

# CD4 Monoclonal Antibody (RM4-5), PE, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse, Human
Host/Isotope	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	RM4-5
Conjugate	PE
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage Conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_465510

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.125 µg/test	87 Publications
Miscellaneous PubMed (Misc)	-	2 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.

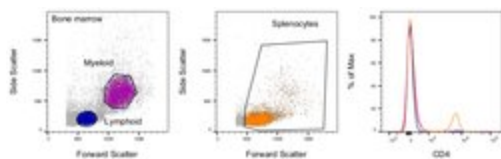
**Applications Reported:** The RM4-5 antibody has been reported for use in flow cytometric analysis.

**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 0.125 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. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

**Excitation:** 488-561 nm; **Emission:** 578 nm; **Laser:** Blue Laser, Green Laser, Yellow-Green Laser.

**Filtration:** 0.2 µm post-manufacturing filtered.

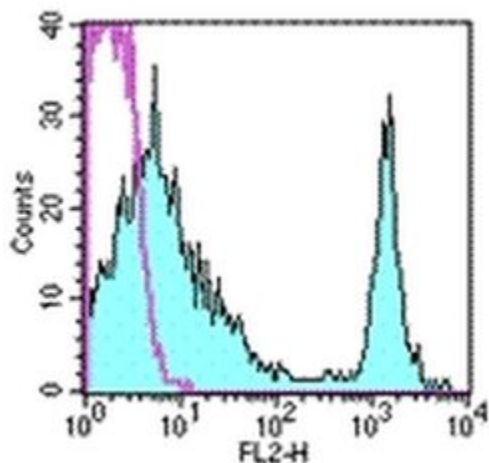
## Advanced Verification Data



### CD4 Antibody (12-0042-82)

Staining of mouse splenocytes and bone marrow cells. Right: As expected based on known relative expression patterns, CD4 clone RM4-5 stains a subset of splenocytes and does not stain any bone marrow cells. Details: Balb/c bone marrow cells (left) and splenocytes (middle) were surface stained with CD4 (clone RM4-5) followed by staining with 7-AAD. Viable bone marrow cells in the lymphoid (blue histogram) and myeloid (purple histogram) gates and viable splenocytes (orange histogram) were used for analysis. Relative expression validation info.

## Product Images For CD4 Monoclonal Antibody (RM4-5), PE, eBioscience™



### CD4 Antibody (12-0042-82) in Flow

Staining of BALB/c splenocytes with staining buffer (autofluorescence) (open histogram) or 0.125 µg of Anti-Mouse CD4 PE (filled histogram). Total viable cells were used for analysis.

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

## Flow Cytometry (87)

### Frontiers in neurology

#### IL-2/Anti-IL-2 Complex Attenuates Inflammation and BBB Disruption in Mice Subjected to Traumatic Brain Injury.

"Published figure using CD4 monoclonal antibody (Product # 12-0042-82) in Flow Cytometry"

Authors: Gao W, Li F, Zhou Z, Xu X, Wu Y, Zhou S, Yin D, Sun D, Xiong J, Jiang R, Zhang J

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2020

### Oncoimmunology

#### Anti-melanoma vaccines engineered to simultaneously modulate cytokine priming and silence PD-L1 characterized using *ex vivo* myeloid-derived suppressor cells as a readout of therapeutic efficacy.

"12-0042 was used in Flow cytometry/Cell sorting to show that the simultaneous delivery of IL12 and a PD-L1-silencing shRNA exhibits therapeutically relevant anti-tumour activities."

Authors: Liechtenstein T, Perez-Janices N, Blanco-Luquin I, Goyvaerts C, Schwarze J, Dufait I, Lanna A, Ridder M, Guerrero-Setas D, Breckpot K, Escors D

**Species**  
Mouse

**Dilution**  
Not Cited

**Year**  
2020

[View more Flow references on thermofisher.com](#)

## Miscellaneous PubMed (2)

### Journal of immunology (Baltimore, Md. : 1950)

#### IFN-gamma promotes generation of IL-10 secreting CD4+ T cells that suppress generation of CD8 responses in an antigen-experienced host.

"12-0042 was used in Flow cytometry/Cell sorting to study the mechanism by which CD8 T cell response is inhibited by CD4(+) T cells in antigen-experienced hosts, showing that IL-10 secretion by CD4(+) cells is enhanced by IFN-gamma signalling, which then inhibits CD8 generation, suggesting that inhibition of IL-10 and IFN-gamma could increase antitumor effect when used in conjunction with antigen immunotherapy."

Authors: Liu XS, Leerberg J, MacDonald K, Leggatt GR, Frazer IH

**Species**  
Mouse

**Dilution**  
Not Cited

**Year**  
2009

### PLoS pathogens

#### Endothelial cells support persistent gammaherpesvirus 68 infection.

"12-0042 was used in Magnetic cell separation to investigate the role of endothelial cells in gammaherpesvirus 68 infection."

Authors: Suárez AL, van Dyk LF

**Species**  
Mouse

**Dilution**  
Not Cited

**Year**  
2008

## More applications with references on thermofisher.com

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, *in vitro* diagnostic uses, *ex vivo* or *in vivo* therapeutic uses, or any type of consumption by or application to human or animals.