abcam

ab247497

Anti-Caveolin-2 antibody [EPR2220] - 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	EPR2220
Purification technique	Affinity purification
Concentration	1.022 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CAV2

Function	May act as a scaffolding protein within caveolar membranes. Interacts directly with G-protein alpha subunits and can functionally regulate their activity. Acts as an accessory protein in conjunction with CAV1 in targeting to lipid rafts and driving caveolae formation. The Ser-36 phosphorylated form has a role in modulating mitosis in endothelial cells. Positive regulator of cellular mitogenesis of the MAPK signaling pathway. Required for the insulin-stimulated nuclear translocation and activation of MAPK1 and STAT3, and the subsequent regulation of cell cycle progression (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

ab247497 is the carrier-free version of ab79397.

Species reactivity

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	Caveolin-2 often referred to as CAV2 is a 20-22 kDa integral membrane protein and an important component of caveolae small invaginations in the plasma membrane. It is mainly expressed in adipocytes endothelial cells pneumocytes and

	some smooth muscle cells. CAV2 works together with other caveolins primarily caveolin-1 to form these flask-shaped invaginations which play roles in various cellular processes.
Biological function summary	Caveolin-2 participates in modulating cellular functions such as signal transduction cholesterol homeostasis and endocytosis. As part of the caveolae complex it cooperates with caveolin-1 to regulate lipid raft domains influencing the movement and function of molecules within the cell. The presence of caveolin-2 helps maintain the caveolae structure and is involved in cellular responses to mechanical stress.
Pathways	Caveolin-2 is implicated in the regulation of insulin signaling and the Ras-MAPK signaling pathway. In the insulin signaling pathway it forms complexes with caveolin-1 and other proteins like IRS-1 affecting glucose uptake in cells. In the Ras-MAPK pathway caveolin-2 interacts with signaling molecules associated with the pathway modulating cell proliferation and survival.
Associated diseases and disorders	Caveolin-2 has been linked to cancer development and pulmonary disorders. Its interactions with caveolin-1 and other signaling proteins in cancer cells can influence tumor growth and metastasis. Additionally altered expression of caveolin-2 affects pulmonary disorders such as emphysema by impacting endothelial cell function. Understanding these connections helps in exploring potential therapeutic interventions.

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

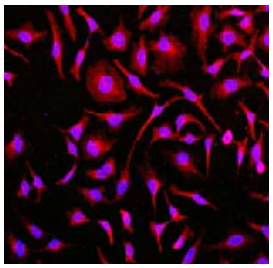
We do not recommend this combination. It is not covered by our product promise.

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.

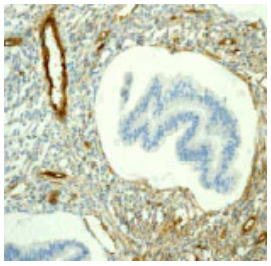
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-Caveolin-2 antibody [EPR2220] - BSA and Azide free (ab247497)

Caveolin-2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Caveolin-2 antibody

This data was developed using ab79397, the same antibody clone in a different buffer formulation. ab79397 at 1/100 dilution staining Caveolin-2 in HeLa cells by Immunofluorescence.

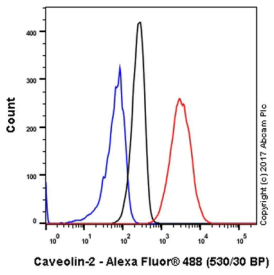


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caveolin-2 antibody [EPR2220] - BSA and Azide free (ab247497)

Caveolin-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Caveolin-2 antibody

This data was developed using ab79397, the same antibody clone in a different buffer formulation. ab79397 at 1/100 dilution staining Caveolin-2 in human uterus by Immunohistochemistry using paraffin-embedded tissue. Note staining of endothelial cells and smooth muscles.

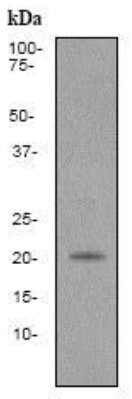
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Caveolin-2 antibody [EPR2220] - BSA and Azide free (ab247497)

Caveolin-2 Flow Cytometry (Intracellular) staining using rabbit Anti-Caveolin-2 antibody

This data was developed using ab79397, the same antibody clone in a different buffer formulation. Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Caveolin-2 (red) with ab79397 at a 1/2000 dilution. Cells were fixed with 80% methanol and permeabilized with 0.1% Tween-20. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.



Western blot - Anti-Caveolin-2 antibody [EPR2220] - BSA and Azide free (ab247497)

This data was developed using ab79397, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Caveolin-2 antibody [EPR2220] - Caveolae Marker (ab79397) at 1/5000 dilution

All lanes:
HeLa cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated at 1/2000 dilution

Predicted band size: 18 kDa

Observed band size: 20 kDa

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