

Monoclonal Antibody to CD4 - FITC

Alternate names:	T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4
Catalog No.:	CL004F
Quantity:	0.1 mg
Concentration:	0.1 mg/ml
Background:	CD4 is a single chain transmembraneous glycoprotein (59 kDa) which belongs to the immunoglobulin superfamily. CD4 is present on a subset of T lymphocytes ("helper/inducer" T cells) and is also expressed at a lower level on monocytes, tissue macrophages and granulocytes. The antigen is involved in binding to MHC class II molecules. The intracellular domain of the antigen is associated with p56lck protein tyrosine kinase.
Uniprot ID:	P06332
NCBI:	NP_038516.1
GeneID:	12504
Host / Isotype:	Rat / IgG2a
Clone:	CT-CD4
Format:	State: Liquid purified Ig fraction Buffer System: PBS containing 0.09% Sodium Azide and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml. Label: FITC
Applications:	Flow Cytometry. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody CL004F recognizes CD4 . <u>Results for tissue distribution by Flow Cytometry analysis (Mouse strain BALB/c):</u> Cell source Spleen T cells: Percentage of cells stained above control = 59.2% Cell source Thymus: Percentage of cells stained above control = 93.4% (Cell concentration = 1×10^6 cells per test, antibody concentration = $1.0 \mu\text{g}/10^6$ cells, isotypic control FITC Rat IgG2a).
Species Reactivity:	Tested: Mouse
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
General References:	1. Bierer, B.E., et al. 1989. <i>Annu. Rev. Immunol.</i> 7: 579-599. 2. Fredrickson, G.G., and R.S. Basch. 1989. <i>J. Exp. Med.</i> 169: 1473-1478.

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.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com

3. Wu, L., et al. 1991. *Nature*. 349: 71-74
4. Cobbold, S.P. et al. 1984. *Nature* 312: 548-551.
5. Agel, N.M. et al. 1984. *J. Immunol.* 131: 2445-2451.
6. Dialynas, D.P. et al. 1993 *J. Immunol.* 131: 2445-2451.
7. Palathumpat, V. et al. 1992 *J. Immunol.* 148: 3319-3326.
8. Gross, J.A. et al. 1992. *J. Immunol.* 149:380-388.
9. Darby, C.R. et al. 1993. *J. Immunol.* 159: 125-129.
10. Darby, C.R. et al. 1992. *J. Immunol.* 54: 483-490.

Protocols:**FLOW CYTOMETRY ANALYSIS:**

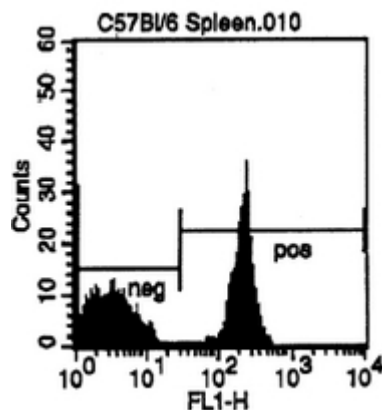
1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population .
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2×10^7 cells/ml in media A. Add 50 μ l of this suspension to each tube (each tube will then contain 1×10^6 cells, representing 1 test).
4. To each tube, add ~ 1.0 μ g of CL004F per 1×10^6 cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.
(It is recommended that the tubes be protected from light, since most fluorochromes are light sensitive.)
7. Wash 2 times at 4°C.
8. Resuspend the cell pellet in 50 μ l ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15 μ l of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.

Media:

- A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + Sodium Azide (100 μ l of 2M Sodium Azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine Serum Albumin + Sodium Azide (100 μ l of 2M sodium azide in 100 mls).

Tissue Distribution by Flow Cytometry Analysis:

Mouse Strain: C57BL/6
Cell Concentration: 1×10^6 cells per test
Antibody Concentration Used: 1.0 μ g/ 10^6 cells
Isotypic Control: FITC Rat IgG2a

Pictures:

Cell Source: CD3e Positive Spleen Cells.
Percentage of cells stained above control: 52.4%

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