

# CD107a (LAMP-1) Monoclonal Antibody (eBioH4A3), eFluor 660, eBioscience™

| Product Details             |   |
|-----------------------------|---|
| Size                        | 100 Tests   |
| Species Reactivity          | Human   |
| Published Species           | Human, Rhesus monkey  |
| Host/Isotype                | Mouse / IgG1, kappa   |
| Recommended Isotype Control | Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), eFluor 660, eBioscience™ |
| Class                       | Monoclonal  |
| Type                        | Antibody  |
| Clone                       | eBioH4A3  |
| Conjugate                   | eFluor® 660   |
| Form                        | Liquid  |
| Concentration               | 5 µL/Test   |
| Purification                | Affinity chromatography   |
| Storage buffer              | PBS, pH 7.2, with 0.1% gelatin, 0.2% BSA                                |
| Contains                    | 0.09% sodium azide  |
| Storage conditions          | 4° C, store in dark, DO NOT FREEZE!                                     |
| RRID                        | AB_11220283   |

| Applications                 | Tested Dilution      | Publications   |
|------------------------------|----------------------|----------------|
| Western Blot (WB)            | 1:1,000              | -              |
| Immunocytochemistry (ICC/IF) | -                    | 3 Publications |
| Flow Cytometry (Flow)        | 5 µL (0.125 µg)/test | 9 Publications |

## Product Specific Information

**Description:** The eBioH4A3 monoclonal antibody reacts with human CD107a, also known as lysosomal-associated membrane protein-1 (LAMP-1). CD107a is a highly glycosylated protein of approximately 110kDa. It is predominantly expressed intracellularly in the lysosomal/endosomal membrane in nearly all cells. CD107a is transiently expressed on the cell surface of degranulating cytolytic T cells, and is also upregulated on the surface of activated platelets and some cancer cells.

**Applications Reported:** This H4A3 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

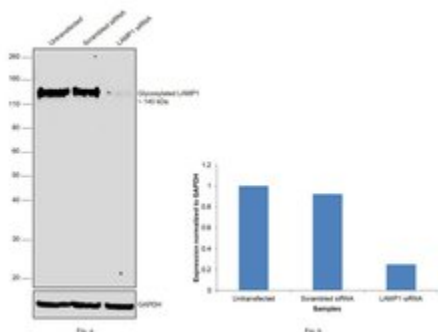
**Applications Tested:** This eBioH4A3 antibody has been pre-titrated and tested by intracellular staining and flow cytometric analysis of the Jurkat cell line. This can be used at 5 µL (0.125 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test.

eFluor® 660 is a replacement for Alexa Fluor® 647. eFluor® 660 emits at 659 nm and is excited with the red laser (633 nm). Please make sure that your instrument is capable of detecting this fluorochrome.

Excitation: 633-647 nm; Emission: 668 nm; Laser: Red Laser.

Filtration: 0.2 µm post-manufacturing filtered.

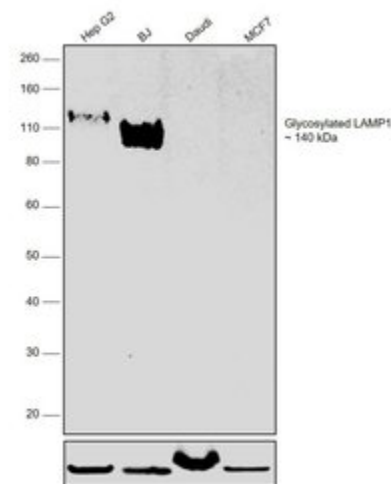
## Advanced Verification Data



### CD107a (LAMP-1) Antibody (50-1079-42)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. Hep G2 cells were transfected with LAMP1 siRNA and decrease in signal intensity was observed in Western Blot application using Anti-CD107a (LAMP-1) Monoclonal Antibody (eBioH4A3), eFluor 660, eBioscience™ (Product # 50-1079-42). Knockdown validation info.

