abcam

ab18251

Anti-alpha Tubulin antibody - Loading Control

Anti-alpha Tubulin antibody - Microtubule Marker (ab18251) is a rabbit polyclonal antibody detecting alpha Tubulin in **Western Blot, Flow Cytometry (Intra), ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Over 360 publications
- Trusted since 2005

Lab Essentials

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Purification technique	Affinity purification Immunogen
Specificity	Replenishment batches of our polyclonal antibody, ab18251 are tested in WB. Previous batches were additionally validated in Flow Cyt and ICC/IF. These applications are still expected to work and are covered by our Abpromise guarantee. You may also be interested in our alternative recombinant antibody, ab52866.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	0.01 µg for 10^5 Cells
Notes	-

Species	Rat
Dilution info	0.01 µg for 10^5 Cells
Notes	-

Species	Human
Dilution info	0.01 µg for 10^5 Cells
Notes	-

Predicted

Species	Chicken, Cow, Drosophila melanogaster, Indian muntjac, African green monkey, Chinese hamster
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	0.5 µg/mL
Notes	Abcam recommends using milk as the blocking agent.

Species	Rat
Dilution info	0.5 µg/mL
Notes	Abcam recommends using milk as the blocking agent.

Species	Human
Dilution info	0.5 µg/mL
Notes	Abcam recommends using milk as the blocking agent.

Predicted

Species	Chicken, Cow, Drosophila melanogaster, Indian muntjac, African green monkey, Chinese hamster
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1-5 µg/mL
Notes	-

Species	Rat
Dilution info	1-5 µg/mL
Notes	-

Species	Human
Dilution info	1-5 µg/mL
Notes	-

Predicted

Species	Chicken, Cow, Drosophila melanogaster, Indian muntjac, African green monkey, Chinese hamster
Dilution info	-
Notes	-

Target data

See full target information TUBA4A

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 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

Product Specifications
Anti-alpha Tubulin antibody - Microtubule Marker (ab18251) is a rabbit polyclonal antibody and is validated for use in Flow Cyt (Intra), ICC/IF, WB in human, mouse, rat samples.
alpha Tubulin antibodies are often used as loading controls in Western Blot. Anti-alpha Tubulin antibody - Microtubule Marker has been verified in Western Blot samples and detects a band at 50kDa Molecular weight.
Anti-alpha Tubulin antibody - Microtubule Marker (ab18251) specifically detects alpha Tubulin (UniProt ID: P68366; Molecular weight: 50kDa) and is sold in 50 µg selling sizes.

Quality and Validation
Abcam's high quality validation processes ensure Anti-alpha Tubulin antibody - Microtubule Marker (ab18251) has high sensitivity and specificity.
Anti-alpha Tubulin antibody - Microtubule Marker (ab18251) has been cited over 362 times in peer reviewed journals and is trusted by the scientific community.
Anti-alpha Tubulin antibody - Microtubule Marker (ab18251) has 21 independent reviews from customers.

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.

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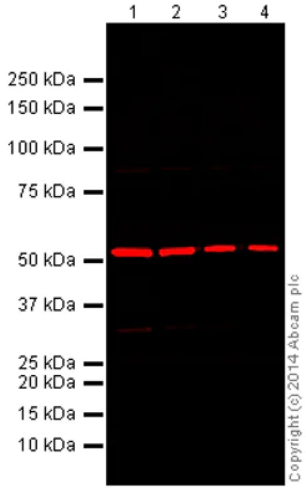
15 product images



Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Western blot staining using rabbit Anti-alpha Tubulin antibody

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Milk before being incubated with ab18251 overnight at 4°C. Antibody binding was detected using ab175772 at a 1:10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx.
All lanes:
Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251) at 1 µg/mL

Lane 1:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Lane 2:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 5 µg

Lane 3:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 2 µg

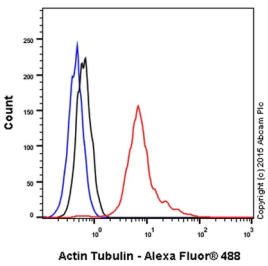
Lane 4:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 1 µg

Secondary

All lanes:
Western blot - Donkey Anti-Rabbit IgG H&L (Alexa Fluor® 680) (ab175772) at 1/10000 dilution

