

Product datasheet

Anti-beta IV Tubulin antibody [EPR16775] ab179504

Recombinant RabMAb

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

Overview

Product name	Anti-beta IV Tubulin antibody [EPR16775]
Description	Rabbit monoclonal [EPR16775] to beta IV Tubulin
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, ICC/IF, Flow Cyt (Intra)
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human fetal brain, Human cerebellum and Human fetal kidney lysates; HeLa, Jurkat, Neuro-2a, C6, RAW 264.7, and PC-12 whole cell lysates; Mouse brain, heart, kidney and spleen lysates; Rat brain and heart lysates. IHC-P: Human cerebral cortex, Mouse hippocampus and Rat thalamus tissues. ICC/IF: HeLa 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	EPR16775

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab179504 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
IHC-P		1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/5000. Detects a band of approximately 50 kDa (predicted molecular weight: 50 kDa).
ICC/IF		1/100.
Flow Cyt (Intra)		1/20.

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.

Domain

The highly acidic C-terminal region may bind cations such as calcium.

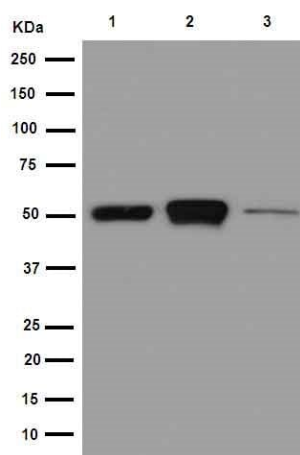
Post-translational modifications

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 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



Western blot - Anti-beta IV Tubulin antibody
[EPR16775] (ab179504)

All lanes : Anti-beta IV Tubulin antibody [EPR16775] (ab179504)
at 1/5000 dilution

Lane 1 : Human fetal brain lysates

Lane 2 : Human cerebellum lysates

Lane 3 : Human fetal kidney lysates

Lysates/proteins at 20 µg per lane.

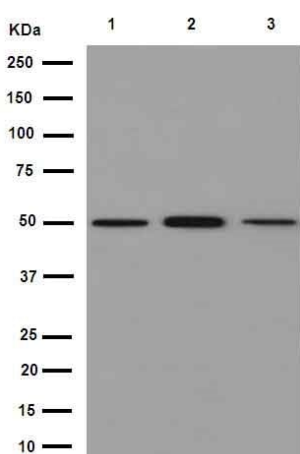
Secondary

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.



Western blot - Anti-beta IV Tubulin antibody
[EPR16775] (ab179504)

All lanes : Anti-beta IV Tubulin antibody [EPR16775] (ab179504)
at 1/5000 dilution

Lane 1 : HeLa (Human epithelial cells from cervix
adenocarcinoma) whole cell lysates

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

Lane 3 : Neuro-2a (Mouse neuroblastoma cells) whole cell lysates

Lysates/proteins at 10 µg per lane.

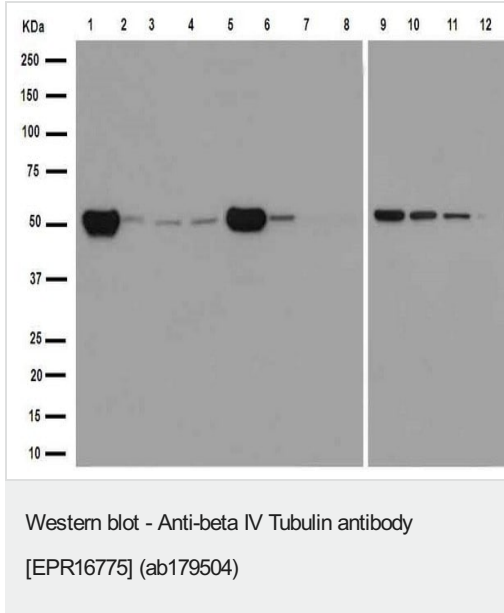
Secondary

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 IV Tubulin antibody [EPR16775] (ab179504) at 1/5000 dilution

Lane 1 : Mouse brain lysates

Lane 2 : Mouse heart lysates

Lane 3 : Mouse kidney lysates

Lane 4 : Mouse spleen lysates

Lane 5 : Rat brain lysates

Lane 6 : Rat heart lysates

Lane 7 : Rat kidney lysates

Lane 8 : Rat spleen lysates

Lane 9 : C6 (Rat glial tumor cells) whole cell lysates

Lane 10 : RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysates

Lane 11 : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysates

Lane 12 : NIH/3T3 (Mouse embryo fibroblast cells) whole cell lysates

Lysates/proteins at 10 µg per lane.

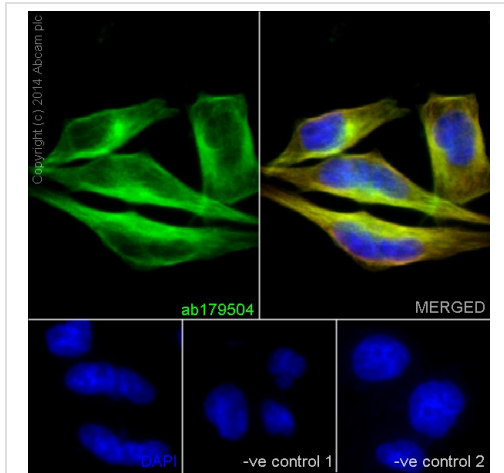
Secondary

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.



