

Datasheet: MCA4635F

Description:	RAT ANTI MOUSE CD4:FITC
Specificity:	CD4
Other names:	L3T4 ANTIGEN, LY-4
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	GK1.5
Isotype:	IgG2b
Quantity:	0.1 mg

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 - 1/100

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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525
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		
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml		

Immunogen	Murine CD4.
External Database Links	<p>UniProt: P06332 Related reagents</p> <p>Entrez Gene: 12504 Cd4 Related reagents</p>
RRID	AB_2075568
Fusion Partners	Spleen cells from immunised Lewis rats were fused with cells of the SP2/0 myeloma cell line.
Specificity	<p>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.</p> <p>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.</p>
Flow Cytometry	<p>Use 10ul of the suggested working dilution to label 1x10⁶ cells in 100ul.</p> <p>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).</p>
References	<ol style="list-style-type: none"> 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. 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. 4. 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. 5. 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 6. 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.

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10. 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.](#)
11. 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.](#)
12. 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.](#)

Further Reading	1. 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.
Storage	<p>This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p>
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA4635F 10041
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M385849:210513'

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