

Product Information



CD4/CD8 Monoclonal FITC/PE Antibody (Clone RIV7/OKT-8)

Item No. 10009852

- Contents:** Vial 1: This vial contains 10 tests of fluorescein-labeled monoclonal anti-CD4 IgG_{2a} and PE-labeled monoclonal anti-CD8 IgG₁ in 500 µl PBS, pH 7.2, containing 1.0% bovine serum albumin and 0.02% sodium azide
Vial 2: This vial contains 2.0 ml of RBC Lysis Reagent (10X)
- Host:** Mouse, clones RIV7 (CD4) and OKT-8 (CD8)
- Stability:** ≥6 months at 4°C
- Applications:** Flow cytometry (50 µl per test, where one test is typically 100 µl whole blood). Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

This antibody pair is intended for the immunochemical detection of human CD4⁺ and CD8⁺ cells by flow cytometry. Human whole blood samples may be stained directly followed by red blood cell lysis with the provided reagents. CD4 and CD8 are each expressed on a variety of white blood cells. When using the CD4/CD8 antibody pair, staining parallel samples or co-staining is recommended to identify specific cell populations. For example, confirm CD4⁺ or CD8⁺ T cells as those only expressing CD3.¹

The MHC class I and II molecules of antigen presenting cells specifically interact with T cell receptor and co-receptors CD8 and CD4, respectively. CD4 and CD8 are co-expressed on T cells during development. However T cell maturation can result in distinct populations of CD4⁺ (helper/suppressor) or CD8⁺ (cytotoxic) T cells residing in the peripheral circulatory system.² Peripheral CD4⁺ T cell abundance is commonly employed for monitoring progression of HIV infections and other immunosuppression.^{3,4} Evidence supports the existence of arachidonic acid metabolites involved in immunosuppression, immune cell maturation, differentiation, and chemotaxis.⁵⁻⁸ These events have been implicated in chronic inflammation associated with the disease states such as cancer and atherosclerosis.⁵⁻⁸

Laboratory Procedures: (all performed at 20-25°C)

1. Dilute the RBC Lysis Reagent to 20 ml final volume with filtered water.
2. Add 50 µl of Cayman's CD4/CD8 Monoclonal FITC/PE Antibody to a flow cytometry test tube (12 x 75 mm) followed by 100 µl of human whole blood.
3. Vortex the tube(s) briefly and incubate in the dark for 30 minutes.
4. Add 2 ml of diluted RBC Lysis Reagent to each tube, vortex briefly and incubate in the dark for ten minutes. Read all samples immediately.

Important: If a flow cytometer is not immediately available collect the cells by centrifugation and decant the RBC Lysis Reagent. This will prevent the loss of white blood cells by prolonged exposure to the reagent. For example, after RBC lysis, pellet the cells, decant supernatant, and wash them with PBS, pH 7.2. Collect cell pellets again and resuspend samples in 0.5 ml PBS buffered formaldehyde (1%). Incubate for ten minutes followed by addition of 0.5 ml of a 10% protein solution (BSA or FBS) for five minutes. Wash the cell samples with buffer three more times and then collect data.

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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Product Information

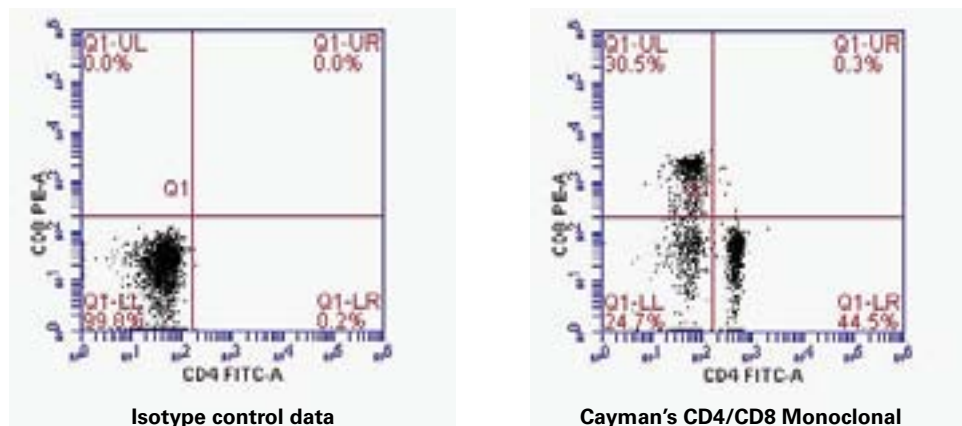


Figure 1: Typical data from human blood (RBCs lysed and 10,000 events gated on lymphocytes)

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