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Anti-MDM2 Antibody

Catalog # ABO10704

Product Information

Application	WB
Primary Accession	Q00987
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for E3 ubiquitin-protein ligase Mdm2(MDM2) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	4193
Other Names	E3 ubiquitin-protein ligase Mdm2, 2.3.2.27, Double minute 2 protein, Hdm2, Oncoprotein Mdm2, RING-type E3 ubiquitin transferase Mdm2, p53-binding protein Mdm2, MDM2
Calculated MW	55233
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Nucleus, nucleoplasm. Cytoplasm. Nucleus, nucleolus. 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 Specificity	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.
Source	Eukaryota
Protein Name	E3 ubiquitin-protein ligase Mdm2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human MDM2(343-358aa EKAKLENSTQAEEGFD), different from the related mouse

	sequence by two amino acids, and from the related rat sequence by three amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the MDM2/MDM4 family.

Protein Information

Name	MDM2
Function	E3 ubiquitin-protein ligase that mediates ubiquitination of p53/TP53, leading to its degradation by the proteasome (PubMed:29681526, PubMed:21317885). 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

Mdm2 is an important negative regulator of the p53 tumor suppressor. It is the name of a gene as well as the protein encoded by that gene. Mdm2 protein functions both as an E3 ubiquity lipase that recognizes the N-terminal trans-activation domain(TAD) of the p53 tumor suppressor and an inhibitor of p53 transcriptional activation. Oliner et al.(1992) used MDM2 clones to localize the human gene to chromosome 12q13-q14 by analysis of human-hamster somatic cell hybrids.

Images



Anti-MDM2 antibody, ABO10704, Western blottingLane 1: Rat Testis Tissue LysateLane 2: Rat Brain Tissue LysateLane 3: Rat Heart Tissue LysateLane 4: SKOV-3 Cell LysateLane 5: CLOL320 Cell LysateLane 6: HELA Cell LysateLane 7: HEPA Cell LysateLane 8: COS7 Cell Lysate

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