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Goat Anti-MDM2 (isoform) Antibody

Peptide-affinity purified goat antibody

Catalog # AF1661a

Specification

Goat Anti-MDM2 (isoform) Antibody - Product Information

Application	**WB**
Primary Accession	Q00987
Other Accession	NP_002383, 4193
Reactivity	**Human**
Predicted	**Rat, Pig, Dog, Cat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**55233**

Goat Anti-MDM2 (isoform) Antibody - Additional Information

Gene ID 4193

Other Names
E3 ubiquitin-protein ligase Mdm2, 6.3.2.-, Double minute 2 protein, Hdm2, Oncoprotein Mdm2, p53-binding protein Mdm2, MDM2

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-MDM2 (isoform) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-MDM2 (isoform) Antibody - Protein Information

Name MDM2

Function
E3 ubiquitin-protein ligase that mediates ubiquitination of p53/TP53, leading to its degradation by the proteasome (PubMed: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: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

Goat Anti-MDM2 (isoform) Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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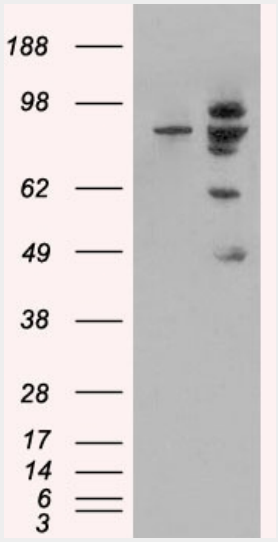
Goat Anti-MDM2 (isoform) Antibody - Images

AF1661a (0.3 µg/ml) staining of Human Liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



HEK293 overexpressing MDM2 (RC219518) and probed with AF1661a (mock transfection in first lane), tested by Origene.

Goat Anti-MDM2 (isoform) Antibody - Background

This gene is a target gene 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 this gene 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. More than 40 different alternatively spliced transcript variants have been isolated from both tumor and normal tissues.

Goat Anti-MDM2 (isoform) Antibody - References

Phosphorylation by casein kinase I promotes the turnover of the Mdm2 oncoprotein via the SCF(beta-TRCP) ubiquitin ligase. Inuzuka H, et al. Cancer Cell, 2010 Aug 9. PMID 20708156.

p53 Codon 72 Increased Biochemical Recurrence Risk after Radical Prostatectomy in a Southern Chinese Population. Xu B, et al. Urol Int, 2010 Jul 20. PMID 20664183.
A large-scale candidate gene approach identifies SNPs in SOD2 and IL13 as predictive markers of response to preoperative chemoradiation in rectal cancer. Ho-Pun-Cheung A, et al. Pharmacogenomics J, 2010 Jul 20. PMID 20644561.
The C terminus of p53 binds the N-terminal domain of MDM2. Poyurovsky MV, et al. Nat Struct Mol Biol, 2010 Aug. PMID 20639885.
A newly identified Pirh2 substrate SCYL1-BP1 can bind to MDM2 and accelerate MDM2 self-ubiquitination. Yan J, et al. FEBS Lett, 2010 Aug 4. PMID 20598683.