abcam

ab175212

Anti-CAPZB antibody [EPR10236]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR10236
Purification technique	Affinity purification Protein A
Concentration	0.165 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Expected

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

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information F-actin-capping protein subunit beta

Function

F-actin-capping proteins bind in a Ca(2+)-independent manner to the fast growing ends of actin filaments (barbed end) thereby blocking the exchange of subunits at these ends. Unlike other capping proteins (such as gelsolin and severin), these proteins do not sever actin filaments. Plays a role in the regulation of cell morphology and cytoskeletal organization. Forms, with CAPZB, the barbed end of the fast growing ends of actin filaments in the dynactin complex and stabilizes dynactin structure. The dynactin multiprotein complex activates the molecular motor dynein for ultra-processive transport along microtubules (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CAPZB also known as the capping protein beta subunit is an essential component of the actin cytoskeleton. It has a molecular mass of about 31 kDa and is expressed ubiquitously across various human tissues. CAPZB partners with CAPZA to form a heterodimeric complex called the capping protein which binds to the barbed ends of actin filaments. This binding is essential for regulating actin filament growth and stability by preventing the addition and loss of actin monomers at these ends.
Biological function summary	The capping of actin filaments by CAPZB helps maintain cellular structures and enables extensive processes like cell motility. CAPZB is an important part of the actin-capping activity within the capping protein complex. It directly affects processes such as muscle contraction cell migration and cell adhesion by modulating actin dynamics. Through these functions CAPZB impacts various cell types including muscle cells and neurons by ensuring proper assembly and function of actin networks.
Pathways	CAPZB plays a prominent role in the regulation of actin-associated pathways including the Arp2/3 complex pathway and the WAVE regulatory complex pathway. These pathways are involved in the control of actin nucleation and branching which are vital for reshaping the actin cytoskeleton in response to cellular signals. CAPZB interacts with proteins such as profilin and cofilin which are important for actin polymerization and depolymerization dynamics in these pathways.

Associated diseases and disorders	CAPZB has shown links to cardiac hypertrophy and neurological disorders like Alzheimer's disease. Aberrations in CAPZB function can lead to disrupted actin dynamics affecting cardiac tissue structure and neuron morphology. In cardiac hypertrophy CAPZB's interactions with sarcomeric proteins like troponin are important while in Alzheimer's disease altered CAPZB function may connect with tau protein modifications impacting the cytoskeletal network within neurons.

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

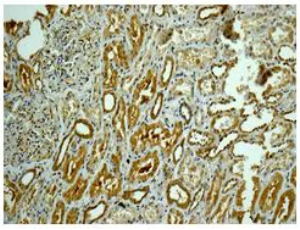
We do not recommend this combination. It is not covered by our product promise.

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.

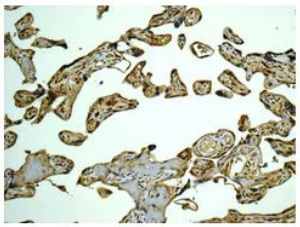
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CAPZB antibody [EPR10236] (ab175212)

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

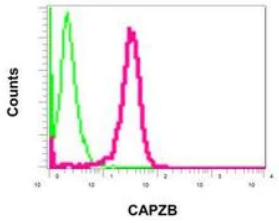
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling CAPZB with ab175212 at 1/100 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CAPZB antibody [EPR10236] (ab175212)

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

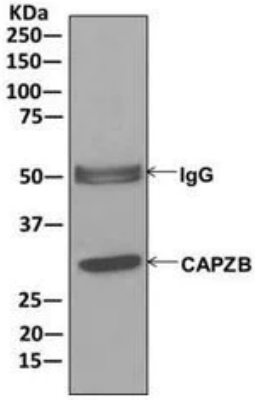
Immunohistochemical analysis of paraffin-embedded Human placenta tissue labeling CAPZB with ab175212 at 1/100 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-CAPZB antibody [EPR10236] (ab175212)

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

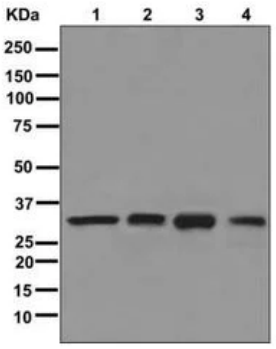
Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling CAPZB with ab175212at 1/10 dilution (red) compared toa Rabbit IgG negative control (green).



Immunoprecipitation - Anti-CAPZB antibody [EPR10236] (ab175212)

Western blot analysis on immunoprecipitation pellet from Jurkat cell lysate using ab175212.
All lanes:
Immunoprecipitation - Anti-CAPZB antibody [EPR10236] (ab175212)

Predicted band size: 26 kDa, 31 kDa



Western blot - Anti-CAPZB antibody [EPR10236] (ab175212)

All lanes:
Western blot - Anti-CAPZB antibody [EPR10236] (ab175212) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
Jurkat cell lysate at 10 µg

Lane 4:
A431 cell lysate at 10 µg

Predicted band size: 31 kDa

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