abcam

ab176560

# Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control

Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560) is a rabbit monoclonal antibody detecting alpha Tubulin in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 40 publications

Lab Essentials | Recombinant | RabMAb | 20ul selling size

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | 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** | EPR13478(B) |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.168 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IHC-P

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/350 |
| **Notes** | **For unpurified, use 1/100.**<br>Perform heat-mediated antigen retrieval before commencing with IHC staining protocol. |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat, African green monkey |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/2000 - 1/10000 |
| **Notes** | **For unpurified, use 1/1000 - 1/10000.** |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat, African green monkey |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/350 |
| **Notes** | **For unpurified, use 1/100.** |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat, African green monkey |

| | |
|---|---|
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/60 |
| **Notes** | For unpurified, use 1/10. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat, African green monkey |
| **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** | 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

**What is this antibody validated in?**
Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

**What is the molecular weight of alpha Tubulin?**
Anti-alpha Tubulin [EPR13478(B)] - Loading Control (ab176560) is often used as a loading control in Western blot. It specifically detects a band for alpha Tubulin (UniProt: P68366) at a molecular weight of 50kDa.

**Trusted by the scientific community**
Anti-alpha Tubulin [EPR13478(B)] - Loading Control (ab176560) was first used in a scientific publication in 2013 and has been cited over 40 times in peer-reviewed journals.

**Reviewed by scientists**
Anti-alpha Tubulin [EPR13478(B)] - Loading Control (ab176560) has over 10 independent reviews from customers.

**Other related products**
We have a range of other formats of antibody clone [EPR13478(B)] also available for your convenience: ab176560, HRP - ab185067, Alexa Fluor® 405 - ab210167, Carrier free - ab220805, Alexa Fluor® 647 - ab225254, PE - ab225255, Alexa Fluor® 488 - ab305219, APC - ab314400

**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.

**Trial sizes available!**
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

## 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**

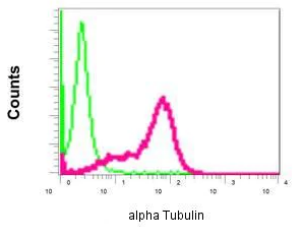
We do not recommend this combination. It is not covered by our product promise.

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.

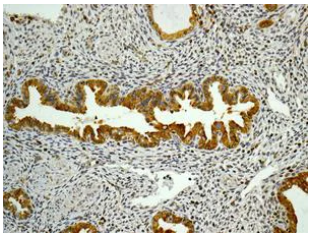
## 7 product images




### Flow Cytometry (Intracellular) - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560)

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

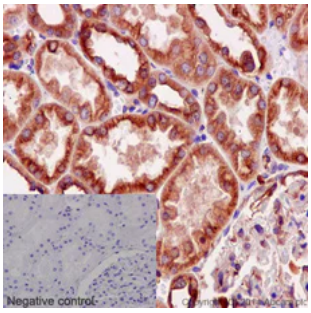
Intracellular Flow Cytometry analysis of permeabilized Jurkat cells labeling alpha Tubulin (red) with unpurified ab176560 at a 1/10 dilution, or negative control rabbit IgG (green)



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560)

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

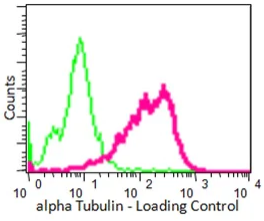
Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human uterus tissue labeling alpha Tubulin with unpurified ab176560 at a 1/100 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.




### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560)

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

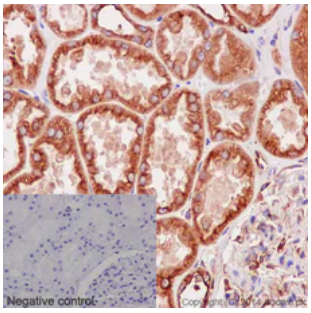
Immunohistochemical staining of paraffin embedded human kidney with purified ab176560 at a dilution of 1/350. A prediluted HRP polymer for rabbit IgG was used as the secondary and the sample was counter stained with hematoxylin. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.




### Flow Cytometry (Intracellular) - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560)

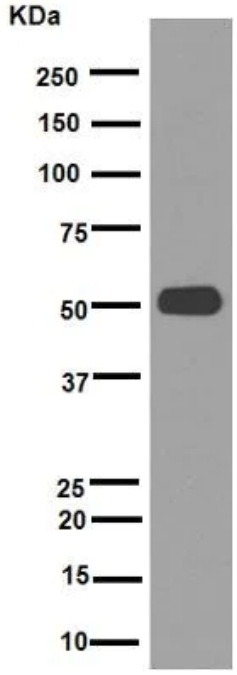
Alpha Tubulin Flow Cytometry (Intracellular) staining using rabbit Anti-alpha Tubulin antibody

Intracellular Flow Cytometry analysis of permeabilized HeLa cells labeling alpha Tubulin (pink) with purifiedab176560 at a 1/70 dilution, or negative control rabbit IgG (green). The secondary antibody was FITC goat anti-rabbit.




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560)

Immunohistochemical staining of paraffin embedded human kidney with unpurified ab176560 at a dilution of 1/100. A prediluted HRP polymer for rabbit IgG was used as the secondary and the sample was counter stained with hematoxylin. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.




## Western blot - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560)

Alpha Tubulin Western blot staining of Jurkat cell lysate using rabbit Anti-alpha Tubulin antibody

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST

All lanes:
Western blot - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560) at 1/7000 dilution

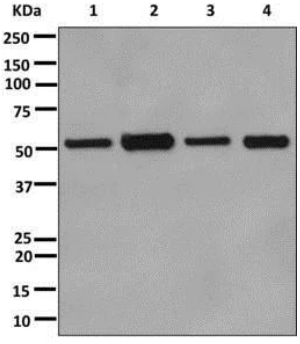
All lanes:
Jurkat cell lysate at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa




## Western blot - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560)

All lanes:
Western blot - Anti-alpha Tubulin antibody [EPR13478(B)] - Loading Control (ab176560) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
Jurkat cell lysate at 10 µg

Lane 3:
A431 cell lysate at 10 µg

Lane 4:
K562 cell lysate at 10 µg

Developed using the ECL technique.

Predicted band size: 50 kDa

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