



CELL LAB Rat Anti-Mouse CD107a (LAMP-1)

Cat. No.	Form	Quantity
732527	Purified (UNLB) Antibody	0.5 mg
732528	Fluorescein (FITC) Conjugate	0.5 mg
732529	Allophycocyanin (APC) Conjugate	0.1 mg

For Laboratory Use Only

DESCRIPTION

Clone:	1D4B
Isotype:	Rat (Sprague-Dawley) IgG2a κ
Immunogen:	Plasma membrane fraction of mouse embryo NIH3T3 cell line ¹
Specificity:	Murine CD107a/LAMP-1 (Mr 110-140 kDa with a core protein of Mr ~40 kDa)

CD107a, also known as lysosomal-associated membrane protein 1 (LAMP-1), is a heavily glycosylated, type I transmembrane protein that constitutes one of the two major sialoglycoproteins on lysosomal membranes that can be used to distinguish lysosomes from other organelles.¹ It is a ligand for galactin, an S-type lectin present in extracellular matrix, through its recognition of acetyllactosamine oligosaccharide chains, and is a ligand for E-selectin-mediated cell adhesion.² CD107a is principally expressed in epithelial cells and macrophages in a variety of organs in normal and Beige mutant mice.³ LAMP-1 may function in protecting the inner surface of the lysosomal membrane by forming a barrier to lysosomal hydrolases.⁴

APPLICATIONS

- Flow cytometry
- Immunoaffinity chromatography²
- Immunohistochemistry (acetone-fixed, frozen tissue sections only)
- Immunoprecipitation^{1,3}
- Western blotting
- Immunoelectron microscopy⁵

CHARACTERIZATION

To ensure lot-to-lot consistency, each batch of product is tested to conform with characteristics of a standard reference reagent using flow cytometry.

WORKING DILUTIONS

Immunofluorescence:	Purified antibody	$\leq 1 \mu\text{g}/10^6$ cells
	FITC conjugate	$\leq 1 \mu\text{g}/10^6$ cells
	APC conjugate	$\leq 0.2 \mu\text{g}/10^6$ cells

Other Applications: Since applications vary, determine the optimum working dilution of the product that is appropriate for your specific needs.

HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of 100 mM borate buffered saline, pH 8.0. No preservatives or amine-containing buffer salts added.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The allophycocyanin (APC) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent.
- Protect fluorochrome-conjugated forms from light. Do not freeze.
- Reagent is stable until the expiration date on the vial when stored at 2-8°C.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Minimize exposure of reagent to light during storage or incubation.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use Good Laboratory Practice (GLP) when handling this reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.
9. Contains sodium azide. Sodium azide under acidic conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, immediately wash excessively with water.

TRADEMARKS

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For additional information or if damaged product is received, contact your local Beckman Coulter Representative.

REFERENCES

1. Chen JW, Pan W, D'Souza MP and August JT. 1985. Lysosome-associated membrane proteins: characterization of LAMP-1 of macrophage P388 and mouse embryo 3T3 cultured cells. *Arch Biochem Biophys*, 239:574-586.
2. Arterburn LM, Earles BJ and August JT. 1990. The disulfide structure of mouse lysosome-associated membrane protein 1. *J Biol Chem*, 265:7419-7423.
3. Chen JW, Chen GL, D'Souza MP, Murphy TL and August JT. 1986. Lysosomal membrane glycoproteins: properties of LAMP-1 and LAMP-2. *Biochem Soc Symp*, 51:97-112.
4. Fukuda M. 1991. Lysosomal membrane glycoproteins. Structure, biosynthesis, and intracellular trafficking. *J Biol Chem*, 266:21327-21330.
5. Rohrer J, Schweizer A, Russell D and Kornfeld S. 1996. The targeting of Lamp1 to lysosomes is dependent on the spacing of its cytoplasmic tail tyrosine sorting motif relative to the membrane. *J Cell Biol*, 132:565-576.



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Beckman Coulter, Inc.
4300 N. Harbor Blvd.
Fullerton, CA 92835
www.beckmancoulter.com

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