**Product datasheet**

**Anti-Tubulin antibody [YOL1/34] - Microtubule Marker (Alexa Fluor® 488) ab195883**

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<th>1 Image</th>
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| **Product name** | Anti-Tubulin antibody [YOL1/34] - Microtubule Marker (Alexa Fluor® 488) |
| **Description** | Rat monoclonal [YOL1/34] to Tubulin - Microtubule Marker (Alexa Fluor® 488) |
| **Host species** | Rat |
| **Conjugation** | Alexa Fluor® 488. Ex: 495nm, Em: 519nm |
| **Tested applications** | Suitable for: ICC/IF |
| **Species reactivity** | Reacts with: Mouse, Rat, Dog, Human, Saccharomyces cerevisiae, Schizosaccharomyces pombe, Alligator |
| **Immunogen** | Full length native protein (purified) (S. cerevisiae). |
| **Positive control** | ICC/IF: HeLa cells. |

**General notes**

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**Properties**

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<th>Form</th>
<th>Liquid</th>
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<tr>
<td>Storage instructions</td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
</tr>
</tbody>
</table>
Storage buffer  
- pH: 7.40
- Preservative: 0.02% Sodium azide
- Constituents: 30% Glycerol, 1% BSA, PBS

Purity  
- IgG fraction

Clonality  
- Monoclonal

Clone number  
- YOL1/34

Isotype  
- IgG2a

Applications

Our Abpromise guarantee covers the use of ab195883 in the following tested applications.

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

<table>
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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<td>ICC/IF</td>
<td>1/100.</td>
<td>This product gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).</td>
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</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  
- Undergoes a tyrosination/detyrosination cycle, the cyclic removal and re-addition of a C-terminal tyrosine residue by the enzymes tubulin tyrosine carboxypeptidase (TTCP) and tubulin tyrosine ligase (TTL), respectively.
- 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-tubulins 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
ab195883 staining tubulin in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% 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 1 h. The cells were then incubated overnight at +4°C with ab195883 at a 1/100 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in HeLa cells fixed with 4% formaldehyde (10 min).

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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