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CEDARLANE[®]
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Conveniently Delivering You Today's Innovations
for the Science of Tomorrow™

**Anti-Rat CD4
Monoclonal Antibody**

Catalogue#	Format	Size	Concentration	Isotype Control
CL003A	Ascites	0.5ml	NA	CLCMG100
CL003AP/-2	Purified	250µg/500µg	1.0 mg/ml	CLCMG100
CL003NA	Purified	1.0ml	1.0 mg/ml	CLCMG100
CL003B/-5	Biotin	100µg/500µg	0.1 mg/ml	CLCMG115
CL003F/-5	FITC	100µg/ 500µg	0.1 mg/ml	CLCMG101
CL003APC	APC	100µg	0.1 mg/ml	CLCMG105
CL003PE/-4	PE	50µg/ 200µg	0.1 mg/ml	CLCMG104
CL003AF4	Alexa Fluor [®] 488	100 µg	0.1 mg/ml	N/A
CL003AF7	Alexa Fluor [®] 700	100 µg	0.1 mg/ml	N/A

Alexa Fluor[®] is a registered trademark of Life Technologies Corporation.

Isotype: Mouse IgG₁

DESCRIPTION:

Cedarlane's anti-rat CD4 monoclonal antibody recognizes a determinant on the majority of thymocytes (90-95%), a subset of peripheral T cells and peritoneal macrophages. (1,2,3,10) The antigen recognized by this antibody is a surface glycoprotein of Mr 48,000-52,000 and is the homologue of the human CD4 and the mouse L3/T4 antigen. CL003 labels the rat T helper subset, which mediates the helper activity for B and T cells, graft vs. host (GVH) reactivity and produces IL-2 in the mixed lymphocyte reaction (MLR). (2,4,6.) Addition of CL003 to the MLR, inhibited proliferation and blocks the production of IL-2. (4,5,6,9) T cells which mediate cytotoxicity and suppressor functions are not labelled. (Thus, cells labelled by this antibody are not labelled by MRC OX-8.)

CL003 is invaluable for separating T cell subsets for functional studies and for labelling cells in tissue sections. It has been used in studying the role of T lymphocytes in graft rejections (7) and in studying the subsets of T cells in the rat which mediate graft vs. host disease. (8)

This particular antibody is also one of three antibodies which labels T lymphocyte populations in the rat. These clones include W3/13 (CL002), which labels all T cells as well as MRC OX-8 (CL004) and W3/25 (CL003) which label non-overlapping T cell subpopulations. These monoclonal antibodies used in concert are being employed extensively to investigate cellular aspects of the immune response in rats and prove to be useful as markers for functionally distinct subpopulations of lymphocytes.

This clone is reported to work with frozen and paraffin sections (11) and in functional testing (12).

PRESENTATION:

Ascites: Lyophilized

Purified: Purified IgG buffered in PBS and 0.02% NaN₃. (Purified from ascitic fluid via Protein G Chromatography). For maximum recovery of contents, spin down tube before use.

Biotin, FITC, PE, APC, AF488 and AF700: Biotin/FITC/PE/APC/AF488/AF700 conjugated IgG buffered in PBS, 0.02% NaN₃ and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml.

No Azide: Purified Ig buffered in PBS, no preservative, 0.2µm sterile filtered.

Continued Overleaf....

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registered company.

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STORAGE/STABILITY:

Store **Ascites** at -20°C. For all other formats, store at 4°C. **DO NOT FREEZE APC, PE, AF488 and AF700** conjugates. For long term storage (**Purified, No Azide, Biotin and FITC**), aliquot and freeze unused portion at -20°C in volumes appropriate for single usage. Avoid freeze/thaw cycles.

SPECIFICATIONS:

Clone: W3/25

Hybridoma Production:

Immunization: Immunogen: Rat thymocyte membrane

Donor: BALB/c spleen

Fusion Partner: P3-NSI-1-Ag4 (NSI/1)

Specificity: Rat CD4

TEST RESULTS:

Tissue Distribution by Flow Cytometry Analysis:

Rat Strain: Buffalo

Cell Concentration: 1×10^6 cells per tests

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

Cell Source

Thymus

Spleen

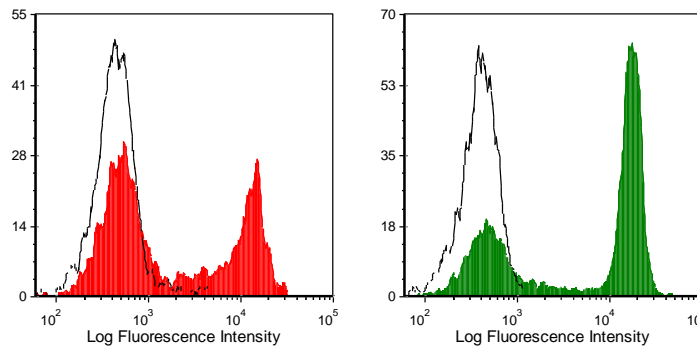
Lymph Node

Percentage of cells stained above control:

97.0%

37.0%

67.0%



Wistar rat splenocytes (left) or lymph nodes (right) were stained with anti-CD4 (clone: W3/25) (filled histogram) or mouse IgG1 isotype control (open histogram).

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

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

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