abcam

ab246357

Anti-EB3 antibody [EPR11421(B)] - 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	EPR11421(B)
Purification technique	Affinity purification Protein A
Concentration	0.959 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Rat, Human, Mouse
Dilution info	-
Notes	-

WB

Expected

Species	Rat, Human, Mouse
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 MAPRE3

Function Plus-end tracking protein (+TIP) that binds to the plus-end of microtubules and regulates the dynamics of the microtubule cytoskeleton (PubMed:19255245, PubMed:28814570). Promotes microtubule growth (PubMed:19255245, PubMed:28814570). May be involved in spindle function by stabilizing microtubules and anchoring them at centrosomes (PubMed:19255245, PubMed:28814570). Also acts as a regulator of minus-end microtubule organization: interacts with the complex formed by AKAP9 and PDE4DIP, leading to recruit CAMSAP2 to the Golgi apparatus, thereby tethering non-centrosomal minus-end microtubules to the Golgi, an important step for polarized cell movement (PubMed:28814570). Promotes elongation of CAMSAP2-decorated microtubule stretches on the minus-end of microtubules (PubMed:28814570).

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

ab246357 is the carrier-free version of ab157217.

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	EB3 also known as End-binding protein 3 is a microtubule-associated protein with a molecular weight of approximately 32 kDa. This protein belongs to the EB family of proteins which includes EB1 and EB2. EB3 facilitates microtubule dynamics by binding to the plus ends of microtubules and playing a role in their stabilization and elongation. Researchers have observed its expression in various tissues with a notable presence in neuronal tissues where it supports complex cellular activities.
Biological function summary	EB3 interacts with other end-binding proteins as part of the plus-end tracking complex often abbreviated as +TIPs. This complex modulates the behavior of microtubules essential for processes like mitosis and cell migration. EB3's interaction within this complex stabilizes microtubules at the growing edge important for neuronal development and synaptic function. Additionally EB3 helps in intracellular signaling through direct interaction with other microtubule-associated proteins thereby contributing to cellular structural integrity.
Pathways	EB3 plays an integral role in the Wnt signaling pathway and the microtubule polymerization regulation pathway. These pathways are important for normal cell division and signaling. In the Wnt signaling pathway EB3 interacts with proteins

	like APC essential for the pathway's downstream signaling events that influence cell polarity and differentiation. Moreover its involvement in the polymerization regulation pathway helps in facilitating effective cargo transport along microtubules.
Associated diseases and disorders	EB3 has been linked to neurodegenerative diseases such as Alzheimer's disease and certain types of cancer. Abnormalities in EB3 expression and function can lead to disruptions in microtubule stability contributing to the pathogenesis of these conditions. EB3's connection with tau protein further highlights its role in Alzheimer's where tau aggregation negatively affects microtubule function. In cancer alterations in EB3 expression influence tumor progression by impacting cell motility and invasiveness with implications for metastasis development.

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

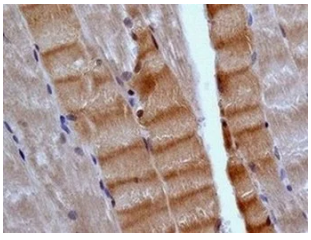
We do not recommend this combination. It is not covered by our product promise.

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

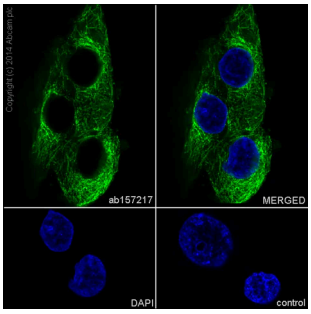


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EB3 antibody [EPR11421(B)] - BSA and Azide free (ab246357)

EB3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-EB3 antibody

Immunohistochemical analysis of paraffin embedded human skeletal muscle tissue labeling EB3 with ab157217 at 1/250.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab157217).

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

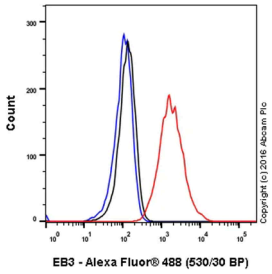


Immunocytochemistry/ Immunofluorescence - Anti-EB3 antibody [EPR11421(B)] - BSA and Azide free (ab246357)

EB3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-EB3 antibody

Immunocytochemistry/Immunofluorescence analysis of SH-SY5Y (Human neuroblastoma cell line from bone marrow) cells labeling EB3 with purified ab157217 at a dilution of 1/500. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. Nuclei counterstained with DAPI (blue).
Control: PBS only.

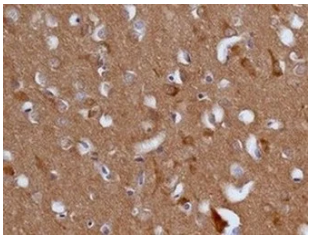
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab157217).



Flow Cytometry (Intracellular) - Anti-EB3 antibody [EPR11421(B)] - BSA and Azide free (ab246357)

EB3 Flow Cytometry (Intracellular) staining using rabbit Anti-EB3 antibody

Intracellular Flow Cytometry analysis of U87-MG (human glioblastoma) cells labeling EB3 with unpurified ab157217 at 1/20 dilution (10µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab157217).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EB3 antibody [EPR11421(B)] - BSA and Azide free (ab246357)

EB3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-EB3 antibody

Immunohistochemical analysis of paraffin embedded human brain tissue labeling EB3 with ab157217 at 1/250.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab157217).

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

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