

Monoclonal Antibody to CD3 delta chain - FITC

Alternate names: CD3D, T-cell surface glycoprotein CD3 delta chain, T3D

Catalog No.:SM253FSQuantity:50 μgConcentration:0.1 mg/ml

Background: 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.

Uniprot ID: P19377

NCBI: <u>NP_037301.1</u>

GenelD: <u>25710</u>

Host / Isotype: Mouse / IgM

Clone: 1F4

Immunogen: F344 rat T cells stimulated with PMA (TPA) and calcium ionophore.

Format: State: Liquid purified IgM fraction.

Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide as preservative and 1% BSA as

stabilizer.

Label: FITC - Fluorescein Isothiocyanate Isomer 1

Applications: Flow cytometry: Use 10 µl of Neat antibody to label 10e6 cells in 100 µl.

Functionally the addition of the antibody to a culture of rat T cells induces the proliferation of T-cells in the presence of PMA (2). We recommend antibody SM253A for this purpose. Other applications not tested. Optimal dilutions are dependent on conditions and should

be determined by the user.

Specificity: SM253F recognises rat CD3, a 25 kD antigen which is found on rat T cells.

SM253F does not react with rat B cells.

Species: Rat.

Other species not tested.



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Storage:

Store the antibody undiluted at 2-8°C or (in aliquots) at -20°C for longer. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing. Shelf life: one year from despatch.

General References: 1. Nicolls, M.G. et al. (1992). Induction of long term specific tolerance to allografts in vivo by therapy with a monoclonal antibody to rat CD3. Transplantation 55: 459-468. 2. Tanaka, T. et al. (1989). Characterization of a CD3-like rat T cells surface antigen

recognised by a monoclonal antibody. J. Immunol. 142: 2791-2795.