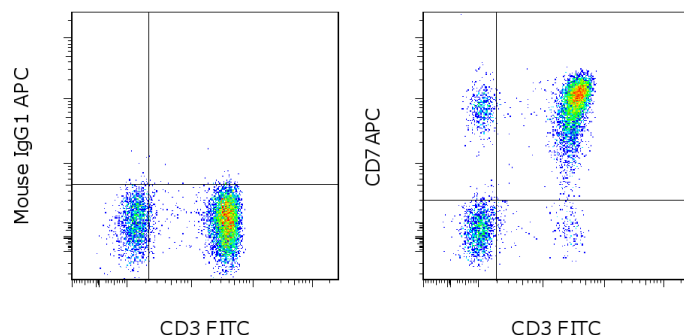


Anti-Human CD7 eFluor® 450

Catalog Number: 48-0079

Also known as: Leu-9

RUO: For Research Use Only. Not for use in diagnostic procedures.



Staining of normal human peripheral blood cells with Anti-Human CD3 FITC (cat. 11-0038) and Mouse IgG1 K Isotype Control eFluor® 450 (cat. 48-4714) (left) or Anti-Human CD7 eFluor® 450 (right). Cells in the lymphocyte gate were used for analysis.

Product Information

Contents: Anti-Human CD7 eFluor® 450

Catalog Number: 48-0079

Clone: eBio124-1D1 (124-1D1)

Concentration: 5 µL (0.06 µg)/test

Host/Isotype: Mouse IgG1, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

Temperature Limitation: Store at 2-8°C. Do not freeze. Light-sensitive material.

Batch Code: Refer to vial

Use By: Refer to vial

Contains sodium azide



Description

The eBio124-1D1 monoclonal antibody reacts with human CD7, also known as gp40 and Leu9. CD7, a 40 kD receptor, is a member of the immunoglobulin gene superfamily. The N-terminal amino acid sequence (aa1-107) is highly homologous to Ig kappa light chain sequence; while the carboxyl-terminal region of the extracellular domain is proline-rich and has been postulated to form a stalk from which the Ig domain projects. CD7 is expressed on the majority of immature and mature T lymphocytes, and T cell leukemias. It is also found on natural killer cells, a small subpopulation of normal B cells and on malignant B cells. Cross-linking surface CD7 positively modulates T cell and NK cell activity, as measured by calcium flux, expression of adhesion molecules, cytokine secretion and proliferation. CD7 associates directly with phosphoinositol 3'-kinase. CD7 ligation induces production of D-3 phosphoinositides and tyrosine phosphorylation.

A clonogenic subpopulation of human CD34(+) CD38(-) cord blood cells that express CD45RA and HLA-DR and high levels of the CD7 has been reported. These cells possess the capacity for lymphopoiesis. They can generate B-cells, natural killer cells, and dendritic cells but do not possess the capacity to develop into myeloid cells or erythroid cells. The CD7(+) phenotype distinguishes primitive human lymphoid progenitors from pluripotent stem cells.

Furthermore, it has been suggested that CD7 co-operates with CD28 during Treg function, as mice deficient in both CD28 and CD7 have reduced total numbers of Tregs and these Tregs have reduced suppressive activity.

Applications Reported

This 124-1D1 antibody has been reported for use in flow cytometric analysis.

Applications Tested

This eBio124-1D1 antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.06 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test.

Not for further distribution without written consent.

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eFluor® 450 is a replacement for Pacific Blue®. eFluor® 450 emits at 456 nm and is excited with the Violet laser (405 nm). Please make sure that your instrument is capable of detecting this fluorochoime.

References

Lyman SD, Escobar S, Rousseau AM, Armstrong A, Fanslow WC. Identification of CD7 as a cognate of the human K12 (SECTM1) protein. J Biol Chem. 2000 Feb 4;275(5):3431-7.

Sato AI, Balamuth FB, Ugen KE, Williams WV, Weiner DB. Identification of CD7 glycoprotein as an accessory molecule in HIV-1-mediated syncytium formation and cellfree infection. J Immunol. 1994 May 15;152(10):5142-52. (124-1D1, FA, FC, PubMed)

Aruffo A, Seed B. Molecular cloning of two CD7 (T-cell leukemia antigen) cDNAs by a COS cell expression system. EMBO J. 1987 Nov;6(11):3313-6.

Related Products

00-4222 Flow Cytometry Staining Buffer

00-4300 10X RBC Lysis Buffer (Multi-species)

11-0038 Anti-Human CD3 FITC (UCHT1)

48-4714 Mouse IgG1 K Isotype Control eFluor® 450 (P3.6.2.8.1)