


Product datasheet

Anti-beta I Tubulin antibody [EPR16778] ab179511

Recombinant RabMAb

[9 References](#) [11 Images](#)

Overview

Product name	Anti-beta I Tubulin antibody [EPR16778]
Description	Rabbit monoclonal [EPR16778] to beta I Tubulin
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), ICC/IF, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Chicken, Hamster, Cow, Dog, Human, African green monkey Predicted to work with: Monkey 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human fetal brain, fetal heart and fetal kidney lysates; Mouse brain, Rat brain and Rat spleen lysates; K562, Jurkat, HeLa, 293T, C6, RAW 264.7, PC-12, NIH/3T3, UMNSAH/DF-1, BHK, MDCK, MDBK, and COS-1 whole cell lysates. IHC-P: Human tonsil tissue; Mouse cerebral cortex tissue; Rat spleen tissue. ICC/IF: K562 cells. Flow Cyt (intra): K562 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR16778
Isotype	IgG

Applications

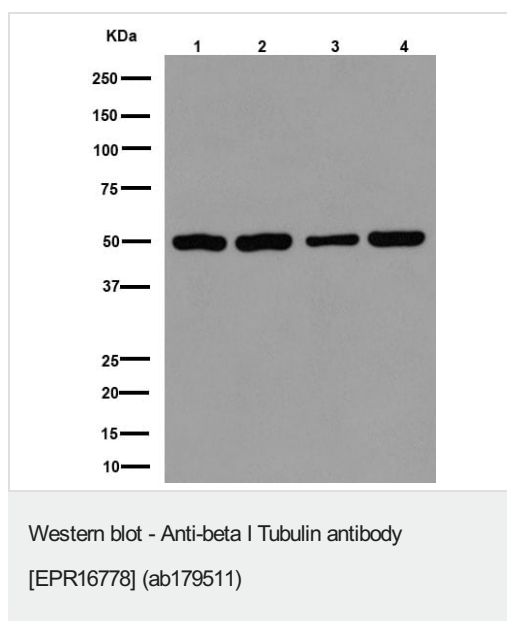
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab179511 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/80. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		1/500.
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Detects a band of approximately 50 kDa (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.
Involvement in disease	Defects in TUBB1 are a cause of macrothrombocytopenia autosomal dominant TUBB1-related (MAD-TUBB1) [MIM:613112]. It is a congenital blood disorder characterized by increased platelet size and decreased number of circulating platelets.
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 TTL10 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 polyglutamylated, and reciprocally. The precise function of such modifications is still unclear but they regulate the assembly and dynamics of axonemal microtubules.
Cellular localization	Cytoplasm > cytoskeleton.

Images



All lanes : Anti-beta I Tubulin antibody [EPR16778] (ab179511) at 1/20000 dilution

Lane 1 : K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysates

Lane 2 : Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysates

Lane 3 : HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysates

Lane 4 : 293T (Human epithelial cells from embryonic kidney) whole cell lysates

Lysates/proteins at 20 µg per lane.

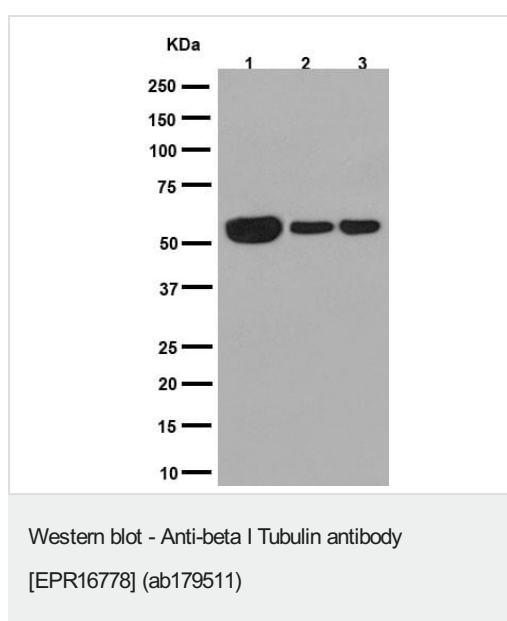
Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-beta I Tubulin antibody [EPR16778] (ab179511) at 1/2000 dilution

Lane 1 : Human fetal brain lysate

Lane 2 : Human fetal heart lysate

Lane 3 : Human fetal kidney lysate

Lysates/proteins at 10 µg per lane.

