Technical Data Sheet

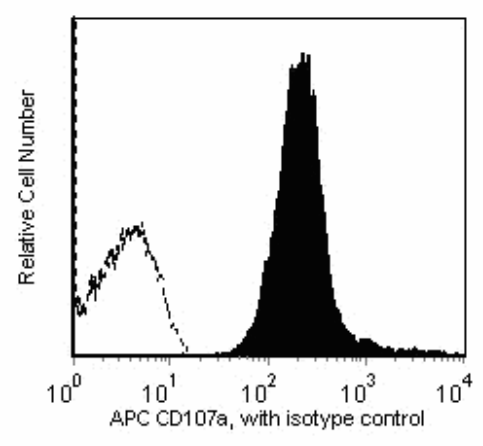
APC Rat Anti-Mouse CD107a

Product Information

Material Number:	**560646**
Alternate Name:	LAMP-1
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	1D4B
Immunogen:	Plasma membrane fraction of mouse embryo NIH 3T3 cell line
Isotype:	Rat (SD) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 1D4B antibody recognizes CD107a (Lysosome-Associated Membrane Protein 1, LAMP-1), one of the two major glycoproteins in lysosome membranes which are useful markers to distinguish lysosomes from other organelles. Mouse CD107a consists of a 40-kDa core protein which is heavily glycosylated to form heterogeneous mature glycoprotein of 110-140 kDa. It is principally expressed in epithelial cells and macrophages in a variety of organs in normal and Beige mutant mice. Several lines of evidence suggest that cell-surface mouse and human LAMP-1 glycoproteins, the expression of which may correlate with malignant transformation, participate in intercellular adhesion and adhesion to extracellular matrix.



Flow cytometric analysis of CD107a on mouse splenocytes. *Splenocytes from BALB/c mice were fixed and permeabilized with BD Cytofix/Cytoperm™ (Cat. No. 554714) and subsequently stained either with a APC Rat IgG2a, κ isotype control (unshaded) or with the APC Rat Anti-Mouse CD107a antibody (shaded). Histograms were derived from gated events based on light scattering characteristics for lymphocytes. Flow cytometry was performed on a BD™ LSR II flow cytometry system.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to APC under optimum conditions, and unconjugated antibody and free APC were removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
553932	APC Rat IgG2a κ Isotype Control	0.1 mg	R35-95
554714	BD Cytofix/Cytoperm™ Fixation/Permeablization Kit	250 tests	(none)
554722	Fixation and Permeabilization Solution	125 ml	(none)
554723	Perm/Wash Buffer	100 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

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2. An isotype control should be used at the same concentration as the antibody of interest.
3. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Chen JW, Chen GL, D'Souza MP, Murphy TL, August JT. Lysosomal membrane glycoproteins: properties of LAMP-1 and LAMP-2. *Biochem Soc Symp.* 1986; 51:97-112. (Biology)

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Chen JW, Pan W, D'Souza MP, August JT. Lysosome-associated membrane proteins: characterization of LAMP-1 of macrophage P388 and mouse embryo 3T3 cultured cells. *Arch Biochem Biophys.* 1985; 239(2):574-586. (Immunogen)

Rohrer J, Schweizer A, Russell D, Kornfeld S. 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.* 1996; 132(4):565-576. (Biology)