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MDM2 Rabbit pAb

Catalog # AP98900

Product Information

Application	IHC-P, IHC-F, IF
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse MDM2
Epitope Specificity	311-400/489
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the MDM2/MDM4 family. Contains 1 RanBP2-type zinc finger. Contains 1 RING-type zinc finger. Contains 1 SWIB domain.
SUBUNIT	Binds p53/TP53, TP73/p73, ARF/P14, PML, RBL5 and RP11, and specifically to RNA. Can interact with RB1, E1A-associated protein EP300 and the E2F1 transcription factor. Forms a ternary complex with p53/TP53 and WWOX. Interacts with CDKN2AIP, MTBP, RFWD3, TBRG1, USP7, PYHIN1, UBXN6, and RBBP6. Isoform Mdm2-F does not interact with p53/TP53. Interacts with and ubiquitinates HIV-1 Tat. Interacts with ARRB1 and ARRB2. Interacts (isoform 2) with PSMA3. Found in a trimeric complex with MDM2, MDM4 and UPB2. Interacts with USP2 (via N-terminus and C-terminus). Interacts with MDM4. Part of a complex with MDM2, DAXX, RASSF1 and USP7. Part of a complex with DAXX, MDM2 and USP7. Interacts directly with DAXX and USP7. Interacts (via C-terminus) with RASSF1 isoform A (via N-terminus); the interaction is independent of TP53. Interacts with APEX1; leading to its ubiquitination and degradation. Interacts with RYBP; this inhibits ubiquitination of TP53. Identified in a complex with RYBP and p53/TP53. Also component of the TRIM28/KAP1-MDM2-p53/TP53 complex involved in regulating p53/TP53 stabilization and activity. Binds directly both p53/TP53 and TRIM28. Component of the TRIM28/KAP1-ERBB4-MDM2 complex involved in connecting growth factor responses with DNA damage. Interacts directly with both TRIM28 and ERBB4 in the complex. Interacts with DYRK2. Interacts with IGF1R. Interacts with TRIM13; the interaction ubiquitinates MDM2 leading to its proteasomal degradation.
Post-translational modifications	Phosphorylated in response to ionizing radiation in an ATM-dependent manner. Auto-ubiquitinated; which leads to proteasomal degradation. Deubiquitinated by USP2 leads to its accumulation and increases deubiquitinilation and degradation of p53/TP53. Deubiquitinated by USP7; leading to stabilize it.
DISEASE	Note=Seems to be amplified in certain tumors (including soft tissue sarcomas, osteosarcomas and gliomas). A higher frequency of splice variants lacking p53 binding domain sequences was found in late-stage and high-grade ovarian and bladder carcinomas. Four of the splice variants show loss of p53 binding.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Background Descriptions	Inhibits TP53/p53- and TP73/p73-mediated cell cyclearrest and apoptosis by binding its transcriptional activation domain. Functions as a ubiquitin ligase E3, in the presence of E1 and E2, toward p53 and itself. Permits the nuclear export of p53 and targets it for proteasome-mediated proteolysis. Binds p53, p73, ARF(P14), ribosomal protein L5 and specifically to RNA. Can interact also with retinoblastoma protein(RB), E1A-associated protein EP300 and the E2F1 transcription factor. Forms a ternary complex with TP53/p53 and WWOX. Interacts with CDKN2AIP, MTBP, TRBG1 and USP7. Isoform Mdm2-F does not interact with TP53/p53. Interacts with PYHIN1. Interacts with, and ubiquitinates HIV-1 Tat. Belongs to the MDM2/MDM4 family.

Additional Information

Other Names	ACTFS; HDMX; LSKB; hdm2; MDM2_HUMAN; MDM2; Double minute 2 protein (Hdm2); Oncoprotein Mdm2; RING-type E3 ubiquitin transferase Mdm2; p53-binding protein Mdm2; 2.3.2.27; MDM2 proto-oncogene; mouse double minute 2, human homolog of; p53-binding protein; Mdm2, transformed 3T3 cell double minute 2, p53 binding protein (mouse); Mdm2 p53 binding protein homolog (mouse); MDM2 proto-oncogene, E3 ubiquitin protein ligase
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Name	MDM2 Rabbit pAb
Function	E3 ubiquitin-protein ligase that mediates ubiquitination of p53/TP53, leading to its degradation by the proteasome. Inhibits p53/TP53- and p73/TP73-mediated cell cycle arrest and apoptosis by binding its transcriptional activation domain. Also acts as an ubiquitin ligase E3 toward itself and ARRB1. Permits the nuclear export of p53/TP53. Promotes proteasome-dependent ubiquitin-independent degradation of retinoblastoma RB1 protein. Inhibits DAXX-mediated apoptosis by inducing its ubiquitination and degradation. Component of the TRIM28/KAP1-MDM2-p53/TP53 complex involved in stabilizing p53/TP53. Also component of the TRIM28/KAP1-ERBB4-MDM2 complex which links growth factor and DNA damage response pathways.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.