Predicted band size: 36 kDa

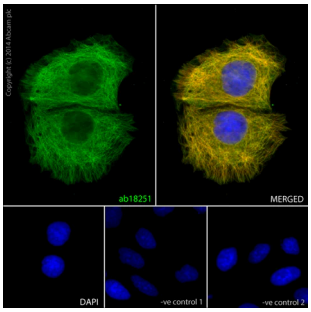
Observed band size: 52 kDa



Flow Cytometry (Intracellular) - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Flow Cytometry (Intracellular) staining using rabbit Anti-alpha Tubulin antibody

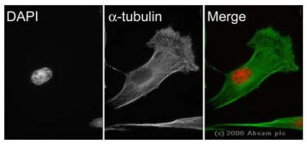
Overlay histogram showing Caco2 cells stained with ab18251 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab18251, 0.01µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150081) at 1/4000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (polyclonal) (ab27478, 0.01µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control.
Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Tubulin antibody

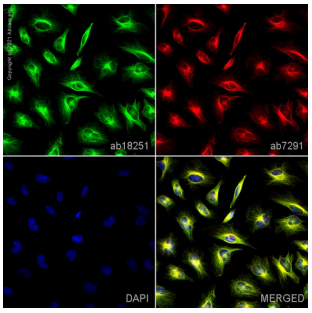
ab18251 staining alpha-Tubulin in Caco-2 cells. The cells were fixed with 100% methanol (5min) and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated with ab18251 at 5 µl/ml and ab7291 at 1 µg/ml overnight at +4°C, followed by a further incubation at room temperature for 1h with an anti-rabbit Alexa Fluor® 488 (ab150081) at 2 µg/ml (shown in green) and anti-mouse Alexa Fluor® 594 (ab150120) at 2 µg/ml (shown in pseudo color red). Nuclear DNA was labelled in blue with DAPI.
Negative controls: 1– Rabbit primary antibody and anti-mouse secondary antibody; 2 – Mouse primary antibody and anti-rabbit secondary antibody. Controls 1 and 2 indicate that there is no unspecific reaction between primary and secondary antibodies used.



Immunocytochemistry/ Immunofluorescence - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Tubulin antibody

ab18251 at a 1/8000 dilution staining human HeLa cells by immunocytochemistry. The cells were paraformaldehyde fixed and incubated with the antibody for 30 minutes. The secondary antibody was a Cy3® conjugated Goat Anti-Rabbit IgG (H+L). The image shows staining of an interphase IM cell.
This image is courtesy of an Abreview by **Kirk McManus** submitted on **27 February 2006.**

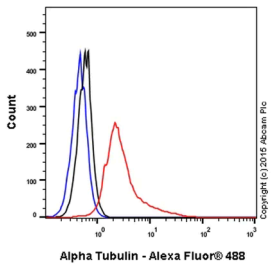


Immunocytochemistry/ Immunofluorescence - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Tubulin antibody

ab18251 staining alpha Tubulin in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab18251 at 1µg/ml and ab7291, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and ab150120, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).
Also suitable in cells fixed with 100% methanol (5 min).

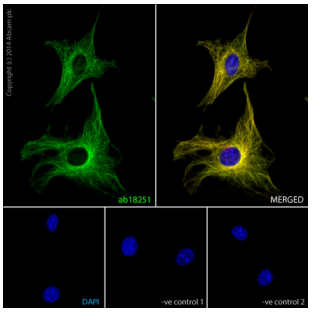
Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Flow Cytometry (Intracellular) - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Flow Cytometry (Intracellular) staining using rabbit Anti-alpha Tubulin antibody

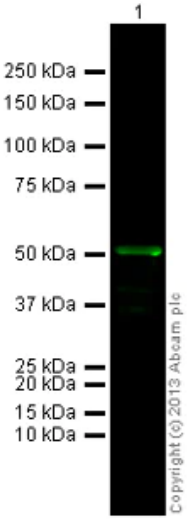
Overlay histogram showing NIH3T3 cells stained with ab18251 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab18251, 0.01µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150081) at 1/4000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (polyclonal) (ab27478, 0.01µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control.
Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Tubulin antibody

ab18251 staining alpha-Tubulin in NIH3T3 cells. The cells were fixed with 100% methanol (5min) and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab18251 at 1 µl/ml and ab7291 at 1µg/ml overnight at +4°C, followed by a further incubation at room temperature for 1h with an anti-rabbit Alexa Fluor® 488 (ab150081) at 2 µg/ml (shown in green) and anti-mouse Alexa Fluor® 594 (ab150120) at 2 µg/ml (shown in pseudo color red). Nuclear DNA was labelled in blue with DAPI.
Negative controls: 1– Rabbit primary antibody and anti-mouse secondary antibody; 2 – Mouse primary antibody and anti-rabbit secondary antibody. Controls 1 and 2 indicate that there is no unspecific reaction between primary and secondary antibodies used.



Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Western blot staining of HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate (ab27252) using rabbit Anti-alpha Tubulin antibody

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Milk before being incubated with ab18251 overnight at 4°C. Antibody binding was detected using ab175781 at a 1:10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx.
All lanes:
Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251) at 1 µg/mL

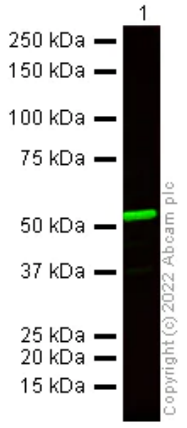
All lanes:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate (ab27252) at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (Alexa Fluor® 790) (ab175781) at 1/10000 dilution

Predicted band size: 36 kDa

Observed band size: 50 kDa



Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Western blot staining of HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate using rabbit Anti-alpha Tubulin antibody

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Milk before being incubated with ab18251 overnight at 4°C. Antibody binding was detected using ab175780 at a 1:10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx.
All lanes:
Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251) at 1 µg/mL

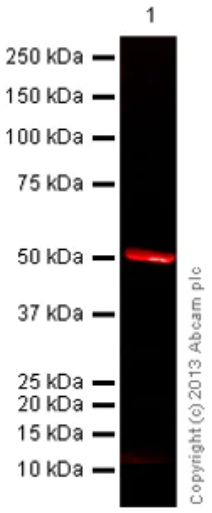
All lanes:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Secondary

All lanes:
Western blot - Donkey Anti-Rabbit IgG H&L (Alexa Fluor® 790) (ab175780) at 1/10000 dilution

Predicted band size: 36 kDa

Observed band size: 50 kDa



Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Western blot staining of HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate using rabbit Anti-alpha Tubulin antibody

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Milk before being incubated with ab18251 overnight at 4°C. Antibody binding was detected using ab175773 at a 1:10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx.
All lanes:
Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251) at 1 µg/mL

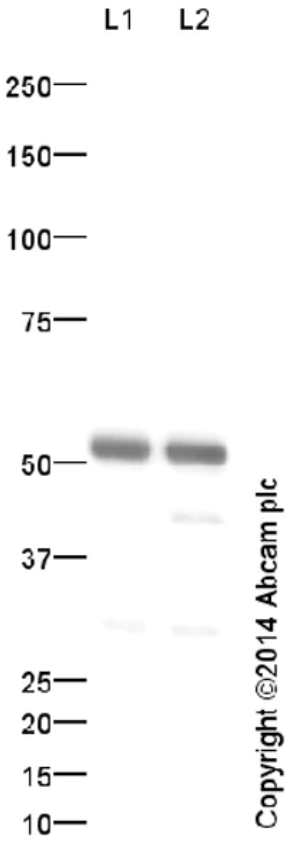
All lanes:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (Alexa Fluor® 680) (ab175773) at 1/10000 dilution

Predicted band size: 36 kDa

Observed band size: 50 kDa



Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Western blot staining using rabbit Anti-alpha Tubulin antibody

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab18251 overnight at 4°C. Antibody binding was detected using an anti-rabbit HRP (ab97051), and visualised using ECL development solution ab133406
All lanes:
Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251) at 1 µg/mL

Lane 1:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Lane 2:
A431 (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

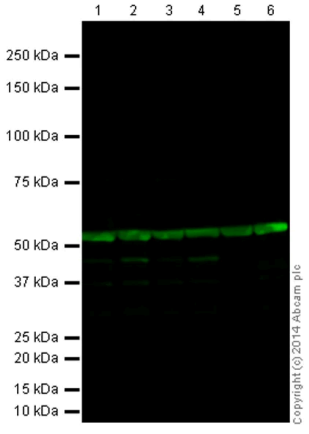
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 50 kDa

