

MDM2 (SPM344): sc-56430

BACKGROUND

p53 is the most commonly mutated gene in human cancer identified to date. Expression of p53 leads to inhibition of cell growth by preventing progression of cells from G₁ to S phase of the cell cycle. Most importantly, p53 functions to cause arrest of cells in the G₁ phase of the cell cycle following any exposure of cells to DNA-damaging agents. The MDM2 (murine double minute-2) protein was initially identified as an oncogene in a murine transformation system. MDM2 functions to bind p53 and block p53-mediated transactivation of cotransfected reporter constructs. The MDM2 gene is amplified in a high percentage of human sarcomas that retain wildtype p53, and tumor cells that overexpress MDM2 can tolerate high levels of p53 expression. These findings argue that MDM2 overexpression represents at least one mechanism by which p53 function can be abrogated during tumorigenesis.

REFERENCES

1. Kastan, M.B., et al. 1991. Participation of p53 protein in the cellular response to DNA damage. *Cancer Res.* 51: 6304-6311.
2. Kastan, M.B., et al. 1992. A mammalian cell cycle checkpoint pathway utilizing p53 and GADD 45 is defective in ataxia-telangiectasia. *Cell* 71: 587-597.

CHROMOSOMAL LOCATION

Genetic locus: MDM2 (human) mapping to 12q15; Mdm2 (mouse) mapping to 10 D2.

SOURCE

MDM2 (SPM344) is a mouse monoclonal antibody raised against amino acids 154-167 of MDM2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MDM2 (SPM344) is recommended for detection of MDM2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MDM2 siRNA (h): sc-29394, MDM2 siRNA (m): sc-37263, MDM2 siRNA (r): sc-63266, MDM2 shRNA Plasmid (h): sc-29394-SH, MDM2 shRNA Plasmid (m): sc-37263-SH, MDM2 shRNA Plasmid (r): sc-63266-SH, MDM2 shRNA (h) Lentiviral Particles: sc-29394-V, MDM2 shRNA (m) Lentiviral Particles: sc-37263-V and MDM2 shRNA (r) Lentiviral Particles: sc-63266-V.

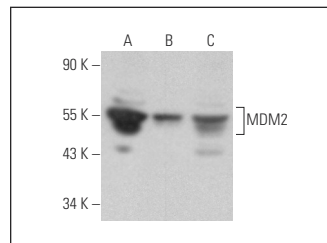
Molecular Weight of MDM2/MDM2 cleavage product: 90/60 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295, A-673 cell lysate: sc-2414 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MDM2 (SPM344): sc-56430. Western blot analysis of MDM2 expression in MCF7 (A), U-2 OS (B) and A-673 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, Y., et al. 2015. P14^{ARF} deficiency and its correlation with overexpression of p53/MDM2 in sporadic vestibular schwannomas. *Eur. Arch. Otorhinolaryngol.* 272: 2227-2234

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **MDM2 (SMP14): sc-965** for MDM2 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.