

# CD3 Monoclonal Antibody (OKT3), APC-eFluor™ 780, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human
Published Species	Non-human primate, Human, Rhesus monkey
Host/Isotype	Mouse / IgG2a, kappa
Class	Monoclonal
Type	Antibody
Clone	OKT3
Conjugate	APC-eFluor™ 780
Excitation/Emission Max	756/785 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.2% BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2573936

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.125 µg)/test	35 Publications

## Product Specific Information

**Description:** The OKT3 monoclonal antibody reacts with an epitope on the epsilon-subunit within the human CD3 complex. The OKT3 antibody has been reported to have potent immunosuppressive properties in vivo and has been proven effective in the treatment of renal, heart and liver allograft rejection. The CD3 subunits, gamma, delta, and epsilon chains, are required for proper assembly, trafficking and surface expression of the TCR complex. CD3 is expressed by thymocytes in a developmentally regulated manner and by all mature T cells. Crosslinking of TCR initiates an intracellular biochemical pathway resulting in cellular activation and proliferation.

**Applications Reported:** This OKT3 antibody has been reported for use in flow cytometric analysis.

**Applications Tested:** This OKT3 antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.125 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test.

APC-eFluor® 780 emits at 780 nm and is excited with the Red laser (633 nm). Please make sure that your instrument is capable of detecting this fluorochrome.

**Light sensitivity:** This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

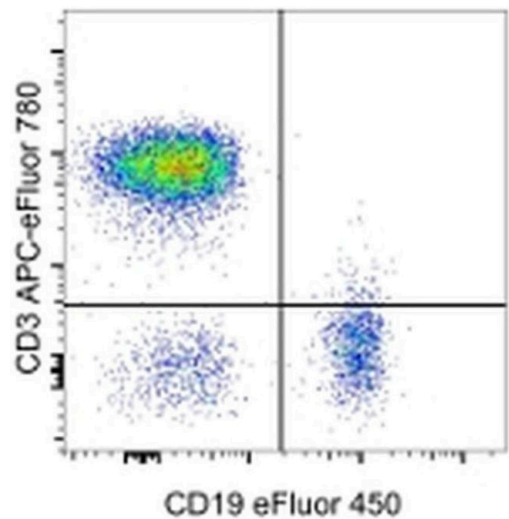
**Fixation:** Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency

/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

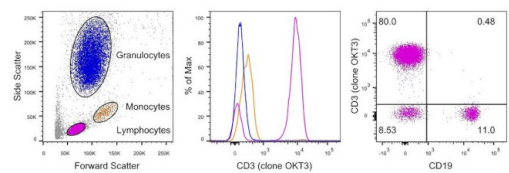
Excitation: 633-647 nm; Emission: 780 nm; Laser: Red Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For CD3 Monoclonal Antibody (OKT3), APC-eFluor™ 780, eBioscience™



**CD3 Antibody (47-0037-42) in Flow**  
Staining of normal human peripheral blood cells with Anti-Human CD19 eFluor® 450 (Product # 48-0199-42) and Anti-Human CD3 APC-eFluor® 780. Cells in the lymphocyte gate were used for analysis.



**CD3 Antibody (47-0037-42)**  
Staining of human peripheral blood cells. As expected based on known relative expression patterns, CD3 clone OKT3 stains a subset of lymphocytes (T cells) and does not stain monocytes and granulocytes (middle plot). Additional analysis of lymphocytes shows that CD3 clone OKT3 does not stain any CD19+ B cells (right plot). Details: Normal human whole blood was surface stained with CD3 (clone OKT3) and CD19 (clone HIB19). After staining, red blood cells were lysed using 1-step Fix/Lyse Buffer. Cells in the lymphocyte (purple histogram), monocyte (orange histogram), or granulocyte (blue histogram) gates were used to compare CD3 staining (middle plot). Cells in the lymphocyte gate were used to compare CD3 and CD19 staining (right plot). {RE}

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### Flow Cytometry (35)

JCI insight

#### Boosting corrects a memory B cell defect in SARS-CoV-2 mRNA-vaccinated patients with inflammatory bowel disease.

"47-0037-42 was used in Flow cytometry/Cell sorting to show that patients with IBD have defects in the formation of antibody-secreting B cells and affinity-matured memory B cells that are corrected by a third vaccination."

Authors: Pape KA,Dileepan T,Matchett WE,Ellwood C,Stresemann S,Kabage AJ,Kozysa D,Evert C,Matson M,Lopez S,Krueger PD,Graiziger CT,Vaughn BP,Shmidt E,Rhein J,Schacker TW,Bold TD,Langlois RA,Khoruts A,Jenkins MK

Year  
2022

Species  
Human

The Journal of experimental medicine

#### Broad and potent neutralizing human antibodies to tick-borne flaviviruses protect mice from disease.

"Published figure using CD3 monoclonal antibody (Product # 47-0037-42) in Flow Cytometry"

Authors: Agudelo M,Palus M,Keeffe JR,Bianchini F,Svoboda P,Salát J,Peace A,Gazumyan A,Cipolla M,Kapoor T,Guidetti F,Yao KH,Elsterová J,Teislerová D,Chrdle A,Hönig V,Oliveira T,West AP,Lee YE,Rice CM,MacDonald MR,Bjorkman PJ,Ržek D,Robbiani DF,Nussenzweig MC

Year  
2021

Species  
Human

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### More applications with references on thermofisher.com

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