

USP7 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP16712c**Specification**

USP7 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [Q93009](#)**USP7 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 7874**Other Names**

Ubiquitin carboxyl-terminal hydrolase 7, Deubiquitinating enzyme 7, Herpesvirus-associated ubiquitin-specific protease, Ubiquitin thioesterase 7, Ubiquitin-specific-processing protease 7, USP7, HAUSP

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

USP7 Antibody (Center) Blocking Peptide - 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: 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: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.

USP7 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

USP7 Antibody (Center) Blocking Peptide - Images**USP7 Antibody (Center) Blocking Peptide - Background**

Hydrolase that deubiquitinates target proteins such as FOXO4, TP53, MDM2, PTEN and DAXX. Together with DAXX, prevents MDM2 self-ubiquitination and enhances the E3 ligase activity of MDM2 towards TP53, thereby promoting TP53 ubiquitination and proteasomal degradation. Deubiquitinates TP53 and MDM2 and strongly stabilizes TP53 even in the presence of excess MDM2, and also induces TP53-dependent cell growth repression and apoptosis. Deubiquitination of FOXO4 in presence of hydrogen peroxide is not dependent on 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.

USP7 Antibody (Center) Blocking Peptide - References

Sarkari, F., et al. J. Mol. Biol. 402(5):825-837(2010)de Bie, P., et al. Biochem. Biophys. Res. Commun. 400(3):389-395(2010)Maertens, G.N., et al. EMBO J. 29(15):2553-2565(2010)Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Tang, J., et al. Biochem. Biophys. Res. Commun. 393(3):542-545(2010)