

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LAMP1/CD107a in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 508921
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LAMP1/CD107a Ala28-Asn380 Accession # P11279
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	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
Flow Cytometry	10 μ L/10 ⁶ cells	Enriched or expanded human NK cells cultured with 1:1 ratio of K562 cell line target cells
Intracellular Staining by Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA

Flow Cytometry

Detection of LAMP-1/CD107a in Human NK cells by Flow Cytometry. NK cells were expanded from PBMC using Cloudz Human NK Cell Expansion Kit (Catalog # [CLD004](#)) and cultured in the presence of Mouse Anti-Human LAMP-1/CD107a PE-conjugated Monoclonal Antibody (Catalog # [IC4800P](#)) for 2 hours either (A) with or (B) without a 1:1 ratio of K562 cell line target cells. Cells were then stained with Mouse Anti-Human NCAM-1/CD56 APC-conjugated Monoclonal Antibody (Catalog # [FAB2408A](#)). Quadrant markers were set based on control antibody staining (Catalog # [IC0041P](#)). Staining was performed using our Staining Surface Molecules protocol.

Flow Cytometry

Detection of LAMP-1/CD107a in Human NK cells by Flow Cytometry. Enriched human NK cells either (A) treated with 1:1 ratio with K562 cell line for 5 hours or (B) untreated were stained with Mouse Anti-Human LAMP-1/CD107a PE-conjugated Monoclonal Antibody (Catalog # [IC4800P](#)) and Mouse Anti-Human NCAM-1/CD56 APC-conjugated Monoclonal Antibody (Catalog # [FAB2408A](#)). Quadrant markers were set based on control antibody staining (Catalog # [IC0041P](#)).

Intracellular Staining by Flow Cytometry

Detection of LAMP-1/CD107a in THP-1 Human Cell Line by Flow Cytometry. THP-1 human acute monocytic leukemia cell line was stained with Mouse Anti-Human LAMP-1/CD107a PE-conjugated Monoclonal Antibody (Catalog # [IC4800P](#), filled histogram) or isotype control antibody (Catalog # [IC0041P](#), open histogram). 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

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

BACKGROUND

Lysosome-associated membrane protein-1 (LAMP1), 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 LAMP2, is essential for the formation of phagolysosomes. On the cell surface, it 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. There is one potential splice variant that shows a 26 aa substitution in the signal sequence. Over aa 28-380, human LAMP1 shares 64% aa identity with mouse LAMP1.