

**Alexa Fluor® 488 anti-mouse CD8a**

**Catalog # / Size:** 1103630 / 25 µg  
1103615 / 100 µg

**Clone:** 53-6.7

**Isotype:** Rat IgG2a, κ

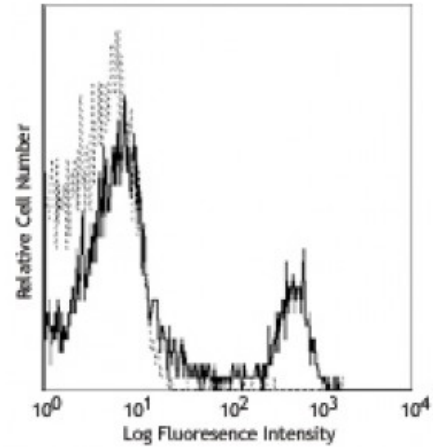
**Immunogen:** Mouse thymus or spleen

**Reactivity:** Mouse

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 488 under optimal conditions.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** 0.5



C57BL/6 mouse splenocytes were stained with CD8 (clone 53-6.7) Alexa Fluor® 488 (solid line) or rat IgG2a, κ Alexa Fluor® 488 isotype control (broken line).

**Applications:**

**Applications:** Flow Cytometry

**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 ≤ 0.25 microg per 10<sup>6</sup> cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

\* Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm.

**Application Notes:** 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>, *in vivo* and *in vitro* cell depletion<sup>2,10,15</sup>, inhibition of CD8 T cell proliferation<sup>3</sup>, blocking of cytotoxicity<sup>3,4</sup>, and immunohistochemical staining<sup>5,6</sup> of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections. Clone 53-6.7 is not recommended for immunohistochemistry of formalin-fixed paraffin sections. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 100716). For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100746) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).

- Application References:**
1. Ledbetter JA, *et al.* 1979. *Immunol. Rev.* 47:63. (IHC, IP)
  2. Hathcock KS. 1991. *Current Protocols in Immunology.* 3.4.1. (Deplete)
  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. Onishi S, *et al.* 2015. *PLoS One.* 10:126564. [PubMed](#)
- 

**Description:** CD8, also known as Lyt-2, Ly-2, or T8, consists of disulfide-linked  $\alpha$  and  $\beta$  chains that form the  $\alpha$ (CD8a)/ $\beta$ (CD8b) heterodimer and  $\alpha/\alpha$  homodimer. CD8a is a 34 kD protein that belongs to the immunoglobulin family. The CD8  $\alpha/\beta$  heterodimer is expressed on the surface of most thymocytes and a subset of mature TCR  $\alpha/\beta$  T cells. CD8 expression on mature T cells is non-overlapping with CD4. The CD8  $\alpha/\alpha$  homodimer is expressed on a subset of  $\gamma/\delta$  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.

- Antigen**
- References:**
1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
  2. Zamoyska R. 1994. *Immunity* 1:243.
  3. Ellmeier W, *et al.* 1999. *Annu. Rev. Immunol.* 17:523.