

## Monoclonal Antibody to CD3 - FITC

<b>Alternate names:</b>	T-cell surface antigen T3/Leu-4, T-cell surface glycoprotein CD3, T3/Leu-4
<b>Catalog No.:</b>	SM3017F
<b>Quantity:</b>	100 Tests
<b>Background:</b>	<p>CD3 complex is crucial in transducing antigen-recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR complex. T cell activation through the antigen receptor (TCR) involves the cytoplasmic tails of the CD3 subunits CD3 gamma, CD3 delta, CD3 epsilon and CD3 zeta. These CD3 subunits are structurally related members of the immunoglobulins super family encoded by closely linked genes on human chromosome 11. The CD3 components have long cytoplasmic tails that associate with cytoplasmic signal transduction molecules. This association is mediated at least in part by a double tyrosine-based motif present in a single copy in the CD3 subunits. CD3 may play a role in TCR-induced growth arrest, cell survival and proliferation.</p> <p>The CD3 antigen is present on 68-82% of normal peripheral blood lymphocytes, 65-85% of thymocytes and Purkinje cells in the cerebellum. It is never expressed on B or NK cells. Decreased percentages of T lymphocytes may be observed in some autoimmune diseases.</p>
<b>Uniprot ID:</b>	<a href="#">P07766</a>
<b>NCBI:</b>	<a href="#">NP_000724.1</a>
<b>GeneID:</b>	<a href="#">916</a>
<b>Host / Isotype:</b>	Mouse / IgG2a
<b>Clone:</b>	MEM-57
<b>Immunogen:</b>	Human thymocytes and T lymphocytes
<b>Format:</b>	<p><b>State:</b> Liquid purified Ig fraction <b>Buffer Solution:</b> Phosphate buffered saline (PBS) <b>Preservatives:</b> 15 mM sodium azide <b>Stabilizers:</b> 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) <b>Label:</b> FITC</p>
<b>Applications:</b>	<p><b>Flow Cytometry:</b> use 20 µl reagent / 100 µl whole blood or 10<sup>6</sup> cells in a suspension. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>
<b>Specificity:</b>	<p>The antibody reacts with gamma-epsilon and delta-epsilon dimers of human CD3 complex, a part of a bigger multisubunit T cell receptor complex (CD3/TCR) expressed on peripheral blood T lymphocytes and mature thymocytes.</p> <p><b>Species:</b> Human. Other species not tested.</p>

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

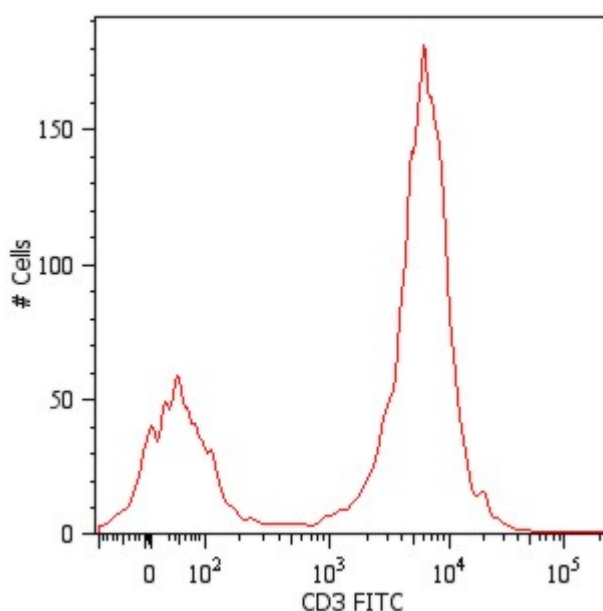
Material Safety Datasheets are available at [www.acris-antibodies.com](http://www.acris-antibodies.com) or on request.

Antibody Hotline - Technical Questions - Antibody Location Service  
Free Call: 0800-2274746 (Germany only) - [www.acris-antibodies.com](http://www.acris-antibodies.com)

**Storage:** Store the antibody at 2 - 8 °C. DO NOT FREEZE! This product is photosensitive and should be protected from light.  
Shelf life: one year from despatch.

**General References:** 1. Huang Y, Wange RL: T cell receptor signaling: beyond complex complexes. *J Biol Chem.* 2004 Jul 9;279(28):28827-30.  
2. Kuhns MS, Davis MM, Garcia KC: Deconstructing the form and function of the TCR/CD3 complex. *Immunity.* 2006 Feb;24 (2):133-9.  
3. Alarcon B, Swamy M, van Santen HM, Schamel WW: T-cell antigen-receptor stoichiometry: pre-clustering for sensitivity. *EMBO Rep.* 2006 May;7(5):490-5.  
4. Leukocyte Typing III., McMichael M.J. et al. (Eds.), Oxford University Press (1987); p.611.  
5. Horejsi V. et al.: Monoclonal antibodies against human leucocyte antigens. II. Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). *Folia Biol. (Praha)* 34, 23 (1988).  
6. Leukocyte Typing IV., Knapp W. et al. (Eds.), Oxford University Press (1989); p. 293.  
7. Hilgert I. et al.: Therapeutic in vivo use of the A1-CD3 monoclonal antibody. *Transplantation* 55, 435 (1993).

**Pictures:**



Surface staining of human peripheral blood cells with anti-human CD3 (MEM-57) FITC. Cells in the lymphocyte gate were used for analysis.

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