Alexa Fluor® 700 anti-mouse CD4

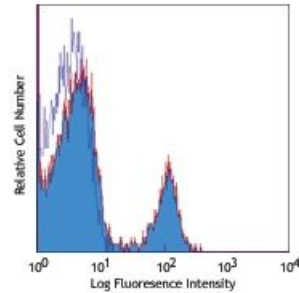|	
Catalog # / Size:	1102680 / 100 µg
Clone:	RM4-5
Isotype:	Rat IgG2a, κ
Immunogen:	BALB/c mouse thymocytes
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 700 under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Concentration:	0.5

C57BL/6 mouse splenocytes stained with CD4 (clone RM4-5) 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 microg per 10^6 cells in 100 microL 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:	The RM4-5 antibody blocks the binding of GK1.5 antibody and H129.19 antibody to CD4^{+} T cells, but not RM4-4 antibody. Additional reported applications (for the relevant formats) include: blocking of ligand binding, *in vivo* depletion of CD4^{+} cells1, and immunohistochemistry of acetone-fixed frozen tissue sections[2,3,11] and paraffin-embedded sections[11]. Clone RM4-5 is not recommended for immunohistochemistry of formalin-fixed paraffin sections. Instead, acetone frozen or zinc-fixed paraffin sections are recommended. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 100520).

Application References:

1. Kruisbeek AM. 1991. *In Curr. Protocols Immunol.* pp. 4.1.1-4.1.5. (Block, Deplete)
2. Nitta H, *et al.* 1997. *Cell Vision* 4:73. (IHC)
3. Fan WY, *et al.* 2001. *Exp. Biol. Med.* 226:1045.
4. Muraille E, *et al.* 2003. *Infect. Immun.* 71:2704. (IHC)
5. León-Ponte M, *et al.* 2007. *Blood* 109:3139. (FC)
6. Bourdeau A, *et al.* 2007. *Blood* doi:10.1182/blood-2006-08-044370. (FC)
7. Matsumoto M, *et al.* 2007. *J. Immunol.* 178:2499. PubMed
8. Shigeta A, *et al.* 2008. *Blood* 112:4915. PubMed
9. Zaborsky N, *et al.* 2010. *J. Immunol.* 184:725. PubMed
10. Rodrigues-Manzanet R, *et al.* 2010. *P. Natl Acad Sci USA* 107:8706. PubMed
11. Whiteland JL, *et al.* 1995. *J. Histochem. Cytochem.* 43:313. (IHC)
12. Ni PP, *et al.* 2014. *J Immunol.* 193:1778. PubMed
13. Soni C, *et al.* 2014. *J Immunol.* 193:4400. PubMed
14. Mykkanen OT, *et al.* 2014. *PLoS One.* 9:114790. PubMed
15. Siegemund S, *et al.* 2015. *PLoS One.* 10:124661. PubMed
16. Wong EB, *et al.* 2015. *J Immunol.* 194:4130. PubMed

Description: CD4 is a 55 kD protein also known as L3T4 or T4. It is a member of the Ig superfamily, primarily expressed on most thymocytes and a subset of T cells, and weakly on macrophages and dendritic cells. It acts as a co-receptor with the TCR during T cell activation and thymic differentiation by binding MHC class II and associating with the protein tyrosine kinase lck.

Antigen References:

1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Bierer BE, *et al.* 1989. *Annu. Rev. Immunol.* 7:579.
3. Janeway CA. 1992. *Annu. Rev. Immunol.* 10:645.