abcam

ab248468

Anti-ARPC2 antibody [EPR8533] - 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	EPR8533
Purification technique	Affinity purification Protein A
Dissociation constant	1 x 10^{-10} M
Concentration	0.999 - 1.013 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

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 ARPC2

Function	Actin-binding component of the Arp2/3 complex, a multiprotein complex that mediates actin polymerization upon stimulation by nucleation-promoting factor (NPF) (PubMed:9230079). The Arp2/3 complex mediates the formation of branched actin networks in the cytoplasm, providing the force for cell motility (PubMed:9230079). Seems to contact the mother actin filament (PubMed:9230079). In addition to its role in the cytoplasmic cytoskeleton, the Arp2/3 complex also promotes actin polymerization in the nucleus, thereby regulating gene transcription and repair of damaged DNA (PubMed:29925947). The Arp2/3 complex promotes homologous recombination (HR) repair in response to DNA damage by promoting nuclear actin polymerization, leading to drive motility of double-strand breaks (DSBs) (PubMed:29925947).

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

ab248468 is the carrier-free version of ab133315.

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	ARPC2 also known as p34-Arc is a critical component of the actin-related protein 2/3 complex (Arp2/3 complex) a protein complex that plays a major role in the regulation of the actin cytoskeleton. The molecular mass of ARPC2 is approximately 34 kDa. ARPC2 is highly expressed in several tissues including the brain lungs and the immune system. Its presence in diverse tissues suggests its fundamental role in various cellular processes.

Biological function summary	ARPC2 contributes to cell movement by promoting the nucleation of new actin filaments. It operates as part of the Arp2/3 complex which nucleates branches on pre-existing actin filaments a process necessary for the formation of a dynamic actin network within cells. The Arp2/3 complex where ARPC2 serves a structural and functional role is pivotal in cellular motility phagocytosis and endocytosis.
Pathways	ARPC2's involvement in cell shape and motility links it to signaling pathways such as the Rho GTPase pathway and the Wiskott-Aldrich syndrome protein (WASP) family member pathway. These pathways help modulate actin polymerization and cell movement. In these pathways ARPC2 works closely with proteins such as the Arp2/3 complex components and other regulatory elements like WASP which activates the complex to facilitate actin branching.
Associated diseases and disorders	ARPC2's role in regulating actin dynamics connects it to conditions such as cancer and autoimmune diseases. Abnormal ARPC2 expression or function can lead to dysregulated cell movement and immune responses contributing to cancer metastasis and autoimmune diseases like systemic lupus erythematosus. In these disorders ARPC2 interacts with proteins that control immune function and cell migration highlighting its importance in maintaining normal physiological processes.

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

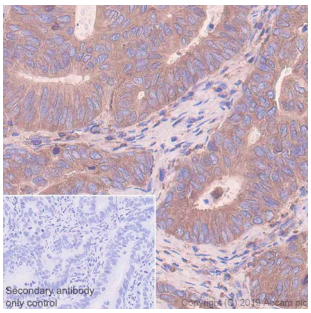
We do not recommend this combination. It is not covered by our product promise.

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.

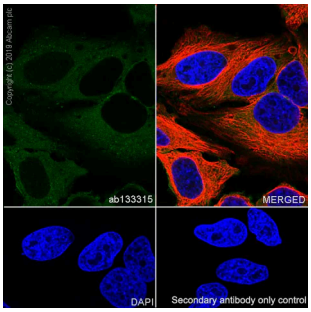
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ARPC2 antibody [EPR8533] - BSA and Azide free (ab248468)

ARPC2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ARPC2 antibody

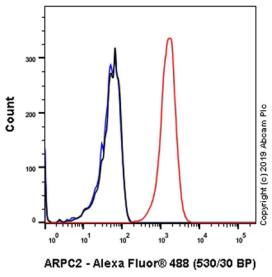
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human gastric carcinoma tissue sections labeling ARPC2 with purified ab133315 at 1/2000 dilution (0.25 µg/ml). Heat mediated antigen retrieval was performed Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133315)



Immunocytochemistry/ Immunofluorescence - Anti-ARPC2 antibody [EPR8533] - BSA and Azide free (ab248468)

ARPC2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ARPC2 antibody

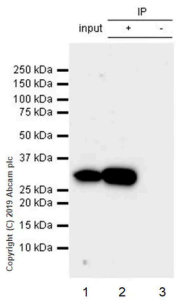
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling ARPC2 with purified ab133315 at 1:100 dilution (5.0 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha 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.



Flow Cytometry (Intracellular) - Anti-ARPC2 antibody [EPR8533] - BSA and Azide free (ab248468)

ARPC2 Flow Cytometry (Intracellular) staining using rabbit Anti-ARPC2 antibody

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling ARPC2 with purified ab133315 at 1/50 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 (ab133315)



Immunoprecipitation - Anti-ARPC2 antibody [EPR8533] - BSA and Azide free (ab248468)

ab133315 (purified) at 1/30 dilution (2 µg) immunoprecipitating ARPC2 in HEK-293 whole cell lysate.
Lane 1 (input): HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate 10 µg
Lane 2 (+): ab133315 & HEK-293 whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab133315 in HEK-293 whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133315)
All lanes:
Immunoprecipitation - Anti-ARPC2 antibody [EPR8533] (ab133315)

Predicted band size: 34 kDa

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