

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human LAMP in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 110728
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human LAMP Val29-Asn315 (predicted) Accession # AAC50569
<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>	1 µg/mL	Recombinant Human LAMP Fc Chimera (Catalog # 873-LP)

**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**

LAMP (limbic system-associated membrane protein) is a member of the IgLON (immunoglobulin LAMP, OBCAM and neurotrimin) subfamily within the Ig superfamily. All IgLON family members are glycosylphosphatidylinositol (GPI)-anchored neural cell adhesion molecules that are involved in cell-cell recognition and may have a role in mediating selective neuronal growth and axon targeting. LAMP cDNA encodes a 338 amino acid (aa) residues precursor protein containing a 28 aa N-terminal signal peptide, a 23 aa C-terminal propeptide and a 287 aa mature chain with 3 Ig-like C2-type domains and a GPI-anchor attachment site. In the developing brain, LAMP exhibits a specific pattern of expression in the cortical and subcortical limbic areas, which are important in cognition, emotion, memory, and learning. LAMP is also expressed in single layers of the superior colliculus, spinal chord and cerebellum. LAMP promotes adhesion and growth of limbic axons primarily via homophilic interaction and in part by modulating calcium influx through L-type calcium channels in limbic neurons. Heterophilic interactions between LAMP and neurotrimin have also been demonstrated. LAMP has been shown to inhibit the outgrowth of neurotrimin-expressing dorsal root ganglion neurons in a heterophilic manner. Antibody perturbation studies showed that LAMP is necessary for normal circuit formation in the limbic system, including the septo-hippocampal connection and hippocampal mossy fibers. LAMP acts as an attractive guidance signal for the limbic thalamic axons and can induce branch formation, but also acts as a repulsive axon guidance signal for nonlimbic thalamic axons (1-5).

**References:**

1. Pimenta, A.F. *et al.* (1995) *Neuron*, **15**:287.
2. Zhukareva, V. and P. Levitt (1995) *Development* **121**:1161.
3. Zhukareva, V. *et al.* (1997) *Mol. Cell Neurosci.* **10**:43.
4. Mann, F. *et al.* (1998) *Journal Neurosci.* **18**:9409.
5. Gil, O.D. *et al.* (2002) *J. Neurobiol.* **51**:190.

**PRODUCT SPECIFIC NOTICES**

US Patents # 5,861,283; 6,423,827 and patents pending.