Human CD7 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 848438

Catalog Number: FAB7579R

100 µg

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
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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	0.25-1 µg/10^6 cells	Human peripheral blood lymphocytes

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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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