USP14 Protein, Human (N-His)

Cat. No.:	HY-P700272
Synonyms:	Ubiquitin Carboxyl-Terminal Hydrolase 14; Deubiquitinating Enzyme 14; Ubiquitin Thioesterase 14; Ubiquitin-Specific-Processing Protease 14; USP14; TGT
Species:	Human
Source:	E. coli
Accession:	P54578 (M1-Q494)
Gene ID:	9097
Molecular Weight:	Approximately 60 kDa

PROPERTIES

AA Sequence	M P L Y S V T V K W G K E K F E G V E L N T D E P P M V F K A Q L F A L T G V Q P A R Q K V M V K G G T L K D D D W G N I K I K N G M T L L M M G S A D A L P E E P S A K T V F V E D M T E E Q L A S A M E L P C G L T N L G N T C Y M N A T V Q C I R S V P E L K D A L K R Y A G A L R A S G E M A S A Q Y I T A A L R D L F D S M D K T S S S I P P I I L L Q F L H M A F P Q F A E K G E Q G Q Y L Q Q D A N E C W I Q M M R V L Q Q K L E A I E D D S V K E T D S S S A S A A T P S K K K S L I D Q F F G V E F E T T M K C T E S E E E E V T K G K E N Q L Q L S C F I N Q E V K Y L F T G L K L R L Q E E I T K Q S P T L Q R N A L Y I K S S K I S R L P A Y L T I Q M V R F F Y K E K E S V N A K V L K D V K F P L M L D M Y E L C T P E L Q E K M V S F R S K F K D L E D K K V N Q Q P N T S D K K S S P Q K E V K Y E P F S F A D D I G S N N C G Y Y D L Q A V L T H Q G R S S S S G H Y V S W V K R K Q D E W I K F D D D K V S I V T P E D I L R L S G G G D W H I A Y V L L Y G P R R V E I M E E E S E Q
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	USP14, a proteasome-associated deubiquitinase, emerges as a crucial player in cellular processes, particularly in the dynamic regulation of ubiquitin at the proteasome. Functioning as a reversibly associated subunit of the proteasome, USP14 ensures the release of ubiquitin from ubiquitinated proteins targeted for degradation, facilitating the regeneration of ubiquitin within the cellular environment. Beyond its role in proteasome-mediated protein turnover, USP14 plays a pivotal role in diverse physiological contexts. It is involved in the degradation of the chemokine receptor CXCR4, a critical event for CXCL12-induced cell chemotaxis. Additionally, USP14 serves as a physiological inhibitor of endoplasmic reticulum-associated degradation (ERAD) under non-stressed conditions, interacting with ERN1 and modulating the degradation of unfolded endoplasmic reticulum proteins. Furthermore, USP14 contributes to synaptic development and function at neuromuscular junctions (NMJs) and participates in the innate immune defense against viruses by stabilizing the viral DNA sensor CGAS, thereby impeding its autophagic degradation.

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