

Purified anti-mouse CD4 Antibody

Catalog# / Size	100505 / 50 µg 100506 / 500 µg
Clone	RM4-5
Regulatory Status	RUO
Other Names	L3T4, T4
Isotype	Rat IgG2a, κ
Description	CD4 is a 55 kD protein also known as L3T4 or T4. It is a member of the Ig superfamily, primarily expressed on most thymocytes and a subset of T cells, and weakly on macrophages and dendritic cells. It acts as a co-receptor with the TCR during T cell activation and thymic differentiation by binding MHC class II and associating with the protein tyrosine kinase lck.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	BALB/c mouse thymocytes
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested CyTOF®. IHC-F - Verified IHC - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 µg per million cells in 100 µl volume. For immunohistochemistry on frozen tissue sections, a concentration range of 5.0 - 10 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	The RM4-5 antibody blocks the binding of GK1.5 antibody and H129.19 antibody to CD4 ⁺ T cells, but not RM4-4 antibody. Additional reported applications (for the relevant formats) include: blocking of ligand binding, <i>in vivo</i> depletion of CD4 ⁺ cells ¹ , and immunohistochemistry of acetone-fixed frozen tissue sections ^{2,3,11} and paraffin-embedded sections ¹¹ . Clone RM4-5 is not recommended for immunohistochemistry of formalin-fixed paraffin sections. Instead, acetone frozen or zinc-fixed paraffin sections are recommended. The Ultra-LEAF™ Purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 100575 and 100576).
Application References	<ol style="list-style-type: none"> 1. Kruisbeek AM. 1991. <i>In Curr. Protocols Immunol.</i> pp. 4.1.1-4.1.5. (Block, Deplete) 2. Nitta H, <i>et al.</i> 1997. <i>Cell Vision</i> 4:73. (IHC) 3. Fan WY, <i>et al.</i> 2001. <i>Exp. Biol. Med.</i> 226:1045. 4. Muraille E, <i>et al.</i> 2003. <i>Infect. Immun.</i> 71:2704. (IHC) 5. León-Ponte M, <i>et al.</i> 2007. <i>Blood</i> 109:3139. (FC) 6. Bourdeau A, <i>et al.</i> 2007. <i>Blood</i> doi:10.1182/blood-2006-08-044370. (FC) 7. Matsumoto M, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:2499. PubMed 8. Shigeta A, <i>et al.</i> 2008. <i>Blood</i> 112:4915. PubMed 9. Zaborsky N, <i>et al.</i> 2010. <i>J. Immunol.</i> 184:725. PubMed 10. Rodrigues-Manzanet R, <i>et al.</i> 2010. <i>P. Natl Acad Sci USA</i> 107:8706. PubMed 11. Whiteland JL, <i>et al.</i> 1995. <i>J. Histochem. Cytochem.</i> 43:313. (IHC)
(PubMed link indicates BioLegend citation)	

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RRID AB_312708 (BioLegend Cat. No. 100505)
 AB_312709 (BioLegend Cat. No. 100506)

Antigen Details

Structure	Ig superfamily, 55 kD
Distribution	Majority of thymocytes, T cell subset
Function	TCR co-receptor, T cell activation
Ligand/Receptor	MHC class II molecule
Cell Type	Dendritic cells, T cells, Thymocytes, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules
Antigen References	1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press. 2. Bierer BE, <i>et al.</i> 1989. <i>Annu. Rev. Immunol.</i> 7:579. 3. Janeway CA. 1992. <i>Annu. Rev. Immunol.</i> 10:645.
Gene ID	12504

Related Protocols

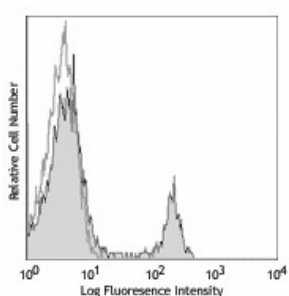
[Immunohistochemistry Protocol for Frozen Sections](#)

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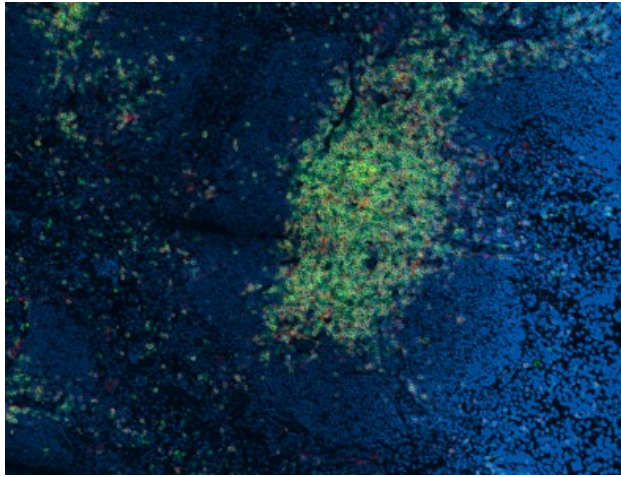
Other Formats

APC anti-mouse CD4, Biotin anti-mouse CD4, FITC anti-mouse CD4, PE anti-mouse CD4, PE/Cyanine5 anti-mouse CD4, Purified anti-mouse CD4, PE/Cyanine7 anti-mouse CD4, APC/Cyanine7 anti-mouse CD4, Alexa Fluor® 647 anti-mouse CD4, Alexa Fluor® 488 anti-mouse CD4, Pacific Blue™ anti-mouse CD4, Alexa Fluor® 700 anti-mouse CD4, PerCP anti-mouse CD4, PerCP/Cyanine5.5 anti-mouse CD4, Brilliant Violet 421™ anti-mouse CD4, APC/Fire™ 750 anti-mouse CD4, Brilliant Violet 570™ anti-mouse CD4, Brilliant Violet 605™ anti-mouse CD4, Brilliant Violet 650™ anti-mouse CD4, Brilliant Violet 711™ anti-mouse CD4, Brilliant Violet 785™ anti-mouse CD4, Brilliant Violet 510™ anti-mouse CD4, Purified anti-mouse CD4 (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse CD4, TotalSeq™-A0001 anti-mouse CD4, TotalSeq™-B0001 anti-mouse CD4, TotalSeq™-C0001 anti-mouse CD4, Ultra-LEAF™ Purified anti-mouse CD4, Spark Violet™ 423 anti-mouse CD4 (L3T4) Antibody

Product Data



C57BL/6 mouse splenocytes stained with purified CD4 (clone RM4-5) (filled histogram) or purified rat IgG2a, κ isotype control (open histogram).



C57BL/6 mouse frozen spleen section was fixed with 4% paraformaldehyde (PFA) for 10 minutes at room temperature and blocked with 5% FBS for 30 minutes at room temperature. Then the section was stained with 10 µg/ml of purified anti-mouse CD4 (clone RM4-5), and anti-mouse CD3ε (clone 500A2) Alexa Fluor® 594 (green) overnight at 4°C, followed by 2.5 µg/mL of Alexa Fluor® 647 anti-rat IgG (clone Poly4054) (red) for two hours at room temperature. Nuclei were counterstained with DAPI (blue). The image was captured by 10X objective.

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