

Alexa Fluor[®] 594 anti-human CD4 Antibody

Catalog# / Size	300544 / 100 µg
Clone	RPA-T4
Regulatory Status	RUO
Workshop	IV T114
Other Names	T4
Isotype	Mouse IgG1, κ
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.

Product Details

Verified Reactivity	Human
Reported Reactivity	Chimpanzee
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor [®] 594 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested ICC - Verified
Recommended Usage	<p>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 ≤1.0 µg per million cells in 100 µL volume. For immunocytochemistry, a concentration range of 2.5 - 10 µg/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor[®] 594 has an excitation maximum of 590 nm, and a maximum emission of 617 nm.</p> <p>Alexa Fluor[®] and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Green Laser (532 nm)/Yellow-Green Laser (561 nm)
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} , blocking of T cell activation ^{1,2} , and spatial biology (IBEX) ^{10,11} . This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 300569 - 300574).
Application References	<ol style="list-style-type: none">Knapp W, <i>et al.</i> 1989. Leucocyte Typing IV. Oxford University Press. New York. (Activ)Moir S, <i>et al.</i> 1999. <i>J. Virol.</i> 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)
10. Radtke AJ, et al. 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
11. Radtke AJ, et al. 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

RRID AB_2563235 (BioLegend Cat. No. 300544)

Antigen Details

Structure	Ig superfamily, type I transmembrane glycoprotein, 55 kD
Distribution	T cell subset, majority of thymocytes, monocytes/macrophages
Function	MHC class II co-receptor, lymphocyte adhesion, thymic differentiation, HIV receptor
Ligand/Receptor	MHC class II molecules, HIV gp120, IL-16
Cell Type	Dendritic cells, Macrophages, Monocytes, T cells, Thymocytes, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. Center D, et al. 1996. <i>Immunol. Today</i> 17:476. 2. Gaubin M, et al. 1996. <i>Eur. J. Clin. Chem. Clin. Biochem.</i> 34:723.
Gene ID	920

Related Protocols

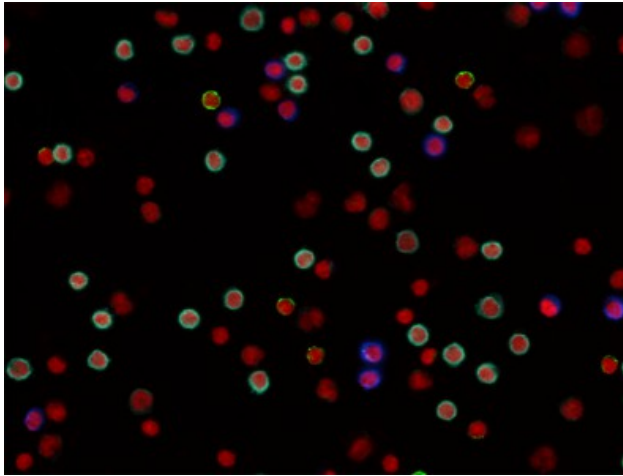
[Cell Surface Flow Cytometry Staining Protocol](#)

[Immunocytochemistry Staining Protocol](#)

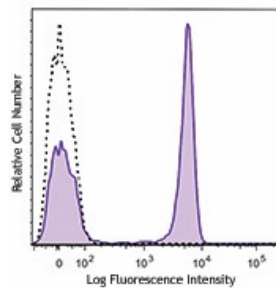
Other Formats

APC anti-human CD4, Biotin anti-human CD4, FITC anti-human CD4, PE anti-human CD4, PE/Cyanine5 anti-human CD4, PE/Cyanine7 anti-human CD4, Purified anti-human CD4, APC/Cyanine7 anti-human CD4, Alexa Fluor® 488 anti-human CD4, Alexa Fluor® 647 anti-human CD4, Pacific Blue™ anti-human CD4, Brilliant Violet 421™ anti-human CD4, Alexa Fluor® 700 anti-human CD4, PerCP anti-human CD4, PerCP/Cyanine5.5 anti-human CD4, Brilliant Violet 570™ anti-human CD4, Brilliant Violet 650™ anti-human CD4, Purified anti-human CD4 (Maxpar® Ready), Alexa Fluor® 594 anti-human CD4, Brilliant Violet 510™ anti-human CD4, PE/Dazzle™ 594 anti-human CD4, Brilliant Violet 785™ anti-human CD4, Brilliant Violet 605™ anti-human CD4, Brilliant Violet 711™ anti-human CD4, APC/Fire™ 750 anti-human CD4, CD4 Fluorophore Sampler Kit, CD4 Fluorophore Sampler Kit with Veri-Cells™ PBMC, TotalSeq™-A0072 anti-human CD4, TotalSeq™-B0072 anti-human CD4, TotalSeq™-C0072 anti-human CD4, Ultra-LEAF™ Purified anti-human CD4, TotalSeq™-D0072 anti-human CD4

Product Data



Human peripheral blood mononuclear cells were fixed with 2% paraformaldehyde (PFA), then stained with 10 µg/ml of CD4 (clone RPA-T4) Alexa Fluor® 594 (cyan), 10 µg/ml CD8 (clone RPA-T8) Brilliant Violet 421™ (blue), and 10 µg/ml CD19 (clone HIB19) Alexa Fluor® 488 (green) for 30 minutes at room temperature. Nuclei were counterstained with DRAQ5 and are shown in red. The image was captured with a 40X objective.



Human peripheral blood lymphocytes were stained with CD4 (clone RPA-T4) Alexa Fluor® 594 (filled histogram) or mouse IgG1, κ Alexa Fluor® 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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