

anti-human CD5 APC-conjugated**APC** - conjugated monoclonal antibody CRIS1 to human CD5Cat-No: **21279056**

500 µl

Clone: CRIS1

Specificity: The antibody CRIS1 reacts with the cell surface glycoprotein CD5, a 67kDa single-chain transmembrane glycoprotein expressed on mature T lymphocytes, most of thymocytes and B lymphocytes subset (B-1a lymphocytes).

HLDA I; WS Code T 29, HLDA III; WS Code T 530**Isotype subclass:** Mouse IgG2a

Form: The purified antibody is conjugated with cross-linked Allophycocyanin (APC) under optimum conditions. No reconstitution is necessary.

Physical state: Liquid**Buffer/Additives/Preservative:** PBS containing 1% BSA and 0.09% sodium azide (pH 7.2)**Expiration date:** The reagent is stable until the expiry date stated on the vial label**Storage conditions:** Store at 4°C. Avoid prolonged exposure to light.**Application:** Flow Cytometry

Background: CD5 antigen (T1; 67 kDa) is a human cell surface T-lymphocyte single-chain transmembrane glycoprotein. CD5 is expressed on all mature T-lymphocytes, most of thymocytes, subset of B-lymphocytes and on many T-cell leukemias and lymphomas. It is a type I membrane glycoprotein whose extracellular region contains three scavenger receptor cysteine-rich (SRCR) domains. The CD5 is a signal transducing molecule whose cytoplasmic tail is devoid of any intrinsic catalytic activity. CD5 modulates signaling through the antigen-specific receptor complex (TCR and BCR). CD5 crosslinking induces extracellular Ca⁺⁺ mobilization, tyrosine phosphorylation of intracellular proteins and DAG production. Preliminary evidence shows protein associations with ZAP-70, p56lck, p59fyn, PC-PLC, etc. CD5 may serve as a dual receptor, giving either stimulatory or inhibitory signals depending both on the cell type and development stage. In thymocytes and B1a cells seems to provide inhibitory signals, in peripheral mature T lymphocytes it acts as a costimulatory signal receptor. CD5 is the phenotypic marker of a B cell subpopulation involved in the production of autoreactive antibodies.

Disease relevance: CD5 is a phenotypic marker for some B cell lymphoproliferative disorders (B-CLL, Hairy cell leukemia, etc.). The CD5⁺ population is expanded in some autoimmune disorders (Rheumatoid Arthritis, etc.). Herpes virus infections induce loss of CD5 expression in the expanded CD8⁺ human T cells.

References:

*) Freedman AS, Freeman G, Whitman J, Segil J, Daley J, Levine H, Nadler LM: Expression and regulation of CD5 on in vitro activated human B cells. Eur J Immunol. 1989 May;19(5):849-55.

*) Raman C.: CD5, an important regulator of lymphocyte selection and immune tolerance. Immunol Res. 2002;26(1-3):255-63.

Warning: Sodium azide is harmful if swallowed (R22). Keep out of reach of children (S2). Keep away from food, drink and animal feeding stuff (S13). Wear suitable protective clothing (S36). If swallowed, seek medical advice immediately and show this container or label (S46). Contact with acids liberates very toxic gas (R32). Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions can develop.

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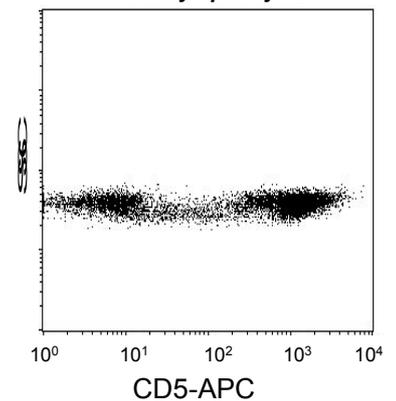
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Blood lymphocytes



Attention! Cells from one healthy individual are shown. Cell populations and staining intensity may vary interindividually.