

CD3 Monoclonal Antibody (OKT3), Super Bright™ 645, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human
Published Species	Human
Host/Isotype	Mouse / IgG2a, kappa
Recommended Isotype Control	Mouse IgG2a kappa Isotype Control (eBM2a), Super Bright™ 645, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	OKT3
Conjugate	Super Bright™ 645
Excitation/Emission Max	414/645 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2662368

Applications	Tested Dilution	Publications
Immunohistochemistry (IHC)	-	1 Publication
Flow Cytometry (Flow)	5 µL (0.25 µg)/test	12 Publications
Functional Assay (FN)	-	1 Publication

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. Antibody clones OKT3 and SK7 see different epitopes.

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 (0.25 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 10⁵ to 10⁸ cells/test.

Super Bright 645 is a tandem dye that can be excited with the violet laser line (405 nm) and emits at 645 nm. We recommend using a 660/20 bandpass filter. Please make sure that your instrument is capable of detecting this fluorochrome.

When using two or more Super Bright dye-conjugated antibodies in a staining panel, it is recommended to use Super Bright Complete Staining Buffer (Product # SB-4401) to minimize any non-specific polymer interactions. Please refer to the datasheet for Super Bright Staining Buffer for more information.

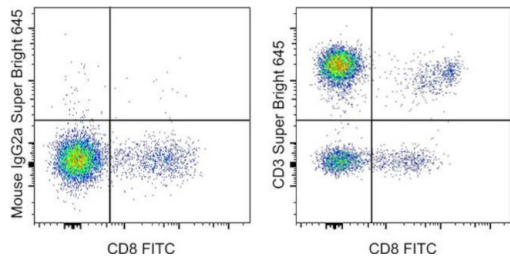
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (Product # 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (Product # 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: 405 nm; Emission: 645 nm; Laser: Violet Laser

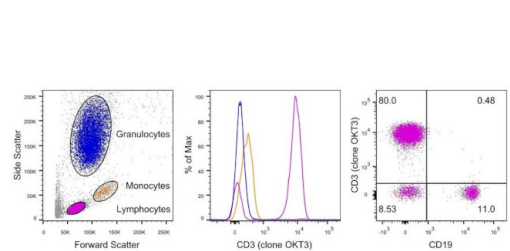
Super Bright Polymer Dyes are sold under license from Becton, Dickinson and Company.

Product Images For CD3 Monoclonal Antibody (OKT3), Super Bright™ 645, eBioscience™



CD3 Antibody (64-0037-42) in Flow

Staining of normal human peripheral blood cells with Anti-Human CD8 FITC (Product # 11-0088-42) and Mouse IgG2a K Isotype Control Super Bright 645 (Product # 64-4724-82) (left) or Anti-Human CD3 Super Bright 645 (right). Cells in the lymphocyte gate were used for analysis.



CD3 Antibody (64-0037-42)

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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Immunohistochemistry (1)

<p>Journal of Cancer</p> <p>IL-2 enhanced MHC class I expression in papillary thyroid cancer with Hashimoto's thyroiditis overcomes immune escape <i>in vitro</i>.</p> <p>"Published figure using CD3 monoclonal antibody (Product # 64-0037-42) in Immunohistochemistry"</p> <p>Authors: Hu JQ,Lei BW,Wen D,Ma B,Zhang TT,Lu ZW,Wei WJ,Wang YL,Wang Y,Li DS, Ji QH,Liao T</p>	<p>Year 2020</p>
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Flow Cytometry (12)

<p>The Journal of experimental medicine</p> <p>Broad and potent neutralizing human antibodies to tick-borne flaviviruses protect mice from disease.</p> <p>"Published figure using CD3 monoclonal antibody (Product # 64-0037-42) in Flow Cytometry"</p> <p>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</p>	<p>Year 2021</p>
<p>The Journal of international medical research</p> <p>Imbalance between T helper 1 and regulatory T cells plays a detrimental role in experimental Parkinson's disease in mice.</p> <p>"Published figure using CD3 monoclonal antibody (Product # 64-0037-42) in Flow Cytometry"</p> <p>Authors: Li W,Luo Y,Xu H,Ma Q,Yao Q</p>	<p>Year 2021</p>

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Functional Assay (1)

<p>The Journal of biological chemistry</p> <p>T cell receptor-dependent S-acylation of ZAP-70 controls activation of T cells.</p> <p>"Published figure using CD3 monoclonal antibody (Product # 64-0037-42) in Functional assay"</p> <p>Authors: Tewari R,Shayahati B,Fan Y,Akimzhanov AM</p>	<p>Year 2021</p>
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