abcam

Product datasheet

Anti-beta II Tubulin antibody [7B9] ab28035

Recombinant

4 References 9 Images

Overview

Product name Anti-beta II Tubulin antibody [7B9]

Description Mouse monoclonal [7B9] to beta Il Tubulin

Host species Mouse

Tested applications Suitable for: WB, IP, ICC/IF

Species reactivity Reacts with: Mouse, Rat, Human

Immunogen Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.

Positive control WB: Human, mouse and rat brain tissue lysate. U-87 MG, C6, PC-12, Y79 and MDA-MB-231

whole cell lysate. ICC/IF: U-87 MG, Neuro-2a and PC-12 cells. IP: Neuro-2a whole cell lysate.

General notes

This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or

conjugation for your experiments, please contact orders@abcam.com.

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

Improved sensitivity and specificityLong-term security of supplyAnimal-free production

For more information see here.

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.

Avoid freeze / thaw cycle.

Storage buffer pH: 7.2

Preservative: 0.01% Sodium azide

Constituents: PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)

Purity Protein A purified

Clonality Monoclonal

Clone number 7B9 lsotype lgG1

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Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab28035 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	
WB		1/1000. Predicted molecular weight: 50 kDa.	
IP		1/30.	
ICC/IF		1/50.	

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Function

 $\label{thm:constituent} Tubulin is the \ major \ constituent \ of \ microtubules. \ It \ binds \ two \ moles \ of \ GTP, \ one \ at \ an$

exchangeable site on the beta chain and one at a non-exchangeable site on the alpha chain.

Tissue specificity

Ubiquitous.

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 polyglutamylation, and reciprocally. The precise function of such

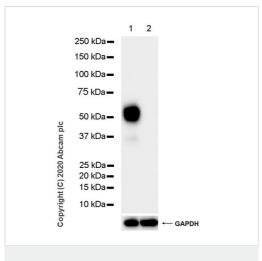
modifications is still unclear but they regulate the assembly and dynamics of axonemal

microtubules.

Cellular localization

Cytoplasm > cytoskeleton.

Images



Western blot - Anti-beta II Tubulin antibody [7B9] (ab28035)

All lanes : Anti-beta II Tubulin antibody [7B9] (ab28035) at 1/1000 dilution

Lane 1: Human brain tissue lysate

Lane 2: Human heart tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : VeriBlot for IP Detection Reagent (HRP) ($\underline{ab131366}$) at

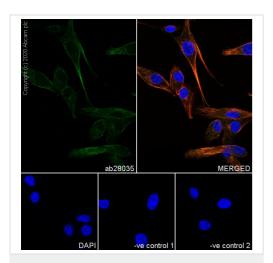
1/1000 dilution

Predicted band size: 50 kDa

Exposure time: 1 second

Blocking/Dilution buffer: 5% NFDM/TBST.

Negative control: Human heart (PMID:20191564).

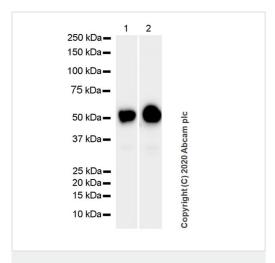


Immunocytochemistry/ Immunofluorescence - Antibeta II Tubulin antibody [7B9] (ab28035)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized U-87 MG cells labelling beta II Tubulin with ab28035 at 1/50 dilution, followed by ab150113 Goat Antimouse IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in U-87 MG cell line. ab179513 anti-beta Tubulin rabbit monoclonal antibody was used to counterstain tubulin at 1/500 dilution, followed by ab150080 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) (Red). The nuclear counterstain was DAPI (Blue).

Negative control 1: ab28035 at a 1/500 dilution followed by **ab150080** at a 1/500 dilution.

Negative control 2: <u>ab179513</u> at a 1/500 dilution followed by <u>ab150113</u> at a 1/1000 dilution.



Western blot - Anti-beta II Tubulin antibody [7B9] (ab28035)

All lanes : Anti-beta Il Tubulin antibody [7B9] (ab28035) at 1/1000 dilution

Lane 1 : Mouse brain tissue lysate

Lane 2: Rat brain tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

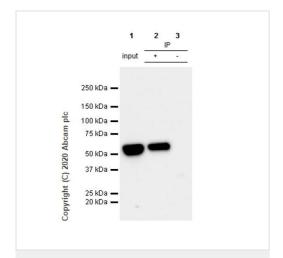
All lanes : Anti-mouse IgG for IP (HRP) ($\underline{ab131368}$) at 1/1000

dilution

Predicted band size: 50 kDa

Exposure time: 1 second

Blocking/Dilution buffer: 5% NFDM/TBST.



