

### 30-2596: Anti-Human CD3 PE (Clone : OKT3)

<b>Clonality :</b>	Monoclonal
<b>Clone Name :</b>	OKT3
<b>Application :</b>	FACS
<b>Reactivity :</b>	Human
<b>Conjugate :</b>	PE
<b>Gene :</b>	CD3E
<b>Gene ID :</b>	916
<b>Alternative Name :</b>	CD3E, T3E, TCRE, CD3 antigen, epsilon polypeptide
<b>Isotype :</b>	Mouse IgG2a
<b>Immunogen Information :</b>	Commercially sensitive information

#### Description

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.

**Specificity :** The mouse monoclonal antibody OKT3 recognizes an extracellular epitope on 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.

#### Product Info

<b>Amount :</b>	100 tests
<b>Purification :</b>	The purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.
<b>Content :</b>	Formulation : Stabilizing phosphate buffered saline (PBS) solution containing 15 mM sodium azide
<b>Storage condition :</b>	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light.

#### Application Note

**Flow cytometry:** The reagent is designed for analysis of human blood cells using 10  $\mu$ l reagent / 100  $\mu$ l of whole blood or  $10^6$  cells in a suspension. The content of a vial (1 ml) is sufficient for 100 tests.

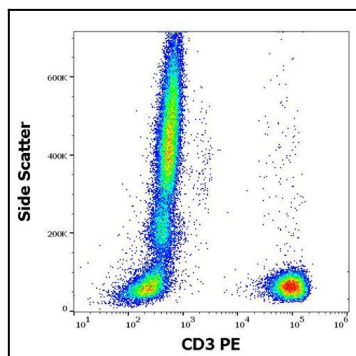


Figure 1 : Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD3 (OKT3) PE antibody (10  $\mu$ l reagent / 100  $\mu$ l of peripheral whole blood).

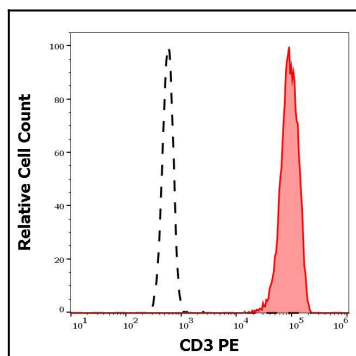


Figure 2 : Separation of human CD3 positive lymphocytes (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD3 (OKT3) PE antibody (10  $\mu$ l reagent / 100  $\mu$ l of peripheral whole blood).