

CD4 Monoclonal Antibody (RM4-5), Super Bright™ 780, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), Super Bright™ 780, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	RM4-5
Conjugate	Super Bright™ 780
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_2722967

Applications	Tested Dilution	Publications
Immunohistochemistry (IHC)	-	4 Publications
Immunohistochemistry (PFA fixed) (IHC (PFA))	-	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	-	1 Publication
Immunocytochemistry (ICC/IF)	-	3 Publications
Flow Cytometry (Flow)	0.5 µg/test	34 Publications

Product Specific Information

Description: The RM4-5 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 RM4-5 is blocked by GK1.5.

Applications Reported: The RM4-5 antibody has been reported for use in flow cytometric analysis.

Applications Tested: The RM4-5 antibody has been tested by flow cytometric analysis of mouse thymocytes and splenocytes. This can be used at less than or equal to 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 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

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

filter, or equivalent. 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).

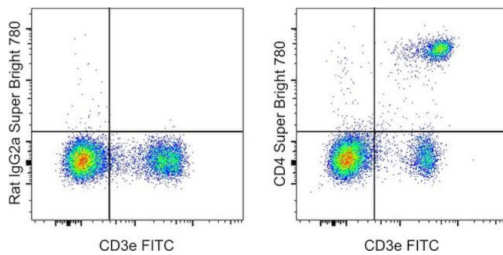
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (Product # 00-8222) (100 μ L of cell sample + 100 μ 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 (RM4-5), Super Bright™ 780, eBioscience™



CD4 Antibody (78-0042-82) in Flow

C57BL/6 mouse splenocytes were stained with CD3e Monoclonal Antibody, FITC (Product # 11-0031-82) and 0.25 μ g of Rat IgG2a kappa Isotype Control, Super Bright 780 (Product # 78-4321-82) (left) or 0.25 μ g of CD4 Monoclonal Antibody, Super Bright 780 (right). Total viable cells were used for analysis, as determined by 7-AAD (Product # 00-6993-50).

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

Immunohistochemistry (4)

<p>Cancers</p> <p>Epithelial Mutant p53 Promotes Resistance to Anti-PD-1-Mediated Oral Cancer Immunoprevention in Carcinogen-Induced Mouse Models.</p> <p>"Published figure using CD4 monoclonal antibody (Product # 78-0042-82) in Immunohistochemistry"</p> <p>Authors: Wang J,Hu Y,Escamilla-Rivera V,Gonzalez CL,Tang L,Wang B,El-Naggar AK,Myers JN,Caulin C</p>	<p>Year 2021</p>
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<p>Advanced science (Weinheim, Baden-Wurttemberg, Germany)</p> <p>Prodrug-Loaded Zirconium Carbide Nanosheets as a Novel Biophotonic Nanoplatfrom for Effective Treatment of Cancer.</p> <p>"Published figure using CD4 monoclonal antibody (Product # 78-0042-82) in Immunohistochemistry"</p> <p>Authors: Liu Q,Xie Z,Qiu M,Shim I,Yang Y,Xie S,Yang Q,Wang D,Chen S,Fan T,Ding B,Guo Z,Adah D,Yao X,Zhang Y, Wu H,Wu Z,Wei C,Wang H,Kim HS,Zou Q,Yan Q,Cai Z,Kim JS,Liu LP,Zhang H,Cao Y</p>	<p>Year 2020</p>
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Immunohistochemistry (PFA fixed) (1)

<p>Immunity</p> <p>T Cell Recruitment to the Intestinal Stem Cell Compartment Drives Immune-Mediated Intestinal Damage after Allogeneic Transplantation.</p> <p>"Published figure using CD4 monoclonal antibody (Product # 78-0042-82) in Immunocytochemistry"</p> <p>Authors: Fu YY,Egorova A,Sobieski C,Kuttiyara J,Calafiore M,Takashima S,Clevers H,Hanash AM</p>	<p>Year 2019</p>
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Immunohistochemistry (Frozen) (1)

<p>Biology</p> <p>Increased Levels of IL-16 in the Central Nervous System during Neuroinflammation Are Associated with Infiltrating Immune Cells and Resident Glial Cells.</p> <p>"Published figure using CD4 monoclonal antibody (Product # 78-0042-82) in Immunohistochemistry (Frozen)"</p> <p>Authors: Hridi SU,Barbour M,Wilson C,Franssen AJ,Harte T,Bushell T J,Jiang HR</p>	<p>Year 2021</p>
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More applications with references on thermofisher.com

ICC/IF (3) **Flow (34)**

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