

**Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody**  
Mouse monoclonal antibody  
Catalog # AN1157

**Specification**

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**Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Product Information**

Application	WB, IF
Primary Accession	<a href="#">P09936</a>
Reactivity	Bovine, Human, Rat
Host	Mouse
Clonality	monoclonal
Isotype	IgG1
Calculated MW	24 KDa

**Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Additional Information**

Gene ID	7345
Gene Name	UCHL1

**Other Names**

Ubiquitin carboxyl-terminal hydrolase isozyme L1, UCH-L1, 6---, Neuron cytoplasmic protein 95, PGP 95, PGP95, Ubiquitin thioesterase L1, UCHL1

**Target/Specificity**

Recombinant full length human UCHL1 purified from E. coli.

**Dilution**

WB~~ 1:5000

IF~~ 1:500

**Format**

Unpurified, concentrated culture supernatant

**Antibody Specificity**

Specific for the ~24kDa UCHL1 protein.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

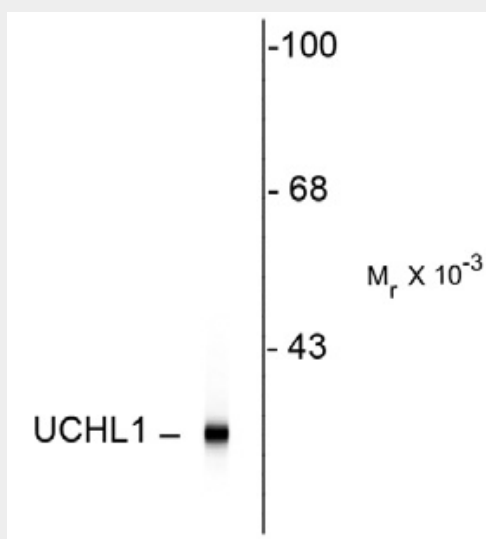
Blue Ice

**Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Protocols**

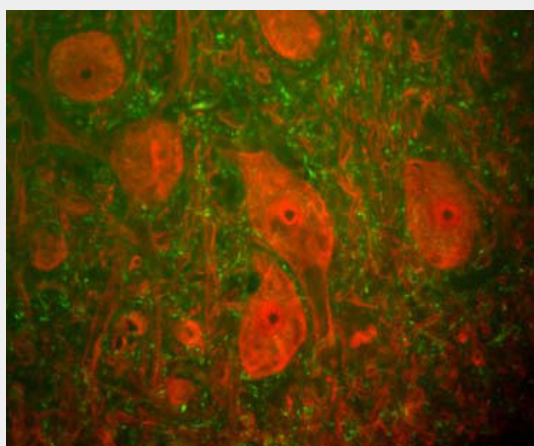
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Images



Western blot of rat hippocampal homogenate showing specific immunolabeling of the ~ 24k UCHL1 protein.



Rat spinal cord stained with anti-UCHL1 (red) and anti-neurofilament NF-H antibody (green). The large cells are  $\alpha$ -motoneurons and UCHL1 fills the cytoplasm of their perikarya and dendrites.

#### Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - Background

Ubiquitin C-terminal hydrolase 1 (UCHL1) is also known as ubiquitin carboxyl esterase L1, ubiquitin thiolesterase, neuron-specific protein PGP9.5 and Park5. It was originally identified as a major component of the neuronal cytoplasm from 2-dimensional gel analysis of brain tissues, and was given the name PGP9.5 (1). It was later found that ubiquitin C-terminal hydrolase enzyme activity

was associated with the PGP9.5 protein (2). The ubiquitin C-terminal hydrolases cleave ubiquitin from other molecules. Regulation of the ubiquitin pathway is very important and many disease states are associated with defects in this pathway. Genetic knockout of UCHL1 in mice results in a motor neuron degeneration similar to the spontaneous gracile axonal dystrophy (gad) mutant mice (3). Point mutations in the UCHL1 gene are associated with some forms of human Parkinson's disease (4). Since UCHL1 is heavily expressed in neurons, it is released in large amounts following injury or degeneration, so the detection of UCHL1 in CSF and other bodily fluids can be used as a biomarker.

Anti-UCHL1

### **Ubiquitin C Terminal Hydrolase 1 (UCHL1) Antibody - References**

1. Doran JF, Jackson P, Kynoch PA, Thompson RJ. Isolation of PGP 9.5, a new human neurone-specific protein detected by high-resolution two-dimensional electrophoresis. *J Neurochem.* 40:1542-7 (1983).
2. Wilkinson KD, Lee KM, Deshpande S, Duerksen-Hughes P, Boss JM, Pohl J. The neuron-specific protein PGP 9.5 is a ubiquitin carboxyl-terminal hydrolase. *Science.* 1989 246:670-3 (1989).
3. Kurihara LJ, Kikuchi T, Wada K, Tilghman SM. Loss of Uch-L1 and Uch-L3 leads to neurodegeneration, posterior paralysis and dysphagia. *Hum Mol Genet.* 10:1963-70 (2001).
4. Liu Y, Fallon L, Lashuel HA, Liu Z, Lansbury PT Jr. The UCH-L1 gene encodes two opposing enzymatic activities that affect alpha-synuclein degradation and Parkinson's disease susceptibility. *Cell* 111:209-18 (2002).