

# CD4 Monoclonal Antibody (GK1.5), Super Bright™ 780, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse
Host/Isotype	Rat / IgG2b, kappa
Recommended Isotype Control	Rat IgG2b kappa Isotype Control (eB149/10H5), Super Bright™ 780, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	GK1.5
Conjugate	Super Bright™ 780
Excitation/Emission Max	413/780 nm
Form	Liquid
Concentration	0.2 mg/mL
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_2722965

Applications	Tested Dilution	Publications
Immunohistochemistry (IHC)	-	5 Publications
Immunohistochemistry (Frozen) (IHC (F))	-	1 Publication
Immunocytochemistry (ICC/IF)	-	2 Publications
Flow Cytometry (Flow)	0.25 µg/test	74 Publications

## Product Specific Information

**Description:** The GK1.5 monoclonal antibody reacts with the mouse CD4 molecule, a 55 kDa cell surface receptor expressed by a majority of thymocytes, subpopulation of mature T cells and dendritic cells. CD4 binds to MHC class II on the surface of antigen presenting cells and plays an important role both in T cell development and in optimal functioning of mature T cells. In T cells, CD4 associates with protein tyrosine kinase p56lck through its cytoplasmic tail. Binding of GK1.5 is blocked by RM4-5.

**Applications Reported:** This GK1.5 antibody has been reported for use in flow cytometric analysis.

**Applications Tested:** This GK1.5 antibody has been tested by flow cytometric analysis of mouse splenocytes. This may be used at less than or equal to 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 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

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.

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

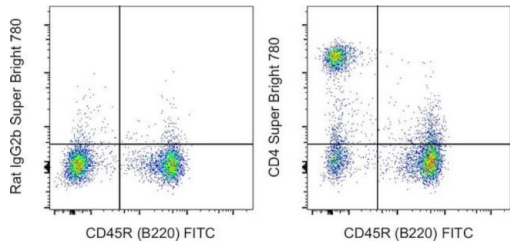
In some experiments, we have observed that compensation values for Super Bright 780-conjugated antibodies are higher in the violet 450/50 channel when using UltraComp eBeads microspheres (Product # 01-2222-42) as compared to single-color stained cells. In such circumstances, we would recommend setting compensation with cells. We have also observed this in some experiments using AbC Total Antibody Compensation beads (Product # A10497).

Fixation: Samples can be stored in IC Fixation Buffer (Product # 00-8222) (100  $\mu$ L of cell sample + 100  $\mu$ L 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 CD4 Monoclonal Antibody (GK1.5), Super Bright™ 780, eBioscience™**



**CD4 Antibody (78-0041-82) in Flow**  
BALB/c mouse splenocytes were stained with CD45R (B220) Monoclonal Antibody, FITC (Product # 11-0452-82) and 0.125  $\mu$ g of Rat IgG2b kappa Isotype Control, Super Bright 780 (Product # 78-4031-82) (left) or 0.125  $\mu$ g of CD4 Monoclonal Antibody, Super Bright 780 (right). Cells in the lymphocyte gate were used for analysis.

**View more figures on [thermofisher.com](https://thermofisher.com)**

Immunohistochemistry (5)

Cell reports	Year 2022
<b>Btla signaling in conventional and regulatory lymphocytes coordinately tempers humoral immunity in the intestinal mucosa.</b>	
"Published figure using CD4 monoclonal antibody (Product # 78-0041-82) in Immunohistochemistry"	
Authors: Stienne C,Virgen-Slane R,Elmén L,Veny M,Huang S,Nguyen J,Chappell E,Balmer MO,Shui JW,Hurchla MA, Kronenberg M,Peterson SN,Murphy KM,Ware CF,Šedý JR	
Cancers	Year 2021
<b>Targeting Ovarian Carcinoma with TSP-1:CD47 Antagonist TAX2 Activates Anti-Tumor Immunity.</b>	
"Published figure using CD4 monoclonal antibody (Product # 78-0041-82) in Flow Cytometry"	
Authors: Jeanne A,Sarazin T,Charlé M,Moali C,Fichel C,Boulagnon-Rombi C,Callewaert M,Andry MC,Diesis E,Delolme F,Rioul D,Dedieu S	

View more IHC references on thermofisher.com

Immunohistochemistry (Frozen) (1)

International journal of molecular sciences	Year 2021
<b>Positive Effects of Oral Antibiotic Administration in Murine Chronic Graft-Versus-Host Disease.</b>	
"Published figure using CD4 monoclonal antibody (Product # 78-0041-82) in Immunohistochemistry"	
Authors: Sato S,Shimizu E,He J,Ogawa M,Asai K,Yazu H,Rusch R,Yamane M,Yang F,Fukuda S,Kawakami Y,Tsubota K,Ogawa Y	

Immunocytochemistry (2)

Nature nanotechnology	Year 2021
<b>Cell-mimicking nanodecoys neutralize SARS-CoV-2 and mitigate lung injury in a non-human primate model of COVID-19.</b>	
"Published figure using CD4 monoclonal antibody (Product # 78-0041-82) in Immunocytochemistry"	
Authors: Li Z,Wang Z,Dinh PC,Zhu D,Popowski KD,Lutz H,Hu S,Lewis MG,Cook A,Andersen H,Greenhouse J,Pessaint L,Lobo LJ,Cheng K	

More applications with references on thermofisher.com

Flow (74)

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