

USP16 Protein, Human (Sf9, His)

Cat. No.:	HY-P701412
Synonyms:	USP16; Ubiquitin carboxyl-terminal hydrolase 16; Deubiquitinating enzyme 16; Ubiquitin thioesterase 16; Ubiquitin-processing protease UBP-M; Ubiquitin-specific-processing protease 16
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9Y5T5 (G2-L823)
Gene ID:	10600
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
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	USP16 protein serves as a specific deubiquitinase, targeting 'Lys-120' of histone H2A (H2AK119Ub), a distinctive tag associated with epigenetic transcriptional repression. By catalyzing the removal of this ubiquitin moiety, USP16 acts as a coactivator, facilitating subsequent phosphorylation at 'Ser-11' of histone H3 (H3S10ph), a crucial event for chromosome segregation during mitosis. This deubiquitination process is indispensable for maintaining transcription in resting B- and T-lymphocytes, where phosphorylation by AURKB enhances USP16 activity. Furthermore, USP16 plays a regulatory role in Hox gene expression through histone H2A deubiquitination, with a preference for nucleosomal substrates. Notably, USP16 exhibits selectivity, as it does not deubiquitinate histone H2B. Beyond histones, USP16 extends its deubiquitinating activity to non-histone proteins, exemplified by its interaction with ribosomal protein RPS27A. In this context, USP16-mediated deubiquitination of monoubiquitinated RPS27A promotes the maturation of the 40S ribosomal subunit. These diverse functions highlight the multifaceted role of USP16 in the regulation of chromatin dynamics and cellular processes beyond histone modification.
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Caution: Product has not been fully validated for medical applications. For research use only.

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