abcam

ab250664

Anti-ARL2 antibody [EPR14436] - 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	EPR14436
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ADP-ribosylation factor-like protein 2

Function	Small GTP-binding protein which cycles between an inactive GDP-bound and an active GTP-bound form, and the rate of cycling is regulated by guanine nucleotide exchange factors (GEF) and GTPase-activating proteins (GAP). GTP-binding protein that does not act as an allosteric activator of the cholera toxin catalytic subunit. Regulates formation of new microtubules and centrosome integrity. Prevents the TBCD-induced microtubule destruction. Participates in association with TBCD, in the disassembly of the apical junction complexes. Antagonizes the effect of TBCD on epithelial cell detachment and tight and adherens junctions disassembly. Together with ARL2, plays a role in the nuclear translocation, retention and transcriptional activity of STAT3. Component of a regulated secretory pathway involved in Ca(2+)-dependent release of acetylcholine. Required for normal progress through the cell cycle (PubMed:10831612, PubMed:16525022, PubMed:18234692, PubMed:18588884, PubMed:20740604). Also regulates mitochondrial integrity and function (PubMed:30945270).

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

ab250664 is the carrier-free version of ab183510.

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	{ 'ARL2' } is a member of the ARF-like protein family and is also known as ADP-ribosylation factor-like protein 2. This small GTP-binding protein has a molecular mass of approximately 22 kDa. Researchers find it expressed in various human tissues including the kidney heart and brain. This wide expression suggests its relevance in multiple cellular functions. Through its involvement in microtubule dynamics ARL2 plays a role in cytoskeletal organization. Its presence in different cellular compartments is linked to diverse functions.
Biological function summary	{ 'ARL2' } is integral to intracellular transport and mitochondrial function. It forms a complex with other proteins such as cofactor D and ARL2BP to influence the stability and assembly of microtubules and assist in the correct folding of tubulin. ARL2 contributes to maintaining proper mitochondrial morphology and energy production. Additionally it participates in regulating apoptosis highlighting its versatility in cellular operations.
Pathways	{ 'ARL2' } functions within the MAPK/ERK signaling pathway which is vital for cell growth and differentiation. It also interacts with the mitochondrial import pathway cooperating with proteins like TOMM7 to regulate mitochondrial protein translocation. These interactions position ARL2 as an important intermediary step in relaying signals vital for cellular homeostasis and energy metabolism.
Associated diseases and disorders	Researchers have associated { 'ARL2' } with neurodegenerative diseases such as Charcot-Marie-Tooth disease type 2A. This association stems from its interaction with mitofusin 2 a protein critical for mitochondrial fusion. Additionally abnormalities in ARL2 expression have implications for certain cancers as disrupted microtubule dynamics can lead to unchecked cell division. Understanding these associations provides insights into the potential for ARL2 as a therapeutic target in disease treatment.

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.

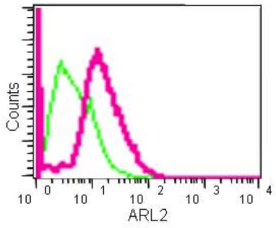
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

---

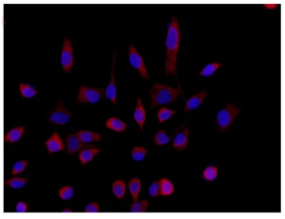
5 product images



Flow Cytometry (Intracellular) - Anti-ARL2 antibody [EPR14436] - BSA and Azide free (ab250664)

ARL2 Flow Cytometry (Intracellular) staining using rabbit Anti-ARL2 antibody

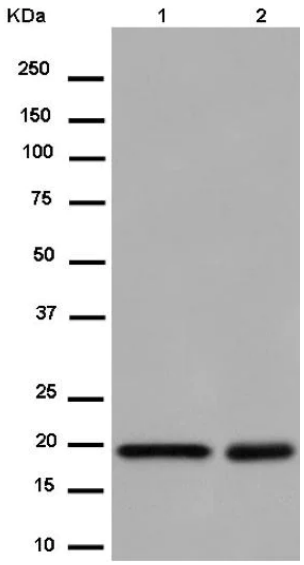
This data was developed using ab183510, the same antibody clone in a different buffer formulation.
Intracellular flow cytometrical analysis of T47D cells labeling ARL2 with ab183510 at 1/100 (green) or a rabbit IgG (negative) (red).



Immunocytochemistry/ Immunofluorescence - Anti-ARL2 antibody [EPR14436] - BSA and Azide free (ab250664)

ARL2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ARL2 antibody

This data was developed using ab183510, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of A549 cells labeling ARL2 with ab183510 at 1/250 (red) and DAPI staining (blue).



Western blot - Anti-ARL2 antibody [EPR14436] - BSA and Azide free (ab250664)

ARL2 Western blot staining using rabbit Anti-ARL2 antibody

This data was developed using ab183510, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ARL2 antibody [EPR14436] (ab183510) at 1/10000 dilution

Lane 1:
T-47D cell lysate at 20 µg

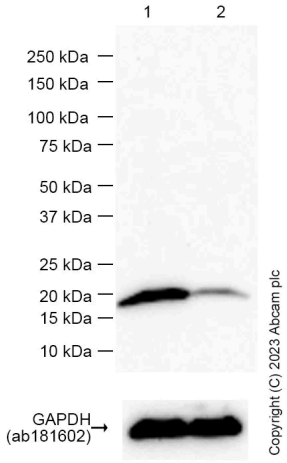
Lane 2:
A549 cell lysate at 20 µg

Secondary

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

Predicted band size: 21 kDa

Observed band size: 19 kDa



Western blot - Anti-ARL2 antibody [EPR14436] - BSA and Azide free (ab250664)

ARL2 Western blot staining using rabbit Anti-ARL2 antibody

This data was developed using ab183510, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ARL2 antibody [EPR14436] (ab183510) at 1/1000 dilution

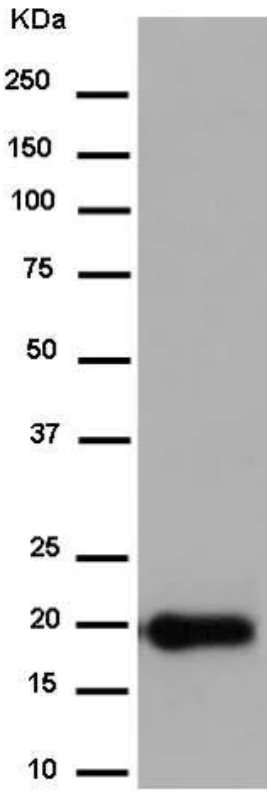
Lane 1:
A549 (Human lung carcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:
A549 (Human lung carcinoma epithelial cell) transfected with siRNA specifically targeting ARL2 whole cell lysate at 20 µg

Secondary

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

Exposure time: 120s



Western blot - Anti-ARL2 antibody [EPR14436] - BSA and Azide free (ab250664)

This data was developed using ab183510, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ARL2 antibody [EPR14436] (ab183510) at 1/2000 dilution

All lanes:
U937 (Human histiocytic lymphoma cell line) cell lysate at 20 µg

Secondary

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

Predicted band size: 21 kDa

Observed band size: 19 kDa

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