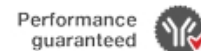


Acetyl-alpha Tubulin (Lys40) Monoclonal Antibody (6-11B-1)

Catalog Number 32-2700



Product Data Sheet

Details		Species Reactivity	
Size	100 µg	Tested species reactivity	Human, Mouse, Rat
Host / Isotype	Mouse IgG2b	Published Species Reactivity	Canine, Chicken, Human, Mollusca, Mouse, Not Applicable, Rat, Zebrafish
Class	Monoclonal		
Type	Antibody	Tested Applications	Dilution *
Clone	6-11B-1	Immunocytochemistry (ICC)	1-3 µg/ml
Immunogen	Acetylated alpha-tubulin from the axoneme of sea urchin sperm flagella.	Immunofluorescence (IF)	1-3 µg/ml
Conjugate	Unconjugated	Western Blot (WB)	1-3 µg/ml
Form	Liquid	Published Applications	
Concentration	0.5mg/ml	Immunofluorescence (IF)	See 13 publications below
Purification	Protein A	Immunocytochemistry (ICC)	See 8 publications below
Storage Buffer	PBS, pH 7.4	Miscellaneous (Misc)	See 6 publications below
Contains	0.1% sodium azide	Immunohistochemistry (IHC)	See 6 publications below
Storage Conditions	-20°C	Immunohistochemistry (Frozen) (IHC (F))	See 1 publications below
		Immunohistochemistry (Paraffin) (IHC (P))	See 1 publications below
		Western Blot (WB)	See 1 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product Specific Information

This antibody reacts with the ~ 55 kDa acetylated form of alpha-tubulin. This antibody reacts with human, mouse, and rat. Reactivity is confirmed with NIH3T3 and HeLa cells.

Background/Target Information

Microtubules of the eukaryotic cytoskeleton perform essential and diverse functions and are composed of a heterodimer of alpha and beta tubulin. The genes encoding these microtubule constituents are part of the tubulin superfamily, which is composed of six distinct families. Genes from the alpha, beta, and gamma tubulin families are found in all eukaryotes. The alpha and beta tubulins represent the major components of microtubules, while gamma tubulin plays a critical role in the nucleation of microtubule assembly. There are multiple alpha and beta tubulin genes and they are highly conserved among and between species. The tubulin protein is a major target of drug molecules, and consequently, tubulin inhibitors have attracted great attention as antimitotic antitumor agents for chemotherapeutic use. Stable microtubules (MTs) are known to contain acetylated alpha-tubulin. Acetylated tubulin is found in the dense networks and bundles of microtubules in the sensory and supporting cells. MTs containing acetylated alpha-tubulin in Ni²⁺-treated cells were resistant to disassembly induced by nocodazole, and at least partially resistant to cold temperature (0 degrees Celsius), which also depolymerizes MTs. Since acetylated alpha tubulin serves as a marker for the presence of stable MTs, the marked enhancement of alpha tubulin acetylation in Ni²⁺-treated cells indicates that stabilization of MTs may be an important mechanism by which Ni²⁺ induces cell injury since stabilized MTs in turn should favor MT bundling. The acetylated microtubules have been shown to be more drug resistant than nonacetylated microtubules. This increased stability is most likely due to the acetylation process.

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