

## Alexa Fluor<sup>®</sup> 700 anti-human CD4 Antibody

<b>Catalog# / Size</b>	317425 / 25 µg 317426 / 100 µg
<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>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor <sup>®</sup> 700 under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a>. The suggested use of this reagent is ≤1.0 µg per million cells in 100 µl volume. It is highly recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor<sup>®</sup> 700 has a maximum emission of 719 nm when it is excited at 633 nm / 635 nm. Prior to using Alexa Fluor<sup>®</sup> 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor<sup>®</sup> and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></p>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	<p>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 &lt; 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 317453 and 317454).</p> <p>In a small subset of individuals, the OKT4 clone does not bind to CD4 due to polymorphisms in CD4.<sup>9</sup></p>

## Application References

(PubMed link indicates BioLegend citation)

1. Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York.
2. Reinherz EL, *et al.* 1979. *Proc. Natl. Acad. Sci.* 76:4061.
3. Kmiecik M, *et al.* 2009. *J. Transl. Med.* 7:89. (FC) [PubMed](#)
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.

## Product Citations

1. Lovelace SE, *et al.* 2022. *iScience.* 25:105067. [PubMed](#)
2. Gordon E, *et al.* 2016. *Proc Natl Acad Sci U S A.* 113: 8765 - 8770. [PubMed](#)
3. Cersaletti K, *et al.* 2017. *The Journal of Immunology.* 10.4049/jimmunol.1700172. [PubMed](#)
4. Ott PA, *et al.* 2017. *Nature.* 547:217. [PubMed](#)
5. Naaber P, *et al.* 2022. *Cell Rep Med.* 3:100716. [PubMed](#)
6. Asokan M, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:18754. [PubMed](#)
7. Aschauer C, *et al.* 2021. *Front Immunol.* 12:750005. [PubMed](#)
8. Sabree SA, *et al.* 2021. *J Immunother Cancer.* 9: . [PubMed](#)
9. Frencher J, *et al.* 2014. *J Leukoc Biol.* 96:957. [PubMed](#)
10. Thieme CJ, *et al.* 2020. *Cell Rep Med.* 1:100092. [PubMed](#)
11. Li D, *et al.* 2020. *Immunohorizons.* 0.661805556. [PubMed](#)
12. Mathewson ND, *et al.* 2021. *Cell.* 184(5):1281-1298.e26. [PubMed](#)
13. Sade-Feldman M, *et al.* 2018. *Cell.* 175:998. [PubMed](#)
14. Salumets A, *et al.* 2022. *Aging Cell.* 21:e13607. [PubMed](#)

## RRID

AB\_571942 (BioLegend Cat. No. 317425)  
AB\_571943 (BioLegend Cat. No. 317426)

## 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, <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.
<b>Gene ID</b>	<a href="#">920</a>

## Related Protocols

---

[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

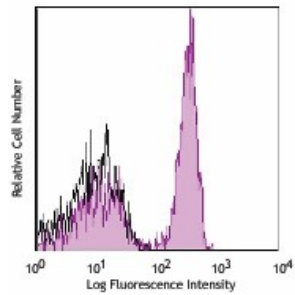
---

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 OKT4 Alexa Fluor® 700



For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587