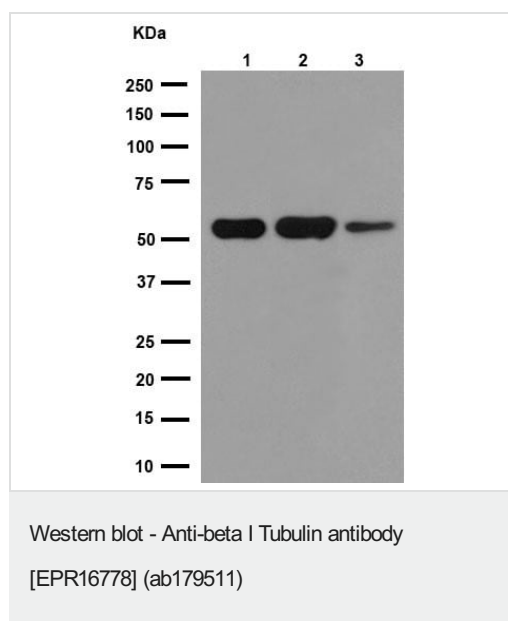
Secondary

All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-beta I Tubulin antibody [EPR16778] (ab179511) at 1/2000 dilution

Lane 1 : Mouse brain lysate

Lane 2 : Rat brain lysate

Lane 3 : Rat spleen lysate

Lysates/proteins at 10 µg per lane.

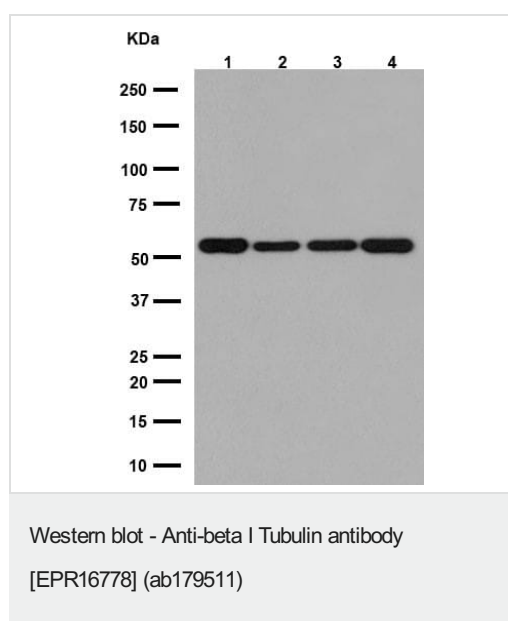
Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at 1/1000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-beta I Tubulin antibody [EPR16778] (ab179511) at 1/2000 dilution

Lane 1 : C6 (Rat glial tumor cells) whole cell lysates

Lane 2 : RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysates

Lane 3 : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates

Lane 4 : NIH/3T3 (Mouse embryo fibroblast cells) whole cell lysates

Lysates/proteins at 20 µg per lane.

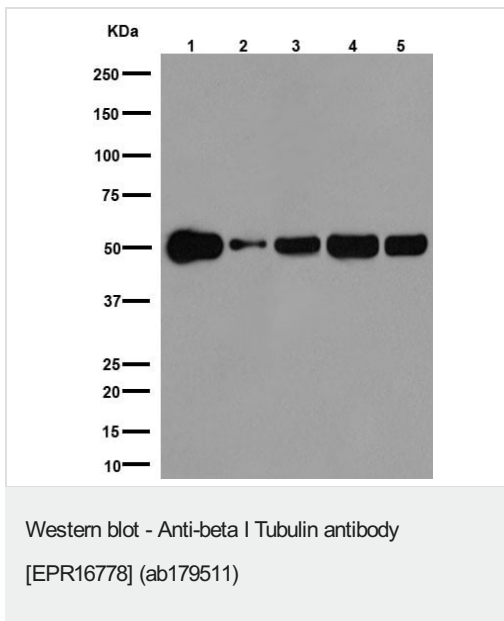
Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at 1/1000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-beta I Tubulin antibody [EPR16778] (ab179511) at 1/1000 dilution

Lane 1 : UMNSAH/DF-1 (Transformed chicken embryonic fibroblast cells) whole cell lysates

Lane 2 : BHK (Hamster kidney fibroblast cells) whole cell lysates

Lane 3 : MDCK (Canine kidney cell line) whole cell lysates

Lane 4 : MDBK (Bovine kidney cell line) whole cell lysates

Lane 5 : COS-1 (African green monkey kidney fibroblast-like cell line) whole cell lysates

Lysates/proteins at 20 µg per lane.

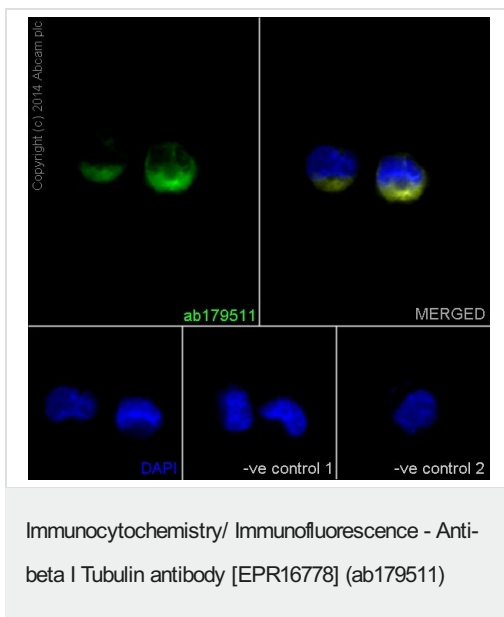
Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated antibody at 1/1000 dilution

