SONY

Product Data Sheet

PE/Cyanine7 anti-human CD107a (LAMP-1)

Catalog # / Size: 2243090 / 100 tests
2243085 / 25 tests

Clone: H4A3

Isotype: Mouse IgG1, κ

Immunogen: Human adult adherent peripheral blood cells

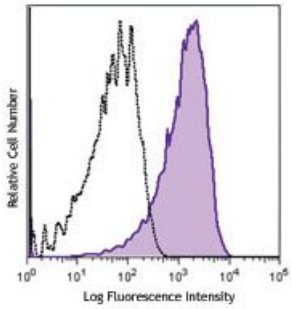
Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography and conjugated with PE/Cy7 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

Workshop Number: P PR-63; BP 473; P P008

Concentration: Lot-specific



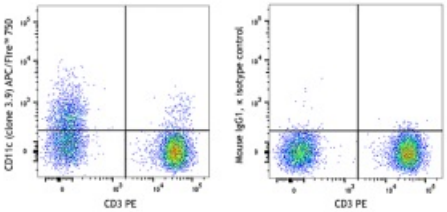
Thrombin-activated human peripheral blood platelets were stained with CD107a (clone H4A3) PE/Cy7 (filled histogram) or mouse IgG1, κPE/Cy7 isotype control (open histogram).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Additional reported applications (for the relevant formats) include: Western blotting[8], immunohistochemical staining2, immunofluorescence[5,7], and immunoprecipitation5.



Human peripheral blood lymphocytes were stained with PE anti-human CD3 and APC/Fire™ 750 anti-human CD11c (clone 3.9) (left) or mouse IgG1, κ APC/Fire™ 750 isotype control (right).

Application References:

1. Misse D, *et al.* 1999. *Blood* 93:2454.
2. Furuta K, *et al.* 2001. *Am. J. Pathol.* 159:449. (IHC)
3. Watanabe A, *et al.* 2011. *J. Biol. Chem.* 286:10702. PubMed
4. Baron Gaillard CL, *et al.* 2011. *Mol. Cell. Biol.* 22:5459. PubMed
5. Hauck CR and Meyer TF. 1997. *FEBS Lett.* 405:86. (IF, IP)
6. De Keersmaecker B, *et al.* 2012. *J. Virol.* 86:9351. PubMed
7. Knodler LA, *et al.* 2010. *P. Natl. Acad. Sci. USA.* 107:17733. (IF)
8. Oh J, *et al.* 2000. *Hum. Mol. Genet.* 9:375. (WB)
9. Salio M, *et al.* 2013 *PNAS.* 110:4753. PubMed

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Description: CD107a, also known as Lysosome-Associated Membrane Protein 1 (LAMP-1) or LGP-120, is a 110-140 kD type I membrane glycoprotein. Mature CD107a is heavily glycosylated from a 40 kD core protein. This molecule is located on the luminal side of lysosomes. Upon activation, CD107a is transferred to the cell membrane surface of activated platelets, activated lymphocytes, macrophages, epithelial cells, endothelial cells, and some tumor cells. CD107a has been suggested to play a role in the protection of lysosomal membrane from lysosomal hydrolases which is involved in cell adhesion and regulation of tumor metastasis, and mediates autoimmune disease progression. CD107a is a ligand for galaptin and E-selectin. Surface expression of LAMP-1 has been shown to correlate with $CD8^+$ T cell and NK cell cytotoxicity.

Antigen References:

1. Sarafian V, *et al.* 2006. *Arch. Dermatol. Res.* 298:7381.
2. Schlossman SF, *et al.* 1995. *Leukocyte Typing V:White Cell Differentiation Antigens.* New York:Oxford University Press.
3. Sawada R, *et al.* 1993. *J. Biol. Chem.* 268:12675.
4. Chen JW, *et al.* 1988. *J. Biol. Chem.* 263:8754.
5. Chen JW, *et al.* 1986. *Biochem. Soc. Symp.* 51:97112.

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