

# CD7 Monoclonal Antibody (eBio124-1D1 (124-1D1)), Super Bright™ 436, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), Super Bright™ 436, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	eBio124-1D1 (124-1D1)
Conjugate	Super Bright™ 436
Excitation/Emission Max	413/431 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2735018

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.25 µg)/test	-

## Product Specific Information

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.<sup>^M</sup>

<sup>^M</sup>  
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.<sup>^M</sup>

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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.<sup>^M</sup>

<sup>^M</sup>  
Applications Reported: This eBio124-1D1 antibody has been reported for use in flow cytometric analysis.<sup>^M</sup>

<sup>^M</sup>  
Applications Tested: This eBio124-1D1 antibody has been pre-diluted and tested by flow cytometric analysis of normal human peripheral blood cells. This may be used at 5 µL (0.25 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  $\mu$ L. Cell number should be determined empirically but can range from  $10^5$  to  $10^8$  cells/test.<sup>^M</sup>

<sup>^M</sup>

Super Bright 436 can be excited with the violet laser line (405 nm) and emits at 436 nm. We recommend using a 450/50 bandpass filter, or equivalent. Please make sure that your instrument is capable of detecting this fluorochrome.<sup>^M</sup>

<sup>^M</sup>

When using two or more Super Bright dye-conjugated antibodies in a staining panel, it is recommended to use Super Bright Complete Staining Buffer (Product # SB-4401) to minimize any non-specific polymer interactions. Please refer to the datasheet for Super Bright Staining Buffer for more information.<sup>^M</sup>

<sup>^M</sup>

Fixation: Samples can be stored in IC Fixation Buffer (Product # 00-8222) (100  $\mu$ L of cell sample + 100  $\mu$ L of IC Fixation Buffer) or 1-step Fix/Lyse Solution (Product # 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.<sup>^M</sup>

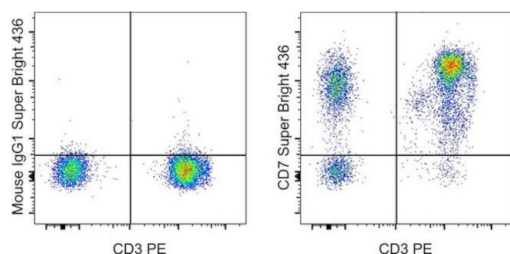
<sup>^M</sup>

Excitation: 405 nm; Emission: 436 nm; Laser: Violet Laser<sup>^M</sup>

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Super Bright Polymer Dyes are sold under license from Becton, Dickinson and Company.

## Product Images For CD7 Monoclonal Antibody (eBio124-1D1 (124-1D1)), Super Bright™ 436, eBioscience™



### CD7 Antibody (62-0079-42) in Flow

Normal human peripheral blood cells were stained with CD3 Monoclonal Antibody, PE (Product # 12-0038-42) and Mouse IgG1 kappa Isotype Control, Super Bright 436 (Product # 62-4714-82) (left) or CD7 Monoclonal Antibody, Super Bright 436 (right). Cells in the lymphocyte gate were used for analysis.

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