

## Monoclonal Antibody to CD4 (non-polymorphic epitope) - FITC

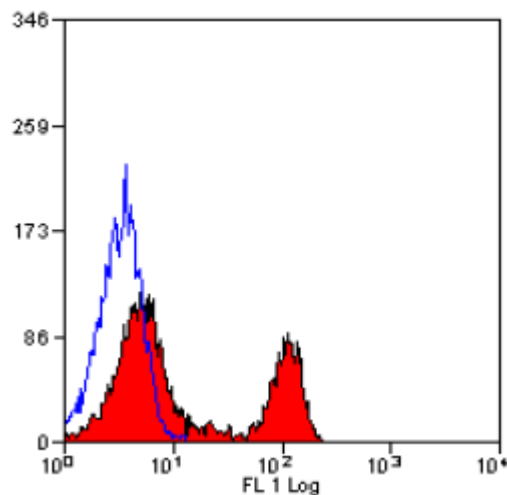
<b>Alternate names:</b>	T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4
<b>Catalog No.:</b>	SM019F
<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	0.1 mg/ml
<b>Background:</b>	<p>CD4 is a single chain transmembrane glycoprotein and belongs to immunoglobulin supergene family. In extracellular region there are 4 immunoglobulin-like domains (1 Ig-like V-type and 3 Ig-like C2-type). Transmembrane region forms 25 aa, cytoplasmic tail consists of 38 aa. Domains 1,2 and 4 are stabilized by disulfide bonds. The intracellular domain of CD4 is associated with p56Lck, a Src-like protein tyrosine kinase. It was described that CD4 segregates into specific detergent-resistant T-cell membrane microdomains.</p> <p>Extracellular ligands: MHC class II molecules (binds to CDR2-like region in CD4 domain 1); HIV envelope protein gp120 (binds to CDR2-like region in CD4 domain 1); IL-16 (binds to CD4 domain 3), Human seminal plasma glycoprotein gp17 (binds to CD4 domain 1), L-selectin</p> <p>Intracellular ligands: p56Lck</p> <p>CD4 is a co-receptor involved in immune response (co-receptor activity in binding to MHC class II molecules) and HIV infection (human immunodeficiency virus; CD4 is primary receptor for HIV-1 surface glycoprotein gp120). CD4 regulates T-cell activation, T/B-cell adhesion, T-cell differentiation, T-cell selection and signal transduction. Defects in antigen presentation (MHC class II) cause dysfunction of CD4+ T-cells and their almost complete absence in patients blood, tissue and organs (SCID immunodeficiency).</p>
<b>Uniprot ID:</b>	<a href="#">P06332</a>
<b>NCBI:</b>	<a href="#">NP_038516.1</a>
<b>GeneID:</b>	<a href="#">12504</a>
<b>Host / Isotype:</b>	Rat / IgG2a
<b>Clone:</b>	YTS177.9
<b>Immunogen:</b>	<p>Mouse spleen cells.</p> <p>Spleen cells from immunised DA rats were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.</p>
<b>Format:</b>	<p><b>State:</b> Liquid purified IgG fraction.</p> <p><b>Purification:</b> Affinity Chromatography on Protein G.</p> <p><b>Buffer System:</b> PBS, pH 7.2 containing 0.09% Sodium Azide as preservative and 1% BSA as stabilizer.</p> <p><b>Label:</b> FITC – Fluorescein Isothiocyanate Isomer 1</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.

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- Applications:** Flow Cytometry: Use 10  $\mu$ l of Neat-1/10 diluted antibody to label 10e6 cells or 100 $\mu$ l whole blood. The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors.  
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
- Specificity:** This antibody reacts with the CD4 antigen; non polymorphic epitope.  
The antibody is reported to block MHC class II dependant T-cell responses *in vitro* and *in vivo* and induces tolerance.  
**Species:** Mouse.  
Other species not tested.
- Storage:** Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.  
Avoid repeated freezing and thawing.  
This product is photosensitive and should be protected from light.  
Shelf life: one year from despatch.
- General References:** 1. Qin, S. et al. (1990) Induction of tolerance in peripheral T-cells with monoclonal antibodies. *Eur. J. Immunol.* 20: 2737-2745.  
2. Cobbold, S.P. et al. (1990) The induction of skin graft tolerance in MHC-mismatched or primed recipients: primed T-cells can be tolerised in the periphery with CD4 and CD8 antibodies. *Eur. J. Immunol.* 20: 2747-2755.  
3. Wise, M.P. et al. (1998) Cutting Edge: Linked suppression of skin graft rejection can operate through indirect recognition. *J. Immunol.* 161: 5813-5816.

**Pictures:**

Staining of mouse peripheral blood lymphocytes with Rat Anti Mouse CD4 antibody -FITC.

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