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UCHL1 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AW5207

Specification

UCHL1 Antibody - Product Information

Application	**IF, WB, IHC-P,E**
Primary Accession	P09936
Other Accession	NP_004172.2
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**H=25;M=25;Rat=25 KDa**
Isotype	**IgG1,k**
Antigen Source	**HUMAN**

UCHL1 Antibody - 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
IF~~1:25
WB~~1:1000
IHC-P~~1:25

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.

UCHL1 Antibody - 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:9774100, PubMed:8639624, PubMed:12408865). 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.

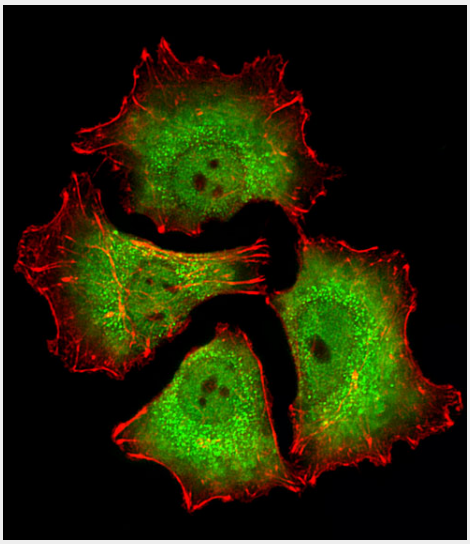
UCHL1 Antibody - Protocols

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

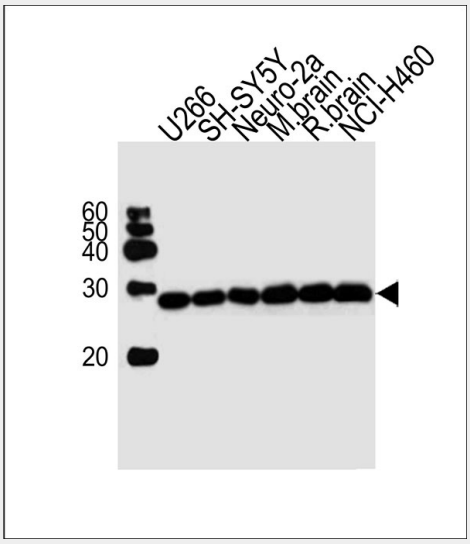
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

UCHL1 Antibody - Images

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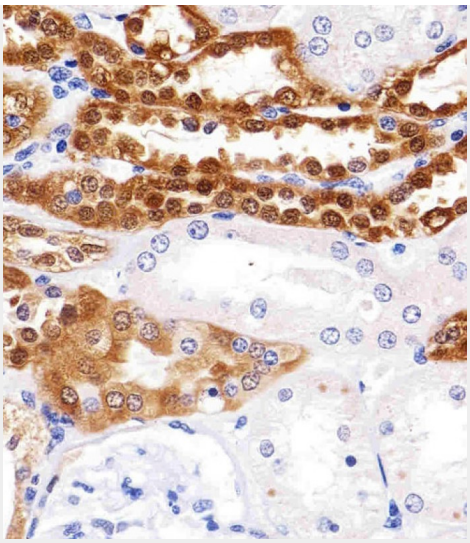


Fluorescent image of A549 cells stained with UCHL1 Antibody(Cat#AW5207). AW5207 was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin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



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.

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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.

UCHL1 Antibody - 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.

UCHL1 Antibody - References

Martins-de-Souza, D., et al. J Psychiatr Res 44(14):989-991(2010)
Hussain, S., et al. Leukemia 24(9):1641-1655(2010)
Ma, Y., et al. J. Cell. Biochem. 110(6):1512-1519(2010)
Wu, Y.R., et al. Clin. Chim. Acta 411 (13-14), 955-958 (2010) :
Li, L., et al. Clin. Cancer Res. 16(11):2949-2958(2010)