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Datasheet for ABIN509566
anti-CD4 antibody (FITC)

2 Images

9 Publications

Overview

Quantity:	0.1 mg
Target:	CD4
Reactivity:	Mouse
Host:	Rat
Clonality:	Monoclonal
Conjugate:	This CD4 antibody is conjugated to FITC
Application:	Flow Cytometry (FACS)

Product Details

Immunogen:	Mouse CTL clone V4 cells
Clone:	GK1-5
Isotype:	IgG2b
Specificity:	The rat monoclonal antibody GK1.5 reacts with an extracellular epitope of mouse CD4 transmembrane glycoprotein (55 kDa).
Cross-Reactivity (Details):	Mouse
Purification:	Purified antibody is conjugated with fluorescein isothiocyanate (FITC) under optimum conditions and unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Target Details

Target:	CD4
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Target Details

Alternative Name: CD4 ([CD4 Products](#))

Background: CD4 Molecule, CD4 (T4) 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. 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. Intracellular ligands: p56Lck 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), T4/Leu-3, L3T4

Gene ID: 12504

UniProt: [P06332](#)

Pathways: [TCR Signaling](#), [Maintenance of Protein Location](#), [CXCR4-mediated Signaling Events](#)

Application Details

Application Notes: Flow cytometry: Recommended dilution: 1-2 µg/mL.

Comment: The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.

Restrictions: For Research Use only

Handling

Concentration: 0.5 mg/mL

Buffer: Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

Handling

should be handled by trained staff only.

Handling Advice:

Do not freeze.

Avoid prolonged exposure to light.

Storage:

4 °C

Storage Comment:

Store at 2-8°C. Protect from prolonged exposure to light. Do not freeze.

Publications

Product cited in:

Hu, Watson, Zhang, Graf, Wang, Sartor, Howden, Fletcher, Alexander: "Long-term cardiac allograft survival across an MHC mismatch after "pruning" of alloreactive CD4 T cells." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 180, Issue 10, pp. 6593-603, (2008) ([PubMed](#)).

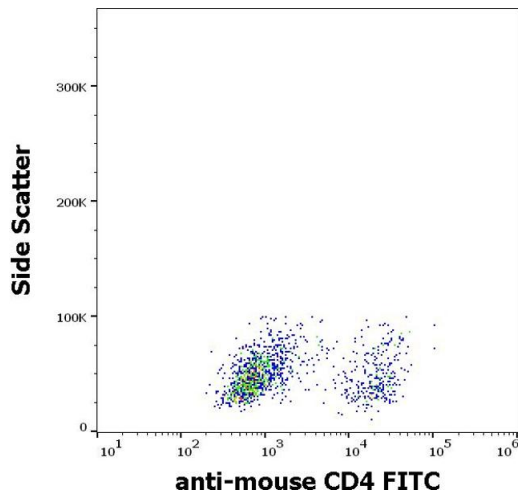
Yi, Zhen, Zeng, Zhang, Zhao: "Depleting anti-CD4 monoclonal antibody (GK1.5) treatment: influence on regulatory CD4+CD25+Foxp3+ T cells in mice." in: **Transplantation**, Vol. 85, Issue 8, pp. 1167-74, (2008) ([PubMed](#)).

Felix, Donermeyer, Horvath, Walters, Gross, Suri, Allen: "Alloreactive T cells respond specifically to multiple distinct peptide-MHC complexes." in: **Nature immunology**, Vol. 8, Issue 4, pp. 388-97, (2007) ([PubMed](#)).

Zheng, Han, Kelsoe: "T helper cells in murine germinal centers are antigen-specific emigrants that downregulate Thy-1." in: **The Journal of experimental medicine**, Vol. 184, Issue 3, pp. 1083-91, (1997) ([PubMed](#)).

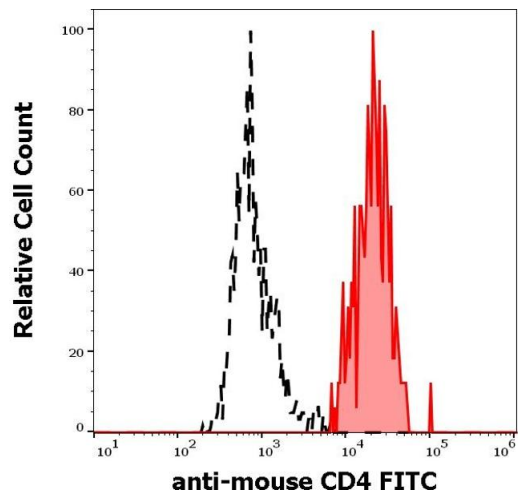
Gavett, Chen, Finkelman, Wills-Karp: "Depletion of murine CD4+ T lymphocytes prevents antigen-induced airway hyperreactivity and pulmonary eosinophilia." in: **American journal of respiratory cell and molecular biology**, Vol. 10, Issue 6, pp. 587-93, (1994) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



Flow Cytometry

Image 1. Flow cytometry surface staining pattern of murine splenocyte suspension stained using anti-mouse CD4 (GK1.5) FITC antibody (concentration in sample 0,33 μ g/mL).



Flow Cytometry

Image 2. Separation of murine CD4 positive cells (red-filled) from murine CD4 negative cells (black-dashed) in flow cytometry analysis (surface staining) of murine splenocyte suspension stained using anti-mouse CD4 (GK1.5) FITC antibody (concentration in sample 0,33 μ g/mL).