

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Conjugated LAMP2/CD107b antibodies are ideal for immunocytochemistry colocalization studies in lysosomes. The unconjugated antibody detects human LAMP2/CD107b in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human LAMP1 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 743320
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human LAMP2/CD107b Leu29-Phe375 Accession # P13473
<b>Conjugate</b>	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

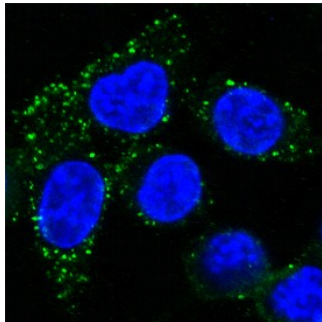
## APPLICATIONS

**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
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	5 µL/10 <sup>6</sup> cells	See Below

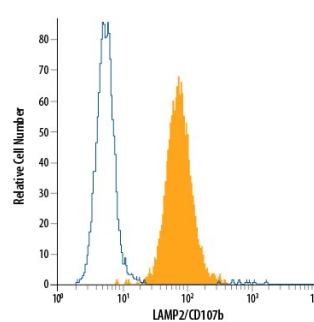
## DATA

### Immunocytochemistry



**LAMP2/CD107b in HeLa Human Cell Line.** LAMP2/CD107b was detected in formaldehyde fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human LAMP2/CD107b Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # IC6228G) at 25 µg/mL dilution overnight at 4° C and counterstained with DAPI (blue). Specific staining was localized to lysosomes. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

### Intracellular Staining by Flow Cytometry



**Detection of LAMP2/CD107b in HeLa Human Cell Line by Flow Cytometry.** HeLa human cervical epithelial carcinoma cell line was stained with Mouse Anti-Human LAMP2/CD107b Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # IC6228G, filled histogram) or isotype control antibody (Catalog # IC002G, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for [Staining Intracellular Molecules](#).

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### BACKGROUND

Lysosomal associated membrane protein 2 (LAMP2), also known as CD107b and LGP110, is an approximately 110 kDa transmembrane glycoprotein that is a major component of lysosomal membranes (1). Mature human LAMP2 consists of a 347 amino acid (aa) intraluminal domain, a 24 aa transmembrane segment, and a 35 aa cytoplasmic tail (2). Its luminal domain is organized into two heavily N-glycosylated regions separated by a Ser/Pro-rich linker that carries a minor amount of O-linked glycosylation (2, 3). Alternate splicing generates a human LAMP2 isoform (LAMP2B) with a substituted juxtamembrane luminal region, transmembrane segment, and cytoplasmic tail (4). Within the luminal domain, human LAMP2 shares approximately 64% aa sequence identity with mouse and rat LAMP2. LAMP2 itself is subject to lysosomal degradation following cleavage of its luminal domain (5). It mediates the lysosomal uptake of the chaperone HSC73 in complex with cargo proteins and is required for the lysosomal destruction of autophagic vacuoles (6, 7). In cytotoxic T cells and mast cells, LAMP2 is expressed in the membranes of intracellular granules that contain effector molecules such as perforin, granzymes, eicosanoids, and histamine (8-10). Up-regulated LAMP2 at the plasma membrane serves as an indicator of cell activation of CD8<sup>+</sup> T cells, mast cells, monocytes, and platelets (9-12). LAMP2 is a native ligand for lectins Galectin-1 and Galectin-3 (13-15).

#### References:

1. Eskelinen, E.-L. *et al.* (2003) *Trends Cell Biol.* **13**:137.
2. Fukuda, M. *et al.* (1988) *J. Biol. Chem.* **263**:18920.
3. Carlsson, S.R. *et al.* (1988) *J. Biol. Chem.* **263**:18911.
4. Konecki, D.S. *et al.* (1995) *Biochem. Biophys. Res. Commun.* **215**:757.
5. Cuervo, A.M. and J.F. Dice (2000) *Traffic* **1**:570.
6. Cuervo, A.M. and J.F. Dice (1996) *Science* **273**:501.
7. Tanaka, Y. *et al.* (1990) *Nature* **406**:902.
8. Peters, P.J. *et al.* (1991) *J. Exp. Med.* **173**:1099.
9. Betts, M.R. *et al.* (2003) *J. Immunol. Meth.* **281**:65.
10. Grutzkau, A. *et al.* (2004) *Cytometry* **61**:62.
11. Kannan, K. *et al.* (1996) *Cell. Immunol.* **171**:10.
12. Silverstein, R.L. and M. Febbraio (1992) *Blood* **80**:1470.
13. Skrincoosky, D.M. *et al.* (1993) *Cancer Res.* **53**:2667.
14. Inohara, H. and Raz, A. (1994) *Biochem. Biophys. Res. Commun.* **201**:1366.
15. Ohannesian D.W. *et al.* (1994) *Cancer Res.* **54**:5992.

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.