

UCHL1 Antibody (C-term)
Mouse Monoclonal Antibody (Mab)
Catalog # AW5233

Specification

UCHL1 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	P09936
Other Accession	Q00981 , Q6SEG5 , Q9R0P9 , Q60HC8 , P23356
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	H=24;M=24;Rat=24 KDa
Isotype	IgG1
Antigen Source	HUMAN

UCHL1 Antibody (C-term) - Additional Information

Gene ID 7345

Antigen Region
185-214

Other Names

UCHL1;Ubiquitin carboxyl-terminal hydrolase isozyme L1; Ubiquitin carboxyl-terminal hydrolase isozyme L1; Neuron cytoplasmic protein 9.5; Ubiquitin carboxyl-terminal hydrolase isozyme L1; PGP 9.5; Ubiquitin carboxyl-terminal hydrolase isozyme L1; Ubiquitin thioesterase L1

Dilution

WB~~1:1000

Target/Specificity

This UCHL1 Monoclonal antibody is generated from mice immunized with a KLH conjugated synthetic peptide selected from the 185-214 region of human UCHL1.

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

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

Precautions

UCHL1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

UCHL1 Antibody (C-term) - Protein Information

Name UCHL1

Function

Deubiquitinase that plays a role in the regulation of several processes such as maintenance of synaptic function, cardiac function, inflammatory response or osteoclastogenesis (PubMed:22212137, PubMed:23359680). Abrogates the ubiquitination of multiple proteins including WWTR1/TAZ, EGFR, HIF1A and beta-site amyloid precursor protein cleaving enzyme 1/BACE1 (PubMed:22212137, PubMed:25615526). In addition, recognizes and hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin to maintain a stable pool of monoubiquitin that is a key requirement for the ubiquitin-proteasome and the autophagy-lysosome pathways (PubMed:12408865, PubMed:8639624, PubMed:9774100). Regulates amyloid precursor protein/APP processing by promoting BACE1 degradation resulting in decreased amyloid beta production (PubMed:22212137). Plays a role in the immune response by regulating the ability of MHC I molecules to reach cross-presentation compartments competent for generating Ag-MHC I complexes (By similarity). Mediates the 'Lys-48'-linked deubiquitination of the transcriptional coactivator WWTR1/TAZ leading to its stabilization and inhibition of osteoclastogenesis (By similarity). Deubiquitinates and stabilizes epidermal growth factor receptor EGFR to prevent its degradation and to activate its downstream mediators (By similarity). Modulates oxidative activity in skeletal muscle by regulating key mitochondrial oxidative proteins (By similarity). Enhances the activity of hypoxia-inducible factor 1-alpha/HIF1A by abrogating its VHL E3 ligase-mediated ubiquitination and consequently inhibiting its degradation (PubMed:25615526).

Cellular Location

Cytoplasm. Endoplasmic reticulum membrane; Lipid- anchor. Note=About 30% of total UCHL1 is associated with membranes in brain. Localizes near and/or within mitochondria to potentially interact with mitochondrial proteins {ECO:0000250|UniProtKB:Q9R0P9}

Tissue Location

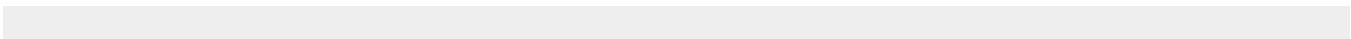
Found in neuronal cell bodies and processes throughout the neocortex (at protein level). Expressed in neurons and cells of the diffuse neuroendocrine system and their tumors. Weakly expressed in ovary. Down-regulated in brains from Parkinson disease and Alzheimer disease patients.

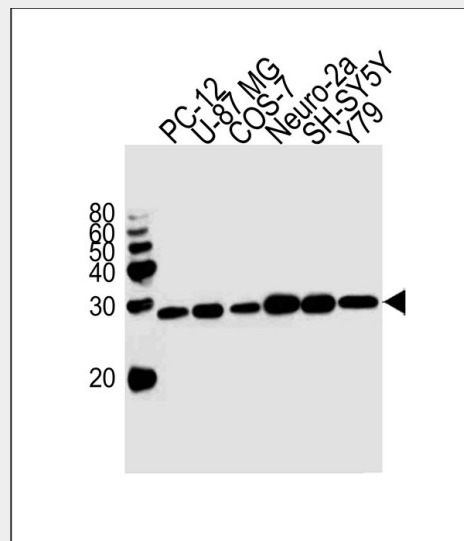
UCHL1 Antibody (C-term) - Protocols

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](#)

UCHL1 Antibody (C-term) - Images





Western blot analysis of lysates from rat PC-12, U-87 MG, COS-7, mouse Neuro-2a, SH-SY5Y, Y79 cell line (from left to right), using UCHL1 Antibody (C-term) (Cat. #AW5233). AW5233 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

UCHL1 Antibody (C-term) - Background

Ubiquitin-protein hydrolase 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. Also binds to free monoubiquitin and may prevent its degradation in lysosomes. The homodimer may have ATP-independent ubiquitin ligase activity.

UCHL1 Antibody (C-term) - References

- Boudreaux D.A., et al. Proc. Natl. Acad. Sci. U.S.A. 107:9117-9122(2010).
- Hillier L.W., et al. Nature 434:724-731(2005).
- Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
- Day I.N.M., et al. Biochem. J. 268:521-524(1990).
- Choi J., et al. J. Biol. Chem. 279:13256-13264(2004).