

## Spark Blue™ 550 anti-mouse CD8a Antibody

<b>Catalog# / Size</b>	100779 / 25 µg 100780 / 100 µg
<b>Clone</b>	53-6.7
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	T8, Lyt2, Ly-2
<b>Isotype</b>	Rat IgG2a, κ
<b>Description</b>	CD8, also known as Lyt-2, Ly-2, or T8, consists of disulfide-linked α and β chains that form the α(CD8a)/β(CD8b) heterodimer and α/α homodimer. CD8a is a 34 kD protein that belongs to the immunoglobulin family. The CD8 α/β heterodimer is expressed on the surface of most thymocytes and a subset of mature TCR α/β T cells. CD8 expression on mature T cells is non-overlapping with CD4. The CD8 α/α homodimer is expressed on a subset of γ/δ TCR-bearing T cells, NK cells, intestinal intraepithelial lymphocytes, and lymphoid dendritic cells. CD8 is an antigen co-receptor on T cells that interacts with MHC class I on antigen-presenting cells or epithelial cells. CD8 promotes T cell activation through its association with the TCR complex and protein tyrosine kinase lck.

### Product Details

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<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	Mouse thymus or spleen
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Spark Blue™ 550 under optimal conditions.
<b>Concentration</b>	0.5 mg/mL
<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. Do not freeze.
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	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 ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.  * Spark Blue™ 550 has a maximum excitation of 516 nm and a maximum emission of 540 nm.
<b>Excitation Laser</b>	Blue Laser (488 nm)
<b>Application Notes</b>	Clone 53-6.7 antibody competes with clone 5H10-1 antibody for binding to thymocytes <sup>3</sup> . The 53-6.7 antibody has been reported to block antigen presentation via MHC class I and inhibit T cell responses to IL-2. This antibody has also been used for depletion of CD8a <sup>+</sup> cells. Additional reported applications (for the relevant formats) include: immunoprecipitation <sup>1,3</sup> , <i>in vivo</i> and <i>in vitro</i> cell depletion <sup>2,10,15</sup> , inhibition of CD8 T cell proliferation <sup>3</sup> , blocking of cytotoxicity <sup>3,4</sup> , immunohistochemical staining <sup>5,6</sup> of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections, and spatial biology (IBEX) <sup>29,30</sup> . Clone 53-6.7 is not recommended for immunohistochemistry of formalin-fixed paraffin sections. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays or <i>in vivo</i> studies (Cat No. 100746).
<b>Application References</b>	1. Ledbetter JA, <i>et al.</i> 1979. <i>Immunol. Rev.</i> 47:63. (IHC, IP)
<b>(PubMed link indicates</b>	2. Hathcock KS. 1991. <i>Current Protocols in Immunology</i> . 3.4.1. (Deplete)

- BioLegend citation)**
3. Takahashi K, *et al.* 1992. *P. Natl. Acad. Sci. USA* 89:5557. (Block, IP)
  4. Ledbetter JA, *et al.* 1981. *J. Exp. Med.* 153:1503. (Block)
  5. Hata H, *et al.* 2004. *J. Clin. Invest.* 114:582. (IHC)
  6. Fan WY, *et al.* 2001. *Exp. Biol. Med.* 226:1045. (IHC)
  7. Shih FF, *et al.* 2006. *J. Immunol.* 176:3438. (FC)
  8. Kamimura D, *et al.* 2006. *J. Immunol.* 177:306.
  9. Bouwer HGA, *et al.* 2006. *P. Natl. Acad. Sci. USA* 103:5102. (FC, Deplete)
  10. Kao C, *et al.* 2005. *Int. Immunol.* 17:1607. [PubMed](#)
  11. Ko SY, *et al.* 2005. *J. Immunol.* 175:3309. (FC) [PubMed](#)
  12. Rasmussen JW, *et al.* 2006. *Infect. Immun.* 74:6590. [PubMed](#)
  13. Lee CH, *et al.* 2009. *Clin. Cancer Res.* [PubMed](#)
  14. Geiben-Lynn R, *et al.* 2008. *Blood* 112:4585. (Deplete) [PubMed](#)
  15. Kingeter LM, *et al.* 2008. *J. Immunol.* 181:6244. [PubMed](#)
  16. Guo Y, *et al.* 2008. *Blood* 112:480. [PubMed](#)
  17. Andrews DM, *et al.* 2008. *J. Virol.* 82:4931. [PubMed](#)
  18. Britschqui MR, *et al.* 2008. *J. Immunol.* 181:7681. [PubMed](#)
  19. Kenna TJ, *et al.* 2008. *Blood* 111:2091. [PubMed](#)
  20. Jordan JM, *et al.* 2008. *Infect. Immun.* 76:3717. [PubMed](#)
  21. Todd DJ, *et al.* 2009. *J. Exp. Med.* 206:2151. [PubMed](#)
  22. Bankoti J, *et al.* 2010. *Toxicol. Sci.* 115:422. (FC) [PubMed](#)
  23. Medyouf H, *et al.* 2010. *Blood* 115:1175. [PubMed](#)
  24. Riedl P, *et al.* 2009. *J. Immunol.* 183:370. [PubMed](#)
  25. Apte SH, *et al.* 2010. *J. Immunol.* 185:998. [PubMed](#)
  26. Bankoti J, *et al.* 2010. *Toxicol. Sci.* 115:422. (FC) [PubMed](#)
  27. del Rio ML, *et al.* 2011. *Transpl. Int.* 24:501. (FC) [PubMed](#)
  28. Cui L, *et al.* 2015. *J Control Release.* 206:220. [PubMed](#)
  29. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) [PubMed](#)
  30. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

