

Datasheet: MCA4635PE

Description:	RAT ANTI MOUSE CD4:RPE
Specificity:	CD4
Other names:	L3T4 ANTIGEN, LY-4
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	GK1.5
Isotype:	IgG2b
Quantity:	100 TESTS

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Mouse		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)		
	1% Bovine Serum Albumin		
	5% Sucrose		
Immunogen	Murine CD4.		
External Database Links	UniProt:		
	P06332	Related reagents	

Entrez Gene:

[12504](#) Cd4 [Related reagents](#)

Fusion Partners	Spleen cells from immunised Lewis rats were fused with cells of the SP2/0 myeloma cell line.
Specificity	Rat anti Mouse CD4 antibody, clone GK1.5 recognizes mouse CD4, a ~55 kDa protein also known as Ly-4 and L3T4. CD4 is a single chain transmembraneous glycoprotein which belongs to the immunoglobulin superfamily, and is primarily expressed on T helper cells, peripheral blood monocytes and tissue macrophages. CD4 is also expressed on a subpopulation of regulatory T cells (CD4⁺ CD25⁺), which play a key role in the maintenance of self tolerance. Rat anti Mouse CD4 antibody, clone GK1.5 has been reported to block CD4⁺ T-cell activation. It blocks class II MHC antigen-specific binding, thereby inhibiting functions such as class II MHC antigen-specific proliferation and the release of lymphokines. It may also be used for <i>in vivo</i> and <i>in vitro</i> cell depletion of CD4⁺ T-cells.
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10⁶ cells in 100ul. The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR (BUF041A/B).
References	1. Dialynas, D.P. <i>et al.</i> (1983) Characterization of the murine T cell surface molecule, designated L3T4, identified by monoclonal antibody GK1.5: similarity of L3T4 to the human Leu-3/T4 molecule. J Immunol. 131 (5): 2445-51. 2. Wilde, D.B. <i>et al.</i> (1983) Evidence implicating L3T4 in class II MHC antigen reactivity; monoclonal antibody GK1.5 (anti-L3T4a) blocks class II MHC antigen-specific proliferation, release of lymphokines, and binding by cloned murine helper T lymphocyte lines. J Immunol. 131 (5): 2178-83. 3. Dialynas, D.P. <i>et al.</i> (1983) Characterization of the murine antigenic determinant, designated L3T4a, recognized by monoclonal antibody GK1.5: expression of L3T4a by functional T cell clones appears to correlate primarily with class II MHC antigen-reactivity. Immunol Rev. 74: 29-56. 4. Zhou, Z. <i>et al.</i> (2011) Autoreactive marginal zone B cells enter the follicles and interact with CD4⁺ T cells in lupus-prone mice. BMC Immunol. 12: 7. 5. Näher, H. <i>et al.</i> (1985) Dynamics of T cells of L3T4 and Ly 2 phenotype within granulomas in murine listeriosis. Clin Exp Immunol. 60 (3): 559-64. 6. Ye, X. <i>et al.</i> (2000) Transient depletion of CD4 lymphocyte improves efficacy of repeated administration of recombinant adenovirus in the ornithine transcarbamylase deficient sparse fur mouse. Gene Ther. 7 (20): 1761-7. 7. Chu, N.R. <i>et al.</i> (2000) Immunotherapy of a human papillomavirus (HPV) type 16 E7-expressing tumour by administration of fusion protein comprising <i>Mycobacterium bovis</i> bacille Calmette-Guérin (BCG) hsp65 and HPV16 E7. Clin Exp Immunol. 121:216-25 8. Pletinckx, K. <i>et al.</i> (2015) Immature dendritic cells convert anergic nonregulatory T cells into Foxp3- IL-10⁺ regulatory T cells by engaging CD28 and CTLA-4. Eur J Immunol. 45 (2): 480-91. 9. Foy, S.P. <i>et al.</i> (2016) Poxvirus-Based Active Immunotherapy with PD-1 and LAG-3 Dual Immune Checkpoint Inhibition Overcomes Compensatory Immune Regulation, Yielding Complete Tumor Regression in Mice. PLoS One. 11 (2): e0150084. 10. Steinl, D.C. <i>et al.</i> (2016) Noninvasive Contrast-Enhanced Ultrasound Molecular Imaging Detects Myocardial Inflammatory Response in Autoimmune Myocarditis. Circ Cardiovasc Imaging. 9 (8): . 11. Olesen, M. N. <i>et al.</i> (2018) CD4 T cells react to local increase of α-synuclein in a pathology-associated variant-dependent manner and modify brain microglia in absence of brain pathology Heliyon. 4 (1): e00513.

Storage	Prior to reconstitution store at +4°C. Following reconstitution store at +4°C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	12 months from date of reconstitution.
Health And Safety Information	Material Safety Datasheet documentation #10075 available at: 10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf
Regulatory	For research purposes only

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