

## Anti-Human CD4 Antibody, Clone OKT4, Biotin



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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

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## Antibodies

Mouse monoclonal IgG2b antibody  
against human, rhesus, cynomolgus  
CD4, biotin-conjugated

Catalog #60016BT  
#60016BT.1

100 µg 0.5 mg/mL  
25 µg 0.5 mg/mL

## Product Description

The OKT4 antibody reacts with CD4, an ~59 kDa single-chain type 1 transmembrane glycoprotein and member of the immunoglobulin (Ig) superfamily; CD4 contains four extracellular Ig-like domains (D1 – D4). The epitope for OKT4 has been localized to the D3 domain of the protein, which has a structure resembling an Ig variable domain. CD4 is expressed at relatively high levels by most thymocytes and a subpopulation of T cells (T-helper cells), and at lower levels by peripheral blood monocytes and macrophages. CD4 binds to a non-polymorphic region of MHC II and acts as a co-receptor to the T cell receptor (TCR) in MHC II-restricted antigen recognition by enhancing the affinity of the association between the TCR and MHC II-antigen complex. CD4 also functions to amplify signals from the TCR to the cytoplasm through the interaction of its intracellular domain with cytoplasmic tyrosine kinases such as Lck. Moreover, CD4 is a receptor for the human immunodeficiency virus (HIV). Binding of the OKT4 antibody to CD4 does not block HIV binding.

|                      |                                       |
|----------------------|---------------------------------------|
| Target Antigen Name: | CD4                                   |
| Alternative Names:   | T4                                    |
| Gene ID:             | 920                                   |
| Species Reactivity:  | Human, Rhesus, Cynomolgus, Chimpanzee |
| Host Species:        | Mouse                                 |
| Clonality:           | Monoclonal                            |
| Clone:               | OKT4                                  |
| Isotype:             | IgG2b, kappa                          |
| Immunogen:           | Human peripheral blood T lymphocytes  |
| Conjugate:           | Biotin                                |

## Applications

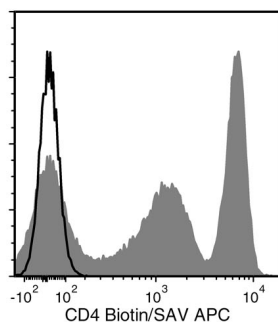
|                       |                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Verified:             | FC                                                                                                                                                                                                                                                                                                                                                                                                      |
| Reported:             | FC                                                                                                                                                                                                                                                                                                                                                                                                      |
| Special Applications: | This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Direct Human CD4+ T Cell Isolation Kit (Catalog #19662), EasySep™ Human CD4+ T Cell Enrichment Kit (Catalog #19052), EasySep™ Human CD3 Positive Selection Kit (Catalog #18051) and EasySep™ Human CD4 Positive Selection Kit (Catalog #18052; partial blocking may be observed). |

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

## Properties

|                        |                                                                                                                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Formulation:           | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide                                                                                                                                            |
| Purification:          | The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.                                                        |
| Stability and Storage: | Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact <a href="mailto:techsupport@stemcell.com">techsupport@stemcell.com</a> .                              |
| Directions for Use:    | For flow cytometry the suggested use of this antibody is ≤ 1 µg per 1 x 10 <sup>6</sup> cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application. |

## Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD4 Antibody, Clone OKT4, Biotin followed by streptavidin (SAV) APC (filled histogram), or Mouse IgG2b, kappa Isotype Control Antibody, Clone MPC-11, Biotin (Catalog #60072BT), followed by SAV APC (solid line histogram).

## Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

1. Antiga E et al. (2014) Regulatory T cells in skin lesions and blood of patients with bullous pemphigoid. *J Eur Acad Dermatol Venereol* 28(2): 222–30. (FC, IF, IHC)
2. Buggert M et al. (2014) Multiparametric bioinformatics distinguish the CD4/CD8 ratio as a suitable laboratory predictor of combined T cell pathogenesis in HIV infection. *J Immunol* 192(5): 2099–108. (FC)
3. Kmieciak M et al. (2009) Human T cells express CD25 and Foxp3 upon activation and exhibit effector/memory phenotypes without any regulatory/suppressor function. *J Transl Med* 7: 89. (FC)
4. Rosenzweig M et al. (2001) Identification of primitive hematopoietic progenitor cells in the rhesus macaque. *J Med Primatol* 30(1): 36–45. (FC)
5. Barclay AN et al. (Eds.). (1997) *The Leucocyte Antigen Factsbook*, Second Edition (pp. 141–2). New York: Academic Press.
6. Center DM et al. (1996) Interleukin 16 and its function as a CD4 ligand. *Immunol Today* 17(10): 476–81.
7. Gaubin M et al. (1996) Molecular basis of T lymphocyte CD4 antigen functions. *Eur J Clin Chem Clin Biochem* 34(9): 723–8.
8. Sakihama T et al. (1995) Molecular recognition of antigen involves lattice formation between CD4, MHC class II and TCR molecules. *Immunol Today* 16(12): 581–7.
9. Bour S et al. (1991) Inhibition of gp160 and CD4 maturation in U937 cells after both defective and productive infections by human immunodeficiency virus type 1. *J Virol* 65(12): 6387–96. (FC, IP)
10. Knapp W et al. (Eds.). (1989) *Leucocyte Typing IV: White cell differentiation antigens* (pp. 628–34). New York: Oxford University Press.
11. Parnes JR. (1989) Molecular biology and function of CD4 and CD8. *Adv Immunol* 44: 265–311.
12. Linder J et al. (1987) Monoclonal antibodies marking T lymphocytes in paraffin-embedded tissue. *Am J Pathol* 127(1): 1–8. (IHC)
13. Reinherz EL et al. (1979) Separation of functional subsets of human T cells by a monoclonal antibody. *Proc Natl Acad Sci U S A* 76(8): 4061–5. (FACS, FC)

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