abcam

Product datasheet

# Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free ab220805

Recombinant RabMAb

1 References 8 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free |
| **Description** | Rabbit monoclonal [EPR13478(B)] to alpha Tubulin - BSA and Azide free |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** Flow Cyt (Intra), IHC-P, ICC/IF, WB |
| **Species reactivity** | **Reacts with:** Human<br>**Predicted to work with:** Mouse, Rat, African green monkey |
| **Immunogen** | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | HeLa, Jurkat, A431 and K562 cell lysates; Human kidney and uterus tissues; A431 and Jurkat cells. |
| **General notes** | ab220805 is the carrier-free version of **ab176560**.<br><br>Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.<br><br>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.<br><br>Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.<br><br>This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.<br><br>This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br><br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit |

monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

## Properties

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|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C. Do Not Freeze. |
| **Storage buffer** | pH: 7.20<br>Constituent: PBS |
| **Carrier free** | Yes |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR13478(B) |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab220805 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **Flow Cyt (Intra)** | | Use at an assay dependent concentration.<br>**ab199376** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |
| **IHC-P** | | Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. |
| **ICC/IF** | | Use at an assay dependent concentration. |
| **WB** | | Use at an assay dependent concentration. Predicted molecular weight: 50 kDa. |

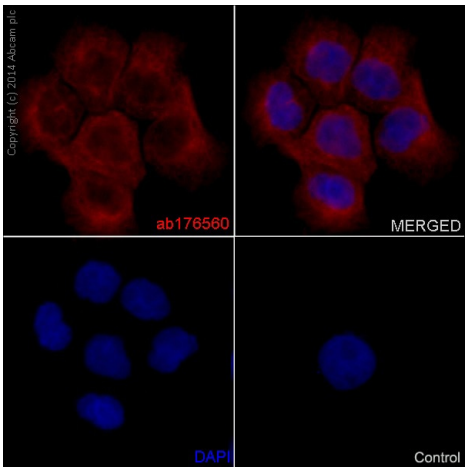
## Target

| | |
|---|---|
| **Function** | Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha chain. |
| **Sequence similarities** | Belongs to the tubulin family. |
| **Post-translational modifications** | Some glutamate residues at the C-terminus are polyglutamylated. This modification occurs exclusively on glutamate residues and results in polyglutamate chains on the gamma-carboxyl group. Also monoglycylated but not polyglycylated due to the absence of functional TTLL10 in human. Monoglycylation is mainly limited to tubulin incorporated into axonemes (cilia and flagella) whereas glutamylation is prevalent in neuronal cells, centrioles, axonemes, and the mitotic spindle. Both modifications can coexist on the same protein on adjacent residues, and lowering |

glycylation levels increases polyglutamylation, and reciprocally. The precise function of such modifications is still unclear but they regulate the assembly and dynamics of axonemal microtubules.
Acetylation of alpha chains at Lys-40 stabilizes microtubules and affects affinity and processivity of microtubule motors. This modification has a role in multiple cellular functions, ranging from cell motility, cell cycle progression or cell differentiation to intracellular trafficking and signaling.

**Cellular localization** Cytoplasm > cytoskeleton.

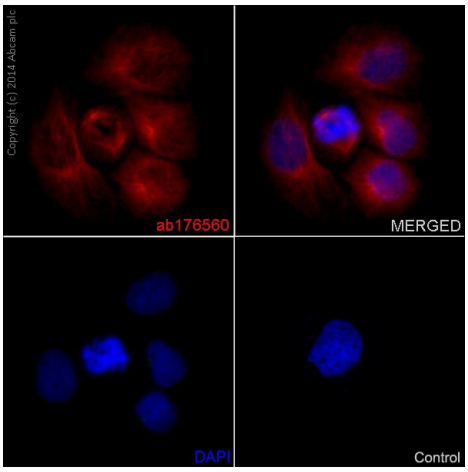
## Images




Immunocytochemistry/ Immunofluorescence - Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

Immunofluorescent staining of A431 cells fixed in 4% PFA with purified **ab176560** at a dilution of 1/350. An Alexa Fluor® 555 goat anti-rabbit was used as the secondary at a dilution of 1/500 and the sample was counter stained with DAPI. An Alexa Fluor® 555 goat anti-mouse was used at a dilution of 1/500 as the negative control and is shown in the bottom right hand panel.

