

## Monoclonal Antibody to CD5 - FITC

<b>Alternate names:</b>	CD5, LEU1, Lymphocyte antigen T1/Leu-1, T-cell surface glycoprotein CD5
<b>Catalog No.:</b>	AM03103FC-N
<b>Quantity:</b>	100 Tests
<b>Background:</b>	<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<sup>++</sup> 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<sup>+</sup> population is expanded in some autoimmune disorders (Rheumatoid Arthritis, etc.). Herpes virus infections induce loss of CD5 expression in the expanded CD8<sup>+</sup> human T cells.</p>
<b>Uniprot ID:</b>	<a href="#">P06127</a>
<b>NCBI:</b>	<a href="#">NP_055022.2</a>
<b>GeneID:</b>	<a href="#">921</a>
<b>Host / Isotype:</b>	Mouse / IgG2a
<b>Clone:</b>	CRIS1
<b>Immunogen:</b>	Stimulated human leukocytes
<b>Format:</b>	<p><b>State:</b> Liquid IG fraction</p> <p><b>Buffer System:</b> 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</p> <p><b>Label:</b> FITC – Conjugated with Fluorescein isothiocyanate under optimum conditions. The reagent is free of unconjugated and adjusted for direct use</p>
<b>Applications:</b>	<p>Flow Cytometry analysis of blood cells using 20 µl reagent / 100 µl of whole blood or 10e6 cells in a suspension.</p> <p>The content of a vial (2 ml) is sufficient for 100 tests.</p>

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Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**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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