

USP7 Protein, Human (sf9)

Cat. No.:	HY-P74478
Synonyms:	Ubiquitin carboxyl-terminal hydrolase 7; USP7; HAUSP
Species:	Human
Source:	Sf9 insect cells
Accession:	Q93009 (K208-E560)
Gene ID:	7874
Molecular Weight:	Approximately 41 kDa

PROPERTIES

Appearance	Solution
Formulation	Supplied as a 0.2 µm filtered solution of 50 mM Tris, 100 mM NaCl, 0.5 mM PMSF, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

The USP7 protein, functioning as a hydrolase, plays a pivotal role in deubiquitinating various target proteins, including FOXO4, DEPTOR, KAT5, p53/TP53, MDM2, ERCC6, DNMT1, UHRF1, PTEN, KMT2E/MLL5, and DAXX. Collaborating with DAXX, it prevents MDM2 self-ubiquitination and enhances MDM2's E3 ligase activity toward p53/TP53, promoting p53/TP53 ubiquitination and subsequent degradation. Furthermore, USP7 is involved in cell proliferation during early embryonic development, transcription-coupled nucleotide excision repair (TC-NER) in response to UV damage, and maintenance of DNA methylation. It regulates chromatin structure, exhibits a preference for 'Lys-48'-linked ubiquitin chains, and modulates the circadian clock. Additionally, USP7 contributes to the stabilization of specific proteins involved in gluconeogenesis, neural progenitor cell maintenance, and actin polymerization at endosomal surfaces. Importantly, its diverse functions highlight its significance in cellular processes and response to microbial infections, such as its involvement in the stabilization and trans-activation of the herpesvirus 1 trans-acting transcriptional protein ICP0/VMW110 during HSV-1 infection.

Caution: Product has not been fully validated for medical applications. For research use only.

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