## Product Images For CD107a (LAMP-1) Monoclonal Antibody (eBioH4A3), eFluor 660, eBioscience™

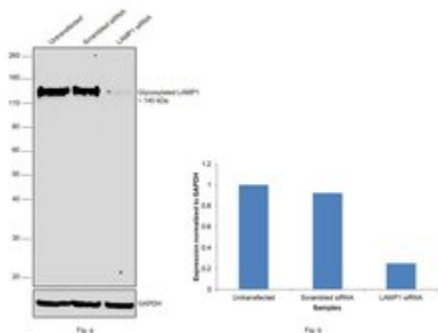


### CD107a (LAMP-1) Antibody (50-1079-42) in WB

Western blot was performed using Anti-CD107a (LAMP-1) Monoclonal Antibody (eBioH4A3), eFluor 660, eBioscience™ (Product # 50-1079-42) and a 140kDa band corresponding to glycosylated form of LAMP1 was observed in Hep G2 and BJ, but not in MCF7 or Daudi that are reported to have lower levels of the same. Whole cell extracts (40 µg lysate) of Hep G2 (Lane 1), BJ (Lane 2), Daudi (Lane 3) and MCF7 (Lane 4) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0321BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1000 dilution) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:10000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005). LAMP1 is a heavily glycosylated protein and is reported to show bands above ~110kDa.

### CD107a (LAMP-1) Antibody (50-1079-42) in WB

Knockdown of LAMP1 (lysosome-associated membrane glycoprotein 1) was achieved by transfecting Hep G2 with LAMP1 specific siRNAs (Silencer® select Product # s8081, s8082). Western blot analysis (Fig. a) was performed using whole cell extracts (40 µg lysate) from the LAMP1 knockdown cells (lane 3), non-targeting scrambled siRNA transfected cells (lane 2) and untransfected cells (lane 1). The blot was probed with CD107a (LAMP-1) Monoclonal Antibody (eBioH4A3), eFluor 660, eBioscience™ (Product # 50-1079-42, 1:1000 dilution) and Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:10000 dilution). Densitometric analysis of this western blot is shown in histogram (Fig. b). Decrease in signal upon siRNA mediated knock down confirms that antibody is specific to LAMP1.



12 References

Immunocytochemistry (3)

The Journal of clinical investigation

Targeting cancer metabolism by simultaneously disrupting parallel nutrient access pathways.

"Published figure using CD107a (LAMP-1) monoclonal antibody (Product # 50-1079-42) in Immunofluorescence"

Authors: Kim SM,Roy SG,Chen B,Nguyen TM,McMonigle RJ,McCracken AN,Zhang Y,Kofuji S,Hou J,Selwan E,Finicle BT,Nguyen TT,Ravi A,Ramirez MU,Wiher T,Guenther GG,Kono M,Sasaki AT,Weisman LS,Potma EO,Tromberg BJ, Edwards RA,Hanessian S,Edinger AL

Species  
Human

Dilution  
Not Cited

Year  
2016

Cell death & disease

Fucosylation of LAMP-1 and LAMP-2 by FUT1 correlates with lysosomal positioning and autophagic flux of breast cancer cells.

"Published figure using CD107a (LAMP-1) monoclonal antibody (Product # 50-1079-42) in Immunofluorescence"

Authors: Tan KP,Ho MY,Cho HC,Yu J,Hung JT,Yu AL

Species  
Human

Dilution  
Not Cited

Year  
2016

View more ICC/IF references on thermofisher.com

Flow Cytometry (9)

Oncoimmunology

T cells targeting NY-ESO-1 demonstrate efficacy against disseminated neuroblastoma.

Authors: Singh N,Kulikovskaya I,Barrett DM,Binder-Scholl G,Jakobsen B,Martinez D,Pawel B,June CH,Kalos MD, Grupp SA

Species  
Human

Dilution  
Not Cited

Year  
2021

PLoS pathogens

HLA-B\*27:05 alters immunodominance hierarchy of universal influenza-specific CD8+ T cells.

"Published figure using CD107a (LAMP-1) monoclonal antibody (Product # 50-1079-42) in Flow Cytometry"

Authors: Sant S,Quiñones-Parra SM,Koutsakos M,Grant EJ,Loudovaris T,Mannering SI,Crowe J,van de Sandt CE, Rimmelzwaan GF,Rosjohn J,Gras S,Loh L,Nguyen THO,Kedzierska K

Species  
Not Applicable

Dilution  
Not Cited

Year  
2020

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