

UCLH1 Antibody
Chicken Polyclonal Antibody
Catalog # ABV11124**Specification**

UCLH1 Antibody - Product Information

Application	WB
Primary Accession	P09936
Reactivity	Human
Host	Chicken
Clonality	Polyclonal
Isotype	Chicken IgG
Calculated MW	24824

UCLH1 Antibody - Additional Information**Gene ID** 7345

Positive Control
Application & Usage

Western Blot: Crude HEK293 cell lysate
Western blot: Robust detection of 100 ng
of recombinant protein was possible when
antibody was used at a final concentration
of 5 µg/mL

Other Names

Neuron cytoplasmic protein 9.5, PARK5, PGP9.5, PGP 9.5, Ubiquitin carboxyl-terminal, hydrolase isozyme L1, Ubiquitin thioesterase L1, UCH-L1, Ubiquitin thioesterase L1.

Target/Specificity

UCLH1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

50 µg of antibody in PBS containing 10% glycerol

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

UCLH1 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 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 - 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 - Images**UCHL1 Antibody - Background**

Protein ubiquitination and Deubiquitination are reversible processes catalyzed by ubiquitinating enzymes (UBEs) and deubiquitinating enzymes (DUBs). DUBs are categorized into 5 subfamilies: USP, UCH, OTU, MJD, and JAMM. UCHL1, UCHL3, UCHL5/UCH37, and BRCA-1-associated protein-1 (BAP1) belong to the UCH family of DUBs, which all possess a conserved catalytic domain (UCH domain) of about 230 amino acids. Although UCHL1 and UCHL3 are the most closely related UCH family members with about 53% identity, their biochemical properties differ in that UCHL1 binds monoubiquitin and UCHL3 shows dual specificity toward both ubiquitin (Ub) and NEDD8, a Ub-like molecule. UCHL1 (PGP9.5) is a 25 kDa protein; it is highly specific to neurons and to cells of the diffuse neuroendocrine system and their tumors. It comprises >1% of total brain protein but is almost absent from other tissues. It has been implicated both in Parkinson's disease and in lung cancer.