abcam

ab108629

Anti-TUBA1B antibody [EPR1333] - Loading Control

Lab Essentials | Recombinant | RabMAb | 20ul selling size

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	EPR1333
Purification technique	Affinity purification Protein A
Concentration	0.151 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Antigen retrieval is recommended. **For unpurified use at 1/500 - 1/1000.**

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

Species	Rat
Dilution info	1/2000
Notes	Antigen retrieval is recommended. **For unpurified use at 1/500 - 1/1000.** Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/2000
Notes	Antigen retrieval is recommended. **For unpurified use at 1/500 - 1/1000.** Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/100000
Notes	**For unpurified use at 1/10000 - 1/50000.**

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	**For unpurified use at 1/250 - 1/500.**

Expected

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

Expected

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

Target data

See full target information TUBA1B

Function	Tubulin is the major constituent of microtubules, protein filaments consisting of alpha- and beta-tubulin heterodimers (PubMed:38305685, PubMed:34996871, PubMed:38609661). Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms (PubMed:38305685, PubMed:34996871, PubMed:38609661). Below the cap, tubulin dimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin (PubMed:34996871, PubMed:38609661).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

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	TUBA1B also known as tubulin alpha-1B chain is a subunit of microtubules that plays a structural role in the cellular cytoskeleton. It has a molecular mass of about 50 kDa. TUBA1B distributes widely across various tissues with elevated expression in neuronal cells. It characterizes by its involvement in the assembly and stabilization of microtubules which are essential for maintaining cell shape promoting intracellular transport and facilitating chromosome segregation during cell division.

Biological function summary	TUBA1B contributes significantly to the formation and function of the cytoskeletal microtubule network. It functions as part of the heterodimeric complex pairing with beta-tubulin to form the building blocks of microtubules. These structures are central to diverse cellular activities such as intracellular trafficking axonal transport in neurons and the migration and division of cells. In this implicit role TUBA1B influences the dynamics and stability of microtubule polymers impacting the cell's ability to respond to mechanical and environmental stimuli.
Pathways	TUBA1B is integral to the mitotic spindle assembly pathway and neuronal signaling. In the context of these pathways TUBA1B's interactions with proteins like dynein and kinesin facilitate its role in intracellular transport and spindle orientation during cell division. TUBA1B also participates in neuronal development pathways where its association with tau and other microtubule-associated proteins contributes to the formation of neuronal axons and dendrites.
Associated diseases and disorders	Alterations in TUBA1B have been linked to certain neurodevelopmental disorders and cancers such as lissencephaly and glioblastoma. In lissencephaly mutations in TUBA1B disrupt proper neuronal migration contributing to the abnormal brain development associated with the disorder. In glioblastoma TUBA1B's aberrant expression impacts microtubule dynamics aiding in cancer cell proliferation and resistance to therapies. These pathological conditions often involve interactions with other proteins including those found in the microtubule-associated protein family such as MAP2 and MAPT which further influence disease progression.

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

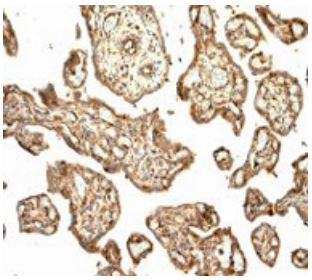
We do not recommend this combination. It is not covered by our product promise.

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.

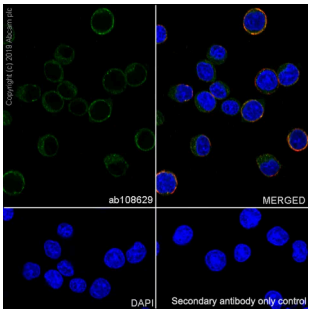
11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TUBA1B antibody

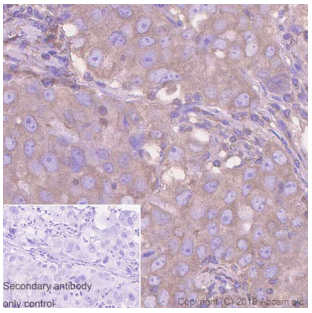
Unpurified ab108629, at 1/500 dilution, staining TUBA1B in paraffin embedded Human placenta tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TUBA1B antibody

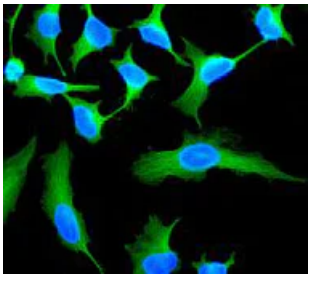
Immunocytochemistry/ Immunofluorescence analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling TUBA1B with purified ab108629 at 1/50 dilution (2.56 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TUBA1B antibody

