



Qty: 100 µg/200 µl

Mouse anti-p53

Catalog No. 13-4100

Lot No. See product label

Mouse anti-p53

FORM

Liquid. This monoclonal antibody is supplied in phosphate buffered saline, pH 7.4, with 0.1% sodium azide (NaN₃). Antibody was purified from ascites raised in Balb/C mice. The protein concentration is 0.5 mg/ml.

CLONE: PAB240

ISOTYPE: gG₁, kappa

SPECIFICITY

This antibody reacts with mutant p53, and denatured wild-type p53⁽¹⁾. Reactivity has been shown with most mammalian species, including; human, rat, and mouse. The epitope is located between the evolutionally conserved Box III and IV regions (approximately 161-220 aa in the human sequence). Reactivity with a 75 kD cytoplasmic protein has been reported.

APPLICATION

p53 is a 339 amino acid protein (53 kD) thought to act as a tumor suppressor gene. p53 has been shown to be a DNA-binding protein⁽²⁾. Missense mutation of the gene can lead to loss of the DNA-binding function, and subsequent inactivation of p53 may be a contributing fact in tumorigenesis. Mutation occurs at many sites on p53 and may represent the most common genetic event in human malignancy⁽³⁾. Mutations result in overexpression of p53 which can then be detected by immunohistochemistry. The overexpression and accumulation of p53 in cell nucleus was reported for a number of human tumors, such as breast⁽⁴⁾, lung, ovarian⁽⁵⁾, and colon carcinomas⁽⁶⁾. Staining of p53 overexpression may be a useful tumor and prognostic marker.

USAGE

The dilutions below are only recommendations. Optimal concentrations of this antibody should be determined by the researcher for each specific application.

	Dilution	Wild Type	Mutant
Immunohistostaining (frozen only):	~1:100	Yes	Yes
Immunoprecipitation (native):	~2-5 µg	No	Yes
Western Blotting:	~1:2,000	Yes	Yes

STORAGE

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

BACKGROUND

P53 is a 339 amino acid protein (53 kD) that is thought to act as a tumor suppressor gene. p53 is a DNA-binding protein, and missense mutation of the gene can lead to loss of its DNA-binding functions, and subsequent inactivation of p53 may be a contributing factor in tumorigenesis. Mutation of p53 occurs at many sites and represents a common genetic alteration in human malignancy. Mutations which result in overexpression of p53 can be detected by immunohistochemistry, and overexpression and accumulation of p53 in cell nucleus was reported for a number of human tumors, such as breast, lung and colon carcinomas. Staining of p53 overexpression may be a useful tumor and prognostic marker.

(cont'd)

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REFERENCES

1. Gannon, J.V. et al; *EMBO J* 9:1595-1602 (1990).
2. Kern, S. et al; *Science* 252:1708-1711 (1993).
3. Vogelstein, B.; *Nature* 348:681-682 (1990).
4. Walker, R.A., et al; *J Pathol* 165:203 (1991)
5. Chang, k., et al; *J Histochem Cytochem* 39:128 (1991)
6. Purdie, C.A., et al; *Am J Pathol* 138:807 (1991)
7. Lane, D.P., et al; *Genes & Development* 4:1 (1990)

RELATED PRODUCTS

<u>Product</u>	<u>Clone</u>	<u>Cat. No.</u>
Ms x p53	BP53.12	13-2200
Ms x p53	Pab1801	13-4000

<u>Product</u>	<u>Conjugate</u>	<u>Cat. No.</u>
Goat anti-Mouse IgG (H+L) (ZyMAX™ Grade)	Purified	81-6500
	FITC	81-6511
	TRITC	81-6514
	Cy™3	81-6515
	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
	Biotin	81-6540

Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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