

## Product datasheet for **CL004APC**

### Cd4 Rat Monoclonal Antibody [Clone ID: CT-CD4]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	CT-CD4
Applications:	FC
Recommended Dilution:	<b>Flow Cytometry</b> (see "Protocols" below). (Reported to be useful in Immunohistochemistry on Acetone Fixed Frozen Sections).
Reactivity:	Mouse
Host:	Rat
Isotype:	IgG2a
Clonality:	Monoclonal
Specificity:	This antibody detects Mouse CD4 (L3/T4). Other species not tested.
Formulation:	PBS Label: APC State: Liquid purified Ig fraction. Stabilizer: EIA grade BSA Preservative: 0.09% Sodium Azide
Concentration:	lot specific
Conjugation:	APC
Storage:	Store the antibody undiluted at 2-8°C. <b>DO NOT FREEZE!</b> This product is photosensitive and should be protected from light.
Stability:	Shelf life: one year from despatch.
Gene Name:	CD4 antigen
Database Link:	<a href="#">Entrez Gene 12504 Mouse P06332</a>



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**Background:**

Mouse CD4 (L3T4) which is expressed on the majority of thymocytes and on the MHC class II restricted subset of mature T cells including Th cells<sup>1,2</sup>. Mouse CD4 has also been reported to be present on multipotential hematopoietic stem cells, bone marrow myeloid precursors, and intrathymic precursors<sup>2,3</sup>. 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 lck<sup>1</sup>.

The CD4 (L3/T4) antigen appears to be expressed by the helper/inducer subset of murine T cells and by delayed hypersensitivity T cells but not by cytotoxic T cells or their precursors. CD4 (L3/T4) and CD8a (Ly 2) have been shown to be present on mutually exclusive T cells in the peripheral lymphoid organs but the thymus contains cells expressing both CD4 (L3/T4) and CD8a (Ly 2).

**Synonyms:**

T-cell surface antigen T4/Leu-3

**Note:****Protocol: FLOW CYTOMETRY ANALYSIS:**

1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with Lympholyte®-M cell separation medium.
2. Wash 2 times.
3. Resuspend the cells to a concentration of  $2 \times 10^7$  cells/ml in media A. Add 50  $\mu$ l of this suspension to each tube (each tube will then contain  $1 \times 10^6$  cells, representing 1 test).
4. To each tube, add  $\sim 1 \mu\text{g}^*$  of this Ab per  $10^6$  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 are protected from light, since most fluorochromes are light sensitive.)
7. Wash 2 times at 4°C.
8. Resuspend the cell pellet in 50  $\mu$ l ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15  $\mu$ 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  $\mu$ l of 2M sodium azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100  $\mu$ l of 2M sodium azide in 100 mls).

**Tissue Distribution by Flow Cytometry Analysis:**

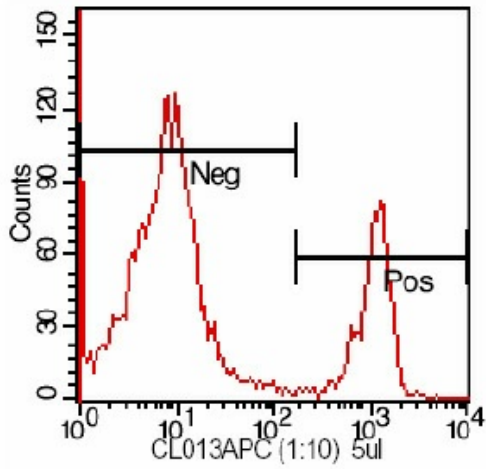
Mouse Strain: BALB/c

Cell Concentration:  $1 \times 10^6$  cells per test

Antibody Concentration Used: 1  $\mu\text{g}/10^6$  cells

Isotypic Control: APC Rat IgG2a

Product images:



Cell Source: Mouse Lymphocytes Percentage  
Stained above control: 14.9 %