


Product datasheet

Anti-HAUSP / USP7 antibody [EPR4254] ab109109

KO VALIDATED Recombinant RabMAB

[1 Abreviews](#) [1 References](#) [4 Images](#)

Overview

Product name	Anti-HAUSP / USP7 antibody [EPR4254]
Description	Rabbit monoclonal [EPR4254] to HAUSP / USP7
Host species	Rabbit
Tested applications	Suitable for: WB Unsuitable for: Flow Cyt, ICC/IF or IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HEK-293T, T47-D and HeLa cell lysates.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information see here . Our RabMAB [®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents .

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR4254

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab109109 in the following tested applications.

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

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Detects a band of approximately 135 kDa (predicted molecular weight: 128 kDa).

Application notes

Is unsuitable for Flow Cyt, ICC/IF or IHC-P.

Target

Function

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).

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

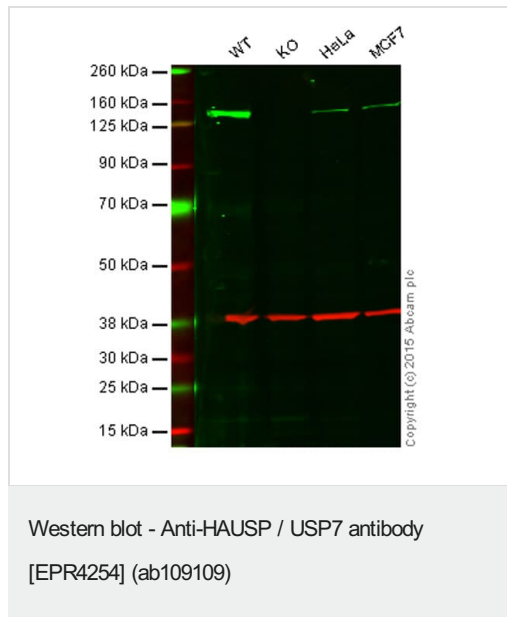
Isoform 1: Phosphorylated. Isoform 1 is phosphorylated at positions Ser-18 and Ser-963. Isoform 2: Not phosphorylated.
Isoform 1: Polyneddylated. Isoform 2: Not Polyneddylated.
Isoform 1 and isoform 2: Not sumoylated.
Isoform 1 and isoform 2: Polyubiquitinated by herpesvirus 1 trans-acting transcriptional 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



Lane 1: Wild-type HAP1 cell lysate (20 µg)

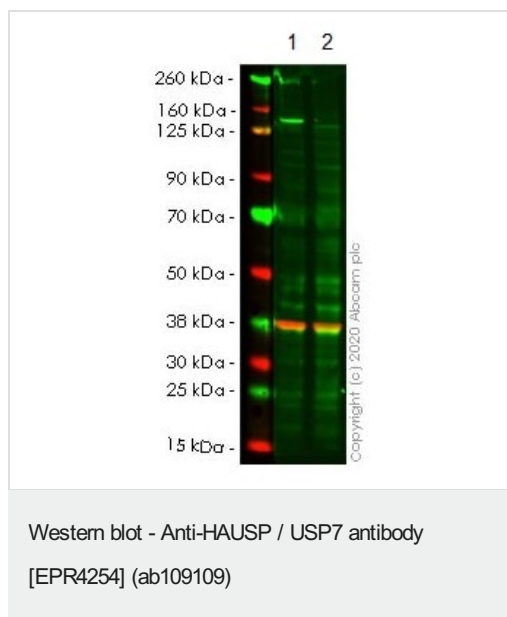
Lane 2: HAUSP / USP7 knockout HAP1 cell lysate (20 µg)

Lane 3: HeLa cell lysate (20 µg)

Lane 4: MCF-7 cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab109109 observed at 135 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab109109 was shown to specifically react with HAUSP / USP7 when HAUSP / USP7 knockout samples were used. Wild-type and HAUSP / USP7 knockout samples were subjected to SDS-PAGE. ab109109 and **ab8245** (loading control to GAPDH) were diluted 1/1000 and 1/2000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10000 dilution for 1 h at room temperature before imaging.



All lanes : Anti-HAUSP / USP7 antibody [EPR4254] (ab109109) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : USP7 CRISPR/Cas9 edited HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

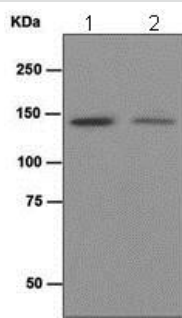
Predicted band size: 128 kDa

Observed band size: 128 kDa

Lanes 1- 2: Merged signal (red and green). Green - ab109109 observed at 128 kDa. Red - Anti-GAPDH antibody [6C5] - Loading

Control (**ab8245**) observed at 37 kDa.

ab109109 was shown to react with HAUSP / USP7 in wild-type HEK-293T cells in western blot. The band observed in CRISPR/Cas9 edited cell line **ab266535** (CRISPR/Cas9 edited cell lysate **ab257284**) lane below 128kDa may represent truncated forms and cleaved fragments. This has not been investigated further. Wild-type HEK-293T and USP7 CRISPR/Cas9 edited HEK-293T cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab109109 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-HAUSP / USP7 antibody [EPR4254] (ab109109)

All lanes : Anti-HAUSP / USP7 antibody [EPR4254] (ab109109) at 1/1000 dilution

Lane 1 : T47-D cell lysate

Lane 2 : Hela cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 128 kDa

Observed band size: 135 kDa

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-HAUSP / USP7 antibody [EPR4254]

(ab109109)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors