abcam

ab249602

Anti-TUBB2A+TUBB2B antibody [EPR11843] - 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	EPR11843
Purification technique	Affinity purification
Concentration	1.005 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information TUBB2A

Function	Tubulin is the major constituent of microtubules, a cylinder consisting of laterally associated linear protofilaments composed of alpha- and beta-tubulin heterodimers. Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms. Below the cap, tubulin dimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin.

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

ab249602 is the carrier-free version of ab170931.

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	TUBB2A and TUBB2B are members of the tubulin family which forms microtubules. Together they play an important role in providing structural support within cells. TUBB2A is sometimes referred to as tubulin beta-2A chain whereas TUBB2B is known as tubulin beta-2B chain. Both TUBB2A and TUBB2B have a molecular mass of approximately 50 kDa. These proteins are expressed mainly in neurons contributing to the formation of the microtubule network essential for cell shape intracellular transport and cell division.
Biological function summary	TUBB2A and TUBB2B are integral to the assembly of microtubules which are part of the cytoskeleton complex. These microtubules provide a framework that maintains cell shape and facilitates the transport of organelles and vesicles within neurons. In the neuronal environment TUBB2A and TUBB2B are critical for axon guidance and neuronal migration aiding the proper wiring of the nervous system during development. These proteins are also involved in stabilizing the dynamic

	instability of microtubules ensuring that they can undergo rapid growth and shrinkage as needed.
Pathways	TUBB2A and TUBB2B play a role in the cytoskeletal regulation pathway which controls cellular architecture and movement. They work in conjunction with other tubulin isotypes to polymerize microtubules that are involved in the mitotic spindle formation during cell division. Additionally these proteins interact with microtubule-associated proteins (MAPs) for the regulation of microtubule stability and dynamics. TUBB2A and TUBB2B also relate to the neuronal development pathway aligning with proteins like MAP2 and tau that stabilize microtubule structures specifically in neurons.
Associated diseases and disorders	Mutations in TUBB2A and TUBB2B have been linked to developmental brain disorders such as polymicrogyria and pachygyria. These conditions are characterized by abnormal brain development which can lead to intellectual disability epilepsy or other neurological problems. TUBB2A and TUBB2B mutations may disrupt the function of related proteins like GABRB2 which is involved in neurotransmission contributing to altered neuronal connectivity and function. Their dysfunction affects microtubule dynamics resulting in improper neuronal migration and brain formation.

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

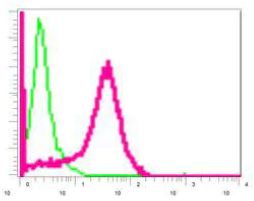
We do not recommend this combination. It is not covered by our product promise.

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.

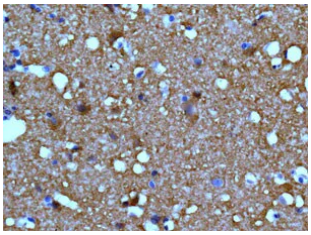
4 product images



Flow Cytometry (Intracellular) - Anti-TUBB2A+TUBB2B antibody [EPR11843] - BSA and Azide free (ab249602)

TUBB2A+TUBB2B Flow Cytometry (Intracellular) staining using rabbit Anti-TUBB2A+TUBB2B antibody

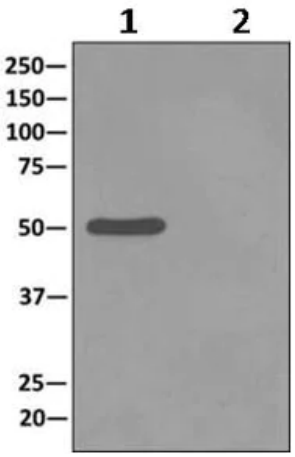
This data was developed using ab170931, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling TUBB2A with ab170931 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TUBB2A+TUBB2B antibody [EPR11843] - BSA and Azide free (ab249602)

This data was developed using ab170931, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human brain tissue labeling TUBB2A and TUBB2B with ab170931 at 1/100 dilution.

Heat mediated antigen retrieval performed with citrate buffer pH 6 before commencing with IHC staining protocol.



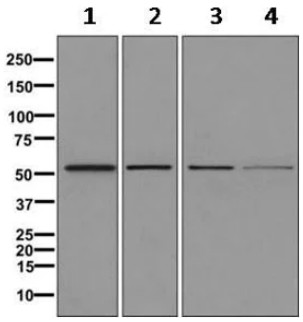
Immunoprecipitation - Anti-TUBB2A+TUBB2B antibody [EPR11843] - BSA and Azide free (ab249602)

This data was developed using ab170931, the same antibody clone in a different buffer formulation.
Western blot analysis on immunoprecipitation pellet from 293T cell lysate (Lane 1) or 1X PBS (negative control) (Lane 2) using ab170931 and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.

Lane 1 Primary: ab170931, 1/10000 dilution
Sample: Immunoprecipitation pellet from 293T cell lysate
Secondary: HRP-conjugated anti-rabbit IgG

Lane 2 Primary: ab170931, 1/10000 dilution
Sample: 1X PBS (negative control)
Secondary: HRP-conjugated anti-rabbit IgG

All lanes:
Immunoprecipitation - Anti-TUBB2A + TUBB2B antibody [EPR11843] (ab170931)



Western blot - Anti-TUBB2A+TUBB2B antibody [EPR11843] - BSA and Azide free (ab249602)

TUBB2A+TUBB2B Western blot staining using rabbit Anti-TUBB2A+TUBB2B antibody

This data was developed using ab170931, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-TUBB2A + TUBB2B antibody [EPR11843] (ab170931) at 1/10000 dilution

Lane 1:
293T cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
Jurkat cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Secondary

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

Predicted band size: 50 kDa

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