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KD-Validated Anti-UCHL1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1066

Specification

KD-Validated Anti-UCHL1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P09936
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 25 kDa , observed, 25 kDa KDa**
Gene Name	**UCHL1**
Aliases	**UCHL1; Ubiquitin C-Terminal Hydrolase L1; PGP9.5; UCHL-1; Ubiquitin Carboxyl-Terminal Esterase L1 (Ubiquitin Thiolesterase); Ubiquitin Carboxyl-Terminal Hydrolase Isozyme L1; Neuron Cytoplasmic Protein 9.5; Ubiquitin Thioesterase L1; Ubiquitin Thiolesterase; PGP 9.5; Uch-L1; UCH-L1; PARK5; Epididymis Secretory Protein Li 53; Epididymis Luminal Protein 117; EC 3.4.19.12; HEL-S-53; HEL-117; SPG79A; NDGOA; PGP95; SPG79**
Immunogen	**A synthesized peptide derived from human PGP9.5**

KD-Validated Anti-UCHL1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**7345**

Other Names
Ubiquitin carboxyl-terminal hydrolase isozyme L1, UCH-L1, 3.4.19.12, Neuron cytoplasmic protein 9.5, PGP 9.5, PGP9.5, Ubiquitin thioesterase L1, UCHL1

KD-Validated Anti-UCHL1 Rabbit Monoclonal 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: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.

KD-Validated Anti-UCHL1 Rabbit Monoclonal 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

KD-Validated Anti-UCHL1 Rabbit Monoclonal Antibody - Images

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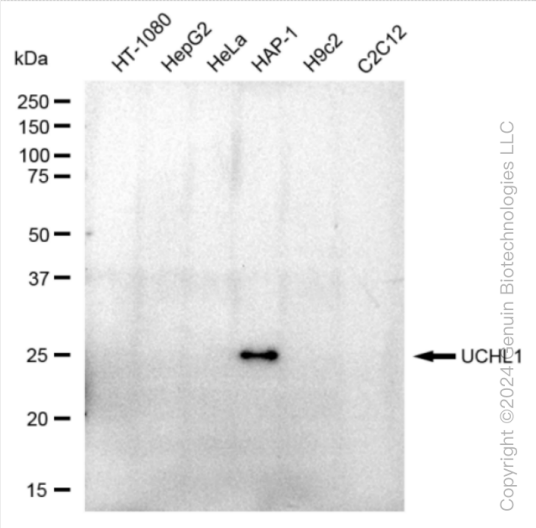
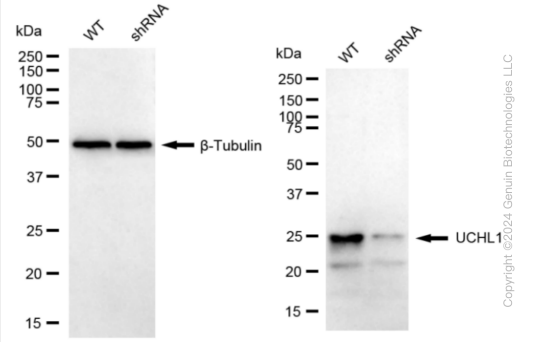
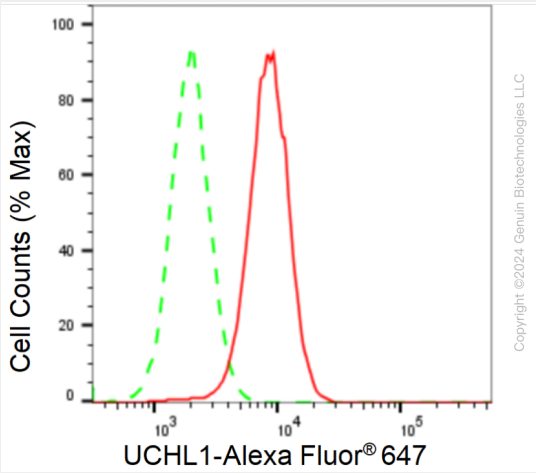


Western blotting analysis using anti-UCHL1 antibody (Cat#AGI1066). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-UCHL1 antibody (Cat#AGI1066, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-UCHL1 antibody (Cat#AGI1066). UCHL1 expression in wild-type (WT) and UCHL1 shRNA knockdown (KD) HAP1 cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-UCHL1 antibody (Cat#AGI1066, 1:2,500) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of UCHL1 expression in HAP-1 cells using UCHL1 antibody (Cat#AGI1066, 1:2,000). Green, isotype control; red, UCHL1.

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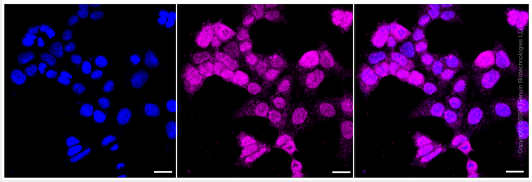

Immunocytochemical staining of HAP-1 cells with UCHL1 antibody (Cat#AGI1066, 1:1,000). Nuclei were stained blue with DAPI; UCHL1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.