

PE/Cy5 anti-mouse CD8a

Catalog # / Size: 1103545 / 25 µg
1103550 / 100 µg

Clone: 53-6.7

Isotype: Rat IgG2a, κ

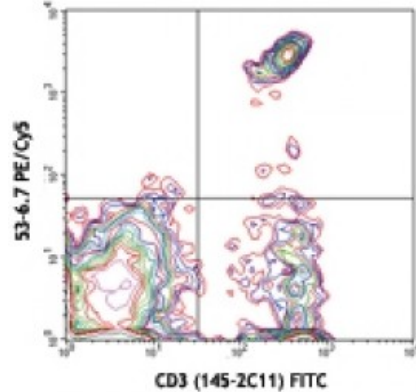
Immunogen: Mouse thymus or spleen

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography, and conjugated with PE/Cy5 under optimal conditions. The solution is free of unconjugated PE/Cy5 and unconjugated antibody.

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

Concentration: 0.2



C57BL/6 splenocytes were stained with CD8 (clone 53-6.7) PE/Cy5 and CD3 FITC.

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 10⁶ cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Clone 53-6.7 antibody competes with clone 5H10-1 antibody for binding to thymocytes³. 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⁺ cells. Additional reported applications (for the relevant formats) include: immunoprecipitation^{1,3}, *in vivo* and *in vitro* cell depletion^{2,10,15}, inhibition of CD8 T cell proliferation³, blocking of cytotoxicity^{3,4}, and immunohistochemical staining^{5,6} 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:

- Ledbetter JA, *et al.* 1979. *Immunol. Rev.* 47:63. (IHC, IP)
- Hathcock KS. 1991. *Current Protocols in Immunology.* 3.4.1. (Deplete)
- Takahashi K, *et al.* 1992. *P. Natl. Acad. Sci. USA* 89:5557. (Block, IP)
- Ledbetter JA, *et al.* 1981. *J. Exp. Med.* 153:1503. (Block)
- Hata H, *et al.* 2004. *J. Clin. Invest.* 114:582. (IHC)
- Fan WY, *et al.* 2001. *Exp. Biol. Med.* 226:1045. (IHC)
- Shih FF, *et al.* 2006. *J. Immunol.* 176:3438. (FC)
- Kamimura D, *et al.* 2006. *J. Immunol.* 177:306.
- Bouwer HGA, *et al.* 2006. *P. Natl. Acad. Sci. USA* 103:5102. (FC, Deplete)
- Kao C, *et al.* 2005. *Int. Immunol.* 17:1607. [PubMed](#)
- Ko SY, *et al.* 2005. *J. Immunol.* 175:3309. (FC) [PubMed](#)
- 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. Lo WL, et al. 2014. *ELife.* 14:1457. [PubMed](#)
29. Ma PF, et al. 2014. *Diabetes.* 63:3458. [PubMed](#)
30. Naik AK, et al. 2015. *J Immunol.* 194:790.

Description: 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.

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.