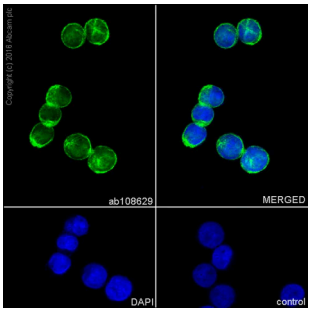
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue sections labeling TUBA1B with purified ab108629 at 1/2000 dilution (0.06 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunocytochemistry/ Immunofluorescence - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TUBA1B antibody

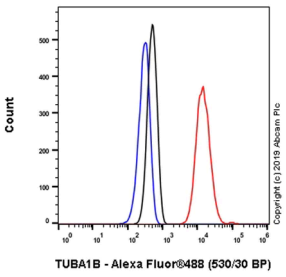
Unpurified ab108629, at a 1/250 dilution, staining TUBA1B in HeLa cells by Immunofluorescence.



Immunocytochemistry/ Immunofluorescence - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TUBA1B antibody

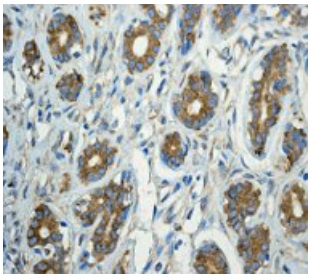
Immunocytochemistry/Immunofluorescence analysis of Jurkat (human acute T cell leukemia) labelling TUBA1B with purified ab108629 at 1/500. Cells were fixed with 100% methanol. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody (ab150077). Nuclei counterstained with DAPI (blue).
Control: PBS only



Flow Cytometry (Intracellular) - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Flow Cytometry (Intracellular) staining using rabbit Anti-TUBA1B antibody

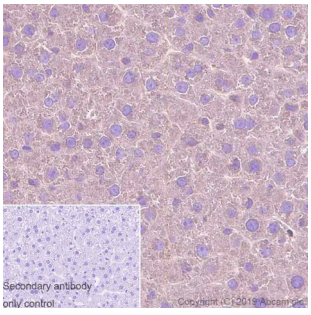
Intracellular Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling TUBA1B with purified ab108629 at 1/20 dilution (5 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TUBA1B antibody

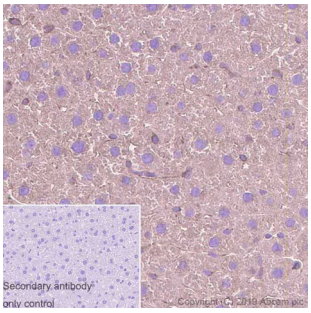
Unpurified ab108629, at a 1/500 dilution, staining TUBA1B in paraffin embedded Human breast tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TUBA1B antibody

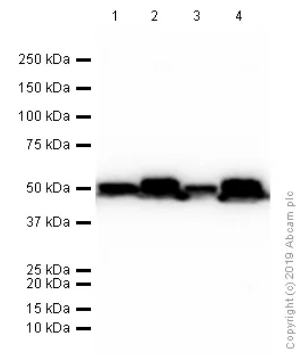
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue sections labeling TUBA1B with purified ab108629 at 1/2000 dilution (0.06 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TUBA1B antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling TUBA1B with purified ab108629 at 1/2000 dilution (0.06 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Western blot staining using rabbit Anti-TUBA1B antibody

All lanes:
Western blot - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629) at 1/100000 dilution

Lane 1:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates at 20 µg

Lane 2:
Mouse brain lysates at 20 µg

Lane 3:
Mouse kidney lysates at 20 µg

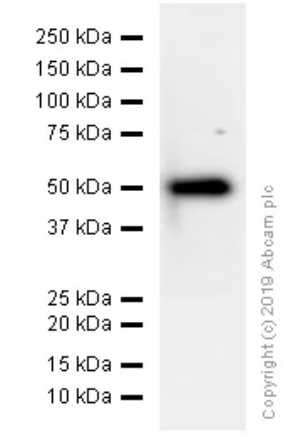
Lane 4:
Rat brain lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa



Western blot - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629)

TUBA1B Western blot staining of HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates using rabbit Anti-TUBA1B antibody

All lanes:
Western blot - Anti-TUBA1B antibody [EPR1333] - Loading Control (ab108629) at 1/100000 dilution

All lanes:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 15 µg

Secondary

All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa

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