Qty: 100 µg/200 µl
Mouse anti-β-Tubulin
Catalog No. 32-2600
Lot No.

Mouse anti-β-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: 2-28-33 **ISOTYPE:** Mouse IgG_1-kappa

IMMUNOGEN
β-tubulin from sea urchin (*S. purpuratus*) sperm.

SPECIFICITY
This antibody reacts with the ~50 kDa β-tubulin. This antibody has been shown to bind to the two major and one of the minor β-tubulin isotypes.

REACTIVITY
This antibody cross reacts with β-tubulin in a variety of species including human, mouse, rat, and *C. elegans*.[5] Reactivity is confirmed with mouse NIH3T3 fibroblast cells, rat brain, and mouse testis.

Sample	Western Blotting	Immunofluorescence
Human	++	NT
Mouse	++	NT
Rat	++	NT
C. elegans[5]	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: 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] The effects on tubulin messenger RNA levels and tubulin protein synthesis when treating cells with microtubule-depolymerizing drugs or when directly microinjecting cells with tubulin suggest that non-polymerized tubulin depresses its own synthesis.

Accumulation of tubulin protein and an increased array of microtubules have been associated with contractile dysfunction in cardiac myocytes after pressure overload in vivo.[2] Studies have also shown that cardiac activity can increase the amount of beta-tubulin in rat cardiac myocytes. Tubulin production in cultured cardiac myocytes can be regulated directly by mechanical forces. In mechanically challenged hearts, the accumulation of beta-tubulin and the development of contractile dysfunction may be directly related to the mechanical forces imposed on the myocardium during the onset and progression of cardiovascular disease.

REFERENCES

1. Shi Q, et al. *Curr Pharm Des* 4(3):219-248,(1998).
2. Watson PA, et al. *Am J Physiol* 271(2 pt 1):C684-C689, (1996).
3. Buttgereit D, et al. *Int J Dev Biol* 40(1):189-196,(1996).
4. Caron JM, et al. *Nature* 317(6038):648-651, (1985).
5. Siddiqui SS, et al. *J Neurosci* 9(8):2963-2972, (1989).

RELATED PRODUCTS

Product	*Clone/PAD**	*Cat. No.*
Mouse anti-Tubulin (alpha)	B-5-1-2	32-2500
Mouse anti-acetylated Tubulin (alpha)	6-11B-1	32-2700
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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PI322600 (Rev 10/08) DCC-08-1089