

OriGene Technologies, Inc.

9620 Medical Center Drive, Ste 200 Rockville, MD 20850 UNITED STATES Phone: +1-888-267-4436 Fax: +1-301-340-8606 techsupport@origene.com **OriGene Technologies GmbH** 

Schillerstr. 5 32052 Herford GERMANY Phone: +49-5221-34606-0 Fax: +49-5221-34606-11 info-de@origene.com

## CL004B Monoclonal Antibody to CD4 - Biotin

| Alternate names:  | T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4   |
|-------------------|--|
| Quantity:         | 0.1 mg   |
| Concentration:    | 0.1 mg/ml  |
| Background:       | CD4 (L3T4) which is expressed on the majority of thymocytes and on the MHC class II restricted subset of mature T cells including Th cells1,2. Mouse CD4 has also been reported to be present on multipotential hematopoietic stem cells, bone marrow myeloid precursors, and intrathymic precursors2,3. As a coreceptor in the TCR complex, CD4 is involved in T cell activation through interaction with MHC class II on APC's and in signal transduction via protein tyrosine kinase lck1.  |
| Uniprot ID:       | <u>P06332</u>  |
| NCBI:             | <u>NP_038516.1</u>   |
| GenelD:           | <u>12504</u>   |
| Host / Isotype:   | Rat / IgG2a  |
| Clone:            | CT-CD4   |
| Format:           | <b>State:</b> Liquid purified IgG fraction<br><b>Buffer System:</b> PBS containing 0.09% Sodium Azide and EIA grade BSA as a<br>stabilizing protein to bring total protein concentration to 4-5 mg/ml<br><b>Label:</b> Biotin  |
| Applications:     | Flow Cytometry (See Protocols).<br>(Reported to be useful in immunohistochemistry on Acetone Fixed Frozen Sections).<br>Other applications not tested. Optimal dilutions are dependent on conditions and<br>should be determined by the user.  |
| Specificity:      | This CT-CD4 monolconal antibody (mAb) recognizes Mouse CD4 (L3T4).<br><b>Species:</b> Mouse.<br>Other species not tested.  |
| Storage:          | Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for<br>longer.<br>Avoid repeated freezing and thawing.<br>Shelf life: one year from despatch.  |
| General Readings: | <ol> <li>Bierer, B.E. et al. 1989. Annu. Rev. Immunol. 7: 579-599.</li> <li>Fredrickson, G.G. et al. 1989. J. Exp. Med. 169: 1473-1478.</li> <li>Wu, L. et al. 1991. Nature 349: 71-74. Dialynas, D.P. et al 1983. J. Immunol.<br/>131:2445-2451.</li> <li>Palathumpat, V. et al. 1992. J. Immunol. 148:3319-3326.</li> <li>Gross, J. A. et al. 1992. J. Immunol. 149:380-388.</li> <li>Darby, C.R. et al. 1993. J. Immunol. 159:125-129.</li> <li>Darby, C.R. et al. 1992. Transplantation 54:483-490.</li> <li>Cobbold, S.P. et al. 1984. Nature 312:548-551.</li> <li>Agel, N.M. et al 1984. J. Immunol. Methods 69:207-214.</li> </ol> |

For research and in vitro use only. Not for diagnostic or therapeutic work. Material Safety Datasheets are available at www.acris-antibodies.com or on request.

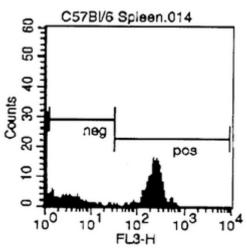
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## CL004B: Monoclonal Antibody to CD4 - Biotin

| Protocols: | FLOW CYTOMETRY ANALYSIS:<br>Method  |
|------------|---|
|            | 1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with Lympholyte <sup>®</sup> -M cell separation medium.<br>2. Wash 2 times.   |
|            | 3. Resuspend the cells to a concentration of $2x10^7$ cells/ml in media A. Add 50 µl of this suspension to each tube (each tube will then contain 1 x $10^6$ cells, representing 1 test).   |
|            | 4. To each tube, add ~1.0-0.5 $\mu$ g of this Ab per 10 <sup>6</sup> cells.<br>5. Vortex the tubes to ensure thorough mixing of antibody and cells.<br>6. Incubate the tubes for 30 minutes at 4°C.   |
|            | <ol> <li>7. Wash 2 times at 4°C.</li> <li>8. Add 100 μl of (Streptavidin-PE) at a 1:20 dilution.</li> <li>9. Incubate tubes at 4°C for 30 - 60 minutes (It is recommended that tubes are protected from light since most fluorochromes are light sensitive).</li> <li>10. Wash 2 times at 4°C.</li> </ol> |
|            | <ul> <li>11. Resuspend the cell pellet in 50 μl ice cold media B.</li> <li>12. Transfer to suitable tubes for flow cytometric analysis containing 15 μl of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.</li> </ul>   |
|            | <b>Media:</b><br>A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium<br>azide (100 μl of 2M sodium azide in 100 mls).<br>B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide<br>(100 μl of 2M sodium azide in 100 mls).                         |
|            | Tissue Distribution by Flow Cytometry Analysis:<br><u>Mouse Strain</u> : BALB/c<br><u>Cell Concentration</u> : 1x10 <sup>6</sup> cells per test<br><u>Antibody Concentration Used</u> : 0.5 μg/10 <sup>6</sup> cells<br><u>Isotypic Control</u> : Biotin Rat IgG2a  |

**Pictures:** 

Cell Source: Spleen Percentage of cells stained above control: 18.38%



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