Immunocytochemistry/ Immunofluorescence - Anti-beta IV Tubulin antibody [EPR16775] (ab179504)

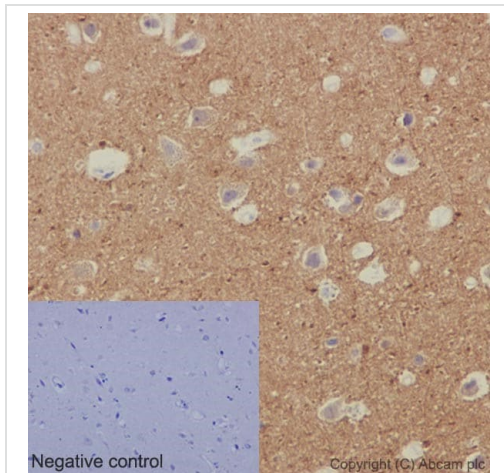
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% tritonX-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling beta IV Tubulin with ab179504 at 1/100 dilution followed by Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody (**ab150077**) at 1/200 dilution (green). Cytoplasm staining is observed.

Tubulin is detected with Mouse anti-Tubulin antibody (**ab7291**) at 1/500 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/400 dilution (red). The nuclear counter stain is DAPI (blue).

The negative controls:-

-ve control 1 - ab179504 at 1/100 dilution followed by Goat anti mouse IgG (Alexa Fluor®594) at 1/400 dilution.

-ve control 2 - Mouse anti-Tubulin antibody (**ab7291**) at 1/500 dilution followed by Goat anti rabbit IgG (Alexa Fluor®488) at 1/200 dilution.

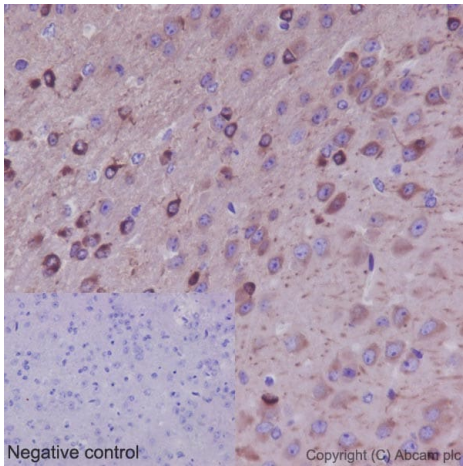


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta IV Tubulin antibody [EPR16775] (ab179504)

Immunohistochemical analysis of paraffin-embedded Human cerebral cortex issue labeling beta IV Tubulin with ab179504 at 1/250 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Counter stained with Hematoxylin. Cytoplasm staining is observed on neurons of cerebral cortex.

Negative control used PBS instead of ab179504, followed by prediluted HRP Polymer for Rabbit/Mouse IgG.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

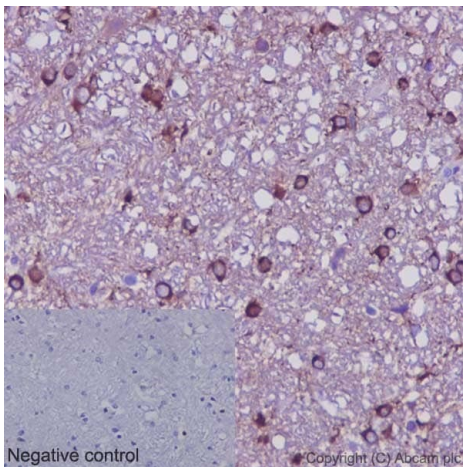


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta IV Tubulin antibody [EPR16775] (ab179504)

Immunohistochemical analysis of paraffin embedded Mouse hippocampus tissue labeling beta IV Tubulin with ab179504 at 1/250 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Counter stained with Hematoxylin. Cytoplasm staining is observed on neurons of mouse hippocampus.

Negative control used PBS instead of ab179504, followed by prediluted HRP Polymer for Rabbit/Mouse IgG.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

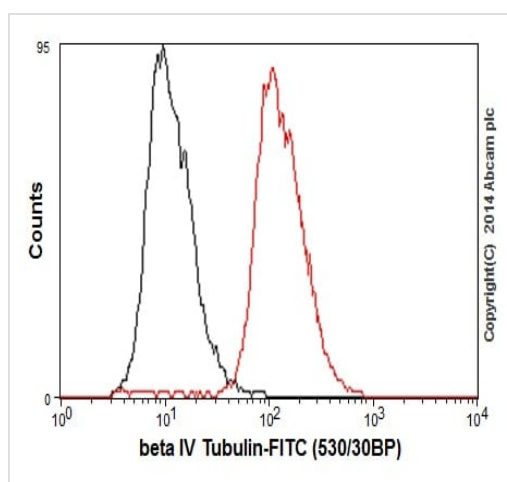


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta IV Tubulin antibody [EPR16775] (ab179504)

Immunohistochemical analysis of paraffin-embedded Rat thalamus tissue labeling beta IV Tubulin with ab179504 at 1/250 dilution, followed by prediluted HRP Polymer for Rabbit/Mouse IgG. Counter stained with Hematoxylin. Cytoplasm staining is observed on neurons of rat thalamus.

Negative control used PBS instead of ab179504, followed by prediluted HRP Polymer for Rabbit/Mouse IgG.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Intracellular Flow Cytometry analysis of 2% paraformaldehyde fixed Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling beta IV Tubulin with ab179504 at 1/20 dilution (red line). Secondary antibody used is a goat anti rabbit IgG (FITC) at 1/150 dilution. The isotype control is rabbit monoclonal IgG (black line).

Flow Cytometry (Intracellular) - Anti-beta IV Tubulin antibody [EPR16775] (ab179504)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-beta IV Tubulin antibody [EPR16775] (ab179504)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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