abcam

Product datasheet

Alexa Fluor® 594 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker ab195889

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Overview

Product name	Alexa Fluor® 594 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker
Description	Alexa Fluor® 594 Mouse monoclonal [DM1A] to alpha Tubulin - Microtubule Marker
Host species	Mouse
Conjugation	Alexa Fluor® 594. Ex: 590nm, Em: 617nm
Tested applications	**Suitable for:** ICC/IF
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Full length native protein (purified) corresponding to Chicken alpha Tubulin.
Epitope	aa 426-450
Positive control	ICC/IF - HeLa
General notes	Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or **outlicensing@thermofisher.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. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Purity	Affinity purified
Clonality	Monoclonal
Clone number	DM1A
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab195889 in the following tested applications.

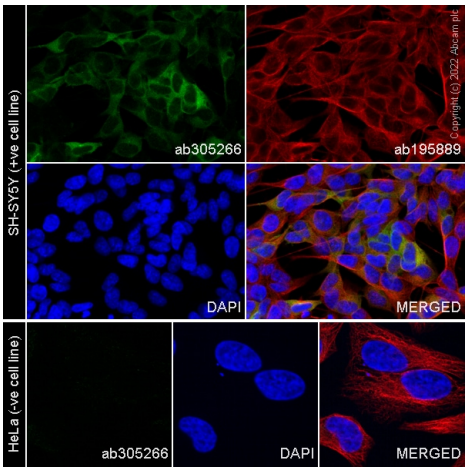
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/150 - 1/250. **ab178000** - Mouse monoclonal IgG1 (Alexa Fluor® 594), is suitable for use as an isotype control with this antibody.

Target

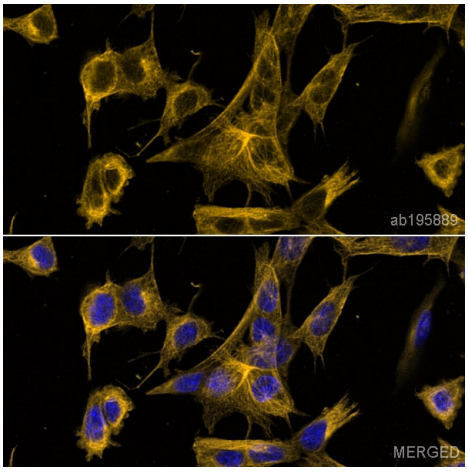
Function	Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha chain.
Sequence similarities	Belongs to the tubulin family.
Post-translational modifications	Some glutamate residues at the 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 - Alexa Fluor® 594 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (ab195889)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized SH-SY5Y (human neuroblastoma epithelial cell) cells labelling Doublecortin with AB305266 at 1/50 (10.0 ug/ml) dilution. Confocal image showing cytoplasmic staining in SH-SY5Y cells. Negative control: HeLa (PMID:18312642). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: PBS instead of the primary antibody.

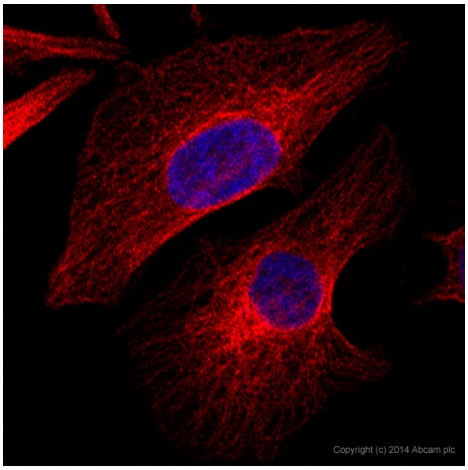


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 594 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (ab195889)

ab195889 staining alpha Tubulin in MEF1 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized in 0.1% PBS-Triton X-100 for 5 min then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1hr. The cells were then incubated with ab195889 at 1/250 dilution (shown in orange) overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.

This product gave a positive signal in 100% methanol (10 min) fixed MEF1 cells under the same testing conditions.

Image was taken with a Confocal microscope (Leica micro-systems, TCS SP8).



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 594 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (ab195889)

ab195889 staining alpha Tubulin in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized in 0.1% PBS-Triton X-100 for 5 min then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1hr. The cells were then incubated with ab195889 at 1/167 dilution (shown in psedo-color red) overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.

This product gave a positive signal in 100% methanol (10 min) fixed HeLa cells under the same testing conditions.

Image was taken with a Confocal microscope (Leica micro-systems, TCS SP8).

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