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Datasheet for ABIN3093782

## MDM2 Protein (AA 1-491) (Strep Tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	MDM2
Protein Characteristics:	AA 1-491
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MDM2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

#### Product Details

Sequence: MCNTNMSVPT DGAVTTSQIP ASEQETLVRP KPLLLKLLKS VQAQKDTYTM KEVLFYLGQY  
IMTKRLYDEK QQHIVYCSND LLGDLFGVPS FSVKEHRKIY TMIYRNLVVV NQQESSDSGT  
SVSENCHLE GGSQKDLVQ ELQEEKPSSS HLVSRPSTSS RRAISETEE NSDELSGERQ  
RKRHKSDSIS LSFDESLALC VIREICCERS SSSESTGTPS NPDL DAGVSE HSGDWLDQDS  
VSDQFSVEFE VESLDESDYS LSEEGQELSD EDDEVYQVTV YQAGESDTDS FEEDPEISLA  
DYWKCTSCNE MNPPLPSHCN RCWALRENWL PEDKGGKDKGE ISEKAKLENS TQAEFGDVP  
DCKKTIVNDS RESCVEENDD KITQASQSQE SEDYSQPSTS SSIYSSQED VKEFEREETQ  
DKEESVSSL PLNAIEPCVI CQGRPKNGCI VHGKTGHLMA CFTCAKLLKK RNKPCPVCRCQ  
PIQMIVLTYF P

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

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### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and

## Product Details

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Western blot.

Purity: >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Grade: Crystallography grade

## Target Details

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Target: MDM2

Alternative Name: MDM2 ([MDM2 Products](#))

Background: E3 ubiquitin-protein ligase Mdm2 (EC 2.3.2.27) (Double minute 2 protein) (Hdm2) (Oncoprotein Mdm2) (RING-type E3 ubiquitin transferase Mdm2) (p53-binding protein 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). {ECO:0000250|UniProtKB:P23804, ECO:0000269|PubMed:12821780, ECO:0000269|PubMed:15053880,

## Target Details

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ECO:0000269|PubMed:15195100, ECO:0000269|PubMed:15632057,  
ECO:0000269|PubMed:16337594, ECO:0000269|PubMed:17290220,  
ECO:0000269|PubMed:19098711, ECO:0000269|PubMed:19219073,  
ECO:0000269|PubMed:19837670, ECO:0000269|PubMed:19965871,  
ECO:0000269|PubMed:20173098, ECO:0000269|PubMed:20385133,  
ECO:0000269|PubMed:20858735, ECO:0000269|PubMed:22128911,  
ECO:0000269|PubMed:29681526, ECO:0000269|PubMed:30879903}.

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Molecular Weight: 55.2 kDa

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UniProt: [Q00987](#)

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Pathways: [p53 Signaling](#), [PI3K-Akt Signaling](#), [Cell Division Cycle](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Autophagy](#), [Ubiquitin Proteasome Pathway](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

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## Handling

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: Unlimited (if stored properly)

## Images

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**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process