SONY

Product Data Sheet

Alexa Fluor® 647 anti-mouse CD3ε

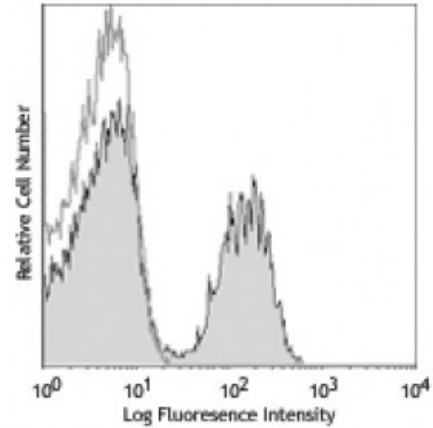|	
Catalog # / Size:	1101620 / 25 µg 1101610 / 100 µg
Clone:	145-2C11
Isotype:	Hamster IgG
Immunogen:	H-2Kb-specific mouse cytotoxic T lymphocyte clone BM10-37
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Concentration:	0.5

C57BL/6 mouse splenocytes were stained with CD3e (clone 145-2C11) Alexa Fluor® 647 (filled histogram) or Armenian hamster IgG Alexa Fluor® 647 isotype control (open histogram).

Applications:

Applications:	Immunofluorescence
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 10^6 cells in 100 microL. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.
Application Notes:	Clone 145-2C11 is useful for *in vitro* blocking of target-specific CTL-mediated cell lysis1, as well as T cell activation assays, inducing proliferation and cytokine production[1,2,7,12,16]. It also induces apoptosis in immature thymocytes[32], and *in vivo* T cell depletion[8-10]. Additional reported applications (for relevant formats of this clone) include: immunoprecipitation1, immunohistochemical staining[14,15] of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections, Western blotting4, complement-mediated cytotoxicity[6], *in vitro* and *in vivo* stimulation of T cells[1,2,7,12,16], immunofluorescent staining5, and *in vivo* T cell depletion8-10. The 145-2C11 antibody has been reported to block the binding of 17A2 antibody to CD3 epsilon-specific T cells[11]. Clone 145-2C11 is not recommended for formalin-fixed paraffin embedded sections. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 100314). For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100340) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).
Application References:	1. Leo O, *et al.* 1987. *P. Natl. Acad. Sci. USA* 84:1374. (IP, Activ) 2. Kruisbeek AM, *et al.* 1991. *In Current Protocols in Immunology.* 3.12.1. (Activ) 3. Duke RC, *et al.* 1995. *Current Protocols in Immunology.* 3.17.1. 4. Salvadori S, *et al.* 1994. *J. Immunol.* 153:5176. (WB) 5. Payer E, *et al.* 1991. *J. Immunol.* 146:2536. (IF) 6. Jacobs H, *et al.* 1994. *Eur. J. Immunol.* 24:934. (CMCD)

7. Vossen ACTM, *et al.* 1995. *Eur. J. Immunol.* 25:1492. (Activ)
8. Henrickson M, *et al.* 1995. *Transplantation* 60:828. (Deplete)
9. Kinnaert P, *et al.* 1996. *Transpl. Int.* 9:386. (Deplete)
10. Han WR, *et al.* 1999. *Transpl. Immunol.* 7:207. (Deplete)
11. Miescher GC, *et al.* 1989. *Immunol. Lett.* 23:113. (Block)
12. Terrazas LI, *et al.* 2005. *Intl. J. Parasitology.* 35:1349. (Activ)
13. Ko SY, *et al.* 2005. *J. Immunol.* 175:3309.
14. Podd BS, *et al.* 2006. *J. Immunol.* 176:6532. (IHC)
15. Tilley SL, *et al.* 2007. *J. Immunol.* 178:3208. (IHC)
16. Wang W, *et al.* 2007. *J. Immunol.* 178:4885. (Activ)
17. Xiao S, *et al.* 2007. *J. Exp. Med.* 204:1691.
18. Chappaz S, *et al.* 2007. *Blood* doi:10.1182/blood-2007-02-074245. (FC)
PubMed.
19. Curtsinger JM, *et al.*2005. *J. Immunol.* 175:4392. PubMed
20. Guo Y, *et al.* 2008. *Blood* 112:480. PubMed
21. Kenna TJ, *et al.* 2008. *Blood* 111:2091.
22. Perchonock CE, *et al.* 2007. *J. Immunol.* 179:1768. PubMed
23. Perchonock GE, *et al.* 2006. *Mol. Cell. Biol.* 26:6005. PubMed
24. Kanaya T, *et al.* 2008. *Am. J. Physiol. Gastrointest. Liver Physiol.* 295:G273.
PubMed
25. de Koning BA, *et al.* 2006. *Int. Immunol.* 18:941. PubMed
26. Schulteis RD, *et al.* 2008. *Blood* 295:G273. PubMed
27. Qi Q, *et al.* 2009. *Blood* 114:564. PubMed
28. Helmersson S, *et al.* 2013. *Am J Pathol.* 9440:123. Pubmed
29. Wu S, *et al.* 2014. *Clin Vaccine Immunol.* 21:156. PubMed
30. Yan J, *et al.* 2014. *Vaccine.* 32:2833. PubMed
31. Guiterrez DA, *et al.* 2014. *Diaebetes.* 63:3827. PubMed

Description: CD3ε is a 20 kD transmembrane protein, also known as CD3 or T3. It is a member of the Ig superfamily and primarily expressed on T cells, NK-T cells, and at different levels on thymocytes during T cell differentiation. CD3ε forms a TCR complex by associating with the CD3δ, γ and ζ chains, as well as the TCR α/β or γ/δ chains. CD3 plays a critical role in TCR signal transduction, T cell activation, and antigen recognition by binding the peptide/MHC antigen complex.

Antigen References:
1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Davis MM. 1990. *Annu. Rev. Biochem.* 59:475.
3. Weiss A, *et al.* 1994. *Cell* 76:263.