

MDM2 clone SMP14

Instructions for Use

Specification:

MDM2, originally described as a gene product of mouse double minute chromosomes, is a nuclear oncoprotein that can inhibit the action of certain tumor suppressor proteins. For example, MDM2 binds to the acidic activation domain (residues 2042) of the p53 tumor suppressor protein, and the p53-MDM2 complex down regulates the transcriptional activity of p53. p53 plays a role in the normal cell cycle by activating the transcription of genes that cause arrest in G1. The expression of MDM2 is itself, induced by p53 and may be a way for p53 to self-regulate its activity during the normal cell cycle. However, overexpression of MDM2 results in the loss of p53-regulated growth control and consequently, deregulated cell proliferation. MDM2 also binds to the Retinoblastoma tumor suppressor protein (Rb) and inhibits its growth regulatory function. MDM2 can directly augment proliferation by binding to two transcription factors E2F1 and DP1 and stimulating the activity of the S-phase inducing E2F1/DP1 heterodimer. MDM2 migrates at a reduced molecular weight of ~95 kDa. The SMP14 clone has been reported to recognize human, mouse and rat MDM2 while exhibiting a slight cross-reactivity with cytokeratin's 6, 14 and 16 in some experimental systems. In the immunoprecipitation application, SMP14 has been reported to precipitate MDM2 and p53-MDM2 complexes. MCF7 human breast carcinoma cells (ATCC HTB-22) and NIH/3T3 mouse fibroblasts (ATCC CRL-1658) are suggested as western blot and immunoprecipitation positive controls. SMP14 has been reported to be useful for the immunohistochemical staining of acetone-fixed, frozen sections and of formalin-fixed, paraffin-embedded tissue sections. In addition to a nuclear staining of MDM2, cytoplasmic staining may also be observed which is likely to be attributable to the slight cross reactivity of the SMP14 clone with cytokeratin's.

Availability:

Catalog No.	Contents	Volume
ILM5324-C01	MDM2	0,1 ml concentrate
ILM5324-C05	MDM2	0,5 ml concentrate
ILM5324-C1	MDM2	1,0 ml concentrate

Intended use: For Research Use Only

Reactivity: Human, mouse, rat

Clone: SMP14

Species of origin: Mouse

Isotype: IgG1

Control Tissue: Breast carcinoma

Staining: Nuclear

Immunogen: Human MDM2 aa. 154-167

Presentation: Affinity purified antibody in aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Application and suggested dilutions:

Pretreatment: Heat induced epitope retrieval in 10 mM citrate buffer, pH6.0, or in 50 mM Tris buffer pH9.5, for 20 minutes is required for IHC staining on formalin-fixed, paraffin embedded tissue sections.

- Immunohistochemical staining of cryostat tissue sections (dilution up to 1:50-1:100)
- Immunohistochemical staining of formalin-fixed, paraffin embedded tissue section (dilution up to 1:50-1:100)
- Western blot

The optimal dilution for a specific application should be determined by the investigator.

Note: Dilution of the antibody in 10% normal goat serum followed by a goat anti-mouse secondary antibody-based detection is recommended.

Storage & Stability: Store at 2-8 °C. Do not use after expiration date printed on the vial.

References:

- 1) Martin K, et al, Nature, 1995; 375(6533):691-694.
- 2) Picksley SM, et al, Oncogene, 1994; 9(9):2523-2529.