abcam

Product datasheet

Alexa Fluor® 488 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker ab195887

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Overview

Product name	Alexa Fluor® 488 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker
Description	Alexa Fluor® 488 Mouse monoclonal [DM1A] to alpha Tubulin - Microtubule Marker
Conjugation	Alexa Fluor® 488. Ex: 495nm, Em: 519nm
Tested applications	**Suitable for:** Flow Cyt (Intra), 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 cells. Flow Cyt (Intra): HeLa cells.
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	Immunogen affinity purified
Clonality	Monoclonal
Clone number	DM1A
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab195887 in the following tested applications.

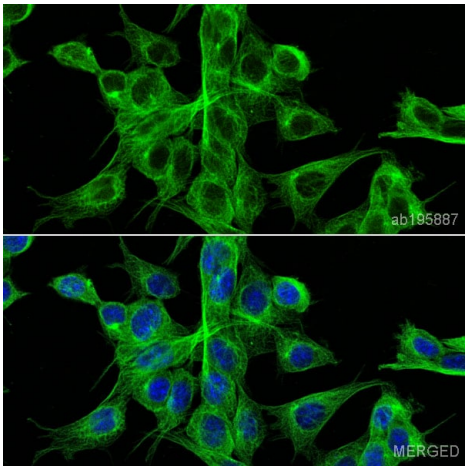
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/500.
ICC/IF	★★★★☆ (1)	1/150 - 1/250.

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

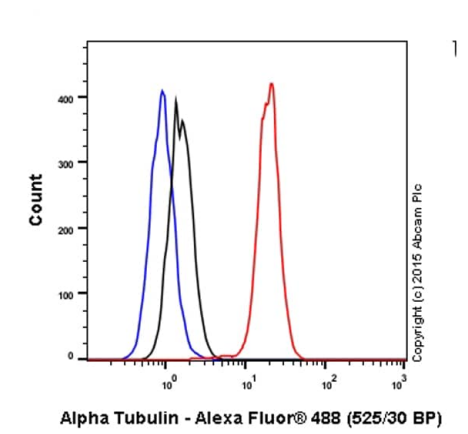


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (ab195887)

ab195887 staining alpha Tubulin in MEF1 cells. The cells were fixed with 4% formaldehyde (10 minutes), permeabilized in 0.1% PBS-Triton X-100 for 5 minutes then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1 hour. The cells were then incubated with ab195887 at 1/250 dilution (shown in green) overnight at +4°C. Nuclear DNA was labeled in blue with DAPI.

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

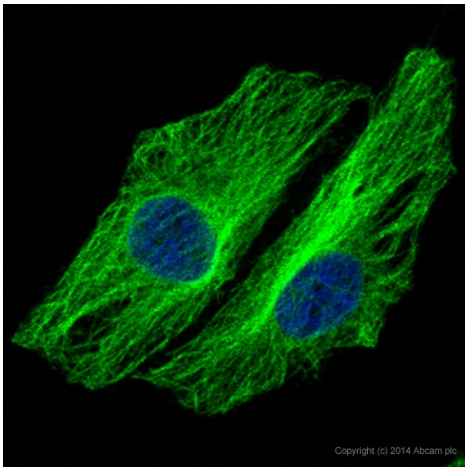
Image was taken with a Confocal microscope (Leica micro-systems, TCS SP8).



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (ab195887)

Overlay histogram showing HeLa (Human epithelial cell line from cervix adenocarcinoma) cells stained with ab195887 (red line). The cells were fixed with 80% methanol (5 minutes) and then permeabilized with 0.1% PBS-Tween for 20 minutes. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab195887, 1/500 dilution) for 30 minutes at 22°C. Isotype control antibody (black line) was mouse IgG1 (monoclonal) Alexa Fluor® 488 (**ab171463**) used at the same concentration and conditions as the primary antibody. Unlabeled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 minutes)/permeabilized with 0.1% PBS-Tween for 20 minutes used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (ab195887)

ab195887 staining alpha Tubulin in HeLa (Human epithelial cell line from cervix adenocarcinoma) cells. The cells were fixed with 4% formaldehyde (10 minutes), permeabilized in 0.1% PBS-Triton X-100 for 5 minutes then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1 hour. The cells were then incubated with ab195887 at 1/167 dilution (shown in green) overnight at +4°C. Nuclear DNA was labeled in blue with DAPI.

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

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

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