abcam

ab24610

Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1]

Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610) is a mouse monoclonal antibody detecting alpha Tubulin in **Western Blot, Flow Cytometry**. Suitable for **Human, Mouse, Rat**.

- Over 200 publications
- Trusted since 2005

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Clone number	6-11B-1
Purification technique	Proprietary technique
Specificity	ab24610 detects acetylated alpha tubulin.
Epitope	The antibody recognizes an epitope located on the a3 isoform of Chlamydomonas axonemal a-tubulin, within four residues of Lys40 when this amino acid is acetylated.
Light chain type	kappa
Concentration	1.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from Tissue culture supernatant.

Reactivity data

ICC

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Cow
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µL for 10^6 Cells
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Cow
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	0.03-0.06 µg/mL
Notes	-

Species	Rat
Dilution info	0.03-0.06 µg/mL
Notes	-

Species	Human
Dilution info	0.03-0.06 µg/mL
Notes	-

Predicted

Species	Cow
Dilution info	-
Notes	-

Target data

See full target information TUBA4A acK40

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	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt) in Human, Mouse, Rat samples.

What is the molecular weight of alpha Tubulin?
Anti-alpha Tubulin (acetyl K40) [6-11B-1] (ab24610) specifically detects a band for alpha Tubulin (UniProt: P68366) at a molecular weight of 55kDa.

Trusted by the scientific community
Anti-alpha Tubulin (acetyl K40) [6-11B-1] (ab24610) was first used in a scientific publication in 2005 and has been cited over 200 times in peer-reviewed journals.

Reviewed by scientists
Anti-alpha Tubulin (acetyl K40) [6-11B-1] (ab24610) has over 30 independent reviews from customers.

Supplementary info

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

Activity summary	Alpha tubulin also known as DM1A is an important component of the structural unit called microtubules. This protein weighs approximately 50 kDa and acts as a building block in the cytoskeleton. Alpha tubulin is expressed in various cell types across many organisms playing a fundamental role in maintaining cell shape and enabling intracellular transport. Researchers often acetylate alpha tubulin to study post-translational modifications and its effects on microtubule dynamics.
Biological function summary	Alpha tubulin combines with beta tubulin to form the tubulin dimer which is the basic unit of microtubule polymerization. These dimers assemble into microtubule filaments integral in numerous cellular processes. As part of the cytoskeleton network alpha tubulin facilitates roles in mitosis and meiosis providing spindle structures necessary for chromosome separation. Its participation in cell signaling pathways is noteworthy as it interacts with motor proteins like kinesins and dyneins to aid cellular activities.

Pathways	Alpha tubulin holds critical roles in microtubule-associated processes within the cytoskeleton and intracellular transport pathways. It interacts with the MAP (microtubule-associated protein) family which modulates microtubule stability and impacts cell division and trafficking. Moreover the microtubule pathway involves proteins like tau which bind to stabilize microtubules and are implicated in cellular dynamics and signaling.
Associated diseases and disorders	Alpha tubulin is relevant in neurodegenerative diseases such as Alzheimer's disease and cancer. Aberrant modifications or mutations in alpha tubulin or associated proteins like tau can disrupt microtubule stability contributing to pathological conditions. In cancer altered expression of alpha tubulin affects cell division leading to tumor progression and chemoresistance. Researchers study alpha tubulin using techniques such as immunofluorescence with Alexa fluor 555 to understand its role in disease better.

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

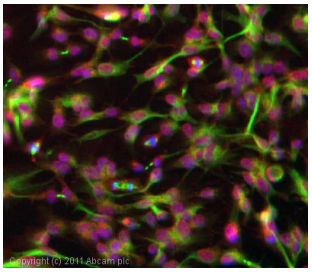
We do not recommend this combination. It is not covered by our product promise.

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.

