

Pacific Blue™ anti-human CD4 Antibody

Catalog# / Size	317423 / 25 µg 317424 / 100 µg 317429 / 100 tests
Clone	OKT4
Regulatory Status	RUO
Workshop	HCDM listed
Other Names	T4
Isotype	Mouse IgG2b, 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, Cynomolgus, Rhesus
Reported Reactivity	Chimpanzee
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human peripheral T cells
Formulation	test size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). µg sizes: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
Concentration	test size: lot-specific; µg sizes: 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
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For test size , the suggested use of this reagent for immunofluorescent staining is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. For µg sizes , the suggested use of this reagent for immunofluorescent staining is ≤2.0 µg per 10 ⁶ cells in 100 µl volume or 100 µl of whole blood. It is highly recommended that the reagent be titrated for optimal performance for each application. * Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Violet Laser (405 nm)
Application Notes	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 CD4.⁹

Application References

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. XP H, *et al.* 2015. *Nat Commun.* 6: 8020. [PubMed](#)
2. Tew G, *et al.* 2016. *Gastroenterology.* 150:477-487. [PubMed](#)
3. Zhu W, *et al.* 2021. *Onco Targets Ther.* 14:2149. [PubMed](#)
4. Wijesinghe A, *et al.* 2020. *J Biomed Sci.* 27:50:00. [PubMed](#)
5. Causi E, *et al.* 2015. *PLoS One.* 10: 0136717. [PubMed](#)
6. Estes J, *et al.* 2015. *J Infect Dis.* 211:744. [PubMed](#)
7. Wang J, *et al.* 2020. *Cell.* 183:1264. [PubMed](#)
8. Eckard AR, *et al.* 2017. *Antivir Ther.* 1.177083333. [PubMed](#)
9. Wu G, *et al.* 2021. *Front Microbiol.* 12:636703. [PubMed](#)
10. McGary C, *et al.* 2014. *J Virol.* 88:4533. [PubMed](#)
11. Eckard AR, *et al.* 2017. *Antivir Ther.* 1.38125. [PubMed](#)
12. Chulpanova DS, *et al.* 2021. *Biology (Basel).* 10:. [PubMed](#)
13. Fang F, *et al.* 2021. *Cell Rep.* 37:109981. [PubMed](#)
14. Turaj AH *et al.* 2017. *Cancer cell.* 32(6):777-791 . [PubMed](#)
15. Hasenkrug KJ, *et al.* 2021. *MBio.* 12:e0150321. [PubMed](#)
16. Duque JSR, *et al.* 2022. *Nat Commun.* 13:3700. [PubMed](#)
17. Ji C, *et al.* 2009. *J Biol Chem.* 284:5175. [PubMed](#)
18. Rnjak D, *et al.* 2021. *Transfus Clin Biol.* . [PubMed](#)
19. Tabb B, *et al.* 2012. *J Infect Dis.* 207:880. [PubMed](#)
20. Robert R, *et al.* 2017. *PLoS One.* 10.1371/journal.pone.0184278. [PubMed](#)
21. Xie CB, *et al.* 2020. *J Clin Invest.* 130:3437. [PubMed](#)
22. Wang S, *et al.* 2022. *Cancer Immunol Immunother.* Online ahead of print. [PubMed](#)
23. Chowdhury A, *et al.* 2015. *J Virol.* 89: 8677-8686. [PubMed](#)

RRID

AB_571952 (BioLegend Cat. No. 317423)
AB_571953 (BioLegend Cat. No. 317424)
AB_1595438 (BioLegend Cat. No. 317429)

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	Macrophages, Monocytes, T cells, Thymocytes, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules
Antigen References	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

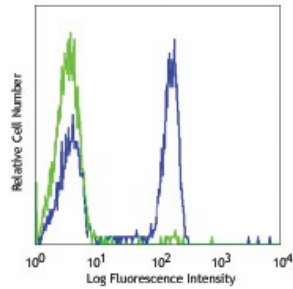
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

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 Pacific Blue™

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