

PGP9.5 Human

Description: PGP9.5 Human Recombinant full length protein expressed in E.coli, shows a 36 kDa band on SDS-PAGE. The PGP9.5 is purified by proprietary chromatographic techniques.

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.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered clear solution.

Formulation:

PGP9.5 in 50mM Tris-Acetate, pH7.5, 1mM EDTA, 20% Glycerol.

Stability:

Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months. Please prevent freeze-thaw cycles.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Applications:

ELISA Inhibition Assays Western Blotting.

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 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 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: > 300 pmole/min/μg. Measured by the hydrolysis of Ubiquitin-AMC at pH 8.0, at 37°C.

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

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