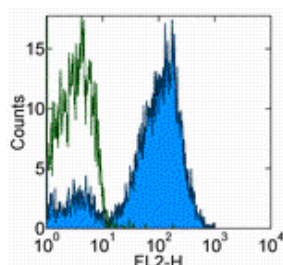


## Anti-Human CD7 Purified

Catalog Number: 14-0079

Also Known As: Leu-9

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



Staining of normal human peripheral blood cells with 0.5 ug of Mouse IgG1 K Isotype Control Purified (cat. 14-4714) (open histogram) or 0.5 ug of Anti-human CD7 Purified (filled histogram) followed by F(ab')<sub>2</sub> Anti-Mouse IgG PE (cat. 12-4010). Cells in the lymphocyte gate were used for analysis.

### Product Information

Contents: Anti-Human CD7 Purified

 Catalog Number: 14-0079

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

Concentration: 0.5 mg/mL

Host/Isotype: Mouse IgG1, kappa

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



Temperature Limitation: Store at 2-8°C.



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 eBio124-1D1 (124-1D1) antibody has been reported for use in flow cytometric analysis.

### Applications Tested

This eBio124-1D1 (124-1D1) antibody has been tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at less than or equal to 1 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 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

### 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

12-4010 F(ab')<sub>2</sub> Anti-Mouse IgG PE (polyclonal)

13-4013 Anti-Mouse IgG Biotin (Polyclonal)

14-4714 Mouse IgG1 K Isotype Control Purified (P3.6.2.1)

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