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Anti-HAUSP (RABBIT) Antibody

HAUSP Antibody
Catalog # ASR5253

Specification

Anti-HAUSP (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human, Mouse**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 130 kDa in size corresponding to HAUSP protein by western blotting in the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids near the amino terminus of human HAUSP protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-HAUSP (RABBIT) Antibody - Additional Information

Gene ID 7874

Other Names
7874

Purity
This affinity purified antibody is directed against human HAUSP protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with HAUSP protein from human, rat, mouse, chimpanzee, bovine and dog based on 100% homology with the immunizing sequence. Expect partial reactivity with HAUSP from chicken (92%, 11/12) and zebrafish (83%, 10/12) sources based on partial sequence homology. Reactivity against homologues from other sources is not known.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted

liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-HAUSP (RABBIT) Antibody - Protein Information

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

Function
Hydrolase that deubiquitinates target proteins such as ARMC5, FOXO4, DEPTOR, KAT5, p53/TP53, MDM2, ERCC6, DNMT1, UHRF1, PTEN, KMT2E/MLL5 and DAXX (PubMed:11923872, PubMed:15053880, PubMed:16964248, PubMed:18716620, PubMed:25283148, PubMed:25865756, PubMed:26678539, PubMed:28655758, PubMed:33544460, 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: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.

Anti-HAUSP (RABBIT) 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

Anti-HAUSP (RABBIT) Antibody - Images

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Western blot using Rockland's affinity purified anti-HAUSP antibody shows detection of HAUSP in various cell lysates at 130 kDa. Lane 1: HeLa nuclear extract (p/n W09-001-367), Lane 2: HeLa (p/n W09-000-364), Lane 3: A431 (p/n W09-000-361), Lane 4: MCF7 (p/n W09-00-360), Lane 5: 3T3 (W10-000-358). The antibody is blocked by pre-incubation with the immunizing peptide (lanes 6 - 10) using the same lysates. A 1:500 dilution of the primary antibody was used for detection followed by a 1:5,000 dilution of HRP Gt-a-Rabbit IgG. Exposure time was 30 s.

Anti-HAUSP (RABBIT) Antibody - Background

HAUSP (also known as deubiquitinating enzyme 7, herpes virus associated ubiquitin specific protease, TEF1, ubiquitin carboxyl terminal hydrolase 7, ubiquitin specific protease 7, ubiquitin thiolesterase 7, and USP7) is a novel p53 interacting protein. HAUSP was identified by mass spectrometry of affinity purified p53 associated factors by Li et al. HAUSP strongly stabilizes p53, even in the presence of excess MDM2, and also induces p53-dependent cell growth repression and apoptosis. HAUSP has an intrinsic enzymatic activity that specifically de-ubiquitinates p53 both in vivo and in vitro. Expression of a catalytically inactive point mutation of HAUSP in cells increased the levels of p53 ubiquitination and also destabilized p53. Li et al concluded that their findings revealed an important mechanism by which p53 can be stabilized by direct de-ubiquitination and also implied that HAUSP may function as a tumor suppressor in vivo through the stabilization of p53.