



Qty: 50 µg/100 µl
Mouse anti-MDM2
Catalog No. 33-7100
Lot No.

Mouse anti-MDM2

FORM

This monoclonal antibody is highly purified from mouse ascites by protein A chromatography. The antibody is supplied as a 100 µl aliquot at a concentration of 0.5 mg/ml in phosphate buffered saline, pH 7.4, containing 0.1% sodium azide (NaN₃).

CLONE: IF2 **ISOTYPE:** Mouse IgG_{2b}-kappa

IMMUNOGEN

A synthetic peptide derived from human MDM2 protein⁽¹⁾.

SPECIFICITY

This antibody reacts with human MDM2 protein. It does not react with mouse MDM2. The epitope recognized by this antibody is located within amino acids 26-169 of the human protein.

REACTIVITY

Human (positive control: OsA-CL, MCF-7 and HeLa cell lysates. HOS cells can be used for negative control).

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate dilutions will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. We recommend the following ranges as starting points for this product.

The predicted molecular mass from the MDM2 amino acid sequence is approximately 54 kDa. However, on SDS/PAGE, MDM2 migrates with an apparent mobility of 90 kDa⁽¹⁻⁴⁾.

Application	Amount	Positive Control	Negative Control
Immunofluorescence	1-5 µg/ml	OsA-CL cells	HOS cells
Immunohistochemistry (frozen) ⁽¹⁾	1-5 µg/ml		
Immunohistochemistry ⁽⁵⁾ (staining of formalin fixed, paraffin embedded tissue requires HIER* pretreatment)	1-5 µg/ml		
Immunoprecipitation (autoradiographic detection)	1 µg/sample	OsA-CL cells	HOS cells
Western Blotting ⁽¹⁻⁴⁾ (chemiluminescence detection)	0.5-2 µg/ml	OsA-CL cells	HOS cells

* HIER: Heat induced epitope retrieval. Contact Invitrogen Technical Service for protocol

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)

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BACKGROUND

The mdm2 (murine double minute 2) proto-oncogene was originally identified as an amplified gene in a mouse tumor cell line. Subsequently, overexpression of MDM2 was shown to produce tumors in athymic mice. In a separate set of studies, the 90 kDa MDM2 was found to bind and inactivate the transcriptional activity of the p53 protein. p53 was also identified as the major target for MDM2 during embryonic development by virtue of the fact that the lethal effects produced by knocking out mdm2 could be reversed by the simultaneous deletion of p53. Interestingly, the mdm2 gene itself is a transcriptional target for p53, and induction of p53 transcriptional activity results in increased MDM2 mRNA and protein levels. Therefore, it appears that a MDM2/p53 feedback loop serves to keep the growth suppressive functions of p53 in check during the normal cell cycle. In addition, recent studies have implicated MDM2 in regulating cell proliferation via p53-independent pathways. This is based on evidence that MDM2 can interact with Rb, E2F-1 and DP1.

Because MDM2 can bind to and inactivate the transcriptional activity of p53, overexpression of MDM2 protein has been detected in a variety of human tumors, and appears to result from gene amplification, increased transcript level, and enhanced translation. In a recent study of 3889 samples from 28 human tumor types, the overall frequency of MDM2 amplification was estimated to be 7%. Gene amplification was observed in 19 tumor types, and the highest frequency was observed in soft tumors (20%), followed by osteosarcomas (16%) and esophageal carcinomas (13%).

REFERENCES*Cited*

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Goat anti-Mouse IgG (H+L) (ZyMAX™ Grade)	Purified	81-6500
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	TRITC	81-6514
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	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
Goat x Mouse IgGAM(H+L) (DS grade)	Biotin	81-6540
	Purified	65-6400
	FITC	65-6411
	HRP	65-6420
	Alk. Phos.	65-6422
Protein A rec-Protein G	Biotin	65-6440
	Sepharose® 4B	10-1041
	Sepharose® 4B	10-1241

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