abcam

ab249255

Anti-CYFIP1 antibody [EPR10782] - 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	EPR10782
Purification technique	Affinity purification Protein A

Reactivity data

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information CYFIP1

Function	Component of the CYFIP1-EIF4E-FMR1 complex which binds to the mRNA cap and mediates translational repression. In the CYFIP1-EIF4E-FMR1 complex this subunit is an adapter between EIF4E and FMR1. Promotes the translation repression activity of FMR1 in brain probably by mediating its association with EIF4E and mRNA (By similarity). Regulates formation of membrane ruffles and lamellipodia. Plays a role in axon outgrowth. Binds to F-actin but not to RNA. Part of the WAVE complex that regulates actin filament reorganization via its interaction with the Arp2/3 complex. Actin remodeling activity is regulated by RAC1. Regulator of epithelial morphogenesis. As component of the WAVE1 complex, required for

BDNF-NTRK2 endocytic trafficking and signaling from early endosomes (By similarity). May act as an invasion suppressor in cancers.

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

ab249255 is the carrier-free version of ab156016.

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	CYFIP1 also known as cytoplasmic FMR1-interacting protein 1 plays an important role in cellular processes including actin dynamics and translation regulation. This protein which has a mass of approximately 140 kDa interacts with FMRP and links to the ribosome controlling mRNA translation. CYFIP1 is expressed mostly in the brain but is also present in other tissues like blood. Researchers study CYFIP1 to understand its role in neural activity and cellular signaling processes.
Biological function summary	CYFIP1 operates as part of the WAVE regulatory complex which is critical for actin polymerization. This complex facilitates cytoskeletal reorganization essential for cellular movement and morphology. CYFIP1 influences synaptic plasticity an important process in neural signaling and cognitive functions. By interacting with other molecular components CYFIP1 impacts processes like memory formation and learning.
Pathways	CYFIP1 is integral to the Rac1 and Arp2/3 pathways which directly affect actin filament assembly. In these pathways CYFIP1 interacts with proteins such as NCKAP1 and ABI2 which play roles in the regulation of actin cytoskeleton reorganization. The involvement of CYFIP1 in these pathways highlights its importance in processes that require rapid cytoskeletal changes such as cell migration and synaptic growth.
Associated diseases and disorders	CYFIP1's function draws a connection to neurodevelopmental disorders and schizophrenia. Alterations in the expression of CYFIP1 have been observed in these conditions suggesting a link between its dysregulation and abnormal brain development. Moreover its interaction with the FMRP protein ties it to Fragile X syndrome characterized by cognitive impairment. Research into these associations provides valuable insight into potential therapeutic targets for these complex conditions.

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

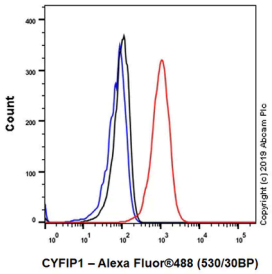
We do not recommend this combination. It is not covered by our product promise.

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.

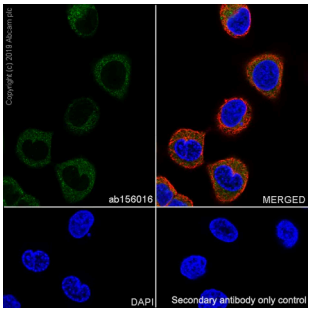
4 product images



Flow Cytometry (Intracellular) - Anti-CYFIP1 antibody [EPR10782] - BSA and Azide free (ab249255)

CYFIP1 Flow Cytometry (Intracellular) staining using rabbit Anti-CYFIP1 antibody

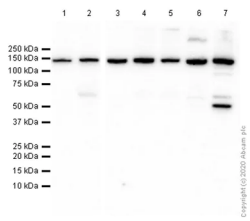
Intracellular Flow Cytometry analysis of 293T (Human embryonic kidney epithelial cell) cells labeling CYFIP1 with Purified ab156016 at 1/30 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab156016).



Immunocytochemistry/ Immunofluorescence - Anti-CYFIP1 antibody [EPR10782] - BSA and Azide free (ab249255)

CYFIP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CYFIP1 antibody

Immunocytochemistry/ Immunofluorescence analysis of A549 (Human lung carcinoma epithelial cell) cells labeling CYFIP1 with Purified ab156016 at 1/50 dilution (5.56 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab156016).



Western blot - Anti-CYFIP1 antibody [EPR10782] - BSA and Azide free (ab249255)

CYFIP1 Western blot staining using rabbit Anti-CYFIP1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab156016).
All lanes:
Western blot - Anti-CYFIP1 antibody [EPR10782] (ab156016) at 1/1000 dilution

Lane 1:
Human brain lysates at 20 µg

Lane 2:
Human lung lysates at 20 µg

Lane 3:
Mouse brain lysates at 20 µg

Lane 4:
Mouse lung lysates at 20 µg

Lane 5:
Mouse breast lysates at 20 µg

Lane 6:
Rat brain lysates at 20 µg

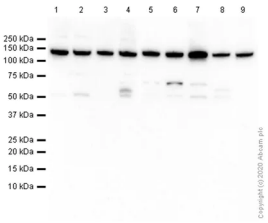
Lane 7:
Rat lung lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 145 kDa

Observed band size: 145 kDa



Western blot - Anti-CYFIP1 antibody [EPR10782] - BSA and Azide free (ab249255)

CYFIP1 Western blot staining using rabbit Anti-CYFIP1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab156016).
All lanes:
Western blot - Anti-CYFIP1 antibody [EPR10782] (ab156016) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Lane 2:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates at 20 µg

Lane 3:
A549 (Human lung carcinoma epithelial cell) whole cell lysates at 20 µg

Lane 4:
Neuro-2a (Mouse neuroblastoma neuroblast) whole cell lysates at 20 µg

Lane 5:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates at 20 µg

Lane 6:
C2C12 (Mouse myoblasts myoblast) whole cell lysates at 20 µg

Lane 7:
C6 (Rat glial tumor glial cell) whole cell lysates at 20 µg

Lane 8:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates at 20 µg

Lane 9:
Rat-1 (Rat embryonic fibroblast) whole cell lysates at 20 µg

Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 145 kDa

Observed band size: 145 kDa

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