

Brilliant Violet 510™ anti-human CD107a (LAMP-1)

Catalog # / Size: 2243155 / 25 tests
2243160 / 100 tests

Clone: H4A3

Isotype: Mouse IgG1, κ

Immunogen: Human adult adherent peripheral blood cells

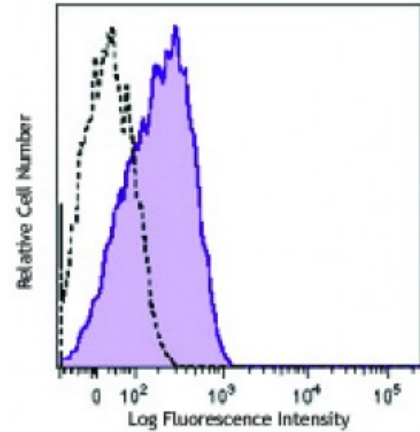
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 510™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 510™ and unconjugated antibody.

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) Brilliant Violet 510™ (filled histogram) or mouse IgG1, κ Brilliant Violet 510™ 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 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 510™ is a trademark of Sirigen Group Ltd.

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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](#)
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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 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.*