Bio Academia
Manufacturer

AS ONE

Anti-MdmX (Mdm4)/HdmX p-Ser367 antibody (mouse/human), monoclonal (#15)

Catalog # 71-141 100 ug

Description

MdmX (synonyms: Mdm4, HdmX) inhibits p53-and p73-dependent cell cycle arrest and apoptosis by binding to the transcription activation domains of these proteins. MdmX consists of 490 amino acids with the molecular weight of 54,864 and contains a RIING-finger domain and a nuclear transport signal. It is known that the protein migrates aberrantly in SDS-PAGE at the position of an 80-kDa protein. MdmX is phosphorylated at Ser367 by Chk2 kinase downstream of ATM in response to DNA damage, and as a result, it binds to14-3-3 and is transported into nucleus where it is degraded by Mdm2. This process activates the p53 functions (1, 2 and 3).

Applications

1. Western blotting (~1 ug/ml)
2. Immunoprecipitation
3. ELISA
4. Indirect immuno-staining

Specification

Product: Mouse monoclonal antibody (clone #15) specific to the MdmX protein phosphorylated at Ser367
Antigen: A synthetic peptide corresponding to a sequence of human Mdmx protein surrounding phospho-Ser367
Isotype: Mouse IgG2b (κ)
Form: Purified monoclonal antibody（IgG）1 mg/ml in PBS (-), 50% glycerol
Reaction: Human and mouse MdmX proteins phosphorylated at Ser367
Storage: -20℃ (long term storage: -70°C)

Data Link

UniProtKB/Swiss-Prot O15151 (MDM4_HUMAN)

References:

This product was used in reference 1.

1. Okamoto K et al “DNA damage-induced phosphorylation of MdmX at serine 367 activates p53 by targeting Mdm2-dependent degradation” Mol Cell Biol 25:9608-9620 (2005) PMID: 16227609

2. Chen L et al “ATM and Chk2-dependent phosphorylation of MDMX contribute to p53 activation after DNA damage” EMBO J 24: 3411-3422 (2005) PMID: 16163388

3. Pereg Y et al “Differential roles of ATM- and Chk2 mediated phosphorylations of HdmX in response to DNA damage” Mol Cell Biol 26: 6819-6831 (2006) PMID: 16943424

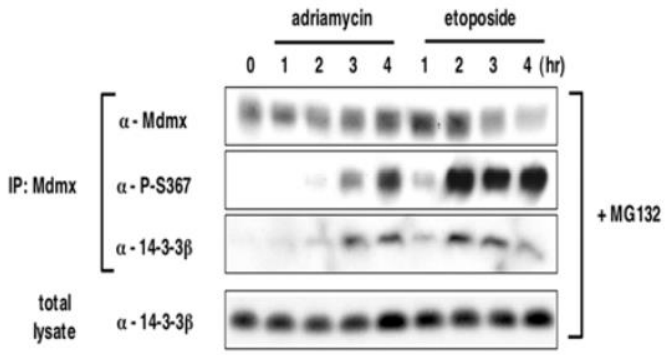

Figure 1. Induction of S367 phosphorylation after DNA damage is associated with increased binding of 14-3-3 to MdmX and accelerated MdmX degradation. Induction of S367 phosphorylation after DNA damage is associated with increased binding of 14-3-3 to MdmX and accelerated MdmX degradation.
MCF cells were preincubated with the proteasome inhibitor MG132 (20 uM) and exposed to DNA damaging agent, adriamycin (3 uM) or etoposide (20 uM), for the indicated periods. The cell lysates were used for immunoprecipitation with anti-MdmX antibody (D-19, Santa-Cruz) and The MdmX immunoprecipitates and the total lysate were analyzed by Western blotting using the indicated antibodies including this product (anti P-S367).