Datasheet for ABIN94061

anti-CD3 antibody (FITC)

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Overview

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

Product Details

Purpose:	Anti-Hu CD3 FITC
Immunogen:	Human thymocytes and T lymphocytes.
Clone:	MEM-57
Isotype:	IgG2a kappa
Specificity:	The antibody MEM-57 reacts with an extracellular epitope on 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.
Cross-Reactivity (Details):	Human
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:	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 Purkynje 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
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.
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
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.**

Handling

	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:

Majer, Vlaskova, Krol, Kalina, Kubanek, Stolnaya, Dvorakova, Elleder, Sikora: "Danon disease: a focus on processing of the novel LAMP2 mutation and comments on the beneficial use of peripheral white blood cells in the diagnosis of LAMP2 deficiency." in: **Gene**, Vol. 498, Issue 2, pp. 183-95, (2012) (PubMed).

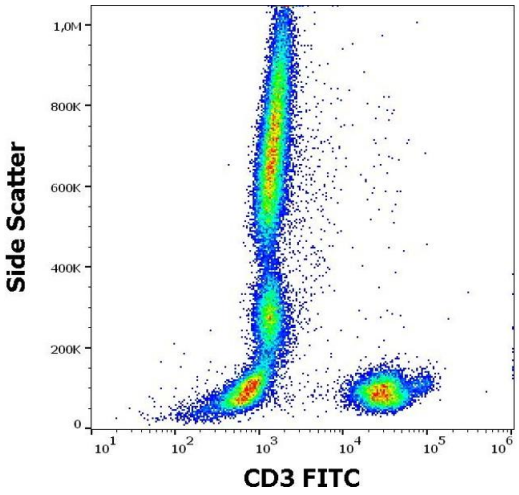
Drbal, Moertelmaier, Holzhauser, Muhammad, Fuertbauer, Howorka, Hinterberger, Stockinger, Schütz: "Single-molecule microscopy reveals heterogeneous dynamics of lipid raft components upon TCR engagement." in: **International immunology**, Vol. 19, Issue 5, pp. 675-84, (2007) (PubMed).

Brdicková, Brdicka, Angelisová, Horváth, Spicka, Hilgert, Paces, Simeoni, Kliche, Merten, Schraven, Horejsí: "LIME: a new membrane Raft-associated adaptor protein involved in CD4 and CD8 coreceptor signaling." in: **The Journal of experimental medicine**, Vol. 198, Issue 10, pp. 1453-62, (2003) (PubMed).

Panyi, Bagdány, Bodnár, Vámosi, Szentesi, Jenei, Mátyus, Varga, Waldmann, Gáspar, Damjanovich: "Colocalization and nonrandom distribution of Kv1.3 potassium channels and CD3 molecules in the plasma membrane of human T lymphocytes." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 100, Issue 5, pp. 2592-7, (2003) (PubMed).

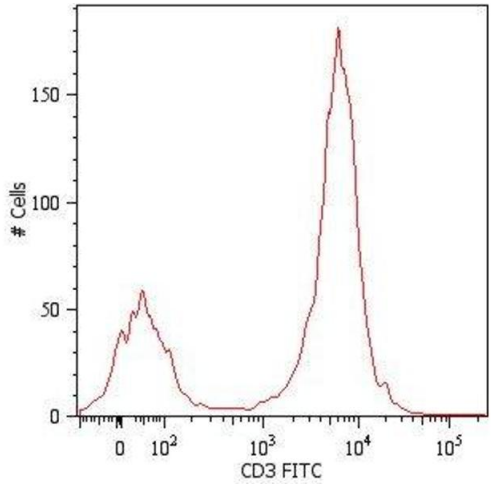
Dave, Cao, Browne, Alarcon, Fernandez-Miguel, Lafaille, de la Hera, Tonegawa, Kappes: "CD3 delta deficiency arrests development of the alpha beta but not the gamma delta T cell lineage." in: **The EMBO journal**, Vol. 16, Issue 6, pp. 1360-70, (1997) (PubMed).

There are more publications referencing this product on: Product page



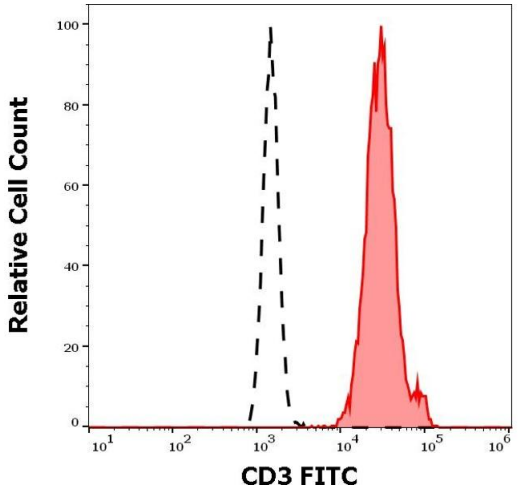
Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD3 (MEM-57) 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 (MEM-57) FITC. Cells in the lymphocyte gate were used for analysis.



Flow Cytometry

Image 3. Separation of human CD3 positive lymphocytes (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD3 (MEM-57) FITC antibody (20 µL reagent / 100 µL of peripheral whole blood).