

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



Scientists Helping Scientists™ | [WWW.STEMCELL.COM](http://WWW.STEMCELL.COM)

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)

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

## Antibodies

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

Catalog #60016AZ  
#60016AZ.1

100 tests 5 µL/test  
25 tests 5 µL/test

FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.

## 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:           | APC                                   |

## Applications

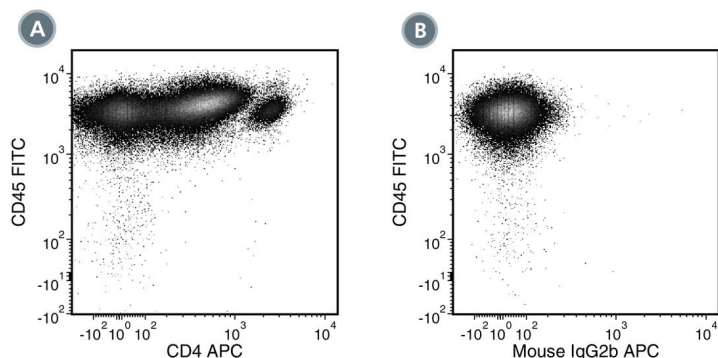
|                       |                                                                                                                                                                                                                                                                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Verified:             | FC                                                                                                                                                                                                                                                                                                                                    |
| Reported:             | FC                                                                                                                                                                                                                                                                                                                                    |
| Special Applications: | This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including 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; WB: Western blotting

## Properties

|                        |                                                                                                                                                                                                                                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Formulation:           | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin                                                                                                                                   |
| Purification:          | The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC and unconjugated antibody.                                                               |
| Stability and Storage: | Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. 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 5 µL per 1 x 10 <sup>6</sup> cells in 100 µL volume or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application. |

## Data



(A) Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD4 Antibody, Clone OKT4, APC and Anti-Human CD45 Antibody, Clone HI30, FITC (Catalog #60018FI).

(B) Flow cytometry analysis of human PBMCs labeled with a mouse IgG2b, kappa APC isotype control antibody and Anti-Human CD45 Antibody, Clone HI30, FITC.

## 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. Barclay AN, et al. Eds. The Leukocyte Antigens Facts Book, 2nd Edition. Academic Press, NY, pp. 141-42, 1997
2. Reinherz EL, et al. Separation of functional subsets of human T cells by a monoclonal antibody. Proc Natl Acad Sci 76(8): 4061-65, 1979 (IF)
3. Linder J, et al. Monoclonal antibodies marking T lymphocytes in paraffin-embedded tissue. Am J Pathol 127(1): 1-8, 1987 (IHC)
4. Knapp W, et al. Eds. Leucocyte Typing IV: White Cell Differentiation Antigens. Oxford University Press, New York, pp. 628-34, 1989
5. Parnes JR. Molecular biology and function of CD4 and CD8. Adv Immunol 44: 265-311, 1989
6. Bour S, et al. 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, 1991 (IP)
7. Sakihama T, et al. Molecular recognition of antigen involves lattice formation between CD4, MHC class II and TCR molecules. Immunol Today 16(12): 581-87, 1995
8. Center D, et al. Interleukin 16 and its function as a CD4 ligand. Immunol Today 17(10): 476-81, 1996
9. Gaubin M, et al. Molecular basis of T lymphocyte CD4 antigen functions. Eur J Clin Chem Clin Biochem 34(9): 723-28, 1996
10. Rosenzweig M, et al. Identification of primitive hematopoietic progenitor cells in the rhesus macaque. J Med Primatol 30(1): 36-45, 2001 (FC)
11. Kmiecik M, et al. Human T cells express CD25 and Foxp3 upon activation and exhibit effector/memory phenotypes without any regulatory/suppressor function. J Transl Med 7: 89, 2009 (FC)
12. Cicin-Sain L, et al. Loss of naive T cells and repertoire constriction predict poor response to vaccination in old primates. J Immunol 184(12): 6739-45, 2010 (FC)

Copyright © 2013 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists and EasySep are trademarks of STEMCELL Technologies Inc. All other trademarks are the property of their respective holders. Alexa Fluor® is a registered trademark of Life Technologies Corporation. This product is licensed for internal research use only and its sale is expressly conditioned on the buyer not using it for manufacturing, performing a service, or medical test, or otherwise generating revenue. For use other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com).

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485 MEDICAL DEVICE STANDARDS.