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Rabbit Anti-HAUSP/APC Conjugated antibody

SL4281R-APC

Product Name	Anti-HAUSP/APC
Chinese Name	APC 标记的疱疹病毒相关 Ubiquitin 特异性蛋白酶 7 抗体
Alias	Deubiquitinating enzyme 7; 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; 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.
Research Area	Tumour Cell biology immunology Chromatin and nuclear signals Microbiology Cyclin Bacteria and viruses Epigenetics Ubiquitin
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted:Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Rabbit)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	128kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human HAUSP/USP7
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH

7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

background:
Hydrolase that deubiquitinates target proteins such as FOXO4, p53/TP53, MDM2, 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. Contributes to the overall stabilization and trans-activation capability of the herpesvirus 1 trans-acting transcriptional protein ICP0/VMW110 during HSV-1 infection.

Product Detail

Function:
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.

Subunit:
Monomer. Homodimer. Part of a complex with DAXX, MDM2, RASSF1 and USP7. Part of a complex with DAXX, MDM2 and USP7. Interacts with MDM2; the interaction is independent of p53/TP53. Interacts with DAXX; the interaction is direct and independent of MDM2 and p53/TP53. Interacts with FOXO4; the interaction is enhanced in presence of hydrogen peroxide and occurs independently of p53/TP53. Interacts with p53/TP53; the interaction is enhanced in response to DNA damage; the interaction is impaired by TSPYL5. Interacts with PTEN; the interaction is direct. Interacts with UBXN6. Interacts with ATXN1 and the strength of interaction is influenced by the length of the poly-Gln region in ATXN1. A weaker interaction seen with mutants having longer poly-Gln regions. Interacts with KIAA1530/UVSSA. Isoform 1 and isoform 2 interact with herpesvirus 1 trans-acting transcriptional protein ICP0/VMW110. Interacts with Epstein-Barr virus EBNA1. EBNA1 shows a 10-fold higher affinity than p53/TP53 and can compete with it for USP7 binding. Binding to ICP0/VMW110 may modulate the substrate specificity or activity of USP7 to stabilize viral proteins. Interacts with MEX3C and antagonizes its ability to degrade mRNA. Interacts with DNMT1 and UHRF1.

Subcellular Location:
Nucleus. Cytoplasm. Nucleus, PML body. 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 Specificity:
Widely expressed. Overexpressed in prostate cancer.

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.

Similarity:
Belongs to the peptidase C19 family.
Contains 1 MATH domain.

Database links:

Entrez Gene: 7874 Human

Omim: 602519 Human

SwissProt: Q93009 Human

Unigene: 386939 Human

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.