

Recombinant human HAUSP / USP7 protein ab198464

[2 Images](#)

Description

Product name	Recombinant human HAUSP / USP7 protein
Biological activity	Specific activity: 545 pmol/min/μg Assay Conditions: Reaction was performed in 50 mM Tris pH 7.4, 1 mM DTT. 0.5 mM EDTA, and 500 nM Ub-AMC. Reaction was incubated at 37°C for 15 min. and fluorescent signal was measured at excitation of 340 nm, and emission at 460 nm.
Purity	>= 66 % SDS-PAGE. Affinity purified.
Endotoxin level	< 1.000 Eu/μg
Expression system	Baculovirus infected Sf9 cells
Accession	<u>Q93009</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MHHHHHHHDYKDDDDKNHQQQQQQKAGEQQLSEPEDM EMEAGDTDDPPRI TQNPVINGNVALSDGHNTAEEDMEDDTSWRSEATFQFTV ERFSRLSESVL SPPCFVRNLPWKIM/MPRFYDPDRPHQKSVGFFLQCNAES DSTSWSCHAQA VLKIINYRDDEKSFRRISHLFFHKENDWGFSNFMAWSEV TDPEKGFIDD DKVTFEVVFVQADAPHGVAWDSKKHTGYVGLKNQGATCY MNSLLQTLFFTN QLRKAVYMMPTEGDDSSKSVPLALQRVFYELQHSDKPV GTKKLTCSFGWE TLDSFMQHDVQELCRVLLDNVENKMKGTCEVTIPKLF GKMVSYIQCKE VDYRSDRREDDYDIQLSIKGGKNIFESFVDYVAVEQLDGDN KYDAGEHGL QEAKEGVKFLTLPPVHLQLMRFMYDPQTDQNIKINDRFE FPEQLPLDEF LQKTDPKDPANYLHAVLVHSGDNHGGHYVVYLNPKGDG

KWCKFDDDVVS
RCTKEEAIEHNYGGHDDLSVRHCTNAYMLVYIRESKLSE
VLQAVTDHDI
PQQLVERLQEEKRIEAQKRKERQEAHLYMQVQVAEDQF
CGHQGNDMYDE
EKVKYTVFKVLKNSSLAEFVQSLSQTMGFQDQIRLWPM
QARSNGTKRPA
MLDNEADGNKTMIELSDNENPWTIFLETVDPELAASGATL
PKFDKDHVM
LFLKMYDPKTRSLNYCGHIYTPISCKIRDLLPVMCDRAGFIQ
DTSLILYE
EVKPNLTERIQDYDVSLDKALDELMDGDIVFQKDDPEND
NSELPTAKEY
FRDLYHRVDVIFCDKTIPNDPGFVVTLNRMNYFQVAKTV
AQRLNTDPML
LQFFKSQGYRDGPGNPLRHNYEGTLRDLLQFFKPRQPKK
LYYQQLKMKIT
DFENRRSFKCMWLN SQFREEEITLYPDKHGCVRDLLEECK
KAVELGEKAS
GKLRLLLEIVSYKIIGVHQEDELLECLSPATSRTRFRIEEIPLDQ
VDIDKEN
EMLVTVAHFHKEVFGTFGIPFLLRHQGEHFREVMKRIQSL
LDIQEKEFE
KFKFAIVMMGRHQYINDEYEVNLKDFEPQPGNMSHPRP
WLGLDHFNKAP KRSRYTYLEKAIKIHN

Predicted molecular weight	130 kDa including tags
Amino acids	2 to 1102
Tags	His-DDDDK tag N-Terminus
Additional sequence information	GenBank Accession No. NM_003470

Specifications

Our **Abpromise guarantee** covers the use of **ab198464** in the following tested applications.

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

Applications	Functional Studies SDS-PAGE
Form	Liquid

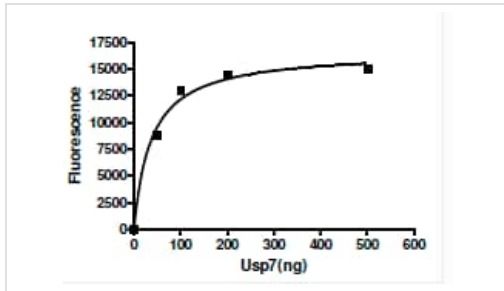
Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Preservative: 0.61% Imidazole Constituents: 0.75% Tris HCl, 0.76% Sodium chloride, 0.02% Potassium chloride, 5% Glycerol (glycerin, glycerine) This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

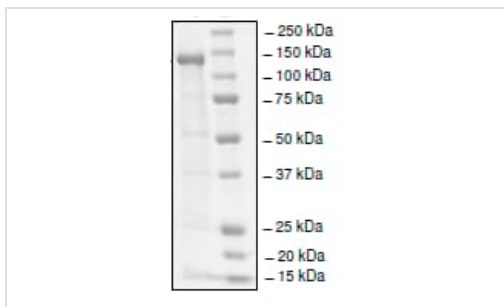
Function	<p>Hydrolase that deubiquitinates target proteins such as FOXO4, p53/TP53, MDM2, ERCC6, DNMT1, UHRF1, PTEN and DAXX (PubMed:11923872, PubMed:15053880, PubMed:16964248, PubMed:18716620, PubMed:25283148). Together with DAXX, prevents MDM2 self-ubiquitination and enhances the E3 ligase activity 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 (PubMed:25283148). 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. 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. Contributes to the overall stabilization and trans-activation capability of the herpesvirus 1 trans-acting transcriptional protein ICP0/VMW110 during HSV-1 infection. 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 (PubMed:21745816). 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 (PubMed:23973222).</p>
Tissue specificity	Widely expressed. Overexpressed in prostate cancer.
Sequence similarities	Belongs to the peptidase C19 family. Contains 1 MATH domain. Contains 1 USP domain.
Domain	The C-terminus plays a role in its oligomerization.
Post-translational modifications	Isoform 1: Phosphorylated. Isoform 1 is phosphorylated at positions Ser-18 and Ser-963. Isoform 2: Not phosphorylated. Isoform 1: Polyneddylated. Isoform 2: Not Polyneddylated. Isoform 1 and isoform 2: Not sumoylated. Isoform 1 and isoform 2: Polyubiquitinated by herpesvirus 1 trans-acting transcriptional protein ICP0/VMW110; leading to its subsequent proteasomal degradation. Isoform 1: Ubiquitinated at Lys-869.
Cellular localization	Nucleus. Cytoplasm. Nucleus, PML body. Present in a minority of ND10 nuclear bodies. Association with ICP0/VMW110 at early times of infection leads to an increased proportion of USP7-containing ND10. Colocalizes with ATXN1 in the nucleus. Colocalized with DAXX in speckled structures. Colocalized with PML and PTEN in promyelocytic leukemia protein (PML) nuclear bodies.

Images



Specific activity of ab198464

Functional Studies - Recombinant human HAUSP /
USP7 protein (ab198464)



10% SDS-PAGE analysis of 2 µg ab198464 stained with
Coomassie

SDS-PAGE - Recombinant human HAUSP / USP7
protein (ab198464)

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