

Pacific Blue™ anti-human CD107a (LAMP-1)

Catalog # / Size: 2243120 / 100 µg
2243115 / 25 µg

Clone: H4A3

Isotype: Mouse IgG1, κ

Immunogen: Human adult adherent peripheral blood cells

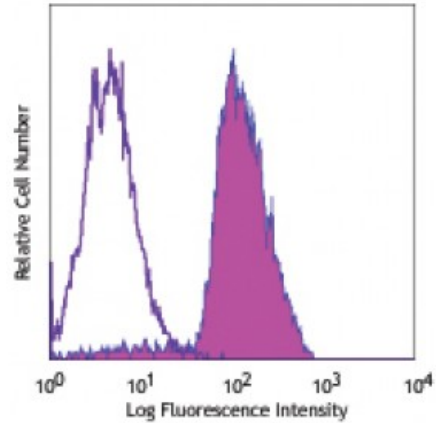
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions. The solution is free of unconjugated Pacific Blue™.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

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

Concentration: 0.5



Thrombin-activated human peripheral blood platelets were stained with CD107a (clone H4A3) Pacific Blue™ (filled histogram) or mouse IgG1, κ Pacific Blue™ (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 ≤ 2.0 microg per 10⁶ cells in 100 microL volume or 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

Application Notes: Additional reported applications (for the relevant formats) include: Western blotting⁸, immunohistochemical staining², immunofluorescence^{5,7}, and immunoprecipitation⁵.

- 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](#)

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 galactin 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.*