

MDM2 Monoclonal Antibody (IF2)

Catalog Number 33-7100

Product data sheet

Details		Species Reactivity	
Size	50 µg	Species reactivity	Human
Host/Isotope	Mouse / IgG2b, kappa	Published species	Rat, Bacteria, Human, Not Applicable, Guinea pig
Class	Monoclonal	Tested Applications	
Type	Antibody	Dilution *	
Clone	IF2	Immunocytochemistry (ICC)	1:25-1:200
Immunogen	Synthetic peptide derived from the n-terminal region of human MDM2	Immunofluorescence (IF)	1:25-1:200
Conjugate	Unconjugated	Immunohistochemistry (IHC)	1:25-1:200
Form	Liquid	Immunoprecipitation (IP)	1-5 µg/mL
Concentration	0.5 mg/mL	Western Blot (WB)	0.5-2 µg/mL
Purification	Protein A	Published Applications	
Storage buffer	PBS, pH 7.4, with 1mg/mL BSA, 30% glycerol	Miscellaneous PubMed (MISC)	See 5 publications below
Contains	0.05% sodium azide	Immunohistochemistry (Paraffin) (IHC (P))	See 6 publications below
Storage Conditions	-20° C, Avoid Freeze/Thaw Cycles	Immunohistochemistry (IHC)	See 8 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

This antibody recognizes the ~90 kDa (apparent MW) MDM2 protein. Also recognizes isoforms at ~57 and ~74/76 kDa. The epitope recognized by this antibody is located within amino acids 26-169 of the human protein. Positive controls: OsA-CL, MCF-7, HeLa cell lysates. HOS cells can be used for negative control. Staining of formalin fixed, paraffin embedded tissue requires heat induced epitope retrieval pretreatment.

Background/Target Information

MDM2 is a ubiquitin ligase for p53 and plays a central role in regulation of the stability of p53. MDM2 is located on chromosome 12 on the q arm. Akt-mediated phosphorylation of MDM2 at Ser166 and Ser186 increases its interaction with p300, allowing MDM2-mediated ubiquitination and degradation of p53. Phosphorylation of MDM2 also blocks its binding to p19ARF, increasing the degradation of p53. MDM2 has also been shown to negatively regulate p53 function. MDM2 binds and inhibits transactivation role played by p53 and overexpression of MDM2 can result in the inactivation of p53 and decrease its tumor suppressor function. Another process by which MDM2 can inactivate p53 is by degrading p53 as the protein also possesses E3 ubiquitin ligase activity. Further, MDM2 plays important roles in apoptosis and cell cycle. MDM2 is over expressed in a wide range of human malignancies including soft tissue carcinomas and breast cancer. In addition to p53, MDM2 is involved in processes of cell cycle, apoptosis, and tumorigenesis through interactions with proteins that include retinoblastoma 1 and ribosomal protein L5. More than 40 different alternatively spliced transcript variants of MDM2 have been isolated from both tumor and normal tissues.

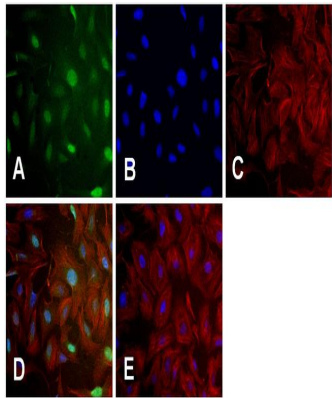
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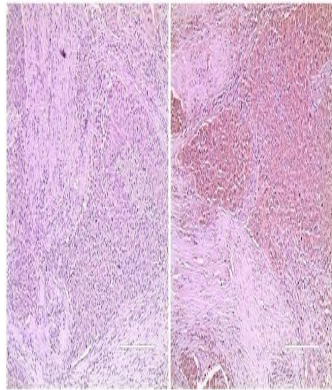
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Product Images For MDM2 Monoclonal Antibody (IF2)



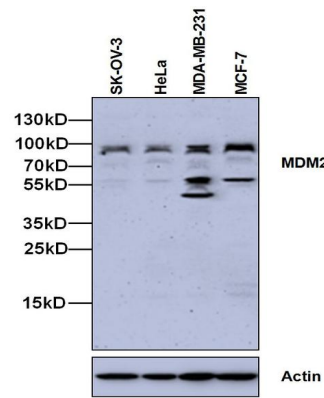
MDM2 Antibody (33-7100) in IF

Immunofluorescence analysis of MDM2 in subconfluent U2OS cells. The cells were fixed with 4% paraformaldehyde for 15 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 3% BSA for 15 minutes at room temperature. The cells were probed with a MDM2 Mouse Monoclonal Antibody (Product # 33-7100) at 1.5 µg/mL for 1 hour at room temperature and then labeled with a Goat anti-Mouse IgG (H+L) Superclonal Secondary Antibody, Alexa Fluor 488 conjugate (Product # A28175) at a dilution of 1:400 for 30 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with Hoechst Dye. F-actin (Panel c: red) was stained with DyLight 554 Phalloidin (Product # 21834). Panel d is a merged image showing predominantly nuclear localization. Panel e shows no primary antibody control. The images were captured at 20X magnification.



