

Phospho-MDM2(S166) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3501a**Specification**

Phospho-MDM2(S166) Antibody Blocking peptide - Product InformationPrimary Accession [Q00987](#)**Phospho-MDM2(S166) Antibody Blocking peptide - Additional Information****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

The synthetic peptide sequence used to generate the antibody [AP3501a](/product/products/AP3501a) was selected from the region of human Phospho-MDM2-pT166. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-MDM2(S166) Antibody Blocking peptide - Protein Information**Name** MDM2**Function**

E3 ubiquitin-protein ligase that mediates ubiquitination of p53/TP53, leading to its degradation by the proteasome (PubMed: [29681526](http://www.uniprot.org/citations/29681526)). 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: [29681526](#)).

href="http://www.uniprot.org/citations/12821780" target="_blank">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

Phospho-MDM2(S166) Antibody Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

Phospho-MDM2(S166) Antibody Blocking peptide - Images

Phospho-MDM2(S166) Antibody Blocking peptide - Background

MDM2 is a target of the transcription factor tumor protein p53. It is a nuclear phosphoprotein that binds to 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. It also affects the cell cycle, apoptosis, and tumorigenesis through interactions with other proteins, including retinoblastoma 1 and ribosomal protein L5.

Phospho-MDM2(S166) Antibody Blocking peptide - References

Burch, L.R., et al., J. Mol. Biol. 337(1):115-128 (2004). Schon, O., et al., J. Mol. Biol. 336(1):197-202 (2004). 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).