

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Designed to visualize the expression of LAMP-1 by fluorescence microscopy for staining cells and tissues. Conjugated LAMP-1 antibodies are ideal for immunocytochemistry colocalization studies in lysosomes. The unconjugated antibody detects human LAMP-1/CD107a in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 508921
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human LAMP-1/CD107a Ala28-Asn380 Accession # P11279
<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.

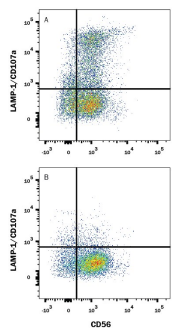
## APPLICATIONS

**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>Flow Cytometry</b>	5 µL/10 <sup>6</sup> cells	See Below
<b>Immunocytochemistry</b>	1:10 dilution	See Below

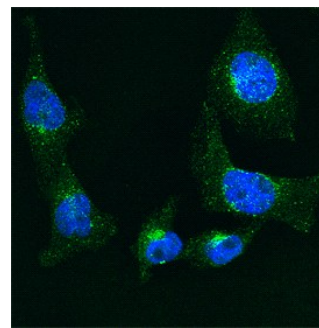
## DATA

### Flow Cytometry



**Detection of LAMP-1/CD107a in Human NK cells by Flow Cytometry.** Human NK Cells either (A) stimulated in a 1:1 ratio with K562 human chronic myelogenous leukemia cell line and 3 µM monensin for 5 hours or (B) unstimulated were stained with Mouse Anti-Human LAMP-1/CD107a Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # IC4800G) and Mouse Anti-Human NCAM-1/CD56 PE-conjugated Monoclonal Antibody (Catalog # FAB2408P). Quadrant markers were set based on control antibody staining (Catalog # IC0041G). View our protocol for [Staining Membrane-associated Proteins](#).

### Immunocytochemistry



**LAMP1/CD107a in HeLa Human Cell Line.** LAMP1/CD107a was detected in formaldehyde fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human LAMP1/CD107a Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # IC4800G) at 1:10 dilution for 3 hours at room temperature and counterstained with DAPI (blue). Specific staining was localized to lysosomes. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## 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

Lysosome-associated membrane protein-1 (LAMP-1), also known as CD107a, is a 100-130 kDa member of the LAMP family of glycoproteins. It is expressed in lysosomal and plasma membranes of macrophages, NK and T-cells, and with LAMP-2, is essential for the formation of phagolysosomes. On the cell surface, it also presents carbohydrates to selectins. Mature human LAMP-1 is a 389 amino acid (aa) type I transmembrane glycoprotein. It contains a 354 aa luminal/extracellular domain (ECD) (aa 28-381) and a 12 aa cytoplasmic tail (aa 405-416). The ECD has two large looping regions (aa 28-193 and 227-381) plus multiple N- and O-linked glycosylation sites. There is one potential splice variant that shows a 26 aa substitution in the signal sequence. Over aa 28-380, human LAMP-1 shares 64% aa identity with mouse LAMP-1.

**PRODUCT SPECIFIC NOTICES**

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