abcam

ab249650

Anti-ARF4 antibody [EPR12133(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	EPR12133(B)
Purification technique	Affinity purification
Specificity	May cross react with family members, immunogen has 86% homology with ARF5.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ARF4

Function	GTP-binding protein that functions as an allosteric activator of the cholera toxin catalytic subunit, an ADP-ribosyltransferase. Involved in protein trafficking; may modulate vesicle budding and uncoating within the Golgi apparatus. Part of the ciliary targeting complex containing Rab11, ASAP1, Rabin8/RAB3IP, RAB11FIP3 and ARF4, which direct preciliary vesicle trafficking to mother centriole and ciliogenesis initiation (PubMed:25673879).

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

ab249650 is the carrier-free version of ab171746.

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	ADP-ribosylation factor 4 (ARF4) is a member of the ARF family of GTP-binding proteins also known as small GTPases. It has an approximate molecular mass of 21 kDa. ARF4 is expressed in various tissues including the liver kidney and pancreas. Mechanically ARF4 cycles between an active GTP-bound state and an inactive GDP-bound state. This cycling is important for regulating vesicle trafficking and membrane dynamics within cells.

Biological function summary	This protein plays a significant role in vesicular transport processes particularly in the Golgi apparatus. ARF4 forms part of protein complexes involved in trafficking between different organelles. It interacts with coat protein complex I (COPI) and clathrin-coated vesicles which help in cargo selection and budding process of vesicles. These interactions facilitate the movement of proteins and lipids within cells.
Pathways	The protein ARF4 integrates into the vesicular transport and Golgi transport pathways. It interacts with coatomer proteins which are responsible for retrograde transport from Golgi to ER maintaining normal cellular function. ARF4 also shows connection with proteins like ARF1 and ARF5 through these pathways. This involvement underlines its role in normal cellular homeostasis and protein sorting.
Associated diseases and disorders	Improper functioning of ARF4 links to neurodegenerative diseases and some forms of cancer. Alterations in ARF4 disrupt essential cellular trafficking contributing to diseases like Alzheimer's disease. In cancer abnormal ARF4 activity links with proteins like ARF1 where dysregulation affects cell growth and migration. Understanding these associations is critical to developing targeted therapies.

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

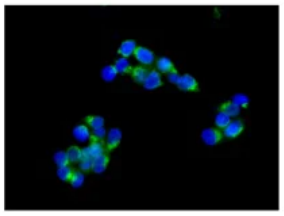
We do not recommend this combination. It is not covered by our product promise.

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.

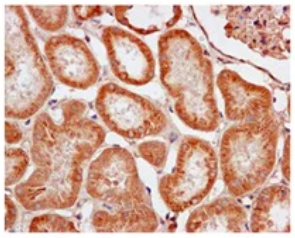
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-ARF4 antibody [EPR12133(B)] - BSA and Azide free (ab249650)

ARF4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ARF4 antibody

This data was developed using ab171746, the same antibody clone in a different buffer formulation.
Immunofluorescence analysis of HepG2 cells labeling ARF4 using ab171746 at 1/100 dilution (green). DAPI nuclear staining (blue).

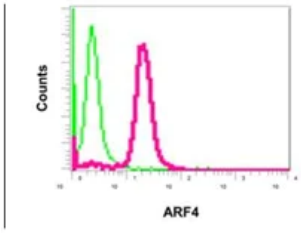


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ARF4 antibody [EPR12133(B)] - BSA and Azide free (ab249650)

ARF4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ARF4 antibody

This data was developed using ab171746, the same antibody clone in a different buffer formulation.
Immunohistochemistry of paraffin-embedded Human kidney tissue labeling ARF4 using ab171746 at 1/100 dilution.

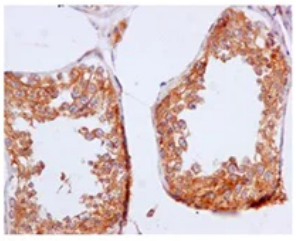
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-ARF4 antibody [EPR12133(B)] - BSA and Azide free (ab249650)

ARF4 Flow Cytometry (Intracellular) staining using rabbit Anti-ARF4 antibody

This data was developed using ab171746, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized K562 cells labeling ARF4 using ab171746 (red) at 1/10 dilution, or a rabbit IgG (negative) (green).

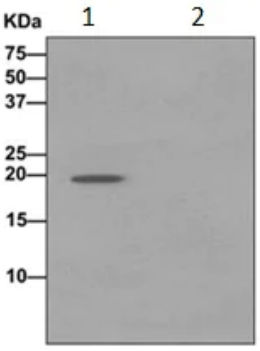


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ARF4 antibody [EPR12133(B)] - BSA and Azide free (ab249650)

ARF4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ARF4 antibody

This data was developed using ab171746, the same antibody clone in a different buffer formulation.
Immunohistochemistry of paraffin-embedded Human testis tissue labeling ARF4 using ab171746 at 1/100 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

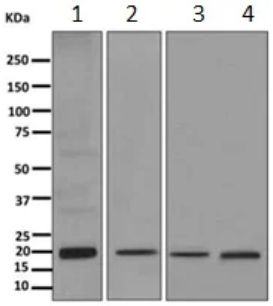


Immunoprecipitation - Anti-ARF4 antibody [EPR12133(B)] - BSA and Azide free (ab249650)

This data was developed using ab171746, the same antibody clone in a different buffer formulation.
Western blot analysis on immunoprecipitation pellet from (Lane 1) HepG2 cell lysate or (Lane 2) 1X PBS (negative control) using ab171746 at 1/10 dilution, and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.

All lanes:
Immunoprecipitation - Anti-ARF4 antibody [EPR12133(B)] (ab171746)

Predicted band size: 21 kDa



Western blot - Anti-ARF4 antibody [EPR12133(B)] - BSA and Azide free (ab249650)

ARF4 Western blot staining using rabbit Anti-ARF4 antibody

This data was developed using ab171746, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ARF4 antibody [EPR12133(B)] (ab171746) at 1/10000 dilution

Lane 1:
HT-29 cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
K562 cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Predicted band size: 21 kDa

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