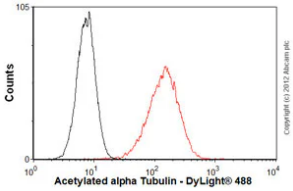
5 product images



Immunocytochemistry - Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610)

Alpha Tubulin (acetyl K40) Immunocytochemistry staining using mouse Anti-alpha Tubulin (acetyl K40) antibody

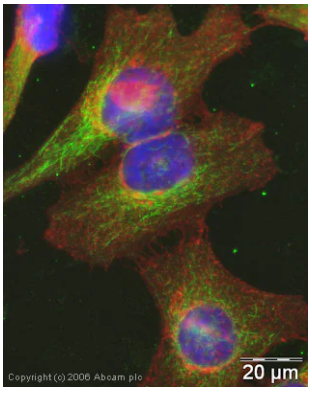
ICC/IF image of ab24610 stained HepG2 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab24610, 5µg/ml) overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-mouse IgG - H&L, pre-adsorbed (ab96879) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Flow Cytometry - Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610)

Alpha Tubulin (acetyl K40) Flow Cytometry staining using mouse Anti-alpha Tubulin (acetyl K40) antibody

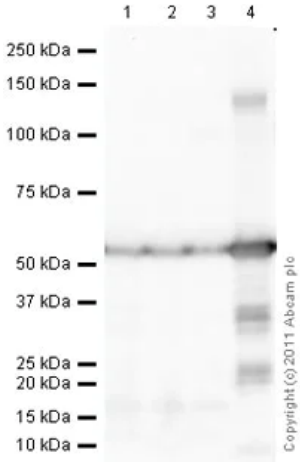
Overlay histogram showing HeLa cells stained with ab24610 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab24610, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry - Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610)

Alpha Tubulin (acetyl K40) Immunocytochemistry staining using mouse Anti-alpha Tubulin (acetyl K40) antibody

ICC/IF image of ab24610 stained human HeLa cells. The cells were methanol fixed (5 min) and incubated with the antibody (ab24610, 1µg/ml) for 1h at room temperature. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Image-iT™ FX Signal Enhancer was used as the primary blocking agent, 5% BSA (in TBS-T) was used for all other blocking steps. DAPI was used to stain the cell nuclei (blue). Alexa Fluor® 594 WGA was used to label plasma membranes (red).



Western blot - Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610)

Alpha Tubulin (acetyl K40) Western blot staining using mouse Anti-alpha Tubulin (acetyl K40) antibody

All lanes:
Western blot - Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610) at 5 µg/mL

Lane 1:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 20 µg

Lane 2:
NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate at 20 µg

Lane 3:
PC12 (Rat adrenal pheochromocytoma cell line) Whole Cell Lysate at 20 µg

Lane 4:
Brain (Mouse) Tissue Lysate at 20 µg

Secondary

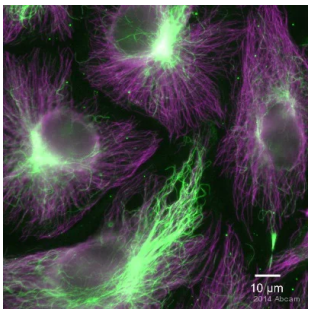
All lanes:
Western blot - Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

Performed under reducing conditions.

Predicted band size: 50 kDa

Observed band size: 140 kDa, 25 kDa, 35 kDa, 55 kDa

Exposure time: 150s



This image is courtesy of a customer review submitted by Aaron Halpen

Immunocytochemistry - Anti-alpha Tubulin (acetyl K40) antibody [6-11B-1] (ab24610)

Alpha Tubulin (acetyl K40) Immunocytochemistry staining using mouse Anti-alpha Tubulin (acetyl K40) antibody

ab24610 staining Acetylated alpha Tubulin in monkey kidney cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 3% PFA + 0.1% GA and blocked with 3% BSA + 0.5% Triton X-100 for 45 minutes at 25°C. Samples were incubated with primary antibody (1/100 in 3% BSA + 0.5% Triton X-100) for 1 hour at 21°C. An Alexa Fluor® 647-conjugated donkey anti-rabbit IgG polyclonal (2 µg/ml) was used as the secondary antibody.

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