Human CD7 Antibody

Monoclonal Mouse IgG_{2B} Clone # 848438

Catalog Number: MAB7579

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD7 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse CD7 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 848438
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell line HEK293-derived human CD7 Ala26-Pro180 Accession # P09564
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

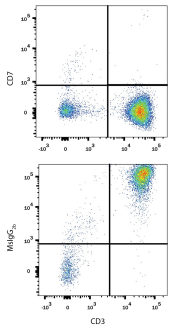
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	See Below

DATA

Flow Cytometry



Detection of CD7 in Human Blood Lymphocytes by Flow Cytometry. Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD3ε APC-conjugated Monoclonal Antibody (Catalog # FAB100A) and either (A) Mouse Anti-Human CD7 Monoclonal Antibody (Catalog # MAB7579) or (B) Mouse IgG_{2B} Flow Cytometry Isotype Control (Catalog # MAB0041) followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD7 (Cluster of Differentiation Antigen 7; also Leu-9, TP41 and GP40) is a 40-44 kDa member of the Ig-superfamily of proteins. It shows restricted expression, being found on fetal thymocytes, $CD34^+$ myeloid and lymphoid progenitor cells, memory CLA- $CD45RA^+$ T cells, and $CD56^+$ IFN-γ secreting NK cells. CD7 binds to both SECTM1/K12 and galectin-1, and when bound to the latter, initiates complex formation with CD43 in cis. Activation of CD7 may result in either cell proliferation or apoptosis, suggesting a context-dependent signaling mechanism. Mature human CD7 is a 215 amino acid (aa) type I transmembrane glycoprotein. It contains a 155 aa extracellular region (aa 26-180) that shows one V-type Ig-like domain (aa 26-130), and a 39 aa C-terminal cytoplasmic domain. There is one potential alternative splice variant that contains a 79 aa substitution for aa 133-240. Over aa 26-180, human CD7 shares only 43% aa sequence identity with mouse CD7.

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