MDM2 Antibody (33-7100) in IHC

Immunohistochemistry analysis of MDM2 showing staining in the cytoplasm and nucleus of paraffin-embedded human breast carcinoma (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0) and heated in a 95C water bath for 20 minutes. Following antigen retrieval, tissues were blocked in 10% goat serum in PBS for 30 minutes at room temperature and quenched with Peroxide Suppressor (Product # 35000) for 30 minutes. Tissues were then probed with a MDM2 monoclonal antibody (Product # 33-7100) at a dilution of 40 µg/mL in blocking buffer for 1 hour at room temperature. Tissues were washed extensively in PBST and detection was performed using the SuperPicture HRP Polymer Detection Kit (Product # 87-8963) and DAB substrate (Product # 34002). Tissues were counterstained with hematoxylin (Product # TA-125-MH) and dehydrated with ethanol and xylene to prep for mounting.



MDM2 Antibody (33-7100) in WB

Western blot analysis of MDM2 was performed by loading 30 µg of the indicated whole cell lysates and 5 µL of PageRuler Plus Prestained Protein Ladder (Product # 26619) per well onto a Novex 4-20% Tris-Glycine polyacrylamide gel (Product # WT4202BOX). Proteins were transferred to a nitrocellulose membrane using the G2 Blotter (Product # 62288), and blocked with 5% Milk in TBST for 1 hour at room temperature. MDM2 was detected at ~57, ~75, and ~90 kDa using a MDM2 monoclonal antibody (Product # 33-7100) at a dilution of 2.5 µg/mL in 5% Milk in TBST overnight at 4C on a rocking platform, followed by a Goat anti-Mouse IgG (H+L) Superclonal Secondary Antibody, HRP conjugate (Product # A28177) at a dilution of 1:1000 for at least 30 minutes at room temperature. Chemiluminescent detection was performed using SuperSignal Pico substrate (Product # 34078) and the myECL Imager (Product # 62236).

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PubMed References For MDM2 Monoclonal Antibody (IF2)

5 Miscellaneous PubMed References

Species / Dilution	Summary
	33-7100 was used in immunohistochemistry - paraffin section to explore the use of MDM2 and CDK4 for the histological diagnosis of low-grade osteosarcoma
Human / 1:100	Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc (Sep 2010; 23: 1279) "Immunohistochemical analysis of MDM2 and CDK4 distinguishes low-grade osteosarcoma from benign mimics." Author(s):Yoshida A,Ushiku T,Motoi T,Shibata T,Beppu Y,Fukayama M,Tsuda H PubMed Article URL: http://dx.doi.org/10.1038/modpathol.2010.124
	33-7100 was used in immunohistochemistry to investigate the frequency and contribution of HMGA2, CDK4, and JUN to dedifferentiated liposarcomas and atypical lipomatous tumors/well-differentiated liposarcomas.
Human / Not Cited	Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc (Nov 2015; 28: 1404) "Prognostic value of HMGA2, CDK4, and JUN amplification in well-differentiated and dedifferentiated liposarcomas." Author(s):Saâda-Bouzi E,Burel-Vandenbos F,Ranchère-Vince D,Birtwisle-Peyrottes I,Chetaille B,Bouvier C,Château MC,Peoc'h M,Battistella M,Bazin A,Gal J,Michiels JF,Coindre JM,Pedeutour F,Bianchini L PubMed Article URL: http://dx.doi.org/10.1038/modpathol.2015.96
	33-7100 was used in immunohistochemistry - paraffin section to use 9 cases of well-differentiated/dedifferentiated liposarcoma to characterize unappreciated features
Human / 1:100	The American journal of surgical pathology (Sep 2010; 34: 1361) "Well-differentiated liposarcoma with low-grade osteosarcomatous component: an underrecognized variant." Author(s):Yoshida A,Ushiku T,Motoi T,Shibata T,Fukayama M,Tsuda H PubMed Article URL: http://dx.doi.org/10.1097/PAS.0b013e3181ebcc45
	33-7100 was used in immunohistochemistry (frozen) to characterize dedifferentiated liposarcomas with an inflammatory malignant fibrous histiocytoma component.
Human / 1:100	The Journal of pathology (Jul 2004; 203: 822) "Inflammatory malignant fibrous histiocytomas and dedifferentiated liposarcomas: histological review, genomic profile, and MDM2 and CDK4 status favour a single entity." Author(s):Coindre JM,Hostein I,Maire G,Derré J,Guillou L,Leroux A,Ghnassia JP,Collin F,Pedeutour F,Aurias A PubMed Article URL: http://dx.doi.org/10.1002/path.1579
	33-7100 was used in immunohistochemistry (paraffin) to report that most so-called malignant fibrous histiocytomas from the retroperitoneum are dedifferentiated liposarcoma.
Human / Not Cited	Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc (Mar 2003; 16: 256) "Most malignant fibrous histiocytomas developed in the retroperitoneum are dedifferentiated liposarcomas: a review of 25 cases initially diagnosed as malignant fibrous histiocytoma." Author(s):Coindre JM,Mariani O,Chibon F,Mairal A,De Saint Aubain Somerhausen N,Favre-Guillevin E,Bui NB,Stoeckle E,Hostein I,Aurias A PubMed Article URL: http://dx.doi.org/10.1097/01.MP.0000056983.78547.77

