

## Alexa Fluor® 647 anti-human CD8a Antibody

<b>Catalog# / Size</b>	300918 / 100 tests
<b>Clone</b>	HIT8a
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	V CD08.10
<b>Other Names</b>	T8, Leu2
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Chimpanzee, Common Marmoset
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a>. For flow cytometric staining, the suggested use of this reagent is 5 <math>\mu</math>l per million cells in 100 <math>\mu</math>l staining volume or 5 <math>\mu</math>l per 100 <math>\mu</math>l of whole blood.</p> <p>* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></p>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	<p>Clone HIT8a recognizes the alpha chain of CD8<sup>5</sup>. It does not block the binding of RPA-T8 antibody to CD8a.</p> <p>Additional reported applications of this antibody (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections<sup>5,6</sup>. This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue.</p>
<b>Application References</b>	<ol style="list-style-type: none"><li>Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.</li><li>Knapp W. 1989. Leucocyte Typing IV. Oxford University Press New York.</li><li>Barclay N, <i>et al.</i> 1997. The Leucocyte Antigen Facts Book. Academic Press Inc. San Diego.</li><li>Awasthi, S., <i>et al.</i> 2011. <i>J. Virol</i> 85:10472. <a href="#">PubMed</a></li><li>Coppieters KT, <i>et al.</i> 2012. <i>J. Exp. Med.</i> 209:51. (IHC, epitope)</li></ol>
<b>(PubMed link indicates BioLegend citation)</b>	

6. Suzuki F, *et al.* 2012. *Arthritis Res. Ther.* 14:R48. (IHC)

## Product Citations

1. Minns D, *et al.* 2021. *Front Immunol.* 12:633486. [PubMed](#)
2. Baleeiro RB, *et al.* 2022. *Oncoimmunology.* 11:2080329. [PubMed](#)
3. Gordon-Alonso M, *et al.* 2017. *Nat. Commun.* 10.1038/s41467-017-00925-6. [PubMed](#)

## RRID

AB\_756154 (BioLegend Cat. No. 300918)

## Antigen Details

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

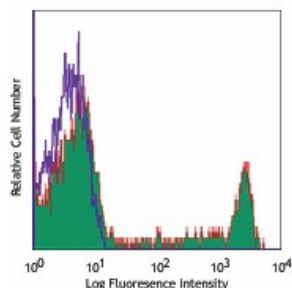
## Related Protocols

[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 Alexa Fluor® 647

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