Observed band size: 50 kDa

Exposure time: 1min



Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Western blot staining using rabbit Anti-alpha Tubulin antibody

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using Licor blocking buffer before being incubated with ab18251 overnight at 4°C. Antibody binding was detected using Anti-Rabbit Alexa Fluor® 790 (ab175781) at a 1:10,000 dilution for 1hr at room temperature and then imaged using the Licor Odyssey CLx.
All lanes:
Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251) at 0.5 µg/mL

Lane 1:
HeLa (Human epithelial carcinoma cell line) whole cell lysate at 20 µg

Lane 2:
HEK-293 (Human embryonic kidney cell line) whole cell lysate at 20 µg

Lane 3:
HepG2 (Human hepatocellular liver carcinoma cell line) whole cell lysate at 20 µg

Lane 4:

Caco-2 (Human colonic carcinoma cell line) whole cell lysate at 20 µg

Lane 5:
NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate at 20 µg

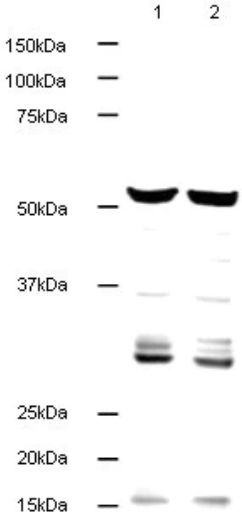
Lane 6:
PC-12 (Rat adrenal pheochromocytoma cell line) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (Alexa Fluor® 790) (ab175781) at 1/10000 dilution

Predicted band size: 27 kDa, 50 kDa

Observed band size: 44 kDa, 52 kDa



Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Western blot staining using rabbit Anti-alpha Tubulin antibody

ab18251 detects a strong band at 50 kDa corresponding to alpha tubulin. Cross-reactivity is also seen with other lower molecular weight bands. This may be reduced by using the antibody at a lower working concentration.
All lanes:
Western blot - Anti-alpha Tubulin antibody - Loading Control (ab18251) at 0.5 µg/mL

Lane 1:
HeLa lysate at 20 µg

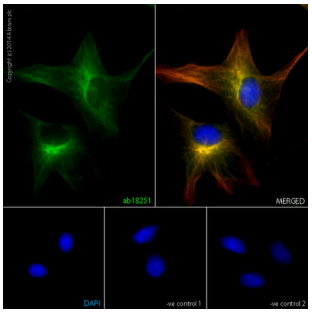
Lane 2:
A431 lysate at 20 µg

Secondary

All lanes:
Alexa Flour Goat polyclonal to Rabbit IgG (700) at 1/10000 dilution

Predicted band size: 50 kDa

Observed band size: 30 kDa, 50 kDa

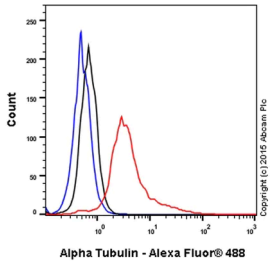


Immunocytochemistry/ Immunofluorescence - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Tubulin antibody

ab18251 staining alpha-Tubulin in SV40LT-SMC cells.
The cells were fixed with 100% methanol for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1 hour. The cells were then incubated with ab18251 at 1 µl/ml and ab7291 at 1 µg/ml overnight at +4°C, followed by a further incubation at room temperature for 1 hour with an anti-rabbit Alexa Fluor® 488 (ab150081) at 2 µg/ml (shown in green) and anti-mouse Alexa Fluor® 594 (ab150120) at 2 µg/ml (shown in pseudo color red). Nuclear DNA was labeled in blue with DAPI.

Negative controls: 1– Rabbit primary antibody and anti-mouse secondary antibody; 2 – Mouse primary antibody and anti-rabbit secondary antibody. Controls 1 and 2 indicate that there is no unspecific reaction between primary and secondary antibodies used.



Flow Cytometry (Intracellular) - Anti-alpha Tubulin antibody - Loading Control (ab18251)

Alpha Tubulin Flow Cytometry (Intracellular) staining using rabbit Anti-alpha Tubulin antibody

Overlay histogram showing SV40LT-SMC cells stained with ab18251 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 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 (ab18251, 0.01µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150081) at 1/4000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (polyclonal) (ab27478, 0.01µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control.
Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

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