**RRID** AB\_2832268 (BioLegend Cat. No. 100779)  
AB\_2819773 (BioLegend Cat. No. 100780)

## Antigen Details

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<b>Structure</b>	Ig superfamily, CD8 $\alpha$ chain, 34 kD
<b>Distribution</b>	Most thymocytes, T cell subset, some NK cells, lymphoid dendritic cells
<b>Function</b>	Co-receptor for TCR
<b>Ligand/Receptor</b>	MHC class I molecule
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.</li><li>2. Zamoyska R. 1994. <i>Immunity</i> 1:243.</li><li>3. Ellmeier W, <i>et al.</i> 1999. <i>Annu. Rev. Immunol.</i> 17:523.</li></ol>
<b>Gene ID</b>	<a href="#">12525</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

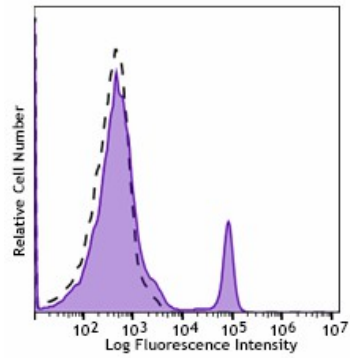
## Other Formats

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APC anti-mouse CD8a, Biotin anti-mouse CD8a, FITC anti-mouse CD8a, PE anti-mouse CD8a, PE/Cyanine5 anti-mouse CD8a, Purified anti-mouse CD8a, PE/Cyanine7 anti-mouse CD8a, APC/Cyanine7 anti-mouse CD8a, Alexa Fluor® 488 anti-mouse CD8a, Alexa Fluor® 647 anti-mouse CD8a, Pacific Blue™ anti-mouse CD8a, Alexa Fluor® 700 anti-mouse CD8a, PerCP/Cyanine5.5 anti-mouse CD8a, PerCP anti-mouse CD8a, Brilliant Violet 421™ anti-mouse CD8a, Brilliant Violet 570™ anti-mouse CD8a, Brilliant Violet 650™ anti-mouse CD8a, Brilliant Violet 605™ anti-mouse CD8a, Ultra-LEAF™ Purified anti-mouse CD8a, Brilliant Violet 711™ anti-mouse CD8a, Brilliant Violet 785™ anti-mouse CD8a, Brilliant Violet 510™ anti-mouse CD8a, Purified anti-mouse CD8a (Maxpar® Ready), Alexa Fluor® 594 anti-mouse CD8a, PE/Dazzle™ 594 anti-mouse CD8a, APC/Fire™ 750 anti-mouse CD8a, GoInVivo™ Purified anti-mouse CD8a, TotalSeq™-A0002 anti-mouse CD8a, Spark Blue™ 550 anti-mouse CD8a, Spark NIR™ 685 anti-mouse CD8a, TotalSeq™-C0002 anti-mouse CD8a, TotalSeq™-B0002 anti-mouse CD8a, Spark YG™ 570 anti-mouse CD8a, PE/Fire™ 640 anti-mouse CD8a, PE/Fire™ 700 anti-mouse CD8a, Spark Blue™ 574 anti-mouse CD8a Antibody, Spark Violet™ 423 anti-mouse CD8a Antibody, Spark UV™ 387 anti-mouse CD8a

## Product Data

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C57BL/6 mouse splenocytes were stained with CD8 (clone 53-6.7) Spark Blue™ 550 (filled histogram). Open histogram represents unstained cells.

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