

TECHNICAL DATA SHEET

CyFlow[™] CD5 Purified

Anti-Hu; Clone L17F12

REF BA604904

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD5
Alternative Names	Leu-1
Clone	L17F12
Clonality	monoclonal
Format	Purified
Host / Isotype	Mouse / IgG2a
Species Reactivity	Human
Negative Species Reactivity	-
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Human acute lymphoblastic leukemia (ALL) T cells

Specificity

The mouse monoclonal antibody L17F12 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

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Immunoprecipitation
- Western blot
- Immunocytochemistry

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH \approx 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

- Engleman EG, Warnke R, Fox RI, Dilley J, Benike CJ, Levy R: Studies of a human T lymphocyte antigen recognized by a monoclonal antibody. Proc Natl Acad Sci USA. 1981 Mar; 78(3):1791-5.
 < PMID: 7015346 >
- Shuster JJ, Falletta JM, Pullen DJ, Crist WM, Humphrey GB, Dowell BL, Wharam MD, Borowitz M: Prognostic factors in childhood T-cell acute lymphoblastic leukemia: a Pediatric Oncology Group study. Blood. 1990 Jan 1; 75(1):166-73. < PMID: 1688495 >
- McAlister MS, Davis B, Pfuhl M, Driscoll PC: NMR analysis of the N-terminal SRCR domain of human CD5: engineering of a glycoprotein for superior characteristics in NMR experiments. Protein Eng. 1998 Oct; 11(10):847-53. < PMID: 9862202 >
- Gong JZ, Lagoo AS, Peters D, Horvatinovich J, Benz P, Buckley PJ: Value of CD23 determination by flow cytometry in differentiating mantle cell lymphoma from chronic lymphocytic leukemia/small lymphocytic lymphoma. Am J Clin Pathol. 2001 Dec; 116(6):893-7. < PMID: 11764079 >
- Dunphy CH, Tang W: The value of CD64 expression in distinguishing acute myeloid leukemia with monocytic differentiation from other subtypes of acute myeloid leukemia: a flow cytometric analysis of 64 cases. Arch Pathol Lab Med. 2007 May; 131(5):748-54. < PMID: 17488160 >

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

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