

Spark NIR™ 685 anti-mouse CD4

Catalog # / Size: 1102380 / 100 µg
1102375 / 25 µg

Clone: GK1.5

Isotype: Rat IgG2b, κ

Immunogen: Mouse CTL clone V4

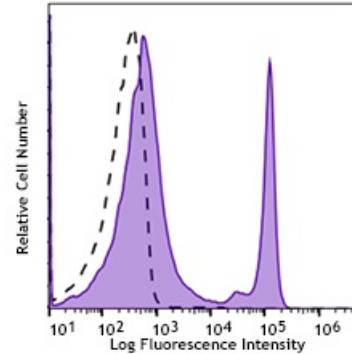
Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Spark NIR™ 685 under optimal conditions.

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

Workshop Number: 750 under optimal conditions.

Concentration: 0.5 mg/mL



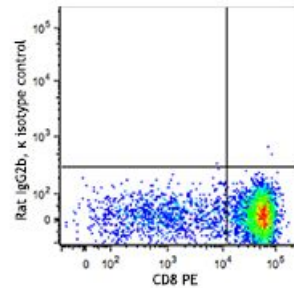
C57BL/6 mouse splenocytes were stained with CD4 (clone GK1.5) Spark NIR™ 685 (filled histogram.) Open histogram represents unstained cells.

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 ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Spark NIR™ 685 has a maximum excitation of 665 nm and a maximum emission of 685 nm.



Application Notes: Additional reported applications (for the relevant formats) include:
blocking of CD4⁺ T cell activation^{1,4,11}, thymocyte costimulation³, *in vitro* and *in vivo* depletion^{2,5-8}, blocking of egg-sperm cell adhesion^{1,4}, immunohistochemical staining of acetone-fixed frozen sections^{9,10}, and immunoprecipitation^{1,2}. The GK1.5 antibody is able to block CD4 mediated cell adhesion and T cell activation. Binding of GK1.5 antibody to CD4 T cells can be blocked by RM4-5 antibody, but not RM4-4 antibody. For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100442) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin < 0.01 EU/μg).

- Application References:**
1. Dialynas DP, *et al.* 1983. *J. Immunol.* 131:2445. (Block, IP)
 2. Dialynas DP, *et al.* 1983. *Immunol. Rev.* 74:29. (IP, Deplete)
 3. Wu L, *et al.* 1991. *J. Exp. Med.* 174:1617. (Costim)
 4. Godfrey DI, *et al.* 1994. *J. Immunol.* 152:4783. (Block)
 5. Gavett SH, *et al.* 1994. *Am. J. Respir. Cell. Mol. Biol.* 10:587. (Deplete)
 6. Schuyler M, *et al.* 1994. *Am. J. Respir. Crit. Care Med.* 149:1286. (Deplete)
 7. Ghobrial RR, *et al.* 1989. *Clin. Immunol. Immunopathol.* 52:486. (Deplete)
 8. Israelski DM, *et al.* 1989. *J. Immunol.* 142:954. (Deplete)
 9. Zheng B, *et al.* 1996. *J. Exp. Med.* 184:1083. (IHC)
 10. Frei K, *et al.* 1997. *J. Exp. Med.* 185:2177. (IHC)
 11. Felix NJ, *et al.* 2007. *Nat. Immunol.* 8:388. (Block)

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, a subset of T cells, and weakly on macrophages and dendritic cells. It acts as a coreceptor with the TCR during T cell activation and thymic differentiation by binding MHC class II and associating with the protein tyrosin 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.