Immunoprecipitation - Anti-beta II Tubulin antibody [7B9] (ab28035)

beta II Tubulin was immunoprecipitated from 0.35 mg Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate with ab28035 at 1/30 dilution (2 μ g in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab28035 at 1/1000 dilution. mouse IgG for IP (HRP) (ab131368) was used at 1/1000 dilution.

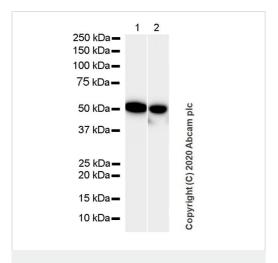
Lane 1: Neuro-2a whole cell lysate 10µg.

Lane 2: ab28035 IP in Neuro-2a whole cell lysate.

Lane 3: Mouse monoclonal $\lg G$ (<u>ab18443</u>) instead of ab28035 in Neuro-2a whole cell lysate.

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: 3 seconds.



Western blot - Anti-beta II Tubulin antibody [7B9] (ab28035)

All lanes: Anti-beta Il Tubulin antibody [7B9] (ab28035) at 1/1000 dilution

Lane 1: C6 (rat glial tumor glial cell), whole cell lysate

Lane 2: PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Anti-mouse IgG for IP (HRP) (<u>ab131368</u>) at 1/1000 dilution

Predicted band size: 50 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: lane 1, 2: 1 second

lane 3: 3 seconds

ab28035 MERGED

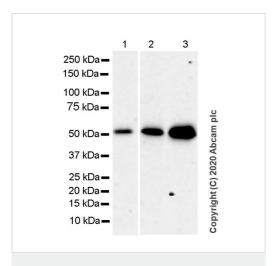
DAPI -ve control 1 -ve control 2

Immunocytochemistry/ Immunofluorescence - Antibeta II Tubulin antibody [7B9] (ab28035)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Neuro-2a cells labelling beta II Tubulin with ab28035 at 1/50 dilution, followed by ab150113 Goat Antimouse IgG H&L (Alexa Fluor[®] 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in Neuro-2a cell line. ab179513 anti-beta Tubulin rabbit monoclonal antibody was used to counterstain tubulin at 1/500 dilution, followed by ab150080 Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 594) (Red). The nuclear counterstain was DAPI (Blue).

Negative control 1: ab28035 at a 1/500 dilution followed by **ab150080** at a 1/500 dilution.

Negative control 2: <u>ab179513</u> at a 1/500 dilution followed by ab150113 at a 1/1000 dilution.



Western blot - Anti-beta II Tubulin antibody [7B9] (ab28035)

All lanes : Anti-beta Il Tubulin antibody [7B9] (ab28035) at 1/1000 dilution

Lane 1 : U-87 MG (human glioblastoma-astrocytoma epithelial cell), whole cell lysate

Lane 2: Y79 (human retinoblastoma retinoblastoma), whole cell lysate

 $\textbf{Lane 3:} \ \mathsf{MDA-MB-231} \ (\mathsf{human \ breast \ adenocarcinoma \ epithelial \ cell), \ \mathsf{whole \ cell \ lysate}$

Lysates/proteins at 20 µg per lane.

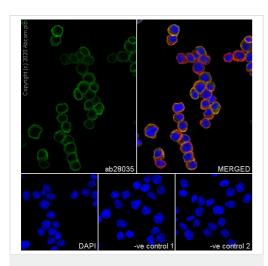
Secondary

All lanes : VeriBlot for IP Detection Reagent (HRP) (<u>ab131366</u>) at 1/1000 dilution

Predicted band size: 50 kDa

Exposure time: 180 seconds

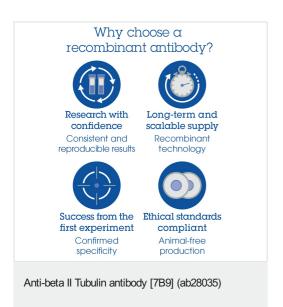
Blocking/Dilution buffer: 5% NFDM/TBST.



Immunocytochemistry/ Immunofluorescence - Antibeta II Tubulin antibody [7B9] (ab28035) Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized PC-12 cells labelling beta Il Tubulin with ab28035 at 1/50 dilution, followed by ab150113 Goat Anti-mouse IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in PC-12 cell line. ab179513 anti-beta Tubulin rabbit monoclonal antibody was used to counterstain tubulin at 1/500 dilution, followed by ab150080 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) (Red). The nuclear counterstain was DAPI (Blue).

Negative control 1: ab28035 at a 1/500 dilution followed by **ab150080** at a 1/500 dilution.

Negative control 2: <u>ab179513</u> at a 1/500 dilution followed by ab150113 at a 1/1000 dilution.



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