Product Information

**Material Number:** 565650  
**Alternate Name:** CD4; CD4 antigen; L3T4; Ly-4; T-cell surface antigen T4/Leu-3  
**Size:** 50 µg  
**Concentration:** 0.2 mg/ml  
**Clone:** RM4-5  
**Immunogen:** Mouse Thymocytes (BALB/c)  
**Isotype:** Rat (DA) IgG2a, κ  
**Reactivity:** QC Testing: Mouse  
**Storage Buffer:** Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

**Description**

The RM4-5 monoclonal antibody specifically binds to the CD4 (L3T4) differentiation antigen expressed on most thymocytes, subpopulations of mature T lymphocytes (i.e., MHC class II-restricted T cells, including most T helper cells and immunosuppressive regulatory T cells), and a subset of NK-T cells. CD4 has also been reported to be detected on pluripotent hematopoietic stem cells, bone marrow myeloid and B-lymphocyte precursors, intrathymic lymphoid precursors, and a subset of splenic dendritic cells. CD4 has been reported to be expressed on the plasma membrane of mouse egg cells and is involved in adhesion of the egg to MHC class II-bearing sperm. CD4 is an antigen coreceptor on the T-cell surface which interacts with MHC class II molecules on antigen-presenting cells. It participates in T-cell activation through its association with the T-cell receptor complex and protein tyrosine kinase Ick. Purified RM4-5 mAb has been reported to block the binding of FITC-conjugated anti-mouse CD4 clones GK1.5 and H129.19, but not the RM4-4 clone.

**Preparation and Storage**

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with APC-Cy7 under optimum conditions, and unconjugated antibody and free APC-Cy7 were removed.

**Application Notes**

**Application**  
Flow cytometry  
Routinely Tested

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565650 Rev. 2
### Suggested Companion Products

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<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<td>Stain Buffer (FBS)</td>
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<td>Stain Buffer (BSA)</td>
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<td>APC-Cy™7 Rat IgG2a, κ Isotype Control</td>
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<td>R35-95</td>
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<td>Lysing Buffer</td>
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<td>Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)</td>
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### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
5. Warning: Some APC-Cy7 and PE-Cy7 conjugates show changes in their emission spectrum with prolonged exposure to formaldehyde. If you are unable to analyze fixed samples within four hours, we recommend that you use BD™ Stabilizing Fixative (Cat. No. 338036).
6. APC-Cy7 is a tandem fluorochrome composed of Allophycocyanin (APC), which is excited by laser lines between 595 and 647 nm and serves as an energy donor, coupled to the cyanine dye Cy7™, which acts as an energy acceptor and fluoresces at 780 nm. BD Biosciences Pharmingen has maximized the fluorochrome energy transfer in APC-Cy7, thus maximizing its fluorescence emission intensity, minimizing residual emission from APC, and minimizing required electronic compensation in multilaser-laser flow cytometry systems. Note: Although every effort is made to minimize the lot-to-lot variation in residual emission from APC, it is strongly recommended that every lot be tested for differences in the amount of compensation required and that individual compensation controls are run for each APC-Cy7 conjugate.
7. APC-Cy7 tandem fluorochrome emission is collected in a detector for fluorescence wavelengths of 750 nm and higher.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Cy is a trademark of GE Healthcare.

### References

Nakamura T. Personal Communication. (Immunogen)