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PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone UCHL1/775]
Catalog # AH12497

Specification

PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide - Product Information

Application	**,1,2,**
Primary Accession	P09936
Other Accession	7345, 518731
Reactivity	**Human, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse / IgG1, kappa**
Calculated MW	**20-30kDa KDa**

PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide - Additional Information

Gene ID 7345

Other Names
Ubiquitin carboxyl-terminal hydrolase isozyme L1, UCH-L1, 3.4.19.12, 6.-.-.-, Neuron cytoplasmic protein 9.5, PGP 9.5, PGP9.5, Ubiquitin thioesterase L1, UCHL1

Storage
Store at 2 to 8°C.Antibody is stable for 24 months.

Precautions
PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide - 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.

PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide - Images

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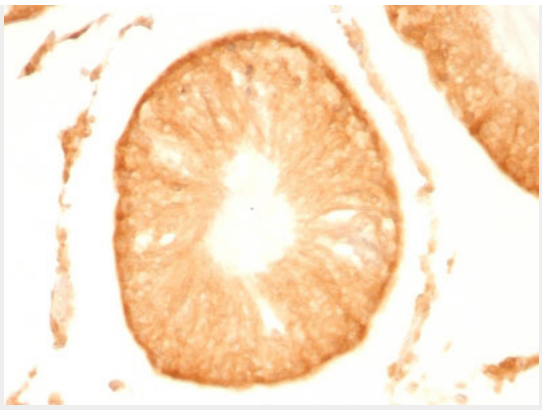
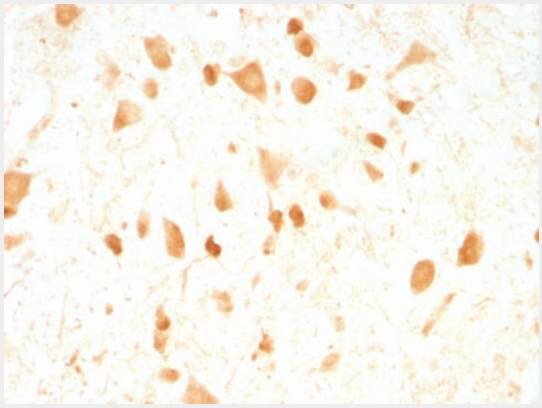


Formalin-fixed, paraffin-embedded Rat Testis stained with Pgp9.5 Monoclonal Antibody (UCHL1/775).



Formalin-fixed, paraffin-embedded Rat Cerebellum stained with Pgp9.5 Monoclonal Antibody (UCHL1/775).

PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide - Background

This MAb reacts with a protein of 20-30kDa, identified as PGP9.5, also known as ubiquitin carboxyl-terminal hydrolase-1 (UchL1). Initially, PGP9.5 expression in normal tissues was reported in neurons and neuroendocrine cells but later it was found in distal renal tubular epithelium, spermatogonia, Leydig cells, oocytes, melanocytes, prostatic secretory epithelium, ejaculatory duct cells, epididymis, mammary epithelial cells, Merkel cells, and dermal fibroblasts. Furthermore, immunostaining for PGP9.5 has been shown in a wide variety of mesenchymal neoplasms as well. A mutation in PGP9.5 gene is believed to cause a form of Parkinson's disease.

PGP9.5 / UchL1 (pan-Neuronal Marker) Antibody - With BSA and Azide - References

Wilkinson, K.D., et al. 1989. The neuron-specific protein PGP 9.5 is a ubiquitin carboxyl-terminal hydrolase. Science 246: 670-672. |