10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

UCHL1 Antibody (C-term)

Mouse Monoclonal Antibody (Mab)
Catalog # AW5233

Product Information

Application	WB
Primary Accession	P09936
Other Accession	Q00981, Q6SEG5, Q9R0P9, Q60HC8, P23356
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	24824
Isotype	IgG1
Antigen Source	HUMAN

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 mouses 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.

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 abrogateing 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.

Background

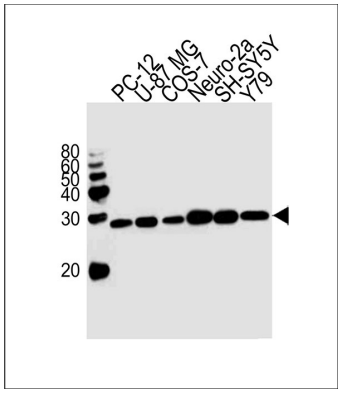
Ubiquitin-protein hydrolase involved both in the processing of ubiquitin precursors and of ubiquitinated proteins. This enzyme is a thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin. Also binds to free monoubiquitin and may prevent its degradation in lysosomes. The homodimer may have ATP-independent ubiquitin ligase activity.

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).

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.