Human LAMP-2/CD107b Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 743320

Catalog Number: IC6228G
100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Monoclonal Mouse IgG_1 Clone # 743320
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LAMP2/CD107b Leu29-Phe375 Accession # P13473
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

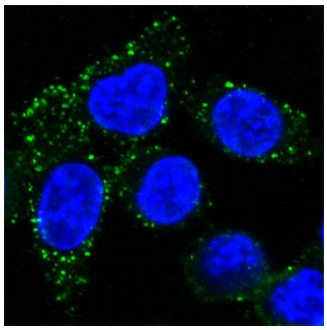
APPLICATIONS

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
Immunocytochemistry	8-25 µg/mL	See Below
Intracellular Staining by Flow Cytometry	5 µL/10^6 cells	See Below

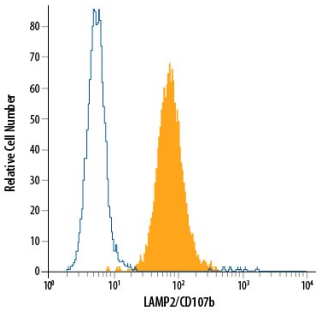
DATA

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

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.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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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) intralumenal domain, a 24 aa transmembrane segment, and a 35 aa cytoplasmic tail (2). Its lumenal 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 lumenal region, transmembrane segment, and cytoplasmic tail (4). Within the lumenal 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 lumenal 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 $CD8^+$ T cells, mast cells, monocytes, and platelets (9-12). LAMP2 is a native ligand for lectins Galectin-1 and Galectin-3 (13−15).

References:

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