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Monoclonal antibody to CD4 -PE-Cy5-

Alternate names: T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4

Catalog No.: SM1663C

Quantity: 100 Tests

Concentration: Lot specific

Background: Identification of human helper/inducer T cells expressing the 60,000 M.W. surface antigen (HLA class II reactive). CD4 is present in low density on monocytes.

Uniprot ID: P01730

NCBI: NP_000607.1

GeneID: 920

Host / Isotype: Mouse / IgG1

Clone: 7E14

Immunogen: CD4=Derived from the hybridization of mouse NS-1 myeloma cells with spleen cells from BALB/c mice immunized with human perherial blood T lymphocytes.

Format:
State: Liquid purified IgG fraction.
Buffer System: PBS containing 0.2% protein carrier and 0.08% Sodium Azide as preservative.
Label: PE-Cy5
Absorption / Emission: 488 nm / 670 nm

Applications:
Flow Cytometry.
Monitoring of T cells subsets in peripheral blood.
Analysis of T cell subsets involved in helper/inducer functions.
Characterization of subtypes of T cell leukemias and lymphomas.
Studies of AIDS virus infection.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:
Species: Human.
Other species not tested.

Add. Information: Cy-5 Portions of this product is manufactured under license from Carnegie Mellon University, U.S. Patent Number 5,268,486.

Storage:
Store the antibody undiluted (protected from light) at 2-8°C
Do Not Freeze!
Shelf life: One year from despatch.

General Readings:
1. Thymus Dependent Membrane Antigens in Man: Inhibition of Cell-Mediated Lympholysis by Monoclonal Antibodies to the TH-2 Antigen. Evans,R.L., Wall,D.W., Platsoucas,C.D., Siegal,F.P., Fikrig,S.M., Testa,C.M, and Good,R.A. Proc. Nat. Acad. Sci. 78,544,1981.

2. Clement LT, Vink PE, Bradley GE. Novel immunoregulatory functions of phenotypically distinct subpopulations of CD4+ cells in the human neonate. J Immunol. 1990 Jul 1;145(1):102-8. PubMed PMID: 1694200.
3. Antigen Presentation by the CD4 Positive Monocyte Subset. Szabo,G., Miller,C.L., Kodys,K., J. Leukoc. Biol. 47(2): 111-20,1990.
4. Diamond DC, Finberg R, Chaudhuri S, Sleckman BP, Burakoff SJ. Human immunodeficiency virus infection is efficiently mediated by a glycolipid-anchored form of CD4. Proc Natl Acad Sci U S A. 1990 Jul;87(13):5001-5. PubMed PMID: 2142306.
5. Adkins B. Developmental regulation of the intrathymic T cell precursor population. J Immunol. 1991 Mar 1;146(5):1387-93. PubMed PMID: 1899686.
6. Induction of CD4 and Susceptibility to HIV-1 Infection in Human CD8+ T Lymphocytes by Human Herpesvirus 6. Lusso,P., De Maria,A., Malnati,M., Lori,F., DeRocco,S.E., Baseler,M., Gallo,R.C., Nat. 349(6309):533-5,1991.
7. Shapiro HM, Glazer AN, Christenson L, Williams JM, Strom TB. Immunofluorescence measurement in a flow cytometer using low-power helium-neon laser excitation. Cytometry. 1983 Nov;4(3):276-9. PubMed PMID: 6363017.
8. Comparison of Helium Neon and Dye lasers for Excitation of Allophycocyanin. Loken, M.R., Kiej, J.F. and Kelly, K.,A. Cytometry 8, 96, 1987

Protocols:

PBMC:
Add 5 ul of Anitbody/10e6 PBMC in 100 ul PBS.
Mix gently and incubate for 15 minutes at 2-8°C.
Wash twice with PBS and analyze or fix with 0.5% v/v of paraformaldehyde in PBS and analyze.

WHOLE BLOOD:
Add 5 ul of Antibody/100 ul of whole blood.
Mix gently and incubate for 15 minutes at room temperature 20°C.
Lyse the whole blood.
Wash once with PBS and analyze or fix with 0.5% v/v of paraformaldehyde in PBS and analyze.
See instrument manufacturer's instructions for Lysed Whole Blood and Immunofluorescence analysis with a Flow cytometer or microscope.

Pictures:

Figure 1. Peripheral blood lymphocytes stained with anti-CD4 PE labeled antibody (SM1663C).