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KD-Validated Anti-UCHL1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1066

Product Information

Application	WB, FC, ICC
Primary Accession	P09936
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB 2125
Calculated MW	24824
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

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

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.

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