10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

Phospho-MDM2(S395) Antibody Blocking peptide

Synthetic peptide
Catalog # BP3579a

Specification

Phospho-MDM2(S395) Antibody Blocking peptide - Product Information

Primary Accession Q00987

Phospho-MDM2(S395) 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 AP3579a was selected from the region of human Phospho-MDM2-pS395. 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(S395) Antibody Blocking peptide - Protein Information

Name MDM2

Phospho-MDM2(S395) Antibody Blocking peptide - Background

MDM2 is a target of the transcription factor tumor protein p53. This 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 proteinp53, diminishing its tumor suppressor function. This protein has E3ubiquitin ligase activity, which targets tumor protein p53 for proteasomal degradation. MDM2 also affects the cell cycle,apoptosis, and tumorigenesis through interactions with other proteins, including retinoblastoma 1 and ribosomal protein L5.

Phospho-MDM2(S395) Antibody Blocking peptide - References

Lu X, et al. (2007) The Wip1 Phosphatase acts as a gatekeeper in the p53-Mdm2 autoregulatory loop. Cancer Cell 12, 342-54Balass M, et al. (2002) Characterization of two peptide epitopes on Mdm2 oncoprotein that affect p53 degradation. Peptides 23, 1719-25Maya R, et al. (2001) ATM-dependent phosphorylation of Mdm2 on serine 395: role in p53 activation by DNA damage. Genes Dev 15, 1067-77

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 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 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:<a href="http://www.uniprot.org/ci

tations/20385133"
target="_blank">20385133,
PubMed:<a href="http://www.uniprot.org/ci
tations/20858735"
target="_blank">20858735,
PubMed:<a href="http://www.uniprot.org/ci
tations/22128911"
target="_blank">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:<a href="http://www.uniprot.org/c
itations/30879903"
target="_blank">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:<a href="http://www.uniprot.org/c
itations/30879903"
target="_blank">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(S395) Antibody Blocking peptide - Protocols

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

- Blocking Peptides