Predicted band size: 50 kDa

Observed band size: 50 kDa

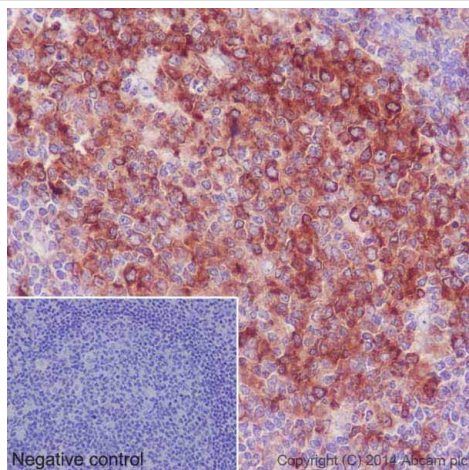
Blocking/Dilution buffer: 5% NFDM/TBST.



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized K562 (Human chronic myelogenous leukemia cells from bone marrow) cells labeling beta I Tubulin with ab179511 at 1/500 dilution followed by AlexaFluor®488 Goat anti-Rabbit secondary antibody (**ab150077**) at 1/400 dilution (green). Cytoplasm and nuclear staining on K562 cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).

The negative controls are as follows;

1. ab179511 at 1/500 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
2. **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.

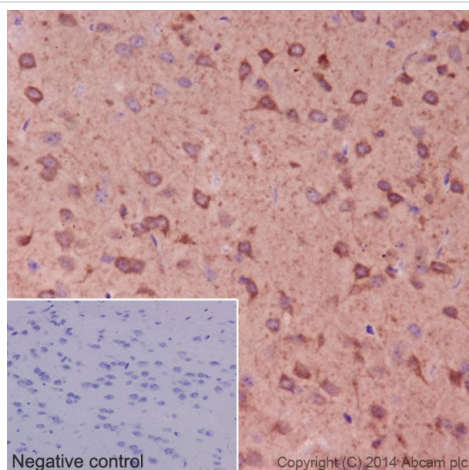


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta I Tubulin antibody [EPR16778] (ab179511)

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling beta I Tubulin with ab179511 at 1/500 followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Cytoplasm staining on germinal center lymphocytes of Human tonsil is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary ab, secondary ab is prediluted HRP Polymer for Rabbit/Mouse IgG.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

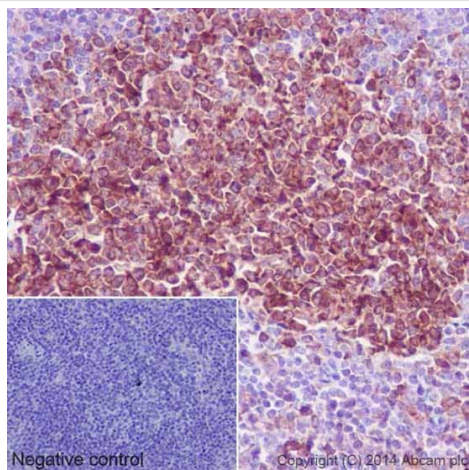


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta I Tubulin antibody [EPR16778] (ab179511)

Immunohistochemical analysis of paraffin-embedded Mouse cerebral cortex tissue labeling beta I Tubulin with ab179511 at 1/500 followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Cytoplasm staining on neuron cells of Mouse cerebral cortex tissue is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary ab, secondary ab is prediluted HRP Polymer for Rabbit/Mouse IgG.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

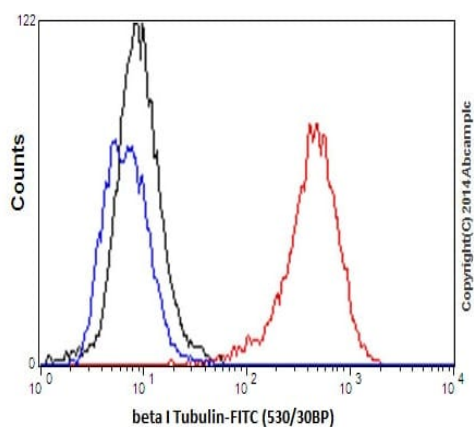


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta I Tubulin antibody [EPR16778] (ab179511)

Immunohistochemical analysis of paraffin-embedded Rat spleen tissue labeling beta I Tubulin with ab179511 at 1/500 followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Cytoplasm staining on follicular center lymphocytes of Rat spleen tissue is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary ab, secondary ab is prediluted HRP Polymer for Rabbit/Mouse IgG.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-beta I Tubulin antibody [EPR16778] (ab179511)

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed K562 (Human chronic myelogenous leukemia cells from bone marrow) cells labeling beta I Tubulin with ab179511 at 1/80 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.

Why choose a recombinant antibody?



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Recombinant technology



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Confirmed specificity



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Animal-free production

Anti-beta I Tubulin antibody [EPR16778] (ab179511)

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