

## Ultra-LEAF™ Purified anti-human CD4 Antibody

<b>Catalog# / Size</b>	317453 / 100 µg 317454 / 1 mg
<b>Clone</b>	OKT4
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	HCDM listed
<b>Other Names</b>	T4
<b>Isotype</b>	Mouse IgG2b, 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, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	Chimpanzee
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Human peripheral T cells
<b>Formulation</b>	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is < 0.01 EU/µg of the protein (< 0.001 ng/µg of the protein) as determined by the LAL test.
<b>Preparation</b>	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
<b>Concentration</b>	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">IHC-F - Reported in the literature. not verified in house</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is ≤ 2.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	The OKT4 antibody binds to the D3 domain of CD4 and does not block HIV binding. Additional reported applications (for the relevant formats) include: immunohistochemistry of frozen sections and blocking of T cell activation. 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. 317453 and 317454).  In a small subset of individuals, the OKT4 clone does not bind to CD4 due to polymorphisms in CD4. <sup>9</sup>
<b>Application References</b>	<ol style="list-style-type: none"> <li>Knapp W, <i>et al.</i> 1989. Leucocyte Typing IV. Oxford University Press. New York.</li> <li>Reinherz EL, <i>et al.</i> 1979. <i>Proc. Natl. Acad. Sci.</i> 76:4061.</li> <li>Knieciak M, <i>et al.</i> 2009. <i>J. Transl. Med.</i> 7:89. (FC) <a href="#">PubMed</a></li> </ol>

4. Cicin-Sain L, et al. 2010. *J. Immunol.* 184:6739. [PubMed](#)
5. Rosenzweig M, et al. 2001. *J. Med. Primatol.* 30:36.
6. Linder J, et al. 1987. *Am. J. Pathol.* 127:1.
7. Boche D, et al. 1999. *J. Neurovirol.* 5:232. (IHC)
8. Reinherz EL, et al. 1979. *Proc. Natl. Acad. Sci. USA.* 76:4061. (Immunogen)
9. Lederman S, et al. 1991. *Mol Immunol.* 28:1171-81.

**RRID** AB\_2876620 (BioLegend Cat. No. 317453)  
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## 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>	Macrophages, Monocytes, T cells, Thymocytes, Tregs
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	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.
<b>Gene ID</b>	<a href="#">920</a>

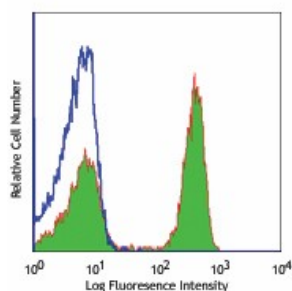
## Related Protocols

[Cell Fixation and Permeabilization Protocol using 70% Ethanol](#)

## Other Formats

Brilliant Violet 650™ anti-human CD4, Purified 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, APC anti-human CD4, APC/Cyanine7 anti-human CD4, Alexa Fluor® 488 anti-human CD4, Alexa Fluor® 647 anti-human CD4, Alexa Fluor® 700 anti-human CD4, Pacific Blue™ anti-human CD4, PerCP/Cyanine5.5 anti-human CD4, PerCP anti-human CD4, Brilliant Violet 421™ anti-human CD4, Brilliant Violet 605™ anti-human CD4, Brilliant Violet 711™ anti-human CD4, Brilliant Violet 785™ anti-human CD4, Brilliant Violet 510™ anti-human CD4, Brilliant Violet 570™ anti-human CD4, PE/Dazzle™ 594 anti-human CD4, TotalSeq™-A0922 anti-human CD4, Ultra-LEAF™ Purified anti-human CD4

## Product Data



Human peripheral blood lymphocytes stained with Ultra-LEAF™ purified OKT4, followed by anti-mouse IgGs FITC

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