6 Immunohistochemistry (Paraffin) References

Species / Dilution	Summary
	33-7100 was used in immunohistochemistry - paraffin section to report genetic changes in dedifferentiated liposarcomas
Not Applicable / 1:100	Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc (Nov 2009; 22: 1477) "Similarity in genetic alterations between paired well-differentiated and dedifferentiated components of dedifferentiated liposarcoma." Author(s):Horvai AE,DeVries S,Roy R,O'Donnell RJ,Waldman F PubMed Article URL: http://dx.doi.org/10.1038/modpathol.2009.119
	33-7100 was used in immunohistochemistry - paraffin section to assess if immunostaining for PPAR-gamma distinguishes dedifferentiated liposarcoma from other retroperitoneal sarcomas
Not Applicable / 1:100	Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc (May 2008; 21: 517) "Immunostaining for peroxisome proliferator gamma distinguishes dedifferentiated liposarcoma from other retroperitoneal sarcomas." Author(s):Horvai AE,Schaefer JT,Nakakura EK,O'Donnell RJ PubMed Article URL: http://dx.doi.org/10.1038/modpathol.3801017

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33-7100 was used in immunohistochemistry - paraffin section to present the case of a patient with a rare atypical lipomatous tumor with spindle cell features	
Not Applicable / 1:200	Virchows Archiv : an international journal of pathology (Mar 2005; 446: 300) "Palmar atypical lipomatous tumour with spindle cell features (well-differentiated spindle cell liposarcoma): a rare neoplasm arising in an unusual anatomical location." Author(s):Mentzel T,Toennissen J,Rütten A,Schaller J PubMed Article URL: http://dx.doi.org/10.1007/s00428-004-1138-6
33-7100 was used in immunohistochemistry - paraffin section to characterize a primary myxoid liposarcoma with chondroid and osseous components	
Human / 1:50	Applied immunohistochemistry and molecular morphology : AIMM (Mar 2015; 23: 230) "Myxoid liposarcoma with heterologous components: dedifferentiation or metaplasia? A FISH-documented and CGH-documented case report." Author(s):Weingertner N,Neuville A,Chibon F,Ray-Coquard I,Marcellin L,Ghnassia JP PubMed Article URL: http://dx.doi.org/10.1097/PAI.0000000000000008
33-7100 was used in immunohistochemistry - paraffin section to present a unique case of relapsing retroperitoneal dedifferentiated liposarcoma with alpha-fetoprotein ectopic production	
Not Applicable / 1:100	Virchows Archiv : an international journal of pathology (Apr 2006; 448: 517) "alpha-fetoprotein expression in a dedifferentiated liposarcoma." Author(s):Bosco M,Allia E,Coindre JM,Odasso C,Pagani A,Pacchioni D PubMed Article URL: http://dx.doi.org/10.1007/s00428-006-0151-3
33-7100 was used in immunohistochemistry - paraffin section to identify immunohistochemical markers to aid chondroid tumor diagnosis	
Human / 1:50	APMIS : acta pathologica, microbiologica, et immunologica Scandinavica (Jul 2009; 117: 518) "Markers aiding the diagnosis of chondroid tumors: an immunohistochemical study including osteonectin, bcl-2, cox-2, actin, calponin, D2-40 (podoplanin), mdm-2, CD117 (c-kit), and YKL-40." Author(s):Daugaard S,Christensen LH,Høgdaal E PubMed Article URL: http://dx.doi.org/10.1111/j.1600-0463.2009.02461.x
8 Immunohistochemistry References	
Species / Dilution	Summary
