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alpha Tubulin Recombinant Mouse mAb

Catalog # AP96571

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P68369
Other Accession	P68369
Reactivity	Rat, Human, Mouse
Host	Mouse
Clonality	Recombinant
Calculated MW	50136
Physical State	Liquid
Immunogen	Recombinant mouse alpha Tubulin protein
Isotype	IgG1, k
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the tubulin family.
SUBUNIT	Dimer of alpha and beta chains.
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 (Probable). 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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	bs-0159P is one synthetic peptide derived from human Tubulin-alpha 1. Tubulin is a major cytoskeleton that has five distinct forms, designated alpha, beta, gamma, delta and epsilon tubulin. The alpha and beta tubulins form a heterodimer that polymerize into the cylindrical microtubule fibers. Both alpha and beta tubulin bind GTP. Only beta tubulin hydrolyzes GTP to GDP. This hydrolysis is a process that is linked to tubulin polymerization and microtubule formation. The alpha tubulin isomer can be modified by addition of a C-terminal tyrosine residue. This modification may influence polymerization rates. The gamma tubulin isomer is localized to centrosomes which compose the heart of the microtubule organizing center from which microtubule fibers emanate.

Additional Information

Gene ID	22142
Other Names	B-ALPHA-1; LIS3; TUBA3; Tuba-1; Tuba1; TBA1A_HUMAN; TUBA1A; Alpha-tubulin 3; Tubulin B-alpha-1; Tubulin alpha-3 chain; 3.6.5.-; TBA1A_MOUSE; Alpha-tubulin 1; Alpha-tubulin isotype M-alpha-1; Tubulin alpha-1 chain; TBA1A_RAT; tubulin alpha 1a; tubulin, alpha, brain-specific
Dilution	WB=1:1000-5000,IHC-P=1:200-1000,IHC-F=1:200-1000,IF=1:200-1000,ICC/IF=1:100-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Tuba1a
Synonyms	Tuba1
Function	Tubulin is the major constituent of microtubules, protein filaments consisting of alpha- and beta-tubulin heterodimers (By similarity). Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms (By similarity). Below the cap, tubulin dimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin (By similarity).
Cellular Location	Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, flagellum axoneme
Tissue Location	Ubiquitously expressed, although primarily in lung and brain.

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