

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LAMP2/CD107b in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human LAMP1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LAMP2/CD107b Leu29-Phe375 Accession # P13473
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Knockout Validated	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Intracellular Staining by Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.

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

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⁺ T cells, mast cells, monocytes, and platelets (9-12). LAMP2 is a native ligand for lectins Galectin-1 and Galectin-3 (13-15).

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