abcam

ab248366

Anti-ORP1 antibody [EPR8646] - 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	EPR8646
Purification technique	Affinity purification Protein A
Concentration	0.981 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
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 OSBPL1A

Function	Binds phospholipids; exhibits strong binding to phosphatidic acid and weak binding to phosphatidylinositol 3-phosphate (By similarity). Stabilizes GTP-bound RAB7A on late endosomes/lysosomes and alters functional properties of late endocytic compartments via its interaction with RAB7A (PubMed:16176980). Binds 25-hydroxycholesterol and cholesterol (PubMed:17428193).

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

ab248366 is the carrier-free version of ab131165.

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	ORP1 also known as oxysterol-binding protein-related protein 1 is a member of the OSBP (oxysterol-binding protein) family. It functions as a lipid transfer protein involved in the regulation of intracellular lipid dynamics. ORP1 weighs approximately 108 kDa and is ubiquitously expressed in various tissues with higher levels in the liver and brain. The protein interacts with lipids and plays a role in the control of cholesterol and phosphoinositide levels by transporting them between cellular membranes.
Biological function summary	ORP1 engages in intracellular lipid transport influencing lipid homeostasis and vesicular trafficking. It is part of a protein complex that associates with late endosomes and the endoplasmic reticulum membrane. ORP1 contributes to the regulation of endosomal positioning and transport by modulating the activity of motor proteins on endosomal surfaces. This protein interaction assists in maintaining an appropriate balance of cholesterol and other sterols within cells impacting overall cellular health.
Pathways	Several cellular mechanisms involve ORP1 including the sterol regulatory element-binding protein (SREBP) pathway and the PI3K/Akt signaling pathway. ORP1 interacts with NPC1 a protein critical for cholesterol transport within the SREBP pathway to facilitate the regulation of lipid metabolism. Furthermore ORP1 influences the PI3K/Akt signaling pathway by interacting with other lipid-related proteins coordinating cellular responses to lipid levels and adapting to changes in nutritional states.
Associated diseases and disorders	Abnormalities related to ORP1 function have connections to neurodegenerative diseases and metabolic syndromes. In neurodegenerative conditions like Niemann-Pick disease ORP1 interacts with the NPC1 and NPC2 proteins both of which are important for normal cholesterol trafficking. In metabolic disorders this protein's role in lipid regulation links it to obesity and associated metabolic syndrome where dysregulation of lipid storage and transport is common. These connections render ORP1 a potential target for therapeutic intervention in these diseases.

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.

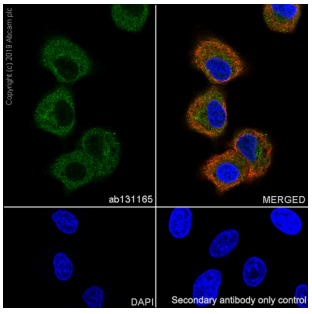
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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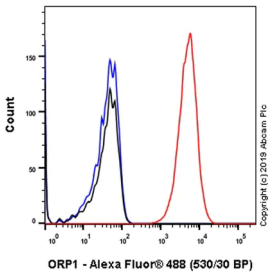
2 product images



Immunocytochemistry/ Immunofluorescence - Anti-ORP1 antibody [EPR8646] - BSA and Azide free (ab248366)

ORP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ORP1 antibody

Immunocytochemistry/ Immunofluorescence analysis of A549 (Human lung carcinoma epithelial cell) cells labeling ORP1 with purified ab131165 at 1:200 dilution (2.8 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 (anti orp1 antibody epr8646 immunocytochemistry a549 human)



Flow Cytometry (Intracellular) - Anti-ORP1 antibody [EPR8646] - BSA and Azide free (ab248366)

ORP1 Flow Cytometry (Intracellular) staining using rabbit Anti-ORP1 antibody

Intracellular Flow Cytometry analysis of A549 (Human lung carcinoma epithelial cell) cells labeling ORP1 with purified ab131165 at 1/60 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 (ab131165)

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