

## USP19 Protein, Human

<b>Cat. No.:</b>	HY-P701415
<b>Synonyms:</b>	USP19; Ubiquitin carboxyl-terminal hydrolase 19; Deubiquitinating enzyme 19; Ubiquitin thioesterase 19; Ubiquitin-specific-processing protease 19; Zinc finger MYND domain-containing protein 9
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	O94966 (E904-R1318)
<b>Gene ID:</b>	10869
<b>Molecular Weight:</b>	

### PROPERTIES

<b>Appearance</b>	Solution.
<b>Formulation</b>	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	Please use rapid thawing with running water to thaw the protein.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	<p>The USP19 protein functions as a pivotal deubiquitinating enzyme, intricately regulating the degradation of diverse proteins and influencing various cellular processes. Notably, it deubiquitinates and shields RNF123 from proteasomal degradation, leading to the stimulation of CDKN1B ubiquitin-dependent degradation and contributing to cell proliferation. USP19 is implicated in decreased protein synthesis in atrophying skeletal muscle and modulates the transcription of major myofibrillar proteins. Additionally, it plays a crucial role in the turnover of endoplasmic-reticulum-associated degradation (ERAD) substrates and regulates the stability of BIRC2/c-IAP1 and BIRC3/c-IAP2 by preventing their ubiquitination. In the context of cellular response to hypoxia, USP19 is required for mounting an appropriate response and rescues HIF1A from degradation in a non-catalytic manner. Moreover, it plays a significant role in 17 beta-estradiol (E2)-inhibited myogenesis, acting to repress myogenesis and decreasing the levels of ubiquitinated proteins during skeletal muscle formation. USP19 exhibits a notable preference for 'Lys-63'-linked ubiquitin chains, highlighting its selectivity in substrate recognition and modulation of cellular pathways.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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