USP14 Protein, Human (His)

Cat. No.:	HY-P71418
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 (D91-Q494)
Gene ID:	9097
Molecular Weight:	47-52 kDa

PROPERTIES

AA Sequence	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
Biological Activity	Measured in a cell proliferation assay using A549 cells. The ED_{50} for this effect is 13.76 ng/mL, corresponding to a specific activity is 7.27×10^4 units/mg.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 100 mM NaCl, 20% Glycerol, pH 8.0 or 50 mM Tris-HCL, 300 mM NaCl, 200 mM arginine, pH 8.0, 20% Glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	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	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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