

Spark Red™ 718 anti-human CD107a (LAMP-1) Antibody

Catalog# / Size	328659 / 25 tests 328660 / 100 tests
Clone	H4A3
Regulatory Status	RUO
Workshop	P PR-63; BP 473; P P008
Other Names	Lysosome-Associated Membrane Protein 1, LGP-120, LAMP-1
Isotype	Mouse IgG1, κ
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.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Chimpanzee, Cynomolgus, Pigtailed Macaque, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human adult adherent peripheral blood cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark Red™ 718 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * Spark Red™ 718 has a maximum excitation of 697 nm and a maximum emission of 711 nm.
Excitation Laser	Red Laser (633 nm)
Application Notes	Additional reported applications (for the relevant formats) include: Western blotting ⁸ , immunohistochemical staining ² , immunofluorescence ^{5,7} , and immunoprecipitation ⁵ . This antibody is specific to human LAMP-1. Positive control: Hela cells; LAMP-1 molecular weight appears to be at ~110 kDa on the gel due to high glycosylation.

Application References

(PubMed link indicates
BioLegend citation)

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](#)

RRID AB_3675047 (BioLegend Cat. No. 328659)
AB_3675047 (BioLegend Cat. No. 328660)

Antigen Details

Structure	LAMP-1 is a 417 amino acid protein with a molecular mass of 45 kD.
Distribution	Macrophages, epithelial cells, endothelial cells, some tumor cells; located on the luminal side of lysosomes or on the surface of cell membranes
Function	Protect lysosomal membrane from lysosomal hydrolases, adhesion
Ligand/Receptor	Galaptin
Cell Type	Endothelial cells, Epithelial cells, Macrophages
Biology Area	Cell Biology, Immunology, Neurodegeneration, Neuroscience, Protein Trafficking and Clearance
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	<ol style="list-style-type: none">1. Sarafian V, <i>et al.</i> 2006. <i>Arch. Dermatol. Res.</i> 298:7381.2. Schlossman SF, <i>et al.</i> 1995. <i>Leukocyte Typing V:White Cell Differentiation Antigens.</i> New York:Oxford University Press.3. Sawada R, <i>et al.</i> 1993. <i>J. Biol. Chem.</i> 268:12675.4. Chen JW, <i>et al.</i> 1988. <i>J. Biol. Chem.</i> 263:8754.5. Chen JW, <i>et al.</i> 1986. <i>Biochem. Soc. Symp.</i> 51:97112.
Gene ID	3916

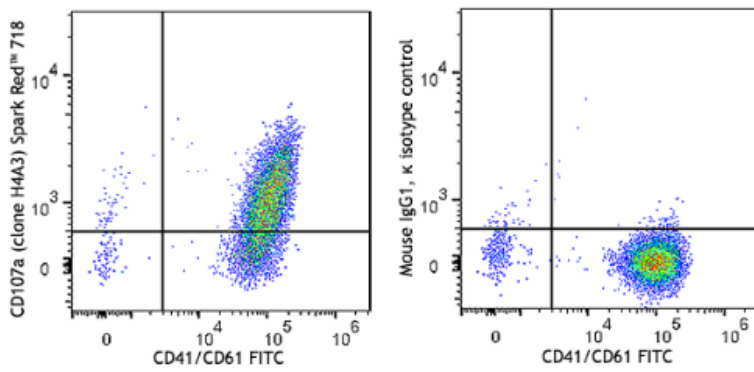
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

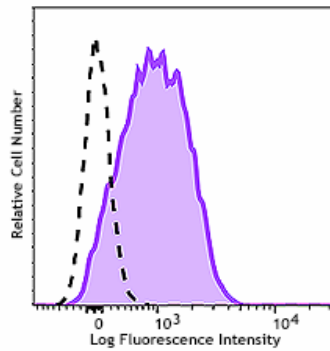
Other Formats

Biotin anti-human CD107a (LAMP-1), Purified anti-human CD107a (LAMP-1), FITC anti-human CD107a (LAMP-1), PE anti-human CD107a (LAMP-1), Alexa Fluor® 488 anti-human CD107a (LAMP-1), Alexa Fluor® 647 anti-human CD107a (LAMP-1), PerCP/Cyanine5.5 anti-human CD107a (LAMP-1), APC anti-human CD107a (LAMP-1), Pacific Blue™ anti-human CD107a (LAMP-1), Brilliant Violet 421™ anti-human CD107a (LAMP-1), PE/Cyanine7 anti-human CD107a (LAMP-1), APC/Cyanine7 anti-human CD107a (LAMP-1), Brilliant Violet 510™ anti-human CD107a (LAMP-1), Brilliant Violet 605™ anti-human CD107a (LAMP-1), Purified anti-human CD107a (LAMP-1) (Maxpar® Ready), Brilliant Violet 650™ anti-human CD107a (LAMP-1), Brilliant Violet 711™ anti-human CD107a (LAMP-1), PerCP anti-human CD107a (LAMP-1), Brilliant Violet 785™ anti-human CD107a (LAMP-1), PE/Dazzle™ 594 anti-human CD107a (LAMP-1), TotalSeq™-A0155 anti-human CD107a (LAMP-1), TotalSeq™-C0155 anti-human CD107a (LAMP-1), TotalSeq™-B0155 anti-human CD107a (LAMP-1), APC/Fire™ 750 anti-human CD107a (LAMP-1) Antibody, PE/Cyanine5 anti-human CD107a (LAMP-1), Spark Blue™ 574 anti-human CD107a (LAMP-1) (Flexi-Fluor™), Spark PLUS B550™ anti-human CD107a (LAMP-1), Spark Red™ 718 anti-human CD107a (LAMP-1), Spark YG™ 581 anti-human CD107a (LAMP-1) (Flexi-Fluor™), Spark YG™ 593 anti-human CD107a (LAMP-1) (Flexi-Fluor™) Antibody, Spark UV™ 387 anti-human CD107a (LAMP-1) (Flexi-Fluor™)

Product Data



Thrombin-activated human peripheral blood platelets were stained with anti-human CD41/CD61 (clone A2A9/6) FITC and anti-human CD107a (LAMP-1) (clone H4A3) Spark Red™ 718 (left) or mouse IgG1, κ Spark Red™ 718 isotype control (right).



Thrombin-activated human peripheral blood platelets were stained with anti-human CD107a (LAMP-1) (clone H4A3) Spark Red™ 718 (filled histogram) or mouse IgG1, κ Spark Red™ 718 isotype control (open histogram).

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