TECHNICAL DATA SHEET

CyFlow™ CD5 APC
Anti-Hu; Clone CRIS1

REF **CM995506**

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD5
Alternative Names	Leu-1
Clone	CRIS1
Clonality	monoclonal
Format	APC
Host / Isotype	Mouse / IgG2a
Species Reactivity	Human
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Stimulated human leukocytes

Specificity

The mouse monoclonal antibody CRIS1 recognizes CD5 antigen, a 67kDa single-chain transmembrane glycoprotein expressed on mature T lymphocytes, most of thymocytes and B lymphocytes subset (B-1a lymphocytes).

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Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 10 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension. The content of a vial (1 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD5 (T1) 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 lymhocytes 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+ popuation is expanded in some autoimmune disorders (Rheumatoid Arthritis, etc.). Herpes virus infections induce loss of CD5 expression in the expanded CD8+ human T cells.

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References

- McMichael AJ, Beverley PCL, Cobbold S, et al. (Eds): Leucocyte Typing III, White Cell Differentiation Antigens. Oxford University Press, Oxford. 1987; 1-1050. < NLM ID: 8913266 >
- Arrizabalaga P, Mirapeix E, Darnell A, Torras A, Revert L: Cellular immunity analysis using monoclonal antibodies in human glomerulonephritis. Nephron. 1989; 53(1):41-9. < PMID: 2789343 >
- 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. < PMID: 2472277 >
- Alberola-Ila J, Places L, Cantrell DA, Vives J, Lozano F: Intracellular events involved in CD5-induced human T cell activation and proliferation. J Immunol. 1992 Mar 1; 148(5):1287-93. < PMID: 1371522 >
- Guarne A, Bravo J, Calvo J, Lozano F, Vives J, Fita I: Conformation of the hypervariable region L3 without the key proline residue. Protein Sci. 1996 Jan; 5(1):167-9. < PMID: 8771210 >
- Raman C: CD5, an important regulator of lymphocyte selection and immune tolerance. Immunol Res. 2002; 26(1-3):255-63. < PMID: 12403363 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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