

TotalSeq™-A0155 anti-human CD107a (LAMP-1) Antibody

Catalog# / Size	328647 / 10 µg
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
Barcode Sequence	CAGCCCACTGCAATA
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 1 mM EDTA.
Preparation	The antibody was purified by chromatography and conjugated with TotalSeq™-A oligomer under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	PG - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis and the oligomer sequence is confirmed by sequencing. TotalSeq™-A antibodies are compatible with 10x Genomics Single Cell Gene Expression Solutions.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
Application Notes	Additional reported applications (for the relevant formats) include: Western blotting ⁸ , immunohistochemical staining ² , immunofluorescence ^{5,7} , and immunoprecipitation ⁹ .

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.

Additional Product Notes

TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. [10x Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit [biolegend.com/totalseq](#).

The barcode flanking sequences are CCTTGGCACCCGAGAATTCCA (PCR handle), and BAAA*A*A (capture sequence). B represents either C, G, or T, and * indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

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](#)

Product Citations

1. Hao Y, *et al.* 2021. *Cell.* 184:3573. [PubMed](#)

RRID

AB_2750351 (BioLegend Cat. No. 328647)

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

[TotalSeq™-A Antibodies and Cell Hashing with 10x Single Cell 3' Reagent Kit v3 3.1 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)

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