

Datasheet for ABIN638428

**anti-CD3 antibody****4** Images**8** Publications[Go to Product page](#)

## Overview

|              |   |
|--------------|---|
| Quantity:    | 0.1 mg  |
| Target:      | CD3   |
| Reactivity:  | Human   |
| Host:        | Mouse   |
| Clonality:   | Monoclonal  |
| Conjugate:   | This CD3 antibody is un-conjugated  |
| Application: | Flow Cytometry (FACS), Immunoprecipitation (IP), Functional Studies (Func), Cytometry by Time of Flight (CyTOF) |

## Product Details

|                             |   |
|-----------------------------|---|
| 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 by protein-A affinity chromatography.  |
| Purity:                     | > 95 % (by SDS-PAGE)  |
| Endotoxin Level:            | Endotoxin level is less than 0.01 EU/μg of the protein, as determined by the LAL test.  |

## Target Details

|                   |   |
|-------------------|---|
| Target:           | CD3   |
| Alternative Name: | CD3 ( <a href="#">CD3 Products</a> )  |
| 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:          | <a href="#">P07766</a>  |
| Pathways:         | <a href="#">TCR Signaling</a> , <a href="#">Ubiquitin Proteasome Pathway</a>  |

## Application Details

|                    |   |
|--------------------|---|
| Application Notes: | <p>Immunoprecipitation: The antibody MEM-57 immunoprecipitates from a detergent lysate of surface-radioiodinated T cells a strong zone of about 22 kDa and a weak 28- kDa zone, which is typical pattern yielded by a reference antibody Leu-4 (SK7).</p> <p>Functional application: The antibody MEM-57 has strong mitogenic effect on peripheral T lymphocytes, it reacts strongly with gamma/delta T lymphocytes.</p> <p>Flow cytometry: Recommended dilution: 1-4 µg/mL, positive control: peripheral blood lymphocytes, JURKAT human leukemia T cell line.</p> |
| Restrictions:      | For Research Use only   |
| Handling           |   |
| Concentration:     | 1 mg/mL   |
| Buffer:            | Phosphate buffered saline (PBS), pH 7.4   |
| Preservative:      | Azide free  |

## Handling

|                  |                                |
|------------------|--------------------------------|
| Handling Advice: | <b>Do not freeze.</b>          |
| Storage:         | 4 °C                           |
| Storage Comment: | Store at 2-8°C. 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](#)).

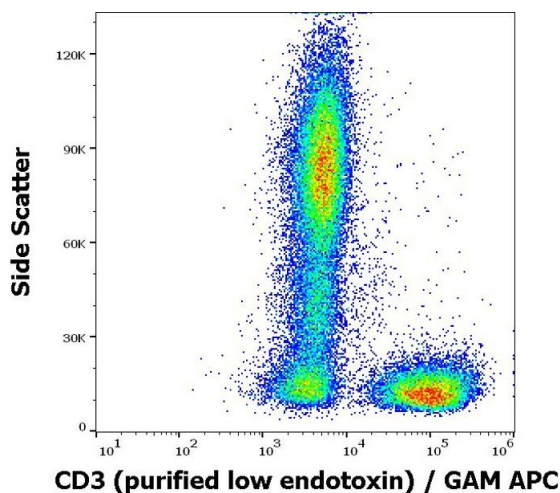
Drbal, Moertelmaier, Holzhauser, Muhammad, Fuertbauer, Howorka, Hinterberger, Stockinger, Schütz: "Single-molecule microscopy reveals heterogeneous dynamics of lipid raft components upon TCR engagement." in: **International immunology**, Vol. 19, Issue 5, pp. 675-84, (2007) ([PubMed](#)).

Panyi, Bagdány, Bodnár, Vámosi, Szentesi, Jenei, Mátyus, Varga, Waldmann, Gáspár, 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](#)).

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](#)).

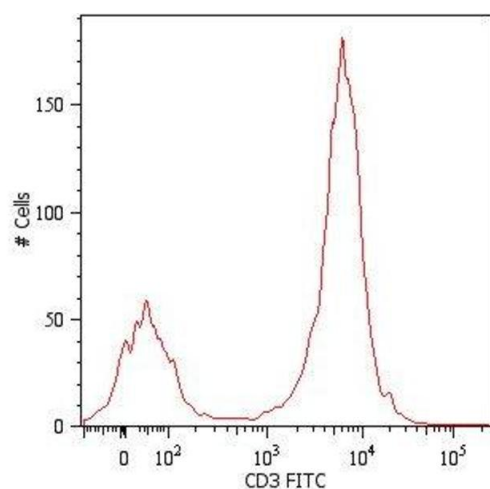
Dave, Cao, Browne, Alarcon, Fernandez-Miguel, Lafaille, de la Hera, Tonegawa, Kappes: "CD3 delta deficiency arrests development of the alpha beta but not the gamma delta T cell lineage." in: **The EMBO journal**, Vol. 16, Issue 6, pp. 1360-70, (1997) ([PubMed](#)).

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



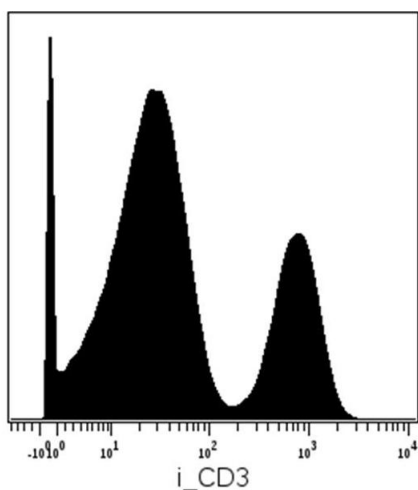
### Flow Cytometry

**Image 1.** Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD3 (MEM-57) purified antibody (low endotoxin, concentration in sample 0,33 µg/mL) GAM APC.



### 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.



### Cytometry by Time of Flight

**Image 3.** Mass cytometry analysis (surface staining) of PBMC after Ficoll-Paque separation with anti-human CD3 (MEM-57) Dy161. Gated on singlets.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN638428.