

Monoclonal Antibody to CD5 - PE

Alternate names:	CD5, LEU1, Lymphocyte antigen T1/Leu-1, T-cell surface glycoprotein CD5
Catalog No.:	AM03103RP-N
Quantity:	100 Tests
Background:	<p>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.</p> <p>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.</p> <p>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.</p>
Uniprot ID:	P06127
NCBI:	NP_055022.2
GeneID:	921
Host / Isotype:	Mouse / IgG2a
Clone:	CRIS1
Format:	State: Liquid Ig fraction Buffer System: Phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2 % (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent. Label: PE – Conjugated with R-Phycoerythrin under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use
Applications:	Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10e6 cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

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- Specificity:** This antibody 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).
Species: Human.
Other species not tested.
- Storage:** Store the antibody at 2 - 8 °C. DO NOT FREEZE! Centrifuge vial before opening. This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.
- General Readings:**
1. 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.
 2. Leukocyte Typing III., McMichael A. J. et al. (Eds.), Oxford University Press (1987).
 3. 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.
 4. 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.
 5. 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.

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