

Human UCHL1 / PGP9.5 Protein (His Tag)

Catalog Number: 11663-H07E



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

HEL-117; NDGOA; PARK5; PGP9.5; PGP95; Uch-L1

Protein Construction:

A DNA sequence encoding the native human UCHL1 (NP_004172.2) (Gln 2-Ala 223) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio Activity:

Measured by the hydrolysis of UbiquitinAMC. The specific activity is >100 pmoles/min/μg.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human UCHL1 consisting of 229 amino acids and migrates as an 25.6 kDa band in SDS-PAGE under reducing conditions as predicted.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 20% glycerol, 1mM DTT, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

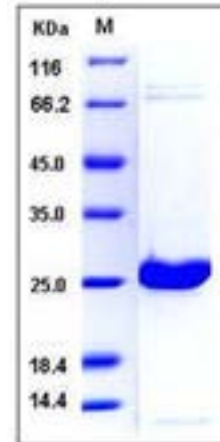
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ubiquitin carboxyl-terminal hydrolase isozyme L1, also known as UCH-L1, Ubiquitin thioesterase L1, PGP9.5 and UCHL1, is a deubiquitinating enzyme with important functions in recycling of ubiquitin. Regulated proteolysis by the ubiquitin pathway has been implicated in control of the cell cycle, transcriptional activation, cell fate and growth, and synaptogenesis. The ubiquitin-proteasome system is involved in synaptic plasticity and is proposed to be part of a molecular switch that converts short-term synaptic potentiation to long-term changes in synaptic strength. UCHL1 is found in neuronal cell bodies and processes throughout the neocortex (at protein level). It is expressed in neurons and cells of the diffuse neuroendocrine system and their tumors. UCHL1 is weakly expressed in ovary. UCHL1 is a ubiquitin-protein hydrolase. It is involved both in the processing of ubiquitin precursors and of ubiquitinated proteins. This enzyme is a thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin. UCHL1 also binds to free monoubiquitin and may prevent its degradation in lysosomes. The homodimer of UCHL1 may have ATP-independent ubiquitin ligase activity. UCHL1 dysfunction has been associated with neurodegeneration in Parkinson's, Alzheimer's, and Huntington's disease patients. Reduced UCHL1 function may jeopardize the survival of CNS neurons.

References

- 1.Wada H., et al., 1998, Biochem. Biophys. Res. Commun. 251:688-92.
- 2.Choi J., et al., 2004, J. Biol. Chem. 279:13256-64.
- 3.Lombardino, A. 2005, et al., J.Proc Natl Acad Sci.USA102 (22):8036-41

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