

Product Information

UCHL1, His-tagged, human recombinant, expressed in *E. coli* cells

Catalog Number **SRP5149**
Storage Temperature -70°C

Synonyms: PARK5, PGP 9.5, PGP9.5, PGP95, Uch-L1

Product Description

UCHL1 is a member of the peptidase C12 family and a thiol protease that hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin to generate the ubiquitin monomer. UCHL1 is expressed in neurons and in cells of the diffuse neuroendocrine system. Mutations in UCHL1 may be associated with Parkinson's disease.¹ The ligase and hydrolase activities of UCHL1 may play roles in proteasomal protein degradation, a process critical for neuronal health. Inhibition of UCHL1 in mouse hippocampal slices reduces normal synaptic function and long-term potentiation. The PKA-CREB pathway mediates the effects of UCHL1 on β -amyloid induced synaptic dysfunction and UCHL1 also reversed the inhibition of CREB phosphorylation induced by β -amyloid.²

Recombinant, full-length, human UCHL1 was expressed in *E. coli* cells using a N-terminal His tag. The gene accession number is NM_004181. Recombinant protein stored in 50 mM sodium phosphate, pH 7.0, 300 mM NaCl, 150 mM imidazole, 0.1 mM PMSF, 0.25 mM DTT, and 25% glycerol.

Molecular mass: ~25 kDa

Purity: 70–95% (SDS-PAGE, see Figure 1)

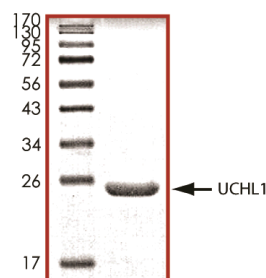
Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at -70°C is recommended. After opening, aliquot into smaller quantities and store at -70°C . Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot
70–95% (densitometry)



References

1. Liu, Y. et al., The UCH-L1 gene encodes two opposing enzymatic activities that affect alpha-synuclein degradation and Parkinson's disease susceptibility. *Cell*, **111**, 209-218 (2002).
2. Gong, B. et al., Ubiquitin hydrolase Uch-L1 rescues beta-amyloid-induced decreases in synaptic function and contextual memory. *Cell*, **126**, 775-788 (2006).

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