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**Product Data Sheet**


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Product Name: UCHL1 Human  
 Cat. No.: GP24944  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
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.		
Amino Acid Sequence	MQLKPMEINP EMLNKVLSRL GVAGQWRFVD VLGLEESLG SVPAPACALL LFLPLTAQHE NFRKKQIEEL KGQEVSPKVY FMKQTIGNSC GTIGLIHAVA NNQDKLGFED GSVLKQFLSE TEKMSPEDRA KCFEKNEAIQ AAHDAVAQEG QCRVDDKVN FHFILFNNVDG HLYELDGRMP FPNVHGASSE DTLLKDAAKV CREFTEREQG EVRFSVALC KAA.		
Formulation	The UCHL1 protein solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0) and 2mM EDTA.		

**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 dimensional 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 neuroendocrine 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

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

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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.

### Biological Activity

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

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

### Background

UCHL1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 223 amino acids (1-223 a.a.) and having a molecular mass of 24.8 kDa (molecular weight on SDS-PAGE will appear higher).

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