

UCH-L1 Polyclonal Antibody

Catalog # AP72995

Product Information

Application	WB, IHC-P
Primary Accession	P09936
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	24824

Additional Information

Gene ID	7345
Other Names	UCHL1; Ubiquitin carboxyl-terminal hydrolase isozyme L1; UCH-L1; Neuron cytoplasmic protein 9.5; PGP 9.5; PGP9.5; Ubiquitin thioesterase L1
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

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- α /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.

Background

Ubiquitin-protein hydrolase involved both in the processing of ubiquitin precursors and of ubiquitinated proteins (Probable). This enzyme is a thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin (PubMed:[9774100](#), PubMed:[8639624](#), PubMed:[12408865](#), PubMed:[23359680](#)). Also binds to free monoubiquitin and may prevent its degradation in lysosomes (By similarity). The homodimer may have ATP-independent ubiquitin ligase activity (PubMed:[12408865](#)).

Images



Western Blot analysis of various cells using UCH-L1 Polyclonal Antibody diluted at 1 : 2000. Secondary antibody was diluted at 1:20000

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