

Anti-Tubulin antibody [B3] ab11324

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Overview

| | |
|----------------------------|---|
| Product name | Anti-Tubulin antibody [B3] |
| Description | Mouse monoclonal [B3] to Tubulin |
| Host species | Mouse |
| Tested applications | Suitable for: ELISA, WB, ICC |
| Species reactivity | Reacts with: Mouse, Rat, Rabbit, Chicken, Cow, Human, Macaque monkey, Sea urchin |
| Immunogen | Purified sea urchin (<i>Lytechinus pictus</i>) sperm axonemal proteins. |
| Epitope | The epitope recognized by the antibody is localized in the C-terminal region of alpha and beta tubulins (the glutamylated motif at amino acid 445-457 of alpha tubulin). |
| Positive control | The epitope recognized by the antibody is localized in the C-terminal region of alpha and beta tubulins (the glutamylated motif at amino acid 445-457 of alpha tubulin). |
| General notes | Storage in frost-free freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours. |

Properties

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|-----------------------------|---|
| 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 | Preservative: 15mM Sodium Azide Constituents: 1% BSA, 0.01M PBS, pH 7.4 |
| Purity | Protein A purified |
| Clonality | Monoclonal |
| Clone number | B3 |
| Isotype | IgM |

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab11324 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 |
|-------------|-----------|-------|
| ELISA | | |
| WB | | |
| ICC | | |

Application notes

ELISA: Use at an assay dependent dilution.

ICC: Use at an assay dependent dilution. Can be used with 4% paraformaldehyde-1% Triton X-100 and methanol-acetone.

WB: Use at a concentration of 0.5 - 1 µg/ml. This concentration is recommended using a cytosolic fraction of rat brain extract. Detects a band of approximately 50 kDa, possibly a doublet of alpha and beta tubulins.

Not tested in other applications.

Optimal dilutions/concentrations should be determined by the end user.

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 TTL10 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 polyglutamylated, 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.

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