary complex. In order for eIF2 to recycle and catalyze another round of initiation, the GDP bound to eIF2 must exchange with GTP by way of a reaction catalyzed by eIF2B (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

ab250752 is the carrier-free version of ab184549.

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	EIF2S2 also known as eukaryotic translation initiation factor 2 subunit 2 and EIF2B part of eukaryotic translation initiation factor 2B are key players in the initiation of protein synthesis. EIF2S2 is a 38.3 kDa protein and is expressed in various tissues including the brain liver and muscle. These factors form a complex that facilitates the exchange of GDP for GTP on the EIF2 complex important for the delivery of initiator tRNA to the ribosome.

Biological function summary	EIF2S2 and EIF2B are part of the eukaryotic translation initiation factor complex which plays a significant role in protein synthesis regulation under stress conditions. This complex senses cellular stress and decreases global protein synthesis by controlling the phosphorylation status of EIF2 allowing the selective translation of stress response proteins. This mechanism helps cells to conserve resources during unfavorable conditions while still expressing proteins necessary for survival.
Pathways	EIF2S2/EIF2B orchestrates the integrated stress response (ISR) pathway and the unfolded protein response (UPR) pathway. These pathways sense disruptions in protein folding and energy stress respectively. The phosphorylation of EIF2α related to these pathways is an important regulatory step that reduces general protein synthesis and channels the cellular machinery towards resolving stress.
Associated diseases and disorders	Defects in EIF2S2 and EIF2B contribute to disorders such as Vanishing White Matter disease and some cancers. Vanishing White Matter disease linked to mutations in EIF2B affects brain white matter and involves the regulation of stress responses through proteins like EIF2α. In certain cancers abnormalities in the EIF2 pathway can affect cell survival and proliferation linking the protein to tumorigenesis and cancer 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

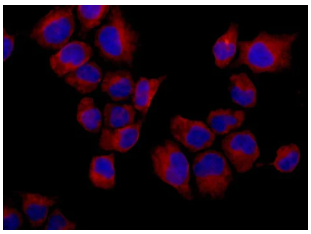
We do not recommend this combination. It is not covered by our product promise.

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.

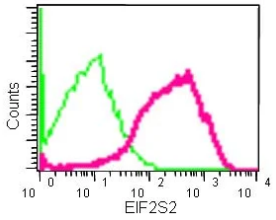
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-EIF2S2/EIF2B antibody [EPR15833(B)] - BSA and Azide free (ab250752)

EIF2S2/EIF2B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-EIF2S2/EIF2B antibody

This data was developed using ab184549, the same antibody clone in a different buffer formulation.
Immunofluorescent staining of 4% paraformaldehyde fixed HeLa cells labeling EIF2S2/EIF2B using ab184549 at a 1/500 dilution and Goat anti rabbit IgG (Alexa Fluor® 555) secondary at a 1/200 dilution, counterstained with Dapi.

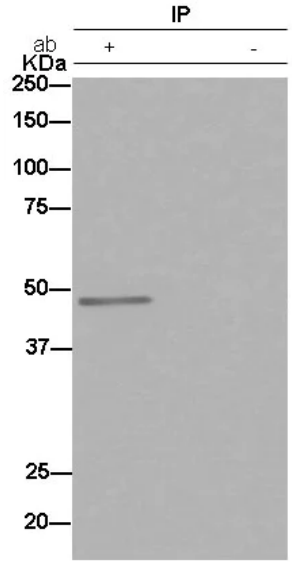


Flow Cytometry (Intracellular) - Anti-EIF2S2/EIF2B antibody [EPR15833(B)] - BSA and Azide free (ab250752)

EIF2S2/EIF2B Flow Cytometry (Intracellular) staining using rabbit Anti-EIF2S2/EIF2B antibody

This data was developed using ab184549, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 2% paraformaldehyde fixed 293 cells labeling EIF2S2/EIF2B using ab184549 at a 1/160 dilution (red) or a Rabbit monoclonal IgG control (green).

Secondary antibody: Goat anti rabbit IgG (FITC) secondary at a 1/150 dilution

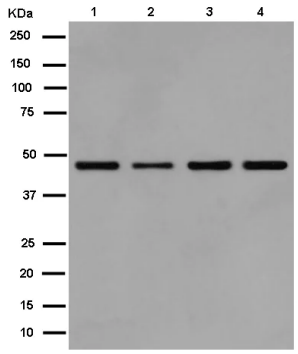


Immunoprecipitation - Anti-EIF2S2/EIF2B antibody [EPR15833(B)] - BSA and Azide free (ab250752)

This data was developed using ab184549, the same antibody clone in a different buffer formulation.
Western blot analysis of EIF2S2/EIF2B in immunoprecipitation pellets from Jurkat lysate. ab184549 used at a 1/50 dilution. Secondary antibody Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG used at a 1/1500 dilution. Right lane shows PBS negative control.

All lanes:
Immunoprecipitation - Anti-EIF2S2/EIF2B antibody [EPR15833(B)] (ab184549)

Predicted band size: 38 kDa



Western blot - Anti-EIF2S2/EIF2B antibody [EPR15833(B)] - BSA and Azide free (ab250752)

EIF2S2/EIF2B Western blot staining using rabbit Anti-EIF2S2/EIF2B antibody

This data was developed using ab184549, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-EIF2S2/EIF2B antibody [EPR15833(B)] (ab184549) at 1/20000 dilution

Lane 1:
HepG2 cell lysate at 20 µg

Lane 2:
HeLa cell lysate at 20 µg

Lane 3:
293T cell lysate at 20 µg

Lane 4:
Jurkat cell lysate at 20 µg

Secondary

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

Predicted band size: 38 kDa

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