abcam

ab247311

Anti-CAB39/MO25 antibody [EP1680Y] - 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	EP1680Y
Purification technique	Affinity purification Protein A
Concentration	1.028 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	We strongly recommend that customers perform an antigen retireval step.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

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 CAB39

Function	Component of a complex that binds and activates STK11/LKB1. In the complex, required to stabilize the interaction between CAB39/MO25 (CAB39/MO25alpha or CAB39L/MO25beta) and STK11/LKB1.

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

ab247311 is the carrier-free version of ab51132.

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	CAB39 also known as MO25 is a protein that plays an important role in cellular signaling. It has a mass of about 40 kDa and is predominantly expressed in the cytoplasm. CAB39 is part of the STE20-related kinase adaptor (STRAD) complex and functions to stabilize the scaffolding necessary for various kinase interactions. This protein is a subunit of the LKB1 complex essential for kinase activity. It modulates activity by binding to other proteins like STRAD and LKB1 enhancing their stability and function.
Biological function summary	CAB39 influences several cellular processes by acting as a scaffolding protein. It is an integral component of the LKB1-STRAD-MO25 complex essential for proper kinase activity. This complex regulates AMPK signaling pathways which are important for cellular energy homeostasis and metabolism. CAB39 by interacting with these kinases regulates energy balance within cells particularly muscle and liver tissues. This regulation influences cell polarity and growth impacting cell survival and division.
Pathways	CAB39 is significant in both the AMPK and mTOR signaling pathways playing a role in energy sensing and cellular growth regulation. In these pathways CAB39 modulates the activity of proteins like AMPK and LKB1. The AMPK pathway is important for maintaining energy homeostasis and is activated under low energy conditions while the mTOR pathway relates to cell growth and autophagy. CAB39's role in these pathways highlights its importance in controlling metabolic responses to nutrient availability and stress.
Associated diseases and disorders	CAB39 has implications in cancer and metabolic syndromes. Alterations in its function can disrupt normal AMPK and mTOR signaling leading to unchecked cell proliferation observed in cancer particularly in Peutz-Jeghers syndrome where LKB1 mutations are common. Additionally defects in CAB39-related pathways can lead to metabolic disorders like type 2 diabetes. By regulating AMPK activity CAB39

interacts indirectly with proteins such as PRKAA1 and PRKAA2 influencing insulin sensitivity and glucose metabolism.

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

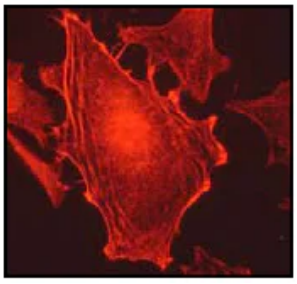
We do not recommend this combination. It is not covered by our product promise.

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.

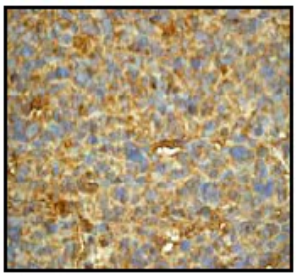
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-CAB39/MO25 antibody [EP1680Y] - BSA and Azide free (ab247311)

CAB39/MO25 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CAB39/MO25 antibody

This data was developed using ab51132, the same antibody clone in a different buffer formulation.Immunofluorescent staining of HeLa cells using ab51132 (1:100).

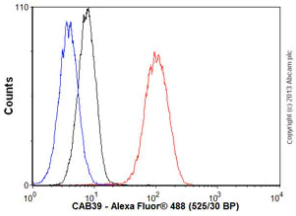


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CAB39/MO25 antibody [EP1680Y] - BSA and Azide free (ab247311)

CAB39/MO25 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CAB39/MO25 antibody

This data was developed using ab51132, the same antibody clone in a different buffer formulation. ab51132 (1:100) staining human CAB39/MO25 in human brain tissue by immunohistochemistry using paraffin embedded tissue.

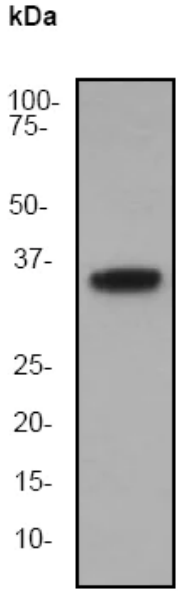
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-CAB39/MO25 antibody [EP1680Y] - BSA and Azide free (ab247311)

CAB39/MO25 Flow Cytometry (Intracellular) staining using rabbit Anti-CAB39/MO25 antibody

This data was developed using ab51132, the same antibody clone in a different buffer formulation. Overlay histogram showing HeLa cells stained with ab51132 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab51132, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Western blot - Anti-CAB39/MO25 antibody [EP1680Y] - BSA and Azide free (ab247311)

This data was developed using ab51132, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-CAB39/MO25 antibody [EP1680Y] (ab51132) at 1/20000 dilution

All lanes:
HeLa cell lysate at 10 µg

Secondary

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

Predicted band size: 40 kDa

Observed band size: 35 kDa

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