

**Brilliant Violet 711™ anti-mouse CD4**

**Catalog # / Size:** 1102745 / 125 µl  
 1102750 / 500 µl  
 1102785 / 50 µg

**Clone:** RM4-5

**Isotype:** Rat IgG2a, κ

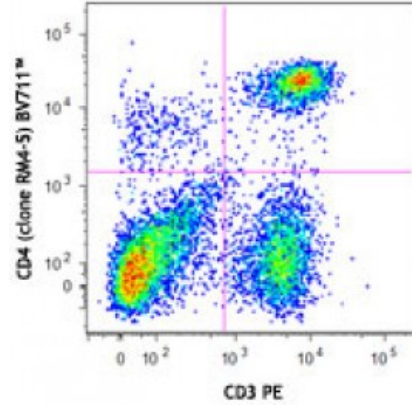
**Immunogen:** BALB/c mouse thymocytes

**Reactivity:** Mouse

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 711™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 711™ and unconjugated antibody.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

**Concentration:** microg sizes: 0.2 mg/ml  
 microL sizes: lot-specific



C57BL/6 mouse splenocytes were stained with CD3 PE and CD4 (clone RM4-5) Brilliant Violet 711™.

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining using the microg size, the suggested use of this reagent is ≤0.5 microg per million cells in 100 microL volume. For immunofluorescent staining using the microL size, the suggested use of this reagent is ≤5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 711™ excites at 405 nm and emits at 711 nm. The bandpass filter 710/50 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 711™ is a trademark of Sirigen Group Ltd.

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**Application Notes:** The RM4-5 antibody blocks the binding of GK1.5 antibody and H129.19 antibody to CD4<sup>+</sup> T cells, but not RM4-4 antibody. Additional reported applications (for the relevant formats) include: blocking of ligand binding, *in vivo* depletion of CD4<sup>+</sup> cells<sup>1</sup>, and immunohistochemistry of acetone-fixed frozen tissue sections<sup>2,3,11</sup> and paraffin-embedded sections<sup>11</sup>. 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)
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**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.