Antibodies

Anti-Human CD3 Antibody, Clone OKT3

Mouse monoclonal IgG2a antibody against human CD3, unconjugated

Catalog #100-0287 100 µg 0.5 mg/mL

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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
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Product Description

The OKT3 antibody reacts with an extracellular conformational epitope on the ~20 kDa CD3ε subunit of the human T cell receptor (TCR)/CD3 complex, which is expressed on the surface of ~95% of mature T cells and NKT cells, and variably on thymocytes. A majority of T cell neoplasms also express CD3. CD3 is a dimer assembled from combinations of CD3γ, δ, ε, η, and ζ subunits, which are structurally related type 1 transmembrane proteins and members of the immunoglobulin superfamily. CD3 associates non-covalently with the TCR and is involved in transducing antigen recognition signals into the cytoplasm of T cells and in regulating T cell activation and the expression of the TCR on the cell surface. Mutations in CD3 have been associated with disorders of the immune system, including severe combined immunodeficiency (SCID). The OKT3 antibody recognizes an epitope that is expressed when the CD3ε subunit associates with either CD3γ or CD3δ, and binding of the antibody can induce T cell activation. Because of its immunosuppressive properties in vivo, the OKT3 antibody has proven useful in treating allograft rejection. Clone OKT3 is widely used for phenotyping human T cells, and it has been observed to block the binding of anti-CD3 antibody clones SK7 and UCHT1.

Target Antigen Name:	CD3
Alternative Names:	CD3 epsilon, CD3ε, Leu-4, T3
Gene ID:	916
Species Reactivity:	Human
Host Species:	Mouse (CAF1)
Clonality:	Monoclonal
Clone:	OKT3
Isotype:	IgG2a, kappa
Immunogen:	Sheep erythrocyte rosette-purified human T cells
Conjugate:	Unconjugated

Applications

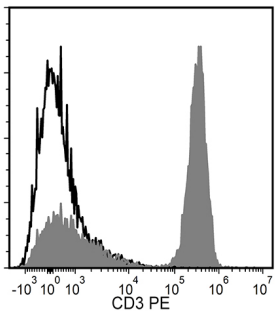
Verified:	FC
Reported:	FA (Activation), FC, IHC, Immunotherapy, RIA, WB

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Stable until expiry date (EXP) on label.
Directions for Use:	For flow cytometry, the suggested use of this reagent is ≤ 0.25 µg per 1 x 10^6 cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD3 Antibody, Clone OKT3, followed by a goat anti-mouse IgG2a antibody, PE (filled histogram) or a mouse IgG2a, kappa isotype control antibody, followed by a goat anti-mouse IgG2a antibody, PE (solid line histogram). Viable lymphocytes were gated for analysis.

Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

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