# Recombinant Human MDM2 protein ab167941

## Description

<table>
<thead>
<tr>
<th>Product name</th>
<th>Recombinant Human MDM2 protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity</td>
<td>&gt; 85 % Densitometry.</td>
</tr>
<tr>
<td>Expression system</td>
<td>Escherichia coli</td>
</tr>
<tr>
<td>Accession</td>
<td>Q00987-11</td>
</tr>
<tr>
<td>Protein length</td>
<td>Protein fragment</td>
</tr>
<tr>
<td>Animal free</td>
<td>No</td>
</tr>
<tr>
<td>Nature</td>
<td>Recombinant</td>
</tr>
<tr>
<td>Species</td>
<td>Human</td>
</tr>
<tr>
<td>Sequence</td>
<td>MHHHHHHHGSMCNTNMSVPTDGAVTTSQPASEQETLV RPKPLLKLKSV GAQKDTYTMKEVLFGQYIMTKRLYDEKQQHVYCSN DLLGDLFGVPSF SVKEHRKIIYTMYRNLVNVNQESSDS</td>
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<tr>
<td>Predicted molecular weight</td>
<td>18 kDa including tags</td>
</tr>
<tr>
<td>Amino acids</td>
<td>1 to 118</td>
</tr>
<tr>
<td>Tags</td>
<td>His tag N-Terminus</td>
</tr>
</tbody>
</table>

## Specifications

Our **Abpromise guarantee** covers the use of **ab167941** in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

### Applications

- Western blot
- SDS-PAGE

### Form

- Liquid

## Preparation and Storage

Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

- pH: 7.00
- Preservative: 1.02% Imidazole
Constituents: 0.002% PMSF, 0.82% Sodium phosphate, 0.004% DTT, 25% Glycerol, 1.75% Sodium chloride

General Info

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 an 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.

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.

Involvement in disease
Note=Seems to be amplified in certain tumors (including soft tissue sarcomas, osteosarcomas and gliomas). A higher frequency of splice variants lacking p53 binding domain sequences was found in late-stage and high-grade ovarian and bladder carcinomas. Four of the splice variants show loss of p53 binding.

Sequence similarities
Belongs to the MDM2/MDM4 family.
Contains 1 RanBP2-type zinc finger.
Contains 1 RING-type zinc finger.
Contains 1 SWIB domain.

Domain
Region I is sufficient for binding p53 and inhibiting its G1 arrest and apoptosis functions. It also binds p73 and E2F1. Region II contains most of a central acidic region required for interaction with ribosomal protein L5 and a putative C4-type zinc finger. The RING finger domain which coordinates two molecules of zinc interacts specifically with RNA whether or not zinc is present and mediates the heterooligomerization with MDM4. It is also essential for its ubiquitin ligase E3 activity toward p53 and itself.

Post-translational modifications
Phosphorylated in response to ionizing radiation in an ATM-dependent manner.
Auto-ubiquitinated; which leads to proteasomal degradation. Deubiquitinated by USP2 leads to its accumulation and increases deubiquitinilation and degradation of p53/TP53. Deubiquitinated by USP7; leading to stabilize it.

Cellular 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.

Images

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SDS-PAGE analysis of ab167941

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