

## Anti-UCHL1 Antibody (6P244)

### Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	6P244
Purification:	Protein A

### Applications

1. Anti-UCHL1 rabbit monoclonal antibody at 1:500 dilution.
  - Lane A: SH-SY5Y Whole Cell lysate.
  - Lysates/proteins at 30 µg per lane.
  - Secondary
    - Goat Anti-Rabbit IgG H&L (Dylight800) at 1/10000 dilution.
  - Developed using the Odyssey technique.
  - Performed under reducing conditions.
  - Predicted band size:25 kDa.
  - Observed band size:24 kDa(We are unsure as to the identity of these extra bands.)

2. UCHL1 was immunoprecipitated using:
  - Lane A:0.5 mg 293T Whole Cell Lysate.
  - Lane B:0.5 mg SH-SY5Y Whole Cell Lysate.
  - Lane C:0.5 mg U87MG Whole Cell Lysate.

- Verified Activity:
- 2 µL anti-UCHL1 rabbit monoclonal antibody and 15 µL of 50 % Protein G agarose.
  - Primary antibody:
    - Anti-UCHL1 rabbit monoclonal antibody, at 1:500 dilution.
  - Secondary antibody:
    - Dylight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilution.
  - Developed using the odyssey technique.
  - Performed under reducing conditions.
  - Predicted band size: 25 kDa.
  - Observed band size: 25 kDa.

3. Immunofluorescence staining of UCHL1 in DU145 cells. Cells were fixed with 4% PFA, permeabilized with 0.1% Triton X-100 in PBS, blocked with 10% serum, and incubated with rabbit anti-human UCHL1 monoclonal antibody (dilution ratio 1:60) at 4°C overnight. Then cells were stained with the Alexa Fluor®488-conjugated Goat Anti-rabbit IgG secondary antibody (green). Positive staining was localized to Cytoplasm.

Application: ELISA,ICC/IF,IP,WB

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Recommended WB: 1:500-1:2000; ELISA: 1:5000-1:10000; ICC-IF: 1:20-1:100; IP: 0.5-2 µL/mg of lysate

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### Properties

Stability & Storage: Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.

Shipping: Shipping with blue ice.

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### Antigen Details

Immunogen: Recombinant Protein: Human UCHL1 protein (TMPY-01547)

Antigen Species: Human

Synonyms: ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)

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### Research Background

Ubiquitin carboxyl-terminal hydrolase isozyme L1, also known as UCH-L1, Ubiquitin thioesterase L1, PGP9.5 and UCHL1, is a deubiquitinating enzyme with important functions in recycling of ubiquitin. Regulated proteolysis by the ubiquitin pathway has been implicated in control of the cell cycle, transcriptional activation, cell fate and growth, and synaptogenesis. The ubiquitin-proteasome system is involved in synaptic plasticity and is proposed to be part of a molecular switch that converts short-term synaptic potentiation to long-term changes in synaptic strength. UCHL1 is found in neuronal cell bodies and processes throughout the neocortex (at protein level). It is expressed in neurons and cells of the diffuse neuroendocrine system and their tumors. UCHL1 is weakly expressed in ovary. UCHL1 is a ubiquitin-protein hydrolase. It is involved both in the processing of ubiquitin precursors and of ubiquitinated proteins. This enzyme is a thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin. UCHL1 also binds to free monoubiquitin and may prevent its degradation in lysosomes. The homodimer of UCHL1 may have ATP-independent ubiquitin ligase activity. UCHL1 dysfunction has been associated with neurodegeneration in Parkinson's, Alzheimer's, and Huntington's disease patients. Reduced UCHL1 function may jeopardize the survival of CNS neurons.

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