

PE/Cyanine7 anti-human CD8a Antibody

Catalog# / Size	300913 / 25 tests 300914 / 100 tests
Clone	HIT8a
Regulatory Status	RUO
Workshop	V CD08.10
Other Names	T8, Leu2
Isotype	Mouse IgG1, κ
Description	CD8a is a 32-34 kD type I glycoprotein. It forms a homodimer (CD8a/a) or heterodimer (CD8a/b) with CD8b. CD8, also known as T8 and Leu2, is a member of the immunoglobulin superfamily found on the majority of thymocytes, a subset of peripheral blood T cells, and NK cells (which express almost exclusively CD8a homodimers). CD8 acts as a co-receptor with MHC class I-restricted T cell receptors in antigen recognition and T cell activation and has been shown to play a role in thymic differentiation. Two domains in CD8a are important for function: the extracellular IgSF domain binds the $\alpha 3$ domain of MHC class I and the cytoplasmic CXCP motif binds the tyrosine kinase p56 Lck.

Product Details

Verified Reactivity	Human
Reported Reactivity	Chimpanzee, Common Marmoset
Antibody Type	Monoclonal
Host Species	Mouse
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 PE/Cyanine7 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Clone HIT8a recognizes the alpha chain of CD8 ⁵ . It does not block the binding of RPA-T8 antibody to CD8a. Additional reported applications of this antibody (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections ^{5,6} . This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue.
Additional Product Notes	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact Technical Service if you have any questions.
Application References	
(PubMed link indicates	1. Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. 2. Knapp W. 1989. Leucocyte Typing IV. Oxford University Press New York.

- BioLegend citation)**
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 4. Awasthi, S., *et al.* 2011. *J. Virol* 85:10472. [PubMed](#)
 5. Coppieters KT, *et al.* 2012. *J. Exp. Med.* 209:51. (IHC, epitope)
 6. Suzuki F, *et al.* 2012. *Arthritis Res. Ther.* 14:R48. (IHC)

Product Citations

1. Freeman ZT, *et al.* 2020. *J Clin Invest.* 130:1405. [PubMed](#)
2. Klemm F, *et al.* 2020. *Cell.* 181(7):1643-1660.e17. [PubMed](#)
3. Xia Y, *et al.* 2019. *Gastroenterol Res Pract.* 2019:5436961. [PubMed](#)
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5. Ye C, *et al.* 2017. *J Virol.* 91:e01389-23. [PubMed](#)
6. Guo J, *et al.* 2019. *Cancer Immunol Res.* 1.349305556. [PubMed](#)
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8. Kacherovsky N, *et al.* 2019. *Nat Biomed Eng.* 0.66875. [PubMed](#)
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11. Evgin L, *et al.* 2020. *Nat Commun.* 2.671527778. [PubMed](#)
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RRID AB_314117 (BioLegend Cat. No. 300913)
AB_314118 (BioLegend Cat. No. 300914)

Antigen Details

Structure	Ig superfamily, homodimer or heterodimer with CD8 β , 32-34 kD
Distribution	Majority of thymocytes, T cell subset, NK cells
Function	MHC class I co-receptor, thymic differentiation, T cell activation
Ligand/Receptor	MHC Class I molecules
Cell Type	Dendritic cells, NK cells, T cells, Thymocytes, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules
Antigen References	1. Barclay N, <i>et al.</i> 1993. The Leucocyte Antigen FactsBook. Academic Press Inc. San Diego.
Gene ID	925

Related Protocols

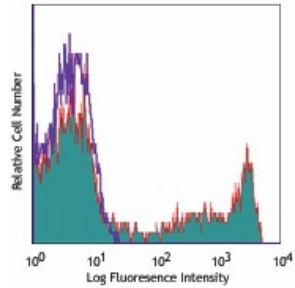
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD8a, Biotin anti-human CD8a, FITC anti-human CD8a, PE anti-human CD8a, PE/Cyanine5 anti-human CD8a, Purified anti-human CD8a, PE/Cyanine7 anti-human CD8a, Alexa Fluor® 488 anti-human CD8a, Alexa Fluor® 647 anti-human CD8a, Alexa Fluor® 700 anti-human CD8a, PerCP anti-human CD8a, PerCP/Cyanine5.5 anti-human CD8a, APC/Cyanine7 anti-human CD8a, Pacific Blue™ anti-human CD8a, PE/Dazzle™ 594 anti-human CD8a, APC/Fire™ 750 anti-human CD8a, Brilliant Violet 510™ anti-human CD8a, Brilliant Violet 605™ anti-human CD8a

Product Data

Human peripheral blood lymphocytes
stained with HIT8a PE/Cyanine7



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