## Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)</th>
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<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Mouse monoclonal [DM1A] to alpha Tubulin - Microtubule Marker (Alexa Fluor® 594)</td>
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<td><strong>Host species</strong></td>
<td>Mouse</td>
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<td><strong>Conjugation</strong></td>
<td>Alexa Fluor® 594. Ex: 590nm, Em: 617nm</td>
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<td><strong>Tested applications</strong></td>
<td>Suitable for: ICC/IF</td>
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<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Human</td>
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<td><strong>Immunogen</strong></td>
<td>Full length native protein (purified) corresponding to Chicken alpha Tubulin.</td>
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<td><strong>Epitope</strong></td>
<td>aa 426-450</td>
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<tr>
<td><strong>Positive control</strong></td>
<td>ICC/IF - HeLa</td>
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<tr>
<td><strong>General notes</strong></td>
<td>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 use products containing Alexa Fluor® dyes for purposes other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or <a href="mailto:outlicensing@lifetech.com">outlicensing@lifetech.com</a></td>
</tr>
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## Properties

<table>
<thead>
<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
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<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at +4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Stable for 12 months at -20°C. Store In the Dark.</td>
</tr>
</tbody>
</table>
Storage buffer
- pH: 7.40
- Preservative: 0.02% Sodium azide
- Constituents: PBS, 30% Glycerol, 1% BSA

Purity
- Immunogen affinity purified

Clonality
- Monoclonal

Clone number
- DM1A

Isotype
- IgG1

Light chain type
- kappa

Applications

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.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>1/150 - 1/250.</td>
<td>ab178000 - Mouse monoclonal IgG1 (Alexa Fluor® 594), is suitable for use as an isotype control with this antibody.</td>
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</tbody>
</table>

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.
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 1 hr. 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).

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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 1 hr. The cells were then incubated with ab195889 at 1/167 dilution (shown in pseudo-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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**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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