Qty: 100 µg/200 µl
Mouse anti-acetylated
α-Tubulin
Catalog No. 32-2700
Lot No.

Mouse anti-acetylated α-Tubulin

FORM
This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: 6-11B-1 **ISOTYPE:** Mouse IgG_{2b}

IMMUNOGEN
Acetylated alpha-tubulin from the axoneme of sea urchin sperm flagella.

SPECIFICITY
This antibody reacts with the ~ 55 kDa acetylated form of alpha-tubulin.

REACTIVITY
This antibody reacts with human, mouse and rat. Reactivity is confirmed with NIH3T3 and HeLa cells.

Sample	Immunofluorescence	Western Blotting
Human	++	++
Mouse	++	++
Rat	NT	++

(Excellent +++, Good++, Poor +, No reactivity 0, Not tested NT)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/ml
Immunofluorescence[8]: 1-3 µg/ml

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

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.[1]

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.

REFERENCES

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4. Thyberg J, Mosalewski S. Cel Tissue Res 273(3): 457-466, (1993).
5. LeDizet M, Piperno G. J Cell Biol 103(1): 13-22, (1986).
6. Caron JM, et al. Nature 317(6038): 648-651, (1985).
7. Piperno G, Fuller MT. J Cell Biol 101(6):2085-2094, (1985).
8. Piperno G, et al. J Cell Biol 104(2):289-302, (1987).

RELATED PRODUCTS

Product	*Clone/PAD**	*Cat. No.*
Mouse anti-Tubulin (alpha)	B-5-1-2	32-2500
Mouse anti-Tubulin (beta)	2-28-33	32-2600
Mouse anti-Tubulin (alpha)	Z022	18-0092
Mouse anti-Tubulin (beta)	Z023	18-0093
Mouse anti-Tubulin (alpha)	TU-01	13-8000
Mouse anti-Actin	ZSA1	03-3100
Mouse anti-Actin (Sarcomeric Actin)	ZMSA-5	18-0177
Rabbit anti-Actin		18-0054
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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