

Monoclonal Antibody to CD4 - FITC

Alternate names:	T-cell surface antigen T4/Leu-3, T-cell surface glycoprotein CD4
Catalog No.:	SM3020F
Quantity:	100 Tests
Background:	<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>
Uniprot ID:	P01730
NCBI:	NP_000607.1
GeneID:	920
Host / Isotype:	Mouse / IgG1
Clone:	MEM-241
Immunogen:	2 N-terminal domains of human CD4 fused to human IgG1 Fc
Format:	<p>State: Liquid purified Ig fraction</p> <p>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.</p> <p>Label: FITC – Conjugated with Fluorescein isothiocyanate under optimum conditions. The reagent is free of unconjugated and adjusted for direct use</p>
Applications:	Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl whole blood. 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.

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

Specificity:

The antibody recognizes CD4 antigen, a 55 kDa transmembrane glycoprotein expressed on a subset of T lymphocytes (helper T-cells) and also on monocytes, tissue macrophages and granulocytes.

Species: Human.

Other species not tested.

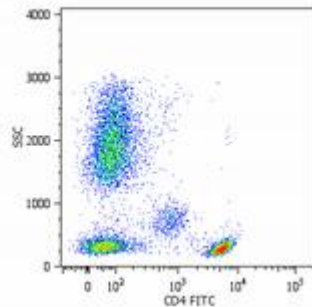
Storage:

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. Millan J, Cerny J, Horejsi V, Alonso MA.: CD4 segregates into specific detergent-resistant T-cell membrane microdomains. *Tissue Antigens*. 1999 Jan;53(1):33-40.
2. Foti M, Phelouzat MA, Holm A, Rasmusson BJ, Carpentier JL.: p56Lck anchors CD4 to distinct microdomains on microvilli. *Proc Natl Acad Sci U S A*. 2002 Feb 19;99(4):2008-13.
3. Brdickova N. et al.: LIME: a new membrane Raft-associated adaptor protein involved in CD4 and CD8 coreceptor signaling. *J Exp Med*. 2003 Nov 17;198(10):1453-62.
4. Zola H, Swart B, Banham A, Barry S, Beare A, Bensussan A, Boumsell L, D Buckley C, Buhring HJ, Clark G, Engel P, Fox D, Jin BQ, Macardle PJ, Malavasi F, Mason D, Stockinger H, Yang X.: CD molecules 2006--human cell differentiation molecules. *J Immunol Methods*. 2007 Jan 30;319(1-2):1-5.
5. Karlsson KR, Cowley S, Martinez FO, Shaw M, Minger SL, James W: Homogeneous monocytes and macrophages from human embryonic stem cells following coculture-free differentiation in M-CSF and IL-3. *Exp Hematol*. 2008 Sep;36(9):1167-75.
6. Manasa J, Musabaike H, Masimirembwa C, Burke E, Luthy R, Mudzori J: Evaluation of the Partec flow cytometer against the BD FACSCalibur system for monitoring immune responses of human immunodeficiency virus-infected patients in Zimbabwe. *Clin Vaccine Immunol*. 2007 Mar;14(3):293-8.
7. Anderson AE, Sayers BL, Haniffa MA, Swan DJ, Diboll J, Wang XN, Isaacs JD, Hilkens CM: Differential regulation of naïve and memory CD4+ T cells by alternatively activated dendritic cells. *J Leukoc Biol*. 2008 Jul;84(1):124-33.

Pictures:

Surface staining of human peripheral blood cells with anti-human CD4 (MEM-241) FITC.

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