10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

UCHL1 / PGP9.5 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52772

Product Information

Application	WB, ICC
Primary Accession	P09936
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	24824

Additional Information

Gene ID	7345
Other Names	UCHL1 / PGP9.5;UCHL1;B220;CD 45;CD45;cd45 antigen;ec3.1.3.48;GP 180;GP180;Human homolog of severe combined immunodeficiency due to PTPRC deficiency;L CA;L-CA;lca;Leukocyte common antigen;LY 5;LY5;Protein tyrosine phosphatase receptor type C;Protein tyrosine phosphatase receptor type c polypeptide;PTPRC;PTPRC_HUMAN;Receptor-type tyrosine-protein phosphatase C;SCID due to PTPRC deficiency;t200;T200 glycoprotein;T200 leukocyte common antigen.
Dilution	WB~~1:1000 ICC~~1:300
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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.

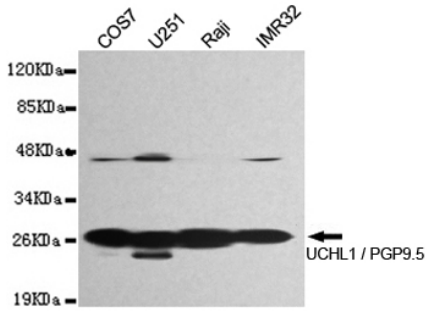
Background

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.

References

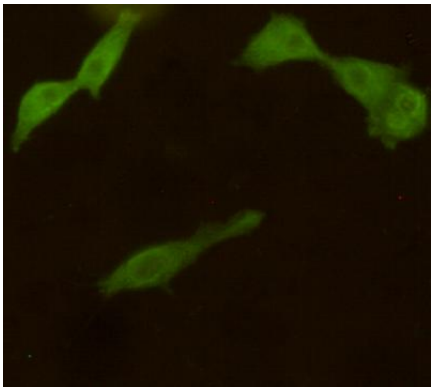
Hillier L.W.,et al.Nature 434:724-731(2005).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Day I.N.M.,et al.Biochem. J. 268:521-524(1990).
Choi J.,et al.J. Biol. Chem. 279:13256-13264(2004).
Lubec G.,et al.Submitted (DEC-2008) to UniProtKB.

Images



Western blot detection of UCHL1 / PGP9.5 in U251,IMR32,Raji and COS7 cell lysates and using UCHL1 / PGP9.5 mouse mAb (1:1000 diluted).Predicted band size: 25KDa.Observed band size: 28KDa.

Immunocytochemistry stain of COS7 using UCHL1 / PGP9.5 mouse mAb (1:300).



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