abcam

Product datasheet

Anti-beta IV Tubulin antibody [ONS.1A6] ab11315

★★★★★ 2 Abreviews 49 References 5 Images

Overview

Product name	Anti-beta IV Tubulin antibody [ONS.1A6]
Description	Mouse monoclonal [ONS.1A6] to beta IV Tubulin
Host species	Mouse
Tested applications	**Suitable for:** ICC, IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Chicken, Hamster, Cow
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa nuclear extract and HeLa, HEK293, K562, NIH3T3 and U20S whole cell lysates. ICC: MCF7 cells IHC-P: Human normal skin tissue.
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**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Purity	Protein G purified
Clonality	Monoclonal
Clone number	ONS.1A6

Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab11315 in the following tested applications.

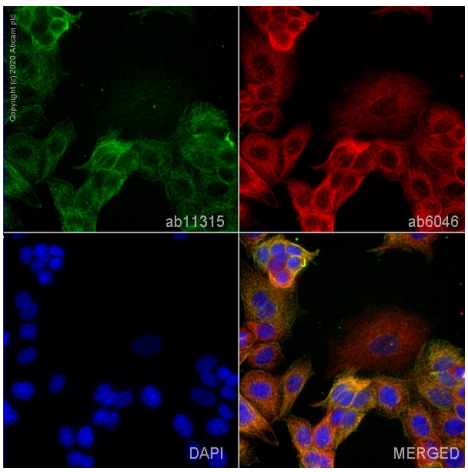
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC	★★★★★ (1)	Use a concentration of 1 µg/ml.
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use a concentration of 5 µg/ml. Detects a band of approximately 52 kDa (predicted molecular weight: 50 kDa). 3% milk is recommended for blocking non-specific protein-protein interactions.

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 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.

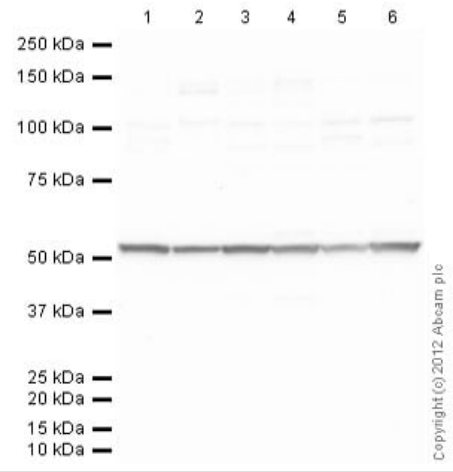
Images



Immunocytochemistry - Anti-beta IV Tubulin antibody [ONS.1A6] (ab11315)

ab11315 staining Beta IV tubulin in MCF7 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab11315 at 1µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Western blot - Anti-beta IV Tubulin antibody [ONS.1A6] (ab11315)

All lanes : Anti-beta IV Tubulin antibody [ONS.1A6] (ab11315) at 5 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : HeLa (Human epithelial carcinoma cell line) Nuclear Lysate
Lane 3 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate
Lane 4 : K562 (Human erythromyeloblastoid leukemia cell line) Whole Cell Lysate
Lane 5 : NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate
Lane 6 : U2OS (Human osteosarcoma cell line) Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Mouse IgG H&L (HRP) preadsorbed (**ab97040**) at 1/10000 dilution

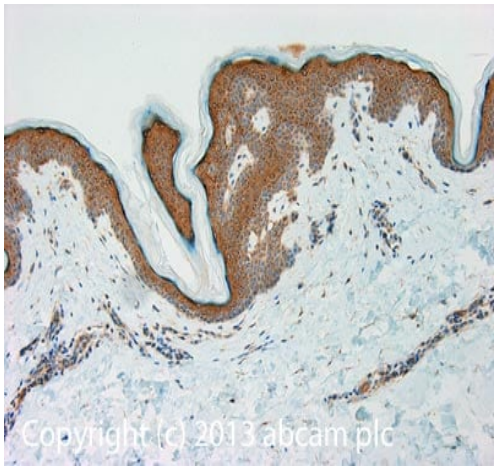
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 50 kDa
Additional bands at: 52 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 4 minutes

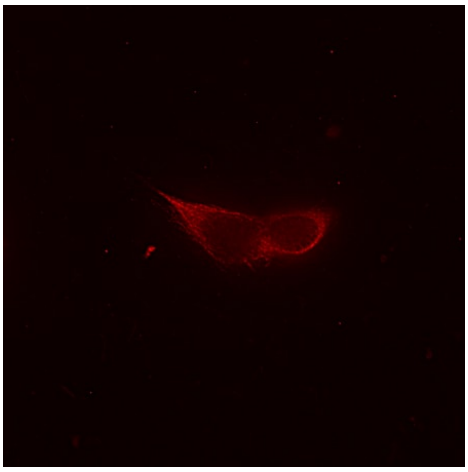
This blot was produced using a 10% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% Milk before being incubated with ab11315 overnight at 4°C. Antibody binding was detected using an anti-mouse antibody conjugated to HRP, and visualised using ECL development solution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta IV Tubulin antibody [ONS.1A6] (ab11315)

IHC image of beta IV Tubulin staining in Human normal skin formalin fixed paraffin embedded tissue section, performed on a Leica BondTM system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab11315, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

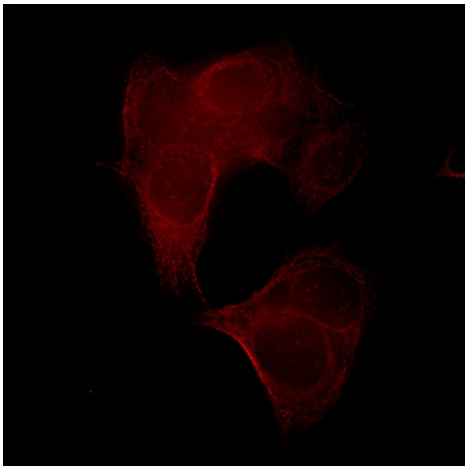


Immunocytochemistry - Anti-beta IV Tubulin antibody [ONS.1A6] (ab11315)

This image is courtesy of Xinmei Chen, University of Alberta

Immunofluorescence analysis of MCF-7 Cells (human breast cancer cell line), staining beta IV Tubulin with ab11315.

Cells on coverslip were fixed with -20°C Methanol for 5 min before permeabilization with 0.2% Triton X-100 in PBS for 10 min. Cells were incubated with the primary antibody with a dilution 1/50 for 1 hour. After brief washing with PBS, cells were incubated with TRITC conjugated secondary antibody with a dilution 1/50 for 45 min and washed with PBS to be examined under fluorescence microscope.



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