abcam

Product datasheet

Recombinant Human MDM2 protein ab82080

1 References 1 Image

Description

Product name	Recombinant Human MDM2 protein
Purity	> 95 % SDS-PAGE. ab82080 is purified by affinity and FPLC chromatography and is greater than 95% homogeneous based on SDS-PAGE analysis.
Expression system	Escherichia coli
Accession	Q00987
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MAHHHHHHASMCNTNMSVPTDGAVTTSQIPASEQETLVR PKPLLLKLLKS VGAQKDTYTMKEVLFYLGQYIMTKRLYDEKQQHIVYCSNDL LGDLFGVPS FSVKEHRKIYTMIYRNLVVVNQQESSDSGTSVSENRCHLE GGSDQKDLVQ ELQEEKPSSSHLVSRPSTSSRRRAISETEENSDELSGER QRKRHKSDSIS LSFDESLALCVIREICCERSSSSESTGTPSNPDLDAGVSE HSGDWLDQDS VSDQFSVEFEVESLDSEDYSLSEEGQELSDEDDEVYQVT VYQAGESDTDS FEEDPEISLADYWKCTSCNEMNPPLPSHCNRCWALREN WLPEDKGKDKGE ISEKAKLENSTQAEEGFDVPDCKKTIVNDSRESCVEEND DKITQASQSQE SEDYSQPSTSSSIIYSSQEDVKEFEREETQDKEESVESSL PLNAIEPCVI CQGRPKNGCIVHGKTGHLMACFTCAKKLKKRNKPCPVCR QPIQMIVLTYF PGLEHHHHHHHH
Predicted molecular weight	55 kDa
Actual molecular weight	58 kDa

Specifications

Our Abpromise guarantee covers the use of **ab82080** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
Form	Liquid
Additional notes	1 unit equals 1 nanogram of purified protein.

Preparation and Storage

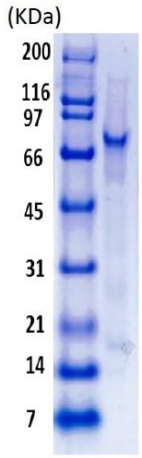
Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 7.9 Constituents: 0.75% Potassium chloride, 0.0154% DTT, 0.316% Tris HCl, 0.00584% EDTA, 20% Glycerol

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



SDS-PAGE - Recombinant Human MDM2 protein (ab82080)

SDS-PAGE analysis of Recombinant Human MDM2 protein (ab82080).

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