

Active Recombinant Full Length Human UCHL1 Protein

Cat. No. UCHL1-1520H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant UCHL1 protein was expressed in E.coli and purified by using conventional chromatography techniques (1-223 aa).
Species	Human
Source	Human
ProteinLength	1-223 a.a.
Description	PGP9.5/UCHL1 is a member of a gene family whose products hydrolyze small C-terminal adducts of ubiquitin to generate the ubiquitin monomer. UCHL1 is a component of the ubiquitin system, which has a fundamental role in regulating various biological activities. UCHL1 gene encodes two opposing enzymatic activities that affect alpha-synuclein degradation and Parkinson's disease susceptibility.
Form	Liquid. In 20 mM Tris-HCl buffer (pH 8.0) containing 2 mM EDTA
Molecular Weight	24.8 kDa (223 aa), confirmed by MALDI-TOF (molecular weight on SDS-PAGE will appear higher)
Purity	> 95% by SDS - PAGE
Concentration	1 mg/ml (determined by Bradford assay)
Biological activity	Specific activity: > 300 pmole/min/ug. Measured by the hydrolysis of Ubiquitin-AMC at

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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	pH 8.0, at 37°C.
Activity Assay	1. Prepare a 100ul of recombinant PGP9.5 protein with various concentrations (0.48ng, 0.9ng) in assay buffer and equilibrate to 37°C for 10 minutes. (Assay buffer: 50mM Tris-HCl, 0.5 mM EDTA, 1 mM DTT, 0.1 mg/ml Ovalbumin, pH 8.0.) 2. Add 50ul of 1uM Ubiquitin-AMC. 3. Read at excitation wavelengths 355nm and emission 460nm for 5 minutes. - Ubiquitin-AMC - 96 Well Polystyrene Microplate, black - Fluorescent plate reader
Sequences of amino acids	MQLKPMEINP EMLNKVLSRL GVAGQWRFVD VLGLEEEESLG SVPAPACALL LLFPLTAQHE NFRKKQIEEL KGQEVSPKVY FMKQTIGNSC GTIGLIHAVA NNQDKLGFED GSVLKQFLSE TEKMSPEDRA KCFEKNEAIQ AAHDAVAQEG QCRVDDKVNF HFILFNNVDG HLYELDGRMP FPNVHGASSE DTLLKDDAAKV CREFTEREQG EVRFSVAVALC KAA
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.
Pathways	Neurodegenerative Disorders; Parkinson's disease

GENE INFORMATION

Gene Name	UCHL1 ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase) [Homo sapiens]
Official Symbol	UCHL1
Synonyms	UCHL1; PARK5; PGP9.5; Uch-L1; UCH-L1; EC 3.4.19.12, EC 6; Neuron cytoplasmic protein 9.5; Ubiquitin thioesterase L1; ubiquitin C-terminal esterase L1; ubiquitin carboxyl-terminal esterase L1; ubiquitin thiolesterase L1; Ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase); Ubiquitin carboxy-terminal hydrolase L1;

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Ubiquitin carboxy-terminal hydrolase L1 (UCH-L1); EC 3.1.2.15; ubiquitin thiolesterase; ubiquitin carboxy-terminal esterase; isopeptidase; isopeptidase T; ubiquitin C-terminal hydrolase; ubiquitin carboxy-terminal hydrolase; ubiquitin-C-terminal-thiolester hydrolase; ubiquitin-C-terminal-thioester hydrolase

Gene ID [7345](#)

mRNA Refseq [NM_004181](#)

Protein Refseq [NP_004172](#)

MIM [191342](#)

UniProt ID [P09936](#)

Chromosome Location [4p14](#)

Function cysteine-type endopeptidase activity; ligase activity; omega peptidase activity; peptidase activity; protein binding; ubiquitin binding; ubiquitin thiolesterase activity

PDB rendering based on 2etl.

