



**LD Biopharma, Inc.**  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human MDM2 Protein  
**Catalog Number:** hTF-1087  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human E3 ubiquitin-protein ligase MDM2 gene is a target gene of the transcription factor tumor protein p53. The encoded protein is a nuclear phosphoprotein that binds and inhibits transactivation by tumor protein p53, as part of an autoregulatory negative feedback loop. Overexpression of this gene can result in excessive inactivation of tumor protein p53, diminishing its tumor suppressor function. This protein has E3 ubiquitin ligase activity, which targets tumor protein p53 for proteasomal degradation. This protein also affects the cell cycle, apoptosis, and tumorigenesis through interactions with other proteins, including retinoblastoma 1 and ribosomal protein L5. More than 40 different alternatively spliced transcript variants have been isolated from both tumor and normal tissues.

Full-length human MDM2 cDNA (491aa) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** MDM2 (ACTFS; hdm2; HDMX)  
**Accession Number:** NP\_002383.2  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 7 days.

### Key References



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Wang,B., et al., *MDM2 inhibitor Nutlin-3a suppresses proliferation and promotes apoptosis in osteosarcoma cells*. Acta Biochim. Biophys. Sin. (Shanghai) 44 (8), 685-691 (2012)

Krishna,A., et al., *Overexpression of MDM2 protein in ameloblastomas as compared to adenomatoid odontogenic tumor*. J Cancer Res Ther 8 (2), 232-237 (2012)

Milne,D., et al., *A novel site of AKT-mediated phosphorylation in the human MDM2 onco-protein*. FEBS Lett. 577 (1-2), 270-276 (2004)

## **Applications**

1. May be used for in vitro MDM2 mediated p53 pathway activities regulation study with “ProFectin” reagent based intracellular delivery of this protein.
2. May be used as specific protein substrate for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
3. May be used for protein-protein interaction mapping.
4. Potential biomarker protein for various cancer diagnoses.
5. As immunogen for specific antibody production.

## **Quality Control**

Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGHHHHHGNLYFQGGFCNTNMSVPTDGAVTTSQIPASEQETLVRPKPLLLK  
LLKSVGAQKDTYTMKEVLFYLGQYIMTKRLYDEKQQHIVYCSNDLLGDLFGVPSFSVKEHRKIY  
TMIYRNLVVVNQQESSDSGTSVSENRCHEGGSDQKDLVQELQEEKPSSSHLVSRLPSTSSRRRA  
ISETEENSDELSEGERQRKRKSDSISLSFDESLALCVIREICCERSSSESTGTSPNPDLDAV  
SEHSGDWLDQDSVSDQFSVEFEVESLSEEDYSLSEEGQELSDEDEDEVYQVTVYQAGESDTSFE  
EDPEISLADYWKCTSCNEMNPPLPSHCNRCWALRENWLPEDKGKDKGEISEKAKLENSTQAEEG  
FDVPDCKKTIVNDSRESCVEENDDKITQASQSQESDYSPSTSSSI IYSSQEDVKEFEREETQ  
DKEESVLESSLPLNAIEPCVICQGRPKNGCIVHGKTGHLMACFTCAKKLKRKPCPVCRQPIQM  
IVLTYFP