

Datasheet for ABIN302021
anti-CD3 antibody (FITC)



[Go to Product page](#)

3 Images

7 Publications

Overview

Quantity:	100 tests
Target:	CD3
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD3 antibody is conjugated to FITC
Application:	Flow Cytometry (FACS)

Product Details

Immunogen:	human thymocytes followed by Sezary T cells
Clone:	UCHT1
Isotype:	IgG1
Specificity:	The antibody UCHT1 recognizes an extracellular epitope on CD3 antigen of the TCR/CD3 complex on mature human T cells. The UCHT1 antibody reacts with the epsilon chain of the CD3 complex.
Cross-Reactivity (Details):	Human, Non-Human Primates
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:	CD3
Alternative Name:	CD3 (CD3 Products)
Background:	<p>CD3 antigen, epsilon polypeptide, 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. 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., CD3E, T3E, TCRE</p>
Gene ID:	916
UniProt:	P07766
Pathways:	TCR Signaling , Ubiquitin Proteasome Pathway

Application Details

Application Notes:	Flow cytometry: The reagent is designed for analysis of human blood cells using 20 µL reagent / 100 µL of whole blood or 10 ⁶ cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests. Extracellular and intracellular staining.
Comment:	The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC and adjusted for direct use. No reconstitution is necessary.
Restrictions:	For Research Use only

Handling

Reconstitution:	No reconstitution is necessary.
Buffer:	Stabilizing phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Preservative:	Sodium azide

Handling

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which 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: Rieux-Laucat, Hivroz, Lim, Mateo, Pellier, Selz, Fischer, Le Deist: "Inherited and somatic CD3zeta mutations in a patient with T-cell deficiency." in: **The New England journal of medicine**, Vol. 354, Issue 18, pp. 1913-21, (2006) ([PubMed](#)).

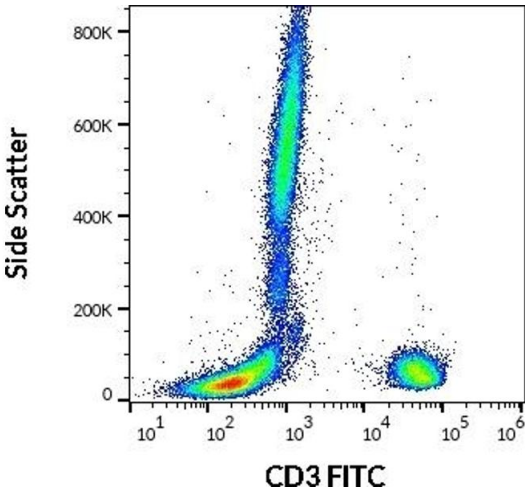
Lin, Liu, Chen, Wang, Medeiros, Hsu: "CD94 1A transcripts characterize lymphoblastic lymphoma/leukemia of immature natural killer cell origin with distinct clinical features." in: **Blood**, Vol. 106, Issue 10, pp. 3567-74, (2005) ([PubMed](#)).

Demedts, Brusselle, Vermaelen, Pauwels: "Identification and characterization of human pulmonary dendritic cells." in: **American journal of respiratory cell and molecular biology**, Vol. 32, Issue 3, pp. 177-84, (2005) ([PubMed](#)).

Arnett, Harrison, Wiley: "Crystal structure of a human CD3-epsilon/delta dimer in complex with a UCHT1 single-chain antibody fragment." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 101, Issue 46, pp. 16268-73, (2004) ([PubMed](#)).

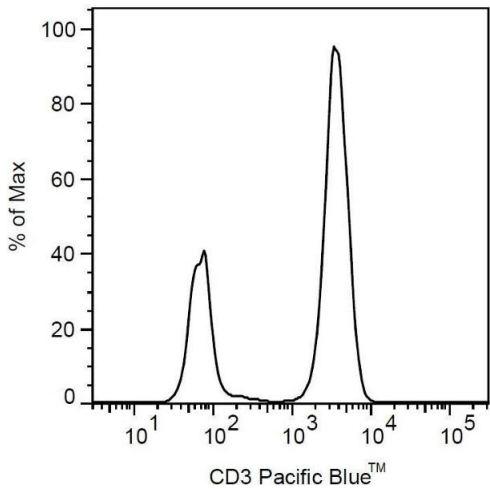
Torres, Alcover, Zapata, Arnaud, Pacheco, Martín-Fernández, Villasevil, Sanal, Regueiro: "TCR dynamics in human mature T lymphocytes lacking CD3 gamma." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 170, Issue 12, pp. 5947-55, (2003) ([PubMed](#)).

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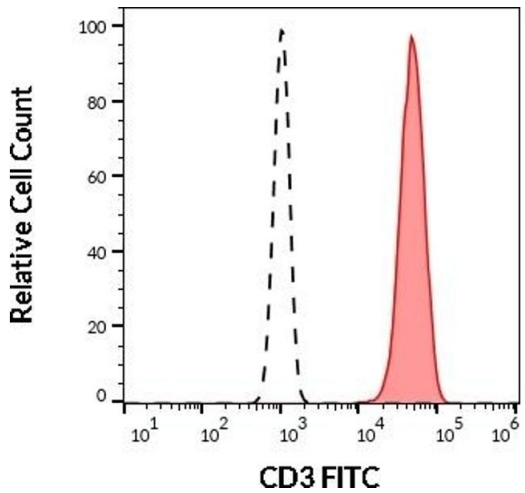
Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD3 (UCHT1) FITC antibody (20 µL reagent / 100 µL of peripheral whole blood).



Flow Cytometry

Image 2. Surface staining of human peripheral blood cells with anti-human CD3 (UCHT1) Pacific Blue™. Cells in the lymphocyte gate were used for analysis.



Flow Cytometry

Image 3. Separation of human CD3 positive T cells (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD3 (UCHT1) FITC antibody (20 µL reagent / 100 µL of peripheral whole blood).