

Rabbit Monoclonal Antibody to Human Ubiquitin Carboxyl-Terminal Esterase L1

Cat. No. CAB11621RH Lot. No. (See product label)

SPECIFICATION

Product Overview Rabbit Monoclonal Antibody to Human Ubiquitin Carboxyl-Terminal Esterase L1

Species Human

Source Rabbit

Antigen Description

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 Parkinsons, Alzheimers, and Huntingtons disease patients. Reduced UCHL1 function may jeopardize the survival of CNS neurons.

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Specificity	Human UCHL1 / PGP9.5. No cross-reactivity with human cell lysate (293 cell line) in WB and ELISA.
Immunogen	Recombinant human UCHL1 protein
Isotype	Rabbit IgG
Clone	A105
Applications	Western blot; ELISA
Dilution	Western blot: This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human UCHL1 in WB. Using a DAB detection system, the detection limit for human UCHL1 is approximately 0.5 ng/lane under non-reducing conditions and 0.25 ng/lane under reducing conditions Direct ELISA: This antibody can be used at 0.1 - 0.2 µg/mL with the appropriate secondary reagents to detect human UCHL1. The detection limit for human UCHL1 is approximately 0.00245 ng/well
Preparation	This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant human UCHL1
Format	0.2 µm filtered solution in PBS with 5% trehalose
Storage	This antibody can be stored at 2-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 to -70 °C. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

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GENE INFORMATION

Gene Name	UCHL1 ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase) [Homo sapiens]
Official Symbol	UCHL1
Synonyms	UCHL1; ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase); PARK5; ubiquitin carboxyl-terminal hydrolase isozyme L1; PGP9.5; Uch L1; ubiquitin thioesterase L1; neuron cytoplasmic protein 9.5; ubiquitin C-terminal hydrolase; PGP95; Uch-L1; PGP 9.5;
Gene ID	7345
mRNA Refseq	NM_004181
Protein Refseq	NP_004172
MIM	191342
UniProt ID	P09936
Chromosome Location	4p13
Pathway	Alpha-synuclein signaling, organism-specific biosystem; Parkinsons disease, organism-specific biosystem;
Function	alpha-2A adrenergic receptor binding; cysteine-type endopeptidase activity; ligase activity; omega peptidase activity; peptidase activity; protein binding; ubiquitin binding; ubiquitin thiolesterase activity;

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