SONY

Product Data Sheet

Alexa Fluor® 700 anti-mouse CD8a

Catalog # / Size: 1103645 / 25 µg
1103650 / 100 µg

Clone: 53-6.7

Isotype: Rat IgG2a, κ

Immunogen: Mouse thymus or spleen

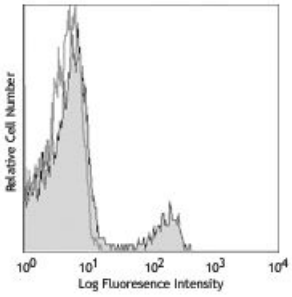
Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 700 under optimal conditions.

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

Workshop Number: V CD40.5

Concentration: 0.5



C57BL/6 mouse splenocytes stained with CD8 (clone 53-6.7) Alexa Fluor® 700 (filled histogram) or rat IgG2a, κ Alexa Fluor® 700 isotype control (open histogram).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. The suggested use of this reagent is ≤ 0.25 µg per 10^6 cells in 100 µl volume. It is highly recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 700 has a maximum emission of 719 nm when it is excited at 633nm / 635nm. Prior to using Alexa Fluor® 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

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).

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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. Cui L, *et al.* 2015. *J Control Release.* 206:220. PubMed

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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.

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