

**DESCRIPTION**

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

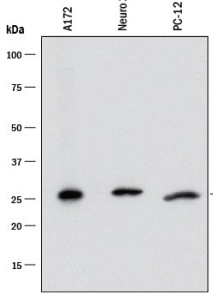
**APPLICATIONS**

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.

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

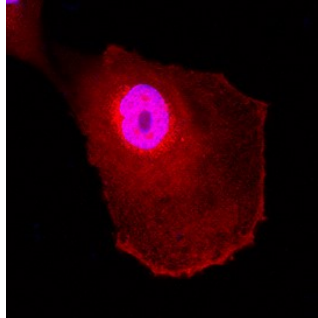
**DATA**

**Western Blot**



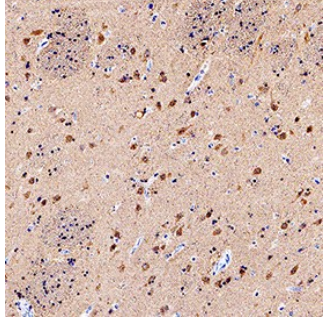
**Detection of Human, Mouse, and Rat UCH-L1/PGP9.5 by Western Blot.** Western blot shows lysates of A172 human glioblastoma cell line, Neuro-2A mouse neuroblastoma cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF membrane was probed with 0.1 µg/mL of Mouse Anti-Human UCH-L1/PGP9.5 Monoclonal 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**



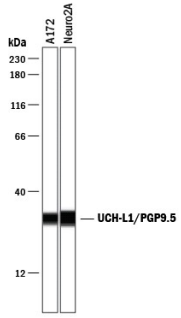
**UCH-L1/PGP9.5 in A172 Human Cell Line.** UCH-L1/PGP9.5 was detected in immersion fixed A172 human glioblastoma cell line using Mouse Anti-Human UCH-L1/PGP9.5 Monoclonal Antibody (Catalog # MAB60072) at 0.3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated 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**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**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.