

## Product datasheet for **CL006B**

### Cd5 Mouse Monoclonal Antibody [Clone ID: CG16]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	CG16
Applications:	FC
Recommended Dilution:	Flow Cytometry Analysis (see Protocols).
Reactivity:	Mouse
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	C3H.CE - Ly 1.2 : DS from C3H spleen. Fusion Partner: Myeloma SP2/0 - Ag 14 (M5).
Specificity:	This anti-CD5 (Ly 1.2) mAb reacts with T cells from mouse strains expressing the Ly 1.2 phenotype, but does not react with lymphocytes from mouse strains expressing the Ly 1.1 phenotype.
Formulation:	PBS, 0.02% NaN <sub>3</sub> and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml Label: Biotin State: Liquid purified IgG
Concentration:	lot specific
Purification:	Protein G Chromatography
Conjugation:	Biotin
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	CD5 antigen
Database Link:	<a href="#">Entrez Gene 12507 Mouse P13379</a>



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**Background:**

CD5 is a 55kDa T lymphocyte single chain transmembrane glycoprotein. It is present on all mature T lymphocytes, on most thymocytes and on many T cell leukemias and lymphomas. It reacts with a subpopulation of activated B cells. CD5/Lyt1 antigen is a monomeric type I transmembrane glycoprotein expressed on thymocytes, T lymphocytes, and a subset of B lymphocytes, but not on natural killer (NK) cells. It has been identified as the major ligand of the B cell antigen CD72. The frequency of CD5+ B cells exhibits strain dependent variation, and the phenotypic, anatomical, functional, developmental, and pathological characteristics of the CD5+ B cells suggest that they may represent a distinct lineage, known as B1 cells. Binding of CD5 on the T cell surface can augment alloantigen or mitogen induced lymphocyte proliferation and induces increased cytosolic free calcium, IL2 secretion, and IL2R expression. It has been proposed that CD5 negatively regulates signal transduction mediated by the T cell and B cell receptors.

**Synonyms:**

CD5, LEU1

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

**Method:**

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 0.1 - 0.2  $\mu$ 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.
7. Wash 2 times at 4°C.
8. Add 100  $\mu$ l of secondary antibody (Streptavidin-FITC) at a 1:500 dilution.
9. Incubate tubes at 4°C for 30 - 60 minutes.
10. Wash 2 times at 4°C.
11. Resuspend the cell pellet in 50  $\mu$ l ice cold media B.
12. 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).

**Results - Tissue Distribution by Flow Cytometry Analysis:**

Mouse Strain: BALB/c

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

Antibody Concentration Used: 0.1  $\mu$ g/ $10^6$  cells

Isotypic Control: Biotin Mouse IgG2b,k

**Results - Strain Distribution by Flow Cytometry Analysis:**

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

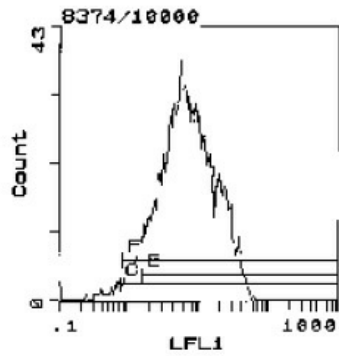
Antibody Concentration Used: 0.1  $\mu$ g/ $10^6$  cells

Strains Tested: BALB/C, C3H/He, CBA/J, AKR, ATH

Positive: BALB/C, AKR, ATH

Negative: C3H/He, CBA/J

Product images:



FLOW CYTOMETRY ANALYSIS - Tissue Distribution

Cell Source: Thymus  
 Percentage of cells stained above control: 97.7%

<u>Cell Source</u>	<u>Percentage of cells stained above control:</u>
Thymus	97.7%
Spleen	26.5%
Bone Marrow	2.6%
Lymph Node	68.3%

FLOW CYTOMETRY ANALYSIS - Cell Source