Qty: 100 µg/200 µL

Mouse anti-Nucleophosmin

Catalog No. 32-5200

Lot No.

Mouse anti-Nucleophosmin

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: FC-61991 **ISOTYPE:** Mouse IgG_1

IMMUNOGEN
NPM/B23 purified from rat hepatoma.

SPECIFICITY
This antibody reacts with the c-terminus of NPM/B23 (Positive controls: HeLa, K562, Jurkat, MCF-7, and HL60 cell lysates). In Western blots it recognizes a band ~37 kDa.

REACTIVITY
This antibody is confirmed reactive with human, mouse and rat.

Sample	ELISA	IHC Frozen Tissue	IHC Paraffin Tissue	Immuno-precipitation (native)	Immuno-fluorescence	Western Blotting
Human	+++	+++	+++	++	+++	+++
Mouse	+++	ND	ND	++	+++	+++
Rat	+++	ND	ND	++	+++	+++

(Excellent +++, Good ++, Poor +, No reactivity 0, Not determined ND, Not applicable NA)

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.

ELISA: 1-2 µg/mL
Immunoprecipitation: 10 µg/IP reaction
Immunofluorescence: 10 µg/mL
Western Blotting: 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

Nucleophosmin/B23 (NMP) is an abundant nucleolar phosphoprotein that accumulates in the nucleoplasm of cells. The putative function of NMP is ribosome assembly and transport. It is associated with pre-ribosomal particles and is localized in the granular region of the nucleolus. NMP has been found to be abundant in tumor growing cells as compared to normal resting cells. In addition, NPM has also been found to shift from the nucleoli to the nucleoplasm when cells are exposed to certain anticancer drugs. Studies indicate applications of NPM to include: cellular nucleolar marker and determination of anti-cancer drug-effects [3,7,10,11], apoptosis and detection of drug-resistant cells [2,6] by NPM-translocation assay [3].

REFERENCES

1. Chan, P.K., et al. Amino acid sequence of a specific antigenic peptide of protein B23. *J. Biol. Chem*. 261: 14335-14341 (1986).
2. Chan, P.K., et al. Assessment of tumor cell sensitivity to mitomycin C by "B23 translocation" assay. *Cancer Letters*, 40: 143-149, (1988).
3. Chan, P.K., et al. C.A. Quantitation of the NPM-translocation using imaging analysis. *Cancer Letters* 100: 191-197 (1996).
4. Chan, P.K., et al. Characterization and cellular localization of Nucleophosmin/B23 in HeLa cells treated with selected cytotoxic agents (studies of B-23-translocation mechanism). *Experimental Cell Research*, 203: 174-181 (1992).
5. Chan, P.K., et al. A study of correlation between NPM-translocation and apoptosis in cells induced by daunomycin. *Biochemical Pharmacology*, 57: 1265-1273, (1999).
6. Chan, P.K., et al. Studies of nucleolar protein B23 translocation after doxorubicin treatment in murine tumor cells. *Cancer Res*. 47: 3798-3801, (1987).
7. Finch, R.A., et al. Studies of actinomycin D induced b23-translocation in P388D1 cells implanted in DBA/2 mice. *Oncology* 49: 223-226, (1992).
8. Lichwe, M.A., et al. Localization of nucleolar phosphoprotein C23 to nucleolar structures and to the nucleolus organizer regions. *Experimental Cell Research*, 203: 174-181 (1992).
9. Ochs, R., et al. Localization of nucleolar phosphoproteins B23 and C23 during Mitosis. *Experimental Cell Research* 146: 139-149 (1983).
10. Yung, B. Y. –M., et al. Effects of actinomycin D analogs on nucleolar phosphoproteins B23. *Biochemical Pharm*. 34: 4059-4063, (1985).
11. Yung, B. Y. –M., et al. Translocation of nucleolar phosphoprotein B23 (37 kD/pI 5.1) induced by selective inhibitors of ribosome synthesis. *Biochem. Biophys. Acta* 826: 167-173 (1985).

RELATED PRODUCTS

Product	***Conjugate***	***Cat. No.***
Protein A	Sepharose 4B	10-1041
rec-Protein G	Sepharose 4B	10-1241
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

Conjugate	***Goat anti-rabbit IgG (H+L)***	***Goat anti-mouse IgG (H+L)***	***Ex/Em****	***Fluorescence similar to--***
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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