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# TECHNICALLY *Speaking*

Place your order with CEDARLANE® or your local distributor.

*Please contact CEDARLANE® for lot specific information.*

## **Purified Anti-Rat CD8b Monoclonal Antibody**

**CL091AP  
CL091AP-2  
LOT: 9121**

### **DESCRIPTION:**

Cedarlane's anti-rat CD8b monoclonal antibody reacts with the beta chain of the CD8 differentiation antigen. CD8b is expressed on most thymocytes and mature T cytotoxic/suppressor cells (MHC class I restricted). While the CD8a and CD8b form a heterodimer on the surface of thymocytes and thymus-dependent T cytotoxic/suppressor cells, the majority of NK cells, many CD8 T cells from athymic rats, many activated CD4 T cells, and intestinal epithelium lymphocytes (IEL) express CD8a without CD8b. This suggests that expression of the CD8 heterodimer (a/b) is more dependant on intrathymic T cell maturation than that of the homodimer (a/a). The thymus dependence of CD8a/b T cells may be due to a requirement for thymic selection on self MHC class I antigens.

Reported applications for this antibody include flow cytometry, immunoprecipitation and Western blotting. The 3.4.1 antibody also blocks both activation in an allogenic response and cell mediated cytotoxicity by CD8 T cells.

### **PRESENTATION:**

250µg (CL091AP) or 500µg (CL091AP-2) Purified Ig buffered in PBS and 0.02% NaN<sub>3</sub>.

### **STORAGE/STABILITY:**

Stable at 4°C. For long term storage, aliquot and freeze unused portions at -20°C in volumes appropriate for single usage. Avoid repeated freeze thaw cycles.

For more information or to place an order please contact...

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## SPECIFICATIONS

Clone: 3.4.1

Hybridoma Production:

Immunization:

Immunogen: Rat/mouse T cell hybrids expressing CD8  
Donor: BALB/c mouse spleen cells

Fusion Partner: X63 Ag.653 myeloma cell line

Specificity: Rat CD8b

Ig Class: mouse IgG<sub>1,k</sub>

Presentation: Purified Ig buffered in PBS with the addition of 0.02% NaN<sub>3</sub>  
(Purified from ascites fluid via Protein G chromatography).

## FLOW CYTOMETRY ANALYSIS:

1. Prepare cell suspension in media A. For cell preparations, deplete the red blood cell population with Lympholyte<sup>®</sup>-Rat. cell separation medium (CL5040).
2. Wash 2 times.
3. Resuspend to  $1 \times 10^6$  cells in approximately 50  $\mu$ l Media A in a microcentrifuge tube (i.e. 50  $\mu$ l of cells resuspended to  $2 \times 10^7$  cells/ml; the contents of 1 tube represent 1 test).
4. To each tube add a 0.5  $\mu$ g \* of **CL091AP or CL091AP-2**.
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 **CLCC30204** (PE Goat anti-mouse IgG at 1:500 dilution).
9. Incubate tubes at 4°C for 30-60 minutes.  
(It is recommended that the tubes are protected from light since most fluorochromes are light sensitive).
10. Wash 2 times at 4°C in Media B.
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 phosphate buffered saline. (This stains dead cells by intercalating DNA).

## MEDIA:

- A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium azide (100  $\mu$ l of 2 M sodium azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% bovine serum albumin + sodium azide (100  $\mu$ l of 2 M sodium azide in 100 mls).

## FLOW CYTOMETRIC ANALYSIS

Rat Strain: Wistar

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

Antibody Concentration:  $0.5 \mu\text{g}/10^6$  cells

Isotypic Control: Purified Mouse IgG<sub>1</sub>

### CELL SOURCE

Thymus

Spleen

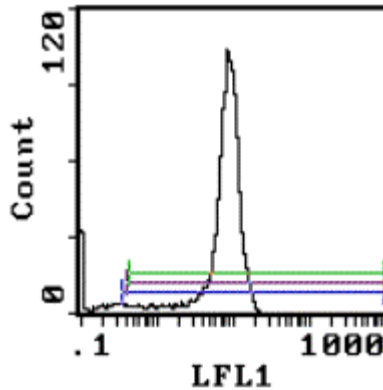
Lymph Node

### PERCENT STAINING

83.36%

15.5%

17.4%



Cell Source: Thymocytes

Percentage of Cells Stained Above Control: 83.3%

**N.B. Appropriate control samples should always be included in any labelling studies.**

**\* For optimal results in various applications, it is recommended that each investigator determine dilutions appropriate for individual use.**

### REFERENCES:

1. Elflein, K., Rodriguez-Palmero, M., Kerkau, T., and T. Hunig. (2003) Immunobiology. 102, 1764 -1770. Rapid recovery from T lymphopenia by CD28 superagonist therapy.
2. Torres-Nagel, N., Kraus, E., Brown, M.H., Tiefenthaler, G., Mitnacht, R., Williams, A.F., and T. Hunig. (1992) Eur. J. Immunol. 22, 2841-2848. Differential thymus dependence of rat CD8 isoform expression\*.

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