

anti-human CD3 PE-conjugated

PE -conjugated monoclonal antibody MEM-57 to human CD3

Cat-No: **21270034**

500 µl

Clone: MEM-57 (mouse)

Specificity: The antibody MEM-57 reacts with 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.

HLDA IV.; **WS Code T 96**

Immunogen: Human thymocytes and T lymphocytes.

Isotype subclass: Mouse IgG2a

Form: The purified antibody is conjugated with R-Phycoerythrin (R-PE) under optimum conditions. No reconstitution is necessary.

Expiration date: The reagent is stable until the expiry date stated on the vial label.

Physical state: Liquid

Buffer/Additives/Preservative: PBS containing protease-free BSA and 15 mM sodium azide (pH 7.4)

Storage conditions: Store at 4 °C. Do not freeze. Avoid prolonged exposure to light.

Application: The reagent is designed for Flow Cytometry analysis of human blood cells.

Background: **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.

References:

*Huang Y, Wange RL: T cell receptor signaling: beyond complex complexes. J Biol Chem. 2004 Jul 9;279(28):28827-30.

*Kuhns MS, Davis MM, Garcia KC: Deconstructing the form and function of the TCR/CD3 complex. Immunity. 2006 Feb;24(2):133-9.

Warning:

Sodium azide is harmful if swallowed (R22). Keep out of reach of children (S2). Keep away from food, drink and animal feeding stuff (S13). Wear suitable protective clothing (S36). If swallowed, seek medical advice immediately and show this container or label (S46). Contact with acids liberates very toxic gas (R32). Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions can develop.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

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ImmunoTools GmbH - Altenoyther Str. 10; 26169 Friesoythe; Germany

Tel +49-(0)4491-400997, Fax +49-(0)4491-400998, info@immunotools.com

www.immunotools.com