

PE/Cyanine5 anti-human CD4 Antibody

Catalog# / Size	300509 / 25 tests 300510 / 100 tests
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 and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE/Cyanine5 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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
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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
Excitation Laser	Blue Laser (488 nm) 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).
Additional Product Notes	BioLegend is in the process of converting the name PE/Cy5 to PE/Cyanine5. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine5 products. Please contact Technical Service if you have any questions.
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) Deng MC, <i>et al.</i> 1995. <i>Circulation</i> 91:1647. (IHC) Friedman T, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:5256. (IHC)
(PubMed link indicates BioLegend citation)	

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](#)

Product Citations

1. Burbano YCB, *et al.* 2019. *Rev Soc Bras Med Trop.* 52:e20190101. [PubMed](#)
2. Li G, *et al.* 2019. *J Virol.* 93:e00233-19. [PubMed](#)
3. O'Regan N, *et al.* 2014. *PLoS Negl Trop Dis.* 8:3206. [PubMed](#)
4. Jung J, *et al.* 2019. *Cell Rep.* 26:1906. [PubMed](#)
5. Ryba M, *et al.* 2011. *Cytokine.* 55:353. [PubMed](#)
6. Bill M, *et al.* 2018. *J Cell Mol Med.* 22:2311. [PubMed](#)
7. Rodriguez-Meira A *et al.* 2019. *Molecular cell.* 73(6):1292-1305. [PubMed](#)

RRID

AB_314077 (BioLegend Cat. No. 300509)
 AB_314078 (BioLegend Cat. No. 300510)

Antigen Details

Structure	lg 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, <i>et al.</i> 1996. <i>Immunol. Today</i> 17:476. 2. Gaubin M, <i>et al.</i> 1996. <i>Eur. J. Clin. Chem. Clin. Biochem.</i> 34:723.
Gene ID	920

Related Protocols

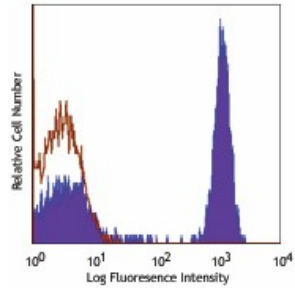
[Cell Surface Flow Cytometry Staining Protocol](#)

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 lymphocytes
stained with RPA-T4 PE/Cyanine5



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