

PE/Cyanine5 anti-human CD4 Antibody

Catalog# / Size	317411 / 25 tests 317412 / 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	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 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
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	

(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. Ivarsson M, *et al.* 2016. *Mucosal Immunol.* 10.1038/mi.2016.50. [PubMed](#)
2. Carre C, *et al.* 2021. *iScience.* 24:102970. [PubMed](#)
3. Freeman ZT, *et al.* 2020. *J Clin Invest.* 130:1405. [PubMed](#)
4. Liu R, *et al.* 2021. *Commun Biol.* 4:652. [PubMed](#)
5. Pattekar A, *et al.* 2021. *Cellular and Molecular Gastroenterology and Hepatology.* 11(5):1267-1289. [PubMed](#)
6. Thompson EA, *et al.* 2021. *Cell Rep.* 108863:34. [PubMed](#)
7. Blom L, *et al.* 2011. *PLoS One.* 6:e21695. [PubMed](#)
8. Yang B, *et al.* 2015. *Cell Immunol.* Available online 12 August 2015. [PubMed](#)
9. Maleki KT, *et al.* 2021. *Cell Reports Medicine.* 2(3):100220. [PubMed](#)
10. Brunetta E, *et al.* 2020. *Nat Immunol.* . [PubMed](#)

RRID

AB_571956 (BioLegend Cat. No. 317411)
AB_571957 (BioLegend Cat. No. 317412)

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

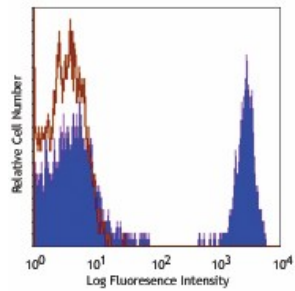
[Cell Surface Flow Cytometry Staining Protocol](#)

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 PE/Cyanine5



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