abcam

ab170931

Anti-TUBB2A + TUBB2B antibody [EPR11843]

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	EPR11843
Purification technique	Affinity purification Protein A
Concentration	0.101 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	1/100 - 1/250
Notes	-

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	1/10000 - 1/50000
Notes	-

Predicted

Species	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 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	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	The TUBB2A and TUBB2B proteins also known as tubulin beta-2A and beta-2B chains are components of microtubules. These proteins have a molecular mass of approximately 50 kDa each and play roles in the cytoskeleton of cells. TUBB2A and TUBB2B are expressed in various tissues with notable expression in the brain. They participate in the dynamic assembly and disassembly of microtubules which are essential for many cellular processes including maintaining cell shape enabling intracellular transport and facilitating cell division.
Biological function summary	TUBB2A and TUBB2B contribute to the formation of the microtubule network that supports cellular functions. These proteins are integral parts of the cytoskeletal complex interacting with alpha-tubulin to form tubulin dimers. This dimeric structure then polymerizes to build microtubules. Their involvement in mitosis helps ensure proper chromosome segregation which is vital for the accurate transmission of genetic information during cell division. TUBB2A and TUBB2B also support neurite outgrowth and are important for neuronal development and function.
Pathways	The TUBB2A and TUBB2B proteins are essential in the mitotic spindle assembly contributing to the spindle checkpoint pathway. This pathway ensures that chromosomes are correctly aligned and attached to spindle fibers before anaphase begins. They also participate in the regulation of the MAPK/ERK signaling pathway which is important for cell growth and differentiation. Related proteins in these pathways include MAD2 which monitors the spindle assembly checkpoint and RAF a kinase in the MAPK pathway.

Associated diseases and disorders	Mutations in TUBB2A and TUBB2B have links to cortical dysplasia and polymicrogyria which are brain malformations characterized by disorganized brain tissue. These conditions can lead to developmental delays seizures and cognitive impairments. Additionally the TUBB2A and TUBB2B are related to tau a microtubule-associated protein which when altered relates to neurodegenerative diseases like Alzheimer's. The abnormal function of tau proteins can disrupt microtubule stability and lead to cell death in 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

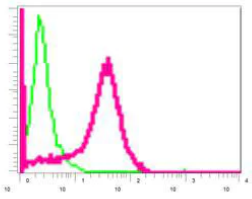
We do not recommend this combination. It is not covered by our product promise.

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.

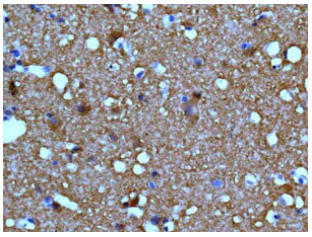
4 product images



Flow Cytometry (Intracellular) - Anti-TUBB2A + TUBB2B antibody [EPR11843] (ab170931)

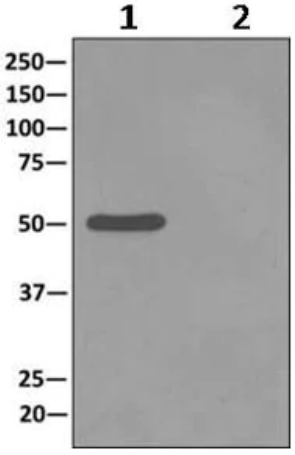
TUBB2A + TUBB2B Flow Cytometry (Intracellular) staining using rabbit Anti-TUBB2A + TUBB2B antibody

Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling TUBB2A with ab170931 at 1/10 dilution (red) compared toa rabbit IgG negative control (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TUBB2A + TUBB2B antibody [EPR11843] (ab170931)

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.

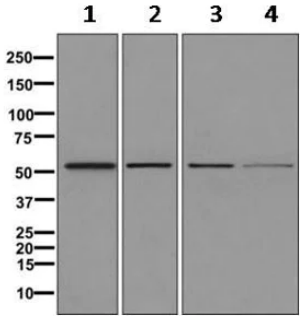


Immunoprecipitation - Anti-TUBB2A + TUBB2B antibody [EPR11843] (ab170931)

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] (ab170931)

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

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'.