

## Purified anti-human CD4 (Maxpar<sup>®</sup> Ready) Antibody

<b>Catalog# / Size</b>	300541 / 100 µg
<b>Clone</b>	RPA-T4
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	IV T114
<b>Other Names</b>	T4
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	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

<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Chimpanzee
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and EDTA.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<b>Concentration</b>	1.0 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">CyTOF<sup>®</sup> - Verified</a> <a href="#">PG - Reported in the literature, not verified in house</a>
<b>Recommended Usage</b>	This product is suitable for use with the <a href="#">Maxpar<sup>®</sup> Metal Labeling Kits</a> . For metal labeling using Maxpar <sup>®</sup> Ready antibodies, proceed directly to the step to Partially Reduce the Antibody by adding 100 µl of Maxpar <sup>®</sup> Ready antibody to 100 µl of 4 mM TCEP-R in a 50 kDa filter and continue with the protocol. Always refer to the latest version of Maxpar <sup>®</sup> User Guide when conjugating Maxpar <sup>®</sup> Ready antibodies.
<b>Application Notes</b>	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 <sup>3,4,5</sup> , blocking of T cell activation <sup>1,2</sup> , and spatial biology (IBEX) <sup>10,11</sup> . 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).
<b>Additional Product Notes</b>	Maxpar <sup>®</sup> is a registered trademark of Standard BioTools Inc.
<b>Application References</b>	1. Knapp W, <i>et al.</i> 1989. Leucocyte Typing IV. Oxford University Press. New York. (Activ) 2. Moir S, <i>et al.</i> 1999. <i>J. Virol.</i> 73:7972. (Activ) 3. Deng MC, <i>et al.</i> 1995. <i>Circulation</i> 91:1647. (IHC) 4. Friedman T, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:5256. (IHC) 5. Mack CL, <i>et al.</i> 2004. <i>Pediatr. Res.</i> 56:79. (IHC) 6. Lan RY, <i>et al.</i> 2006. <i>Hepatology</i> 43:729. 7. Zenaro E, <i>et al.</i> 2009. <i>J. Leukoc. Biol.</i> 86:1393. (FC) <a href="#">PubMed</a> 8. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC) 9. Stoeckius M, <i>et al.</i> 2017. <i>Nat. Methods.</i> 14:865. (PG)
<b>(PubMed link indicates BioLegend citation)</b>	

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. Gadalla R, et al. 2022. *STAR Protoc*. 3:101643. [PubMed](#)
2. Cheung P, et al. 2018. *Cell*. 173:1385. [PubMed](#)
3. Jordan S, et al. 2020. *Cell*. 178(5):1102-1114.e17.. [PubMed](#)
4. Hwang B, et al. 2021. *Nat Methods*. 18:903. [PubMed](#)
5. Wimmers F, et al. 2021. *Cell*. 184:3915. [PubMed](#)

**RRID** AB\_2562809 (BioLegend Cat. No. 300541)

## Antigen Details

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

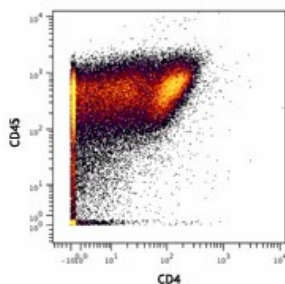
## Related Protocols

[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 PBMCs stained with 154Sm-anti-CD45 (HI30) and 145Nd-anti-CD4 (RPA-T4).

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