

Monoclonal Anti-human LAMP1/CD107a-PE

Catalog Number: IC4800P

Lot Number: AAYN01

100 Tests

Reagents Provided

Phycoerythrin (PE)-conjugated mouse monoclonal anti-human LAMP1/CD107a: Supplied as 25 µg of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

Clone #: 508921

Isotype: mouse IgG_{2b}

Reagents Not Provided

Flow Cytometry Fixation Buffer (Catalog # FC004) or other 4% paraformaldehyde fixation buffer

Flow Cytometry Permeabilization/Wash Buffer I (1X) (Catalog # FC005) or other saponin-containing saline buffer.

Storage

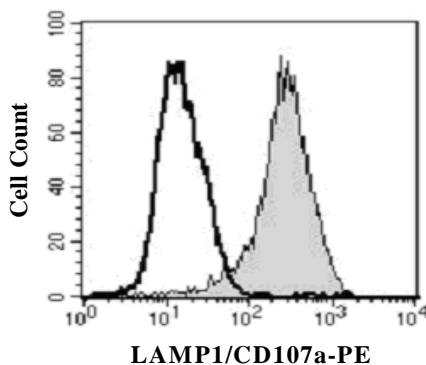
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2° - 8° C.

Intended Use

Designed to quantitatively determine the percentage of cells expressing LAMP1/CD107a within a population and qualitatively determine the density of LAMP1/CD107a in cells by flow cytometry.

Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, NS0-derived, recombinant human LAMP-1 (rhLAMP1; aa 28 - 380). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to PE fluorochrome. Expression of LAMP1/CD107a is determined by flow cytometry using 488 nm wavelength excitation and monitoring emitted fluorescence with a detector optimized to collect peak emissions at 565 - 605 nm.



THP-1 cells were stained with PE-conjugated anti-human LAMP1/CD107a (Catalog # IC4800P, filled histogram) or isotype control (Catalog # IC0041P, open histogram).

Background Information

LAMP1 (Lysosome-associated membrane protein-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 is essential for the formation of phagolysosomes, along with LAMP2. On the cell surface, LAMP1 also presents carbohydrates to selectins. Mature human LAMP1 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.

Flow Cytometry Validation

For intracellular staining, cells must first be fixed and permeabilized. We recommend the use of 4% PFA as a fixative and a 0.1% saponin balanced salt solution for permeabilization and washing (see [Reagents Not Provided](#)).

1. Cells were harvested and washed twice in saline buffer.
2. Cell surface staining may be done at this point following the manufacturer's staining procedure.
3. 5×10^5 cells were resuspended in 0.5 mL of cold Flow Cytometry Fixation Buffer (Catalog # FC004) and incubated at room temperature for 10 minutes.
4. Following fixation, cells were washed twice in saline buffer, then once in Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005).
5. After permeabilization, 10 µL of conjugated antibody was added and cells were incubated for 30 minutes at room temperature **in the dark**.
6. Cells were washed twice with Flow Cytometry Permeabilization/Wash Buffer I.
7. The cells were resuspended in saline buffer for analysis by flow cytometry. As a control for this analysis, cells in a separate tube should be treated with PE-labeled mouse IgG_{2b} antibody. This procedure may need to be modified, depending on cell type and final utilization. Individual users may need to titrate to determine optimal reagent amount for their specific use.

Warning: Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.

FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

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