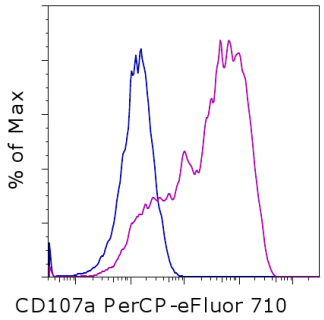
Anti-Mouse CD107a (LAMP-1) PerCP-eFluor® 710

Catalog Number: 46-1071
Also known as: lysosomal-associated membrane protein 1
RUO: For Research Use Only. Not for use in diagnostic procedures.



Intracellular staining of BALB/c thioglycolate-induced peritoneal exudate cells with 0.5 ug of Rat IgG2a K Isotype Control PerCP-eFluor® 710 (46-4321) (blue histogram) or 0.5 ug of Anti-Mouse CD107a (LAMP-1) PerCP-eFluor® 710 (purple histogram). Total viable cells were used for analysis.

Product Information

Contents: Anti-Mouse CD107a (LAMP-1) PerCP-eFluor® 710
REF **Catalog Number:** 46-1071
Clone: eBio1D4B (1D4B)
Concentration: 0.2 mg/mL
Host/Isotype: Rat IgG2a, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C. Do not freeze. Light-sensitive material.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial
Contains sodium azide

Description

The eBio1D4B monoclonal antibody reacts with mouse CD107a, also known as lysosomal-associated membrane protein-1 (LAMP-1). CD107a is a type I, lysosomal membrane protein that is extensively glycosylated. It is expressed constitutively in the late endosomes-lysosomes in all cells. CD107a is also transiently expressed on the cell surface of degranulating cytolytic T cells. Additionally, CD107a has been implicated in a variety of cellular functions including cancer metastasis and is also a marker for lysosomal storage disorders.

Applications Reported

This eBio1D4B (1D4B) antibody has been reported for use in intracellular staining followed by flow cytometric analysis. It has also been reported for use in surface staining in a flow cytometric based degranulation assay.

Applications Tested

This eBio1D4B (1D4B) antibody has been tested by intracellular staining and flow cytometric analysis of mouse thioglycolate-elicited peritoneal exudate cells. This can be used at less than or equal to 1 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

PerCP-eFluor® 710 can be used in place of PE-Cy5, PE-Cy5.5 or PerCP-Cy5.5. PerCP-eFluor® 710 emits at 710 nm and is excited with the blue laser (488 nm). Please make sure that your instrument is capable of detecting this fluorochrome. For a filter configuration, we recommend using the 685 LP dichroic mirror and 710/40 band pass filter, however the 695/40 band pass filter is an acceptable alternative.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 uL cell sample + 100 uL IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

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References

Wolint P, Betts MR, Koup RA, Oxenius A. Immediate cytotoxicity but not degranulation distinguishes effector and memory subsets of CD8+ T cells. J Exp Med. 2004 Apr 5;199(7):925-36.(**1D4B**, degranulation assay, PubMed)

Betts MR, Koup RA. Detection of T-cell degranulation: CD107a and b. Methods Cell Biol. 2004;75:497-512.

Gough NR, Zweifel ME, Martinez-Augustin O, Aguilar RC, Bonifacino JS, Fambrough DM. Utilization of the indirect lysosome targeting pathway by lysosome-associated membrane proteins (LAMPs) is influenced largely by the C-terminal residue of their GYXXphi targeting signals. J Cell Sci. 1999 Dec;112 (Pt 23):4257-69. (**1D4B**, IF, PubMed)

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 Feb;132(4):565-76. (**1D4B**, immunoelectron microscopy, PubMed)

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 Jun;239(2):574-86. (**1D4B**, CD107a purification, PubMed)

Related Products

00-4222 Flow Cytometry Staining Buffer
00-8222 IC Fixation Buffer
00-8333 Permeabilization Buffer (10X)
46-4321 Rat IgG2a K Isotype Control PerCP-eFluor® 710 (eBR2a)

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