Monoclonal Antibody to CD3
Purified Antibody (0.1 mg)

**Clone:** OKT3

**Isotype:** Mouse IgG2a

**Specificity:** The mouse monoclonal antibody OKT3 recognizes the CD3 antigen of the TCR/CD3 complex on mature human T cells. This antibody, also known as Orthoclone OKT3 or Muromonab-CD3, has been extensively used as a drug for therapy of acute, glucocorticoid resistant rejection of allogenic renal, heart and liver transplants. It has also been investigated for use in treating T-cell acute lymphoblastic leukemia.

**Regulatory Status:** RUO

**Immunogen:** Commercially sensitive information

**Species Reactivity:** Human

**Application:** Flow Cytometry

- Recommended dilution: 1 µg/ml
- Immunohistochemistry (frozen sections)
- Functional Application counteracting both generation and function of effector T cells

**Purity:** > 95% (by SDS-PAGE)

**Purification:** Purified by protein-A affinity chromatography

**Concentration:** 1 mg/ml

**Storage Buffer:** Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4

**Storage / Stability:** Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.

**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.
References:

* And many other.

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