Human/Mouse/Rat UCH-L1/PGP9.5 Antibody

Monoclonal Mouse IgG_{2B} Clone # 972119

Catalog Number: MAB60072

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human UCH-L1/PGP9.5 in direct ELISAs. Detects human, mouse, and rat in Western blot.
Source	Monoclonal Mouse IgG_{2B} Clone # 972119
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human UCH-L1/PGP9.5 Gln2-Ala223 Accession # P09936
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

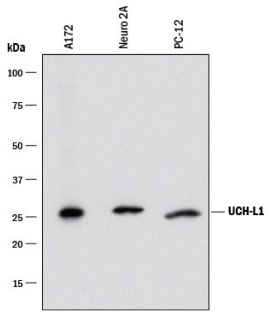
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	See Below
Immunocytochemistry	0.3-25 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below
Simple Western	1 µg/mL	See Below

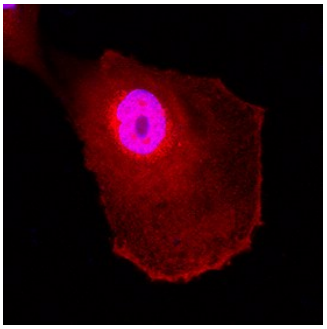
DATA

Western Blot



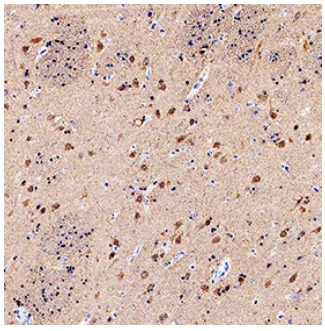
Detection of Human, Mouse, and Rat UCH-L1/PGP9.5 by Western Blot. Western blot shows lysates of A172 human glioblastoma cell line, Neuro-2A mouse neuroblastoma cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF membrane was probed with 0.1 µg/mL of Mouse Anti-Human UCH-L1/PGP9.5 Monoclonal Antibody (Catalog # MAB60072) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for UCH-L1/PGP9.5 at approximately 26 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



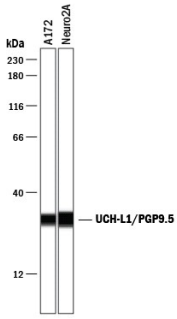
UCH-L1/PGP9.5 in A172 Human Cell Line. UCH-L1/PGP9.5 was detected in immersion fixed A172 human glioblastoma cell line using Mouse Anti-Human UCH-L1/PGP9.5 Monoclonal Antibody (Catalog # MAB60072) at 0.3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



UCH-L1/PGP9.5 in Human Brain. UCH-L1/PGP9.5 was detected in immersion fixed paraffin-embedded sections of human brain (caudate nucleus) using Mouse Anti-Human UCH-L1/PGP9.5 Monoclonal Antibody (Catalog # MAB60072) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of Human and Mouse UCH-L1/PGP9.5 by Simple Western™. Simple Western lane view shows lysates of A172 human glioblastoma cell line and Neuro-2A mouse neuroblastoma cell line, loaded at 0.2 mg/mL. A specific band was detected for UCH-L1/PGP9.5 at approximately 31 kDa (as indicated) using 1 µg/mL of Mouse Anti-Human UCH-L1/PGP9.5 Monoclonal Antibody (Catalog # MAB60072) . This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

UCH-L1 (ubiquitin carboxyterminal hydrolase isozyme 1; also PGP9.5) is a 24-27 kDa member of the peptidase C12 family of enzymes. It shows restricted expression, being found in neurons and oocytes. UCH-L1 has dual enzymatic activity. As a monomer, it is a ubiquitin hydrolase that removes ubiquitin from modified proteins; as a homodimer, it acts as a ligase that creates ubiquitin dimers. In neurons, UCH-L1's most important role appears to be that of generating free ubiquitin. Human UCH-L1 is 223 amino acids (aa) in length. It is O-glycosylated, ubiquitinated, and farnesylated; when farnesylated, it becomes associated with cell membranes. Three potential splice forms are reported. One shows a two aa substitution for aa 12-15, a second contains an alternative start site at Met82, and a third shows the same start site coupled with a deletion of aa 138-153. Full-length human UCH-L1 shares 95% aa identity with mouse UCH-L1.

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