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UCHL1 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AW5207

Product Information

Application	IHC-P, IF, WB
Primary Accession	P09936
Other Accession	NP_004172.2
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	24824
Isotype	IgG1,k
Antigen Source	HUMAN

Additional Information

Gene ID	7345
Antigen Region	1-243
Other Names	UCHL1; Ubiquitin carboxyl-terminal hydrolase isozyme L1; Neuron cytoplasmic protein 9.5; PGP 9.5; Ubiquitin thioesterase L1
Dilution	IHC-P~~1:100~500 IF~~1:25 WB~~1:1000
Target/Specificity	This UCHL1 monoclonal antibody is generated from mouse immunized with UCHL1 recombinant protein.
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 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

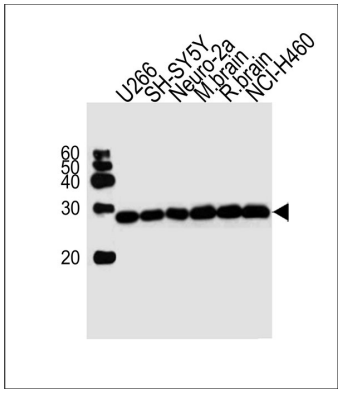
The protein encoded by this gene belongs to the peptidase C12 family. This enzyme is a thiol protease that hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin. This gene is specifically expressed in the neurons and in cells of the diffuse neuroendocrine system. Mutations in this gene may be associated with Parkinson disease.

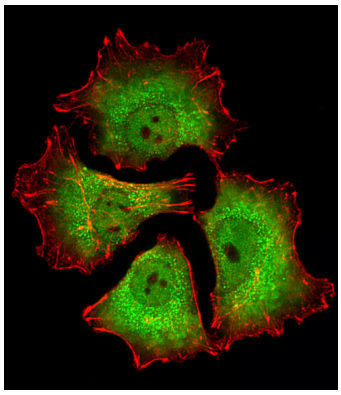
References

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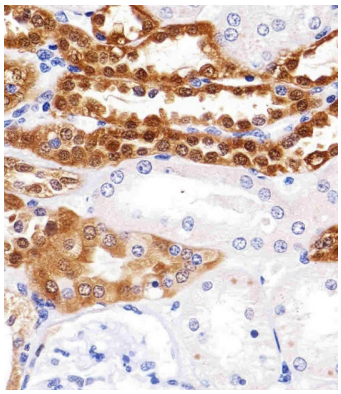
Images

Western blot analysis of lysates from U266,SH-SY5Y,mouse Neuro-2a cell line,mouse brain,rat brain tissue lysate,NCI-H460 cell line (from left to right), using UCHL1 Antibody(Cat. #AW5207). AW5207 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.





Fluorescent image of A549 cells stained with UCHL1 Antibody(Cat#AW5207). AW5207 was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).



Immunohistochemical analysis of paraffin-embedded H. kidney section using UCHL1(Cat#AW5207). AW5207 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

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