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Anti-UCHL1 Antibody (7B8-G5-B8)

Mouse Monoclonal Antibody
Catalog # ABV12063

Product Information

Application	WB, IF
Primary Accession	P09936
Reactivity	Human, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG2b
Clone Names	7B8-G5-B8
Calculated MW	24824

Additional Information

Gene ID	7345
Application & Usage	WB: U251, IMR32, Raji and COS7 cell lysates; IF: COS7 cells
Other Names	UCH-L1, Neuron cytoplasmic protein 9.5, PGP 9.5, Ubiquitin thioesterase L1, Ubiquitin carboxyl-terminal hydrolase isozyme L1
Target/Specificity	Ubiquitin carboxyl-terminal hydrolase isozyme L1
Antibody Form	Liquid
Appearance	Colorless liquid
Formulation	In buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50% glycerol
Handling	The antibody solution should be gently mixed before use.
Reconstitution & Storage	-20 °C
Background Descriptions	
Precautions	Anti-UCHL1 Antibody (7B8-G5-B8) 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}

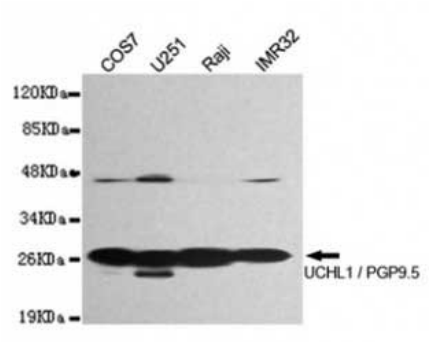
Tissue Location

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.

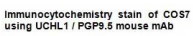
Background

Ubiquitin-protein hydrolase involved both in the processing of ubiquitin precursors and of ubiquitinated proteins. This enzyme is a thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin. Also binds to free monoubiquitin and may prevent its degradation in lysosomes. The homodimer may have ATP-independent ubiquitin ligase activity.

Images



Western blot detection of UCHL1/ PGP9.5 in U251, IMR32, Raji and COS7 cell lysates and using UCHL1 / PGP9.5 mouse mAb



immunocytochemistry stain of COS7 using UCHL1 / PGP9.5 mouse mAb

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.