UCHL1 Protein, Mouse (His)

Cat. No.:	HY-P73466
Synonyms:	Ubiquitin carboxyl-terminal hydrolase isozyme L1; UCH-L1; Uchl1; PGP9.5
Species:	Mouse
Source:	E. coli
Accession:	Q9R0P9 (Q2-A223)
Gene ID:	22223
Molecular Weight:	Approximately 29 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris, 150 mM NaCl, 20% Glycerol, pH 7.7. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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	UCHL1 Protein is a deubiquitinase that plays a crucial role in various processes, including maintenance of synaptic function, cardiac function, inflammatory response, and osteoclastogenesis. It inhibits the ubiquitination of several proteins, such as WWTR1/TAZ, EGFR, HIF1A, and beta-site amyloid precursor protein cleaving enzyme 1/BACE1. Additionally, it recognizes and hydrolyzes the peptide bond at the C-terminal glycine of ubiquitin, which helps maintain a stable pool of monoubiquitin necessary for the ubiquitin-proteasome and autophagy-lysosome pathways. UCHL1 Protein also regulates amyloid precursor protein/APP processing by promoting BACE1 degradation, leading to reduced amyloid beta production. It is involved in the immune response by regulating the ability of MHC I molecules to reach compartments essential for generating Ag-MHC I complexes. Furthermore, UCHL1 Protein mediates the deubiquitination of the transcriptional coactivator WWTR1/TAZ, stabilizing it and inhibiting osteoclastogenesis. It also stabilizes epidermal growth factor receptor EGFR, preventing its degradation and activating downstream mediators. Moreover, UCHL1 Protein modulates oxidative activity in skeletal muscle by regulating key mitochondrial oxidative proteins. Lastly, it enhances the activity of hypoxia-inducible factor 1-alpha/HIF1A by inhibiting its degradation through abrogating its VHL E3 ligase-mediated ubiquitination.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA