

USP7 Protein, Human, Recombinant (His & Myc & SUMO)

General Information

Synonyms:	Ubiquitin thioesterase 7; Ubiquitin carboxyl-terminal hydrolase 7; Ubiquitin-specific-processing protease 7; HAUSP; USP7; Deubiquitinating enzyme 7; Herpesvirus-associated ubiquitin-specific protease
Protein Construction:	214-521 aa
Species:	Human
Expression Host:	<i>E. coli</i>
Accession:	Q93009
Molecular Weight:	55.6 kDa (predicted)
AA Sequence:	VGLKNQGATCYMNSLLQTLFFTQNLRKAVYMMPTEGDDSSKSVPLALQRVFYELQHSDKPVGKKLTKSFG WETLDSFMQHDVQELCRVLLDNVENKMKGTCVEGTIPKLFRGKVMVSYIQCKEVDRYRSDRREDYYDIQLSIKGK KNIFESFVDYVAVEQLDGDNKYDAGEHGLQEAEGVKFLTPPVHLQLMRFMYDPQTDQNIKINDRFEFPE QLPLDEFLKTDPKDPANYILHAVLVHSGDNHGGHYVVLNPKGDGKWCKFDDDVSRCRKKEAIEHNYGG HDDDLCSRHCTNAYMLVYIRE

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice. Solutions are shipping with dry ice.

Protein Background

Hydrolase that deubiquitinates target proteins such as FOXO4, p53/TP53, MDM2, ERCC6, DNMT1, UHRF1, PTEN, KMT2E/MLL5 and DAXX. Together with DAXX, prevents MDM2 self-ubiquitination and enhances the E3 ligase

activity of MDM2 towards p53/TP53, thereby promoting p53/TP53 ubiquitination and proteasomal degradation. Deubiquitinates p53/TP53, preventing degradation of p53/TP53, and enhances p53/TP53-dependent transcription regulation, cell growth repression and apoptosis. Deubiquitinates p53/TP53 and MDM2 and strongly stabilizes p53/TP53 even in the presence of excess MDM2, and also induces p53/TP53-dependent cell growth repression and apoptosis. Deubiquitination of FOXO4 in presence of hydrogen peroxide is not dependent on p53/TP53 and inhibits FOXO4-induced transcriptional activity. In association with DAXX, is involved in the deubiquitination and translocation of PTEN from the nucleus to the cytoplasm, both processes that are counteracted by PML. Deubiquitinates KMT2E/MLL5 preventing KMT2E/MLL5 proteasomal-mediated degradation. Involved in cell proliferation during early embryonic development. Involved in transcription-coupled nucleotide excision repair (TC-NER) in response to UV damage: recruited to DNA damage sites following interaction with KIAA1530/UVSSA and promotes deubiquitination of ERCC6, preventing UV-induced degradation of ERCC6. Involved in maintenance of DNA methylation via its interaction with UHRF1 and DNMT1: acts by mediating deubiquitination of UHRF1 and DNMT1, preventing their degradation and promoting DNA methylation by DNMT1. Deubiquitinates alkylation repair enzyme ALKBH3. OTUD4 recruits USP7 and USP9X to stabilize ALKBH3, thereby promoting the repair of alkylated DNA lesions. Acts as a chromatin regulator via its association with the Polycomb group (PcG) multiprotein PRC1-like complex; may act by deubiquitinating components of the PRC1-like complex. Able to mediate deubiquitination of histone H2B; it is however unsure whether this activity takes place in vivo. Exhibits a preference towards 'Lys-48'-linked ubiquitin chains. Increases regulatory T-cells (Treg) suppressive capacity by deubiquitinating and stabilizing the transcription factor FOXP3 which is crucial for Treg cell function. Plays a role in the maintenance of the circadian clock periodicity via deubiquitination and stabilization of the CRY1 and CRY2 proteins. Deubiquitinates REST, thereby stabilizing REST and promoting the maintenance of neural progenitor cells. Deubiquitinates SIRT7, inhibiting SIRT7 histone deacetylase activity and regulating gluconeogenesis.; (Microbial infection) Contributes to the overall stabilization and trans-activation capability of the herpesvirus 1 trans-acting transcriptional protein ICP0/VMW110 during HSV-1 infection.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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