

# CD3 Monoclonal Antibody (UCHT1), Super Bright™ 780, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), Super Bright™ 780, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	UCHT1
Conjugate	Super Bright™ 780
Excitation/Emission Max	413/780 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_2724089

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.5 µg)/test	8 Publications

## Product Specific Information

**Description:** The UCHT1 monoclonal antibody reacts with human CD3ε, a 20 kDa subunit of the TCR complex. Along with the other CD3 subunits gamma and delta, the epsilon chain is 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 via immobilized UCHT1 initiates an intracellular biochemical pathway resulting in cellular activation and proliferation.

**Applications Reported:** This UCHT1 antibody has been reported for use in flow cytometric analysis.

**Applications Tested:** This UCHT1 antibody has been pre-diluted and tested by flow cytometric analysis of normal human peripheral blood cells. This may be used at 5 µL (0.5 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.

Super Bright 780 is a tandem dye that can be excited with the violet laser line (405 nm) and emits at 780 nm. We recommend using a 780/60 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.

In some experiments, we have observed that compensation values for Super Bright 780-conjugated antibodies are higher in

the violet 450/50 channel when using UltraComp eBeads microspheres (Product # 01-2222-42) as compared to single-color stained cells. In such circumstances, we would recommend setting compensation with cells. We have also observed this in some experiments using AbC Total Antibody Compensation beads (Product # A10497).

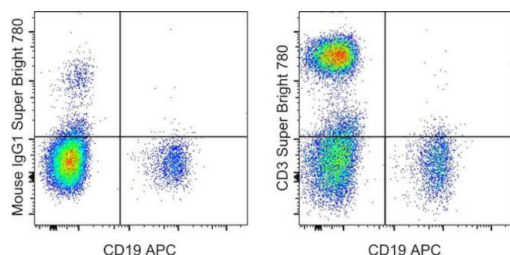
**Light sensitivity:** This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

**Fixation:** Samples can be stored in IC Fixation Buffer (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:** 780 nm; **Laser:** Violet Laser

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

## Product Images For CD3 Monoclonal Antibody (UCHT1), Super Bright™ 780, eBioscience™



### CD3 Antibody (78-0038-42) in Flow

Normal human peripheral blood cells were stained with CD19 Monoclonal Antibody, APC (Product # 17-0199-82) and Mouse IgG1 kappa Isotype Control, Super Bright 780 (Product # 78-4714-82) (left) or CD3 Monoclonal Antibody, Super Bright 780 (right). Cells in the lymphocyte gate were used for analysis.

[View more figures on thermofisher.com](#)

## 8 References

### Flow Cytometry (8)

#### Cell host & microbe

#### Aberrant gut-microbiota-immune-brain axis development in premature neonates with brain damage.

"Published figure using CD3 monoclonal antibody (Product # 78-0038-42) in Flow Cytometry"

Authors: Seki D, Mayer M, Hausmann B, Pjevac P, Giordano V, Goeral K, Unterasinger L, Klebermaß-Schrehof K, De Paepe K, Van de Wiele T, Spittler A, Kasprian G, Warth B, Berger A, Berry D, Wisgrill L

Year  
2021

#### Nature communications

#### Single-cell RNA sequencing reveals ex vivo signatures of SARS-CoV-2-reactive T cells through 'reverse phenotyping'.

"Published figure using CD3 monoclonal antibody (Product # 78-0038-42) in Flow Cytometry"

Authors: Fischer DS, Ansari M, Wagner KI, Jarosch S, Huang Y, Mayr CH, Strunz M, Lang NJ, D'Ippolito E, Hammel M, Mateyka L, Weber S, Wolff LS, Witter K, Fernandez IE, Leuschner G, Milger K, Frankenberger M, Nowak L, Heinig-Menhard K, Koch I, Stoleriu MG, Hilgendorff A, Behr J, Pichlmair A, Schubert B, Theis FJ, Busch DH, Schiller HB, Schober K

Year  
2021

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[More applications with references on thermofisher.com](#)

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