

Datasheet: MCA4635PE

BATCH NUMBER 155134

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](#)

RRID

AB_10612250

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 *in vivo* and *in vitro* 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

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2. Wilde, D.B. *et al.* (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. *et al.* (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. *et al.* (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. *et al.* (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. *et al.* (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. *et al.* (2000) Immunotherapy of a human papillomavirus (HPV) type 16 E7-expressing tumour by administration of fusion protein comprising *Mycobacterium bovis* bacille Calmette-Guérin (BCG) hsp65 and HPV16 E7. [Clin Exp Immunol. 121:216-25](#)
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9. Foy, S.P. *et al.* (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. *et al.* (2016) Noninvasive Contrast-Enhanced Ultrasound Molecular Imaging Detects Myocardial Inflammatory Response in Autoimmune Myocarditis. [Circ Cardiovasc Imaging. 9 \(8\): .](#)
11. Olesen, M. N. *et al.* (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.](#)
12. Jalili, R.B. *et al.* (2018) Fibroblast cell-based therapy prevents induction of alopecia areata in an experimental model. [Cell Transplant. 27 \(6\): 994-1004.](#)
13. Zheng, Z. *et al.* (2022) *In Vivo*. Inhibition of TRPC6 by SH045 Attenuates Renal Fibrosis in a New Zealand Obese (NZO) Mouse Model of Metabolic Syndrome. [Int J Mol Sci. 23\(12\):6870.](#)

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.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA4635PE>
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Regulatory

For research purposes only

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