UCHL3 Protein, Human (His)

Cat. No.:	HY-P71115
Synonyms:	Ubiquitin Carboxyl-Terminal Hydrolase Isozyme L3; UCH-L3; Ubiquitin Thioesterase L3; UCHL3
Species:	Human
Source:	E. coli
Accession:	P15374 (M1-A230)
Gene ID:	7347
Molecular Weight:	Approximately 25.0 kDa

PROPERTIES

AA Sequence	M E G Q R W L P L E A N P E V T N Q F L K Q L G L H P N W Q F V D V Y G M D P E L L S M V P R P V C A V L L L F P I T E K Y E V F R T E E E E K I K S Q G Q D V T S S V Y F M K Q T I S N A C G T I G L I H A I A N N K D K M H F E S G S T L K K F L E E S V S M S P E E R A R Y L E N Y D A I R V T H E T S A H E G Q T E A P S I D E K V D L H F I A L V H V D G H L Y E L D G R K P F P I N H G E T S D E T L L E D A I E V C K K F M E R D P D E L R F N A I A L S A A
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 50 mM Tris-HCl, 150 mM NaCl, 1 mM DTT, 50% Glycerol, pH 8.0.
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	UCHL3 protein, a deubiquitinating enzyme (DUB), plays a crucial role in controlling cellular ubiquitin levels by processing ubiquitin precursors and hydrolyzing ubiquitinated proteins. As a thiol protease, UCHL3 exhibits a 10-fold preference for Arg and Lys at position P3'', with a particular affinity for 'Lys-48'-linked ubiquitin chains. In apical compartments, UCHL3 deubiquitinates ENAC, influencing apical membrane recycling. Additionally, it indirectly enhances the phosphorylation of IGFIR, AKT, and FOXO1, promoting insulin signaling and insulin-induced adipogenesis. UCHL3's involvement extends to stress-response in retinal, skeletal muscle, and germ cells, contributing to their maintenance. Notably, it can hydrolyze UBB(+1), a mutated form of ubiquitin associated with neurodegenerative disorders, which is not effectively degraded by the

	proteasome. This multifaceted enzyme may also play a role in working memory.

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

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