Biotin anti-human CD4 Antibody

Catalog# / Size	317405 / 25 µg 317406 / 100 µg
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.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. **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 ≤1.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
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 **(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. Kmieciak 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. Liu M, *et al.* 2015. J Virol. 89:784. PubMed
2. Delacher M, *et al.* 2021. Immunity. 54(4):702-720.e17. PubMed
3. Kanakasabapathy M, *et al.* 2017. Lab Chip. 10.1039/c7lc00273d. PubMed
4. Hirota K *et al.* 2018. Immunity. 48(6):1220-1232 . PubMed

RRID

AB_571948 (BioLegend Cat. No. 317405)
AB_571949 (BioLegend Cat. No. 317406)

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, *et al.* 1996. *Immunol. Today* 17:476. 2. Gaubin M, *et al.* 1996. *Eur. J. Clin. Chem. Clin. Biochem.* 34:723.
Gene ID	920

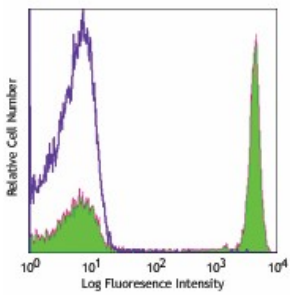
Related Protocols

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 biotinylated OKT4, followed by Sav-PE

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