

# Phospho-MDM2(T218) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3490a

## Product Information

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|                   |                        |
|-------------------|------------------------|
| Application       | DB, E                  |
| Primary Accession | <a href="#">Q00987</a> |
| Reactivity        | Human                  |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Isotype           | Rabbit IgG             |
| Clone Names       | RB7869                 |
| Calculated MW     | 55233                  |

## Additional Information

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|                    |  |
|--------------------|--|
| Gene ID            | 4193   |
| Other Names        | E3 ubiquitin-protein ligase Mdm2, 632-, Double minute 2 protein, Hdm2, Oncoprotein Mdm2, p53-binding protein Mdm2, MDM2  |
| Target/Specificity | This MDM2 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T218 of human MDM2.   |
| Dilution           | DB~~1:500 E~~Use at an assay dependent concentration.  |
| Format             | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| Storage            | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.                                      |
| Precautions        | Phospho-MDM2(T218) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.  |

## Protein Information

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|          |   |
|----------|---|
| Name     | MDM2  |
| Function | E3 ubiquitin-protein ligase that mediates ubiquitination of p53/TP53, leading to its degradation by the proteasome (PubMed: <a href="#">29681526</a> ). Inhibits p53/TP53- and p73/TP73-mediated cell cycle arrest and apoptosis by binding its transcriptional activation domain. Also acts as a 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 a component of the TRIM28/KAP1-ERBB4-MDM2 complex which links growth factor and DNA damage response pathways. Mediates ubiquitination and subsequent proteasome degradation of DYRK2 in nucleus. Ubiquitinates IGF1R and SNAI1 and promotes them to proteasomal degradation (PubMed:[12821780](#), PubMed:[15053880](#), PubMed:[15195100](#), PubMed:[15632057](#), PubMed:[16337594](#), PubMed:[17290220](#), PubMed:[19098711](#), PubMed:[19219073](#), PubMed:[19837670](#), PubMed:[19965871](#), PubMed:[20173098](#), PubMed:[20385133](#), PubMed:[20858735](#), PubMed:[22128911](#)). Ubiquitinates DCX, leading to DCX degradation and reduction of the dendritic spine density of olfactory bulb granule cells (By similarity). Ubiquitinates DLG4, leading to proteasomal degradation of DLG4 which is required for AMPA receptor endocytosis (By similarity). Negatively regulates NDUFS1, leading to decreased mitochondrial respiration, marked oxidative stress, and commitment to the mitochondrial pathway of apoptosis (PubMed:[30879903](#)). Binds NDUFS1 leading to its cytosolic retention rather than mitochondrial localization resulting in decreased supercomplex assembly (interactions between complex I and complex III), decreased complex I activity, ROS production, and apoptosis (PubMed:[30879903](#)).

#### Cellular Location

Nucleus, nucleoplasm. Cytoplasm. Nucleus, nucleolus. Nucleus.  
 Note=Expressed predominantly in the nucleoplasm. Interaction with ARF(P14) results in the localization of both proteins to the nucleolus. The nucleolar localization signals in both ARF(P14) and MDM2 may be necessary to allow efficient nucleolar localization of both proteins. Colocalizes with RASSF1 isoform A in the nucleus

#### Tissue Location

Ubiquitous. Isoform Mdm2-A, isoform Mdm2-B, isoform Mdm2-C, isoform Mdm2-D, isoform Mdm2-E, isoform Mdm2-F and isoform Mdm2-G are observed in a range of cancers but absent in normal tissues

## Background

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MDM2 is a target of the transcription factor tumor protein p53. The encoded protein is a nuclear phosphoprotein that binds and inhibits transactivation by tumor protein p53, as part of an autoregulatory negative feedback loop. Overexpression of MDM2 can result in excessive inactivation of tumor protein p53, diminishing its tumor suppressor function. This protein has E3 ubiquitin ligase activity, which targets tumor protein p53 for proteasomal degradation. This protein also affects the cell cycle,apoptosis, and tumorigenesis through interactions with other proteins, including retinoblastoma 1 and ribosomal protein L5.

## References

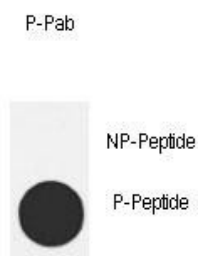
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 Mantesso, A., et al., J. Oral Pathol. Med. 33(2):96-101 (2004).  
 Shmueli, A., et al., Mol. Cell 13(1):4-5 (2004).  
 Xia, L., et al., Cancer Res. 64(1):221-228 (2004).

## Images

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Dot blot analysis of anti-hMDM2-T218 Phospho-specific



Pab (Cat. #AP3490a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Dot Blot

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