

A4-381-T025

Monoclonal Antibody to CD3 Alexa Fluor® 488 conjugated (25 tests)

| | |
|-----------------------------|--|
| Clone: | MEM-92 |
| Isotype: | Mouse IgM |
| Specificity: | The antibody MEM-92 reacts with epsilon chain of human CD3 complex, a part of a bigger multisubunit complex of the T cell receptor (CD3/TCR) expressed on peripheral blood T lymphocytes and mature thymocytes. HLDA IV.; WS Code T 97 |
| Immunogen: | Human peripheral blood lymphocytes. |
| Species Reactivity: | Human |
| Preparation: | The purified antibody is conjugated with Alexa Fluor® 488 under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary. |
| Storage Buffer: | The reagent is provided in phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent. |
| Storage / Stability: | Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label. Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user. |
| Usage: | The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.1 ml) is sufficient for 25 tests. |
| Expiration: | See vial label |
| Lot Number: | See vial label |
| 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. |

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****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.
- *Alarcón B, Swamy M, van Santen HM, Schamel WW: T-cell antigen-receptor stoichiometry: pre-clustering for sensitivity. *EMBO Rep.* 2006 May;7(5):490-5.
- *Leukocyte Typing IV., Knapp W. et al. (Eds.), Oxford University Press (1989).
- Soucek J, Hilgert I, Budová I, Lindnerová G: Augmentation of NK cell activity and proliferation in cultured lymphocytes of leukemic patients by monoclonal antibodies CD3 and interleukin-2. *Neoplasma.* 1994;41(2):75-81.
- *Meraner P, Horejsí V, Wolpl A, Fischer GF, Stingl G, Maurer D: Dendritic cells sensitize TCRs through self-MHC-mediated Src family kinase activation. *J Immunol.* 2007 Feb 15;178(4):2262-71.
- *Brdicková N, Brdicka T, Angelisová P, Horváth O, Spicka J, Hilgert I, Paces J, Simeoni L, Kliche S, Merten C, Schraven B, Horejsí V: LIME: a new membrane Raft-associated adaptor protein involved in CD4 and CD8 coreceptor signaling. *J Exp Med.* 2003 Nov 17;198(10):1453-62.
- *Batista A, Millán J, Mittelbrunn M, Sánchez-Madrid F, Alonso MA: Recruitment of transferrin receptor to immunological synapse in response to TCR engagement. *J Immunol.* 2004 Jun 1;172(11):6709-14.
- *Stefanová I, Saville MW, Peters C, Cleghorn FR, Schwartz D, Venzon DJ, Weinhold KJ, Jack N, Bartholomew C, Blattner WA, Yarchoan R, Bolen JB, Horak ID: HIV infection--induced posttranslational modification of T cell signaling molecules associated with disease progression. *J Clin Invest.* 1996 Sep 15;98(6):1290-7.
- *Brdicka T, Imrich M, Angelisová P, Brdicková N, Horváth O, Spicka J, Hilgert I, Lusková P, Dráber P, Novák P, Engels N, Wienands J, Simeoni L, Osterreicher J, Aguado E, Malissen M, Schraven B, Horejsí V: Non-T cell activation linker (NTAL): a transmembrane adaptor protein involved in immunoreceptor signaling. *J Exp Med.* 2002 Dec 16;196(12):1617-26.
- *Stulnig TM, Berger M, Sigmund T, Stockinger H, Horejsí V, Waldhäusl W: Signal transduction via glycosyl phosphatidylinositol-anchored proteins in T cells is inhibited by lowering cellular cholesterol. *J Biol Chem.* 1997 Aug 1;272(31):19242-7.

This product is provided under an agreement between Molecular Probes, Inc. (a wholly owned subsidiary of Invitrogen Corporation), and Exbio Praha, a.s., and the manufacture, use, sale or import of this product may be subject to one or more U.S. patents, pending applications, and corresponding non-U.S. equivalents, owned by Molecular Probes, Inc. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer (whether the buyer is an academic or for-profit entity), including use in flow cytometry that does not utilize a bead based array, but excluding use in combination with microarrays or High Content Screening. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service, information, or data; (3) use of the product or its components for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research. For information on purchasing a license to this product for any other use, contact Molecular Probes, Inc., Business Development, 29851 Willow Creek Road, Eugene, OR 97402, USA, Tel: (541) 465-8300. Fax: (541) 335-0504.

For laboratory research only, not for drug, diagnostic or other use.

EXBIO Praha | Nad Safinou II 341 | 252 42 Vestec u Prahy | Czech Republic
Tel: +420 261 090 664 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz