SONY

Product Data Sheet

Pacific Blue™ anti-human CD4

Catalog # / Size: 2102620 / 25 µg
2102605 / 100 µg

Clone: RPA-T4

Isotype: Mouse IgG1, κ

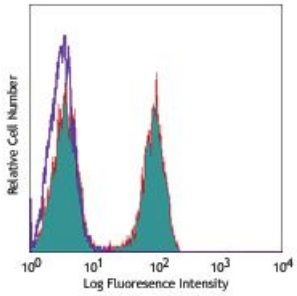
Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.

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

Workshop Number: IV T114

Concentration: 0.5



Human peripheral blood lymphocytes stained with RPA-T4 Pacific Blue™

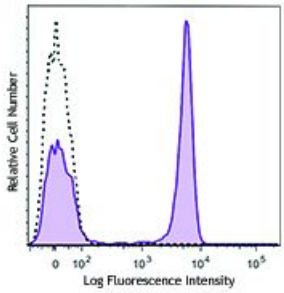
Applications:

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 ≤ 2.0 µg per 10^6 cells in 100 µl volume or 100 µl of whole blood. It is highly recommended that the reagent be titrated for optimal performance for each application.

* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

Application Notes: The RPA-T4 antibody binds to the D1 domain of CD4 (CDR1 and CDR3 epitopes) and can block HIV gp120 binding and inhibit syncytia formation. Additional reported applications (for the relevant formats) include: immunohistochemistry of acetone-fixed frozen sections[3,4,5], and blocking of T cell activation[1,2]. This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 300516).



Human peripheral blood lymphocytes were stained with CD4 (clone RPA-T4) Alexa Flour® 594 (filled histogram) or mouse IgG1, κAlexa Flour® 594 isotype control (open histogram). The data was acquired by BD LSRFortessa™ cell analyzer equipped with the Yellow-Green Laser (561 nm).

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Sony Biotechnology Inc. 1730 North First Street, San Jose, CA 95112 www.sonybiotechnology.com

Application References:

1. Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York. (Activ)
2. Moir S, *et al.* 1999. *J. Virol.* 73:7972. (Activ)
3. Deng MC, *et al.* 1995. *Circulation* 91:1647. (IHC)
4. Friedman T, *et al.* 1999. *J. Immunol.* 162:5256. (IHC)
5. Mack CL, *et al.* 2004. *Pediatr. Res.* 56:79. (IHC)
6. Lan RY, *et al.* 2006. *Hepatology* 43:729.
7. Zenaro E, *et al.* 2009. *J. Leukoc. Biol.* 86:1393. (FC) PubMed
8. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
9. Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865. (PG)

Description: CD4, also known as T4, is a 55 kD single-chain type I transmembrane glycoprotein expressed on most thymocytes, a subset of T cells, and monocytes/macrophages. CD4, a member of the Ig superfamily, recognizes antigens associated with MHC class II molecules, and participates in cell-cell interactions, thymic differentiation, and signal transduction. CD4 acts as a primary receptor for HIV, binding to HIV gp120. CD4 has also been shown to interact with IL-16.

Antigen References:

1. Center D, *et al.* 1996. *Immunol. Today* 17:476.
2. Gaubin M, *et al.* 1996. *Eur. J. Clin. Chem. Clin. Biochem.* 34:723.

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