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HAUSP / USP7 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52691

Specification

HAUSP / USP7 Antibody - Product Information

Application	**WB**
Primary Accession	Q93009
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**135 KDa**

HAUSP / USP7 Antibody - Additional Information

Gene ID 7874

Other Names
Deubiquitinating enzyme 7;HAUSP;herpes virus associated;Herpes virus associated ubiquitin specific protease;Herpesvirus-associated ubiquitin-specific protease;TEF 1;tef-1;TEF1;Ubiquitin carboxyl terminal hydrolase 7;Ubiquitin carboxyl-terminal hydrolase 7;Ubiquitin specific peptidase 7 (herpes virus associated);Ubiquitin specific peptidase 7;Ubiquitin specific peptidase 7 herpes virus associated;Ubiquitin specific processing protease 7;Ubiquitin specific protease 7 (herpes virus associated);Ubiquitin Specific Protease 7;Ubiquitin specific protease 7 herpes virus associated;Ubiquitin thioesterase 7;ubiquitin thiolesterase 7;Ubiquitin-specific-processing protease 7;UBP 7;UBP-7;UBP7;UBP7_HUMAN;USP 7;usp-7;USP7;VMW110-ASSOCIATED PROTEIN, 135-KD.

Dilution
WB~~1:200

Format
ascites

Storage
Store at -20 °C.Stable for 12 months from date of receipt

HAUSP / USP7 Antibody - Protein Information

Name USP7 {ECO:0000303|PubMed:12093161, ECO:0000312|HGNC:HGNC:12630}

Function
Hydrolase that deubiquitinates target proteins such as FOXO4, DEPTOR, KAT5, p53/TP53, MDM2, ERCC6, DNMT1, UHRF1, PTEN, KMT2E/MLL5 and DAXX (PubMed:11923872, PubMed:15053880, PubMed:16964248, PubMed:18716620, PubMed:<a

href="http://www.uniprot.org/citations/25283148" target="_blank">25283148, PubMed:25865756, PubMed:26678539, PubMed:28655758, PubMed:35216969). 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 (PubMed:15053880, PubMed:16845383, PubMed:18566590, PubMed:20153724). 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 (PubMed:11923872, PubMed:26786098). Deubiquitination of FOXO4 in presence of hydrogen peroxide is not dependent on p53/TP53 and inhibits FOXO4-induced transcriptional activity (PubMed:16964248). 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 (PubMed:18716620). Deubiquitinates KMT2E/MLL5 preventing KMT2E/MLL5 proteasomal-mediated degradation (PubMed:26678539). 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 (PubMed:22466611, PubMed:22466612). 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, PubMed:22411829). Deubiquitinates alkylation repair enzyme ALKBH3. OTUD4 recruits USP7 and USP9X to stabilize ALKBH3, thereby promoting the repair of alkylated DNA lesions (PubMed:25944111). 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 (PubMed:20601937). Able to mediate deubiquitination of histone H2B; it is however unsure whether this activity takes place in vivo (PubMed:20601937). Exhibits a preference towards 'Lys-48'-linked ubiquitin chains (PubMed:22689415). Increases regulatory T-cells (Treg) suppressive capacity by deubiquitinating and stabilizing the transcription factor FOXP3 which is crucial for Treg cell function (PubMed:23973222). Plays a role in the maintenance of the circadian clock periodicity via deubiquitination and stabilization of the CRY1 and CRY2 proteins (PubMed:27123980). Deubiquitinates REST, thereby stabilizing REST and promoting the maintenance of neural progenitor cells (PubMed:21258371). Deubiquitinates SIRT7, inhibiting SIRT7 histone deacetylase activity and regulating gluconeogenesis (PubMed:<a href="http://www.uniprot.org/citations/28655758"

target="_blank">28655758). Involved in the regulation of WASH-dependent actin polymerization at the surface of endosomes and the regulation of endosomal protein recycling (PubMed:26365382). It maintains optimal WASH complex activity and precise F-actin levels via deubiquitination of TRIM27 and WASHC1 (PubMed:26365382). Mediates the deubiquitination of phosphorylated DEPTOR, promoting its stability and leading to decreased mTORC1 signaling (PubMed:35216969).

Cellular Location
Nucleus. Cytoplasm Nucleus, PML body. Chromosome. Note=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

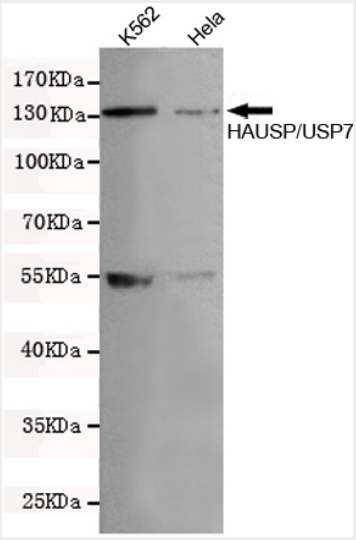
Tissue Location
Expressed in neural progenitor cells (at protein level) (PubMed:21258371). Widely expressed. Overexpressed in prostate cancer.

HAUSP / USP7 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HAUSP / USP7 Antibody - Images



Western blot detection of HAUSP / USP7 in Hela and K562 cell lysates using HAUSP / USP7 mouse mAb (1:200 diluted),with super ECL.Predicted band size:135KDa.Observed band size:135KDa.

HAUSP / USP7 Antibody - Background

Hydrolase that deubiquitinates target proteins such as FOXO4, p53/TP53, MDM2, ERCC6, DNMT1, UHRF1, PTEN 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 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. Exhibits a preference towards 'Lys-48'-linked Ubiquitin chains.

HAUSP / USP7 Antibody - References

Everett R.D.,et al.EMBO J. 16:566-577(1997).
Everett R.D.,et al.EMBO J. 16:1519-1530(1997).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Martin J.,et al.Nature 432:988-994(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.