Human / Not Cited	American journal of clinical pathology (May 2006; 125: 693) "Reproducibility of MDM2 and CDK4 staining in soft tissue tumors." Author(s):Binh MB,Garau XS,Guillou L,Aurias A,Coindre JM PubMed Article URL: http://dx.doi.org/10.1309/VMBP-67QU-NN6Q-3J0E
33-7100 was used in immunohistochemistry to examine expression of MDM2-CDK4 in low-grade osteosarcomas and fibrous or fibro-osseous lesions of the bone or parosseous soft tissue.	
Human / 1:25	Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc (May 2011; 24: 624) "MDM2 and CDK4 immunohistochemistry is a valuable tool in the differential diagnosis of low-grade osteosarcomas and other primary fibro-osseous lesions of the bone." Author(s):Dujardin F,Binh MB,Bouvier C,Gomez-Brouchet A,Larousserie F,Muret Ad,Louis-Brennetot C,Aurias A,Coindre JM,Guillou L,Pedeutour F,Duval H,Collin C,de Pinieux G PubMed Article URL: http://dx.doi.org/10.1038/modpathol.2010.229
Bacteria / Not Cited	Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc (Jan 2009; 22: 66)
Rat / Not Cited	"Detection of MDM2 gene amplification or protein expression distinguishes sclerosing mesenteritis and retroperitoneal fibrosis from inflammatory well-differentiated liposarcoma."
Guinea pig / Not Cited	Author(s):Weaver J,Goldblum JR,Turner S,Tubbs RR,Wang WL,Lazar AJ,Rubin BP
Human / Not Cited	PubMed Article URL: http://dx.doi.org/10.1038/modpathol.2008.153
Human / Not Cited	Cancer (Sep 2005; 104: 962) "MDM2 as a predictor of prostate carcinoma outcome: an analysis of Radiation Therapy Oncology Group Protocol 8610." Author(s):Khor LY,Desilvio M,Al-Saleem T,Hammond ME,Grignon DJ,Sause W,Pilepich M,Okunieff P,Sandler H,Pollack A PubMed Article URL: http://dx.doi.org/10.1002/cncr.21261

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	33-7100 was used in immunohistochemistry to discuss the properties of desmoid tumors
Not Applicable / Not Cited	JOP : Journal of the pancreas (May 2008; 9: 339) "Sporadic desmoid tumor. An exceptional cause of cystic pancreatic lesion." Author(s):Amiot A,Dokmak S,Sauvanet A,Vilgrain V,Bringuier PP,Scoazec JY,Sastre X,Ruszniewski P,Bedossa P,Couvelard A PubMed Article URL: http://dx.doi.org/null
Human / 1:100	Journal of clinical oncology : official journal of the American Society of Clinical Oncology (Jan 2005; 23: 154) "Wild-type p53 overexpression and its correlation with MDM2 and p14ARF alterations: an alternative pathway to non-small-cell lung cancer." Author(s):Wang YC,Lin RK,Tan YH,Chen JT,Chen CY,Wang YC PubMed Article URL: http://dx.doi.org/10.1200/JCO.2005.03.139
Human / Not Cited	The American journal of surgical pathology (Mar 2012; 36: 423) "MDM2 and CDK4 immunohistochemical coexpression in high-grade osteosarcoma: correlation with a dedifferentiated subtype." Author(s):Yoshida A,Ushiku T,Motoi T,Beppu Y,Fukayama M,Tsuda H,Shibata T PubMed Article URL: http://dx.doi.org/10.1097/PAS.0b013e31824230d0
Not Applicable / Not Cited	33-7100 was used in immunohistochemistry to discuss a rare presentation of a lipoleiomyosarcoma and review the method of pathologic diagnosis
Not Applicable / Not Cited	American journal of clinical oncology (Aug 2009; 32: 353) "Lipoleiomyosarcoma of the rectosigmoid colon: a unique site for a rare variant of liposarcoma." Author(s):Nahal A,Meterissian S PubMed Article URL: http://dx.doi.org/10.1097/COC.0b013e31818c0926

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