Product Specification Sheet

Mouse monoclonal Anti-Rat CD4 Antibodies and conjugates

Cat # RCD004-M	**Mouse** Anti-Rat CD4 IgG, unlabeled	**SIZE**: 100 tests
Cat # RCD004-B	**Mouse** Anti-Rat CD4 IgG, biotin conjugate	**SIZE**: 100 tests
Cat # RCD004-F	**Mouse** Anti-Rat CD4 IgG, FITC conjugate	**SIZE**: 100 tests
Cat # RCD004-PE	**Mouse** Anti-Rat CD4 IgG-R-PE conjugate	**SIZE**: 100 tests

Anti-rat T helper cell monoclonal antibody recognizes a determinant on the majority of thymocytes (90-95%), a subset of peripheral T cells and peritoneal macrophages. 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. CL003NA 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). Addition of CL003NA to the MLR, inhibited proliferation and blocks the production of IL-2. T cells which mediate cytotoxicity and suppressor functions are not labelled. (Thus, cells labelled by this antibody are not labelled by MRC OX-8.) The antibody 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 and in studying the subsets of T cells in the rat which mediate graft vs. host disease. This particular antibody is also one of three antibodies which labels T lymphocyte populations in the rat. These clones include W3/13 (CL002NA), which labels all T cells, as well as MRC OX-8 (CL004NA) and W3/25 (CL003NA) 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.

Antigen	Rat thymocyte membrane
Ab Host/type	Mouse monoclonal IgG1, clone W3/25, unlabeled
2-ab	**Goat Anti-mouse IgG1-FITC conjugate**
-ve control IgG	20102-101, mouse IgG1, purified, isotype matching –ve control

IHC: the antibody has been reported to work in IHC using paraffin sections.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
  100 ug/100ul   solution   lyophilized powder
Supplied in **Buffer**: PBS+no preservatives
      Reconstitute powder in PBS at 1mg/ml

Cat# RCD004-F, Anti-Rat IgG (H+L)-FITC-conjugate

Purified antibody was coupled to FITC at F/P ratio ~3:7. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** (0.5 ml) or **liquid** form (100 tests; see lot sp concn on the vial). Reconstitute powder in PBS in 0.5 ml to prepare stock solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:200-1:2000 for immunofluorescence.
Absorption Wavelength: 495 nm
Emission Wavelength: 528 nm

Recommended Usage

Flow cytometry: 0.5-1 ug/10^6 cells
Cell Source Percentage of cells stained above control:
Thymus 97.0%; Spleen 34.0%; Lymph Node 76.2%

Cat# RCD004-B, Biotin-conjugate

Purified antibody was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC**)** at F/P ratio ~10-20:1. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** or **liquid** form. Reconstitute powder in PBS in 0.5-1 ml to prepare stock solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:5,000-1:30,000 ELISA, 1:2K-1:10K for western.

Cat# RCD004-PE, PE-conjugate

The purified antibody was coupled to R-Phycoerythrin (R-PE) (Molecular Weight 240,000 daltons) from seaweed using proprietary methods (A565nm/A280nm ~3-4).

Absorption: 490 nm, 545 nm and 565 nm
Emission Wavelength: 580 nm

The conjugate is provided in PBS, pH 7.5, containing 0.1% bovine serum albumin, (BSA) 0.05% sodium azide and stabilizing agent). DO NOT FREEZE. The product should be stored at 4oC and is stable for a minimum of 1 year. Do not store diluted solutions.

Recommended usage is ~10 ul/106 cells for Flow cytometry or FACS. Due to many experimental variations, optimum concn must be determined for a given applications

General References: Williams AF (1977) Cell 12, 633; Brideua RJ (1980) Eut. J. Immunol. 10, 609615; Barclay AN (1981) Immunol. 42, 593-600; Cantrell DA (1982) Cell Immunol. 70, 367.

*This product is for in vitro research use only.

RCD004-M   90706A