abcam

ab250278

Anti-COPE antibody [EPR12579] - 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	EPR12579
Purification technique	Affinity purification Protein A

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information Coatomer subunit epsilon

Function The coatomer is a cytosolic protein complex that binds to dilysine motifs and reversibly associates with Golgi non-clathrin-coated vesicles, which further mediate biosynthetic protein transport from the ER, via the Golgi up to the trans Golgi network. The coatomer complex is required for budding from Golgi membranes, and is essential for the retrograde Golgi-to-ER transport of dilysine-tagged proteins. In mammals, the coatomer can only be recruited by membranes associated with ADP-ribosylation factors (ARFs), which are small GTP-binding proteins; the complex also influences the Golgi structural integrity, as well as the processing, activity, and endocytic recycling of LDL receptors (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

ab250278 is the carrier-free version of ab180946.

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	The COPE protein also known as Coatomer Protein Complex Subunit E is a component of the COPI coatomer complex. This protein roughly weighs approximately 34 kDa and is present in the Golgi apparatus where it takes part in vesicle formation processes. COPE is expressed in numerous cell types highlighting its importance in intracellular transport mechanisms and maintaining cellular organization.

Biological function summary	COPE plays a significant role in the retrograde transport of proteins from the Golgi back to the endoplasmic reticulum being part of the larger COPI complex. The COPI coatomer complex operates in conjunction with other coat proteins like clathrin to ensure vesicle trafficking and membrane dynamics. This mechanism is essential for membrane recycling protein sorting and other cellular logistics.
Pathways	COPE is important in the secretory pathway. It interacts closely with other components like ARF1 a small GTPase that regulates coat assembly and disassembly to maintain efficient protein sorting. Moreover COPE's role intersects with the ER-to-Golgi transport pathway acting alongside proteins like Sec27 demonstrating its connection within a tightly regulated trafficking network essential for cellular function.
Associated diseases and disorders	COPE’s malfunction associates with neurodegenerative diseases. Disruption in its role in vesicular trafficking can lead to protein aggregation disorders like Alzheimer's disease where protein accumulation becomes pathogenic. COPE interaction with proteins such as APP (Amyloid Precursor Protein) becomes evident in the pathology of Alzheimer's showcasing its importance in disease progression.

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

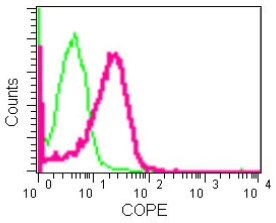
We do not recommend this combination. It is not covered by our product promise.

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.

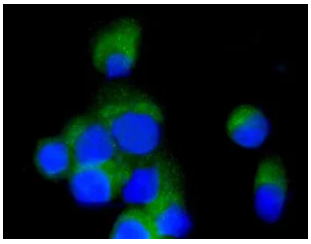
4 product images



Flow Cytometry (Intracellular) - Anti-COPE antibody [EPR12579] - BSA and Azide free (ab250278)

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

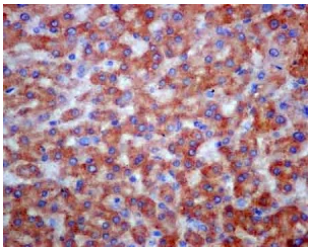
This data was developed using ab180946, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of A375 cells labeling COPE using ab180946 at a 1/70 dilution (pink). Goat anti rabbit IgG (FITC) used as the secondary at a 1/150 dilution. Isotype control Rabbit monoclonal IgG (green). Cells were fixed in 2% paraformaldehyde.



Immunocytochemistry/ Immunofluorescence - Anti-COPE antibody [EPR12579] - BSA and Azide free (ab250278)

COPE Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-COPE antibody

This data was developed using ab180946, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of formaldehyde fixed MCF-7 cells labeling COPE using ab180946 at a 1/50 dilution. A Goat anti rabbit IgG (Alexa Fluor®488) was used as the secondary at a 1/200 dilution. Counterstain DAPI.

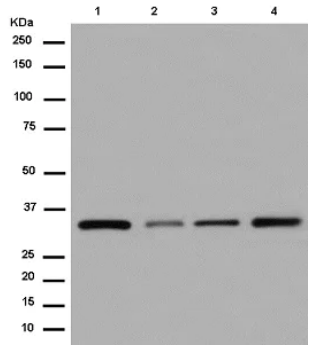


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COPE antibody [EPR12579] - BSA and Azide free (ab250278)

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

This data was developed using ab180946, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin embedded Human liver tissue sections labeling COPE using ab180946 at a 1/50 dilution. A ready to use HRP Polymer for Rabbit IgG was used as the secondary. Hematoxylin counterstain.

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



Western blot - Anti-COPE antibody [EPR12579] - BSA and Azide free (ab250278)

COPE Western blot staining using rabbit Anti-COPE antibody

This data was developed using ab180946, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-COPE antibody [EPR12579] (ab180946) at 1/5000 dilution

Lane 1:
MCF-7 cell lysate at 20 µg

Lane 2:
PC-3 cell lysate at 20 µg

Lane 3:
HeLa cell lysate at 20 µg

Lane 4:
A375 cell lysate at 20 µg

Secondary

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

Predicted band size: 34 kDa

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