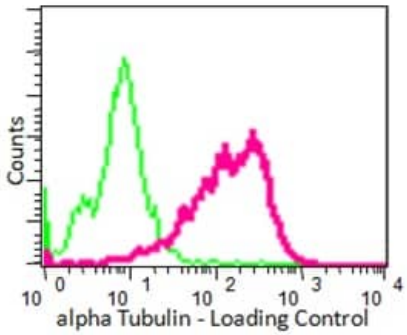
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176560**).




Immunocytochemistry/ Immunofluorescence - Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

Immunofluorescent staining of A431 cells fixed in 4% PFA with unpurified **ab176560** at a dilution of 1/100. An Alexa Fluor® 555 goat anti-rabbit was used as the secondary at a dilution of 1/500 and the sample was counter stained with DAPI. An Alexa Fluor® 555 goat anti-mouse was used at a dilution of 1/500 as the negative control and is shown in the bottom right hand panel.

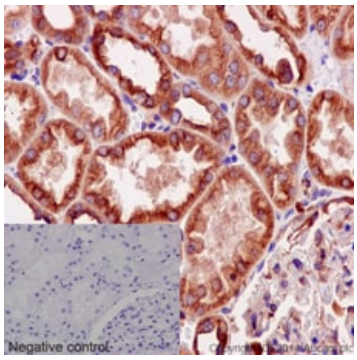
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176560**).




Flow Cytometry (Intracellular) - Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

Intracellular Flow Cytometry analysis of permeabilized HeLa cells labeling alpha Tubulin (pink) with purified **ab176560** at a 1/70 dilution, or negative control rabbit IgG (green). The secondary antibody was FITC goat anti-rabbit.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176560**).

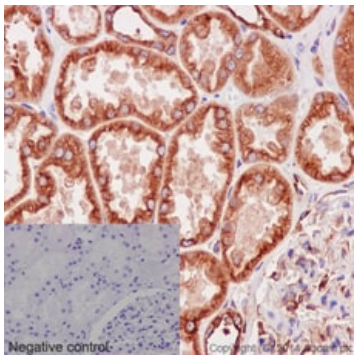



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176560**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176560**).

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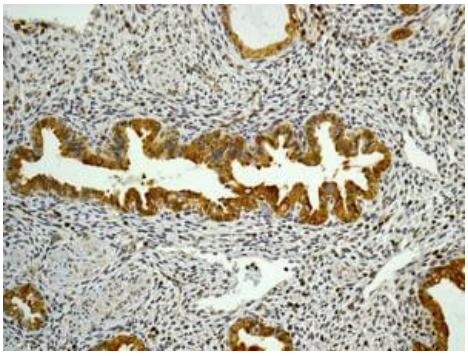
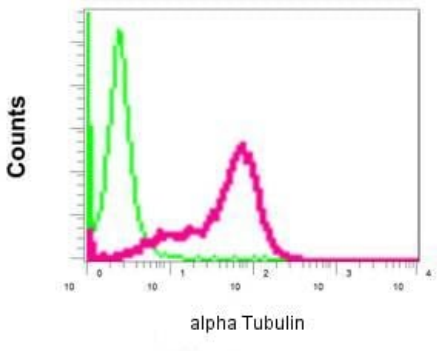


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human uterus tissue labeling alpha Tubulin with unpurified **ab176560** at a 1/100 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176560**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.




Flow Cytometry (Intracellular) - Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

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)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab176560**).


Anti-alpha Tubulin antibody [EPR13478(B)] - BSA and Azide free (ab220805)

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