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UCHL1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5142

Product Information

Application	WB
Primary Accession	P09936
Other Accession	Q00981, Q6SEG5, Q9R0P9, Q60HC8, P23356
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	24824
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	7345
Antigen Region	187-214
Other Names	UCHL1; Ubiquitin carboxyl-terminal hydrolase isozyme L1; Neuron cytoplasmic protein 9.5; PGP 9.5; Ubiquitin thioesterase L1
Dilution	WB~~1:1000
Target/Specificity	This UCHL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 187-214 amino acids from the C-terminal region of human UCHL1.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Background

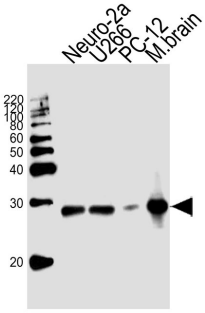
UCHL1 is a member of a gene family whose products hydrolyze small C-terminal adducts of ubiquitin to generate the ubiquitin monomer. Expression of UCHL1 is highly specific to neurons and to cells of the diffuse neuroendocrine system and their tumors. It is present in all neurons (Doran et al., 1983 [PubMed 6343558]).

References

Maraganore, D.M., et al., Mov Disord 18(6):631-636 (2003).
Nishikawa, K., et al., Biochem. Biophys. Res. Commun. 304(1):176-183 (2003).
Liu, Y., et al., Cell 111(2):209-218 (2002).
Caballero, O.L., et al., Oncogene 21(19):3003-3010 (2002).
Saigoh, K., et al., Nat. Genet. 23(1):47-51 (1999).

Images

Western blot analysis of lysates from mouse Neuro-2a,U266,rat PC-12 cell line ,mouse brain tissue lysate(from left to right), using UCHL1 Antibody (C-term)(Cat. #AW5142). AW5142 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.



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