9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

UCHL1 Human

Ubiquitin Carboxyl-Terminal Hydrolase L1 Human Recombinant
RCP2500

Product Overview

Name	UCHL1 Human

Description

Ubiquitin Carboxyl-Terminal Hydrolase L1 Human Recombinant

Accession (Primary)	P09936

Synonyms

Ubiquitin carboxyl-terminal hydrolase isozyme L1, UCH-L1, EC 3.4.19.12, Ubiquitin thioesterase L1, Neuron cytoplasmic protein 9.5, PGP 9.5, UCHL1, PGP9.5, PARK5.

Introduction

UCHL1 (PGP9.5) belongs to a gene family whose products hydrolyze small C-terminal adducts of ubiquitin to produce the ubiquitin monomer. Protein Gene Product (PGP9.5) is a neuron specific protein, structurally and immunologically distinct from neuron specific enolase. Human UCHL1 and UCHL3 have an extremely complicated knot structure for a protein, with five knot crossings. It is considered that the knot structure may increase a protein's resistance to degradation in the proteasome. The protein, which has a molecular weight of 27 kDa was first defined by high resolution two dimetional PAGE. Standard immunohistochemical techniques have demonstrated the presence of PGP9.5 in neurons and nerve fibers at all levels of the central and peripheral nervous system, in many neurodcrine cells, in segments of the renal tubules, in spermatogonia and leydig cells of the testis, in ova and in some cells of both the pregnant and non pregnant corpus luteum. A point mutation (I93M) in UCHL1 is implicated as the cause of Parkinson's disease in one kindred. On the other hand, a polymorphism (S18Y) in UCHL1 has been found to be associated with a reduced risk for Parkinson's disease. Furthermore, UCHL1 is associated with the Alzheimer's disease, and required for normal synaptic and cognitive function.

Source

Escherichia Coli.

Physical Appearance

Sterile Filtered clear solution.

Formulation

The UCHL1 protein solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0) and 2mM EDTA.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term

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storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Amino acid sequence

MQLKPMEINP EMLNKVLSRL GVAGQWRFVD VLGLEEESLG SVPAPACALL LLFPLTAQHE NFRKKQIEEL KGQEVSPKVY FMKQTIGNSC GTIGLIHAVA NNQDKLGFED GSVLKQFLSE TEKMSPEDRA KCFEKNEAIQ AAHDAVAQEG QCRVDDKVNF HFILFNNVDG HLYELDGRMP FPVNHGASSE DTLLKDAAKV CREFTEREQG EVRFSAVALC KAA.

Biological Activity

Specific activity: > 150 pmole/min/ug. Measured by the hydrolysis of Ubiquitin-AMC at pH 8.0, at 37C.

References

Title :Protein gene product 9.5 and ubiquitin are expressed in metabolically active epithelial cells of normal and pathologic human kidney Publication :Nephrol Dial Transplant (2005) 20: 2714–2719 doi:10.1093/ndt/gfi124 Advance Access publication 27 September 2005 Link : UCHL1 prospec publication

Precautions

UCHL1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P09936)