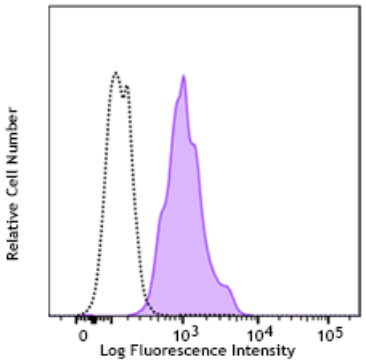
SONY

Product Data Sheet

APC/Fire™ 750 anti-human CD107a (LAMP-1)

Catalog # / Size:	2243265 / 25 tests 2243270 / 100 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 APC/Fire™ 750 under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA)
Workshop Number:	P PR-63
Concentration:	Lot-specific



Thrombin-activated human peripheral blood platelets were stained with anti-human CD107a (clone H4A3) APC/Fire™ 750 (filled histogram) or mouse IgG1, κ APC/Fire™ 750 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 in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 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 about 110 kDa on the gel due to high glycosylation.

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.