

## **MOLECULAR PROBES®**

# PRODUCT INSERT MONOCLONAL ANTIBODIES TO THE HUMAN CD4 ANTIGEN

Product Code	Form	Volume	Tests	Excitation (nm)	Peak Emission (nm)	Matching Isotype Controls	
MHCD0426	Alexa Fluor®* 405	0.5 ml	100 min.	405	421	Mouse IgG2a Alexa Fluor 405	Code MG2a26
MHCD0428	Pacific Blue <sup>TM*</sup>	0.5 ml	100 min.	405	455	Mouse IgG2a Pacific Blue	Code MG2a28

For information on IVDP (R-PE) or ASR formats of this clone, visit our website at www.invitrogen.com

### PRODUCT DESCRIPTION

Mouse monoclonal antibody to the human CD4 antigen

Clone: S3.5

Isotype: Mouse IgG2a

Lot No.: See label Expiration: See label

**Buffer:** Phosphate buffered saline (PBS)

**Preservative:** 0.1% *sodium azide*. Sodium azide is an extremely toxic and dangerous compound particularly when combined with acids or metals. Solutions containing sodium azide should be disposed of properly.

**Stabilizer:** A highly purified grade of BSA has been added as a stabilizing agent.

#### STORAGE & HANDLING

Store reagents at 2-8°C. Light exposure should be avoided. Use dim light during handling, incubation with cells and prior to analysis. It is recommended that cells be analyzed within 18 hours of staining. If the reagent is being diluted, it is recommended that only the quantity to be used within one week be diluted.

#### INTENDED USE

The formats included in this product insert are intended for research use only and should not be used for clinical diagnostic purposes. More information on formats suitable for clinical diagnostic use (IVDP or ASR) can be found at www.Invitrogen.com, or by calling Invitrogen's Technical Services Department.

#### PRODUCT CHARACTERIZATION

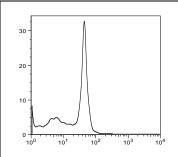
**Antigen Specificity:** According to the literature this antibody recognizes the CD4 antigen also known as T4 and L3T4<sup>1</sup>. CD4 serves as a correceptor during T cell activation through the binding of MHC Class II molecules. CD4 is also the receptor for HIV. CD4 is expressed on helper T cells, thymocyte subsets and to a lesser extent on peripheral blood monocytes.

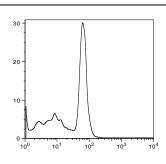
Leukocyte Workshop Status: Leukocyte Typing V

#### PRODUCT QUALITY CONTROL

PI: L11537

Each lot is tested by flow cytometry using human peripheral blood leukocytes (PBL). Based on this testing it is recommended that 5  $\mu$ l of antibody be used per 1 x  $10^6$  cells in a 100  $\mu$ l staining volume. Because conditions may vary, it is suggested that each investigator determine the optimal amount of antibody to be used for each application.





CD4 Alexa Fluor 405

CD4 Pacific Blue

Log fluorescence intensity profiles of human peripheral blood lymphocytes analyzed on a FACSVantage<sup>TM</sup> flow cytometer, BD Biosciences, San Jose, CA, and analyzed using FlowJo<sup>©</sup> software, Tree Star, Inc. (www.flowjo.com).

**Note:** Flow cytometric data shown may not necessarily have been generated using the enclosed lot of reagent. For this reason, and due to differences in flow cytometers and cytometer settings, results may vary from those illustrated above. It is suggested that investigators titrate reagents to determine optimal conditions for use in their systems.

#### REFERENCES:

- Schlossman, S. F., L. Boumsell, W. Gilks, J. M. Harlan, T. Kishimoto, C. Morimoto, J. Ritz, S. Shaw, R. Silverstein, T. Springer, T. F. Tedder, and R. F. Todd eds. 1995. Leukocyte Typing V. Oxford University Press Inc., New York.
- Reinherz, E. L., P. C. Kung, G. Goldstein, and S. F. Schlossman. 1979. Proc. Natl. Acad. Sci. USA 76: 4061.
- 3. Biddison. W. E., P. E. Rao, M. A. Talle, G. Goldstein, and S. Shaw. 1983. *J. Immunol.* 131: 152.
- 4. Maddon, P. J., D. R. Littman, M. Godfrey, D. E. Maddon, L. Chess, and R. Axel. 1985. *Cell* 42: 93.
- Dalgleish, A. G., P. C. L. Beverly, P. R. Clapham, D. H. Crawford, M. F. Greaves, and R. A. Weiss. 1986. *Nature* 312: 763.
- McDougal, J. S., M. S. Kennedy, J. M. Sligh, S. P. Cort, A. Mawie, and J. K. A. Nicholson. 1986. Science 231: 382.
- McDougal, J. S., J. K. A. Nicholson, G. D. Cross, S. P. Cort, M. S. Kennedy, and A. C. Mawie. 1986. *J. Immunol.* 29: 37.
- 8. Viellette, A., M. A. Bookman, E. M. Horak, L. E. Samelson, and J. B. Bolen. 1989. *Nature* 338; 257.
- \* The Alexa Fluor and Pacific Blue dye conjugates in this product are sold under license from Molecular Probes, Inc., and are covered by pending and issued patents.

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