

## Datasheet: MCA4635T

**BATCH NUMBER 167266**

<b>Description:</b>	RAT ANTI MOUSE CD4
<b>Specificity:</b>	CD4
<b>Other names:</b>	L3T4 ANTIGEN, LY-4
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	GK1.5
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	25 µg

## 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/10 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting	▪			
Immunofluorescence	▪			

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.

<b>Target Species</b>	Mouse
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative</b>	0.09% Sodium Azide

## Stabilisers

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Carrier Free Yes

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Approx. Protein Concentrations IgG concentration 1.0 mg/ml

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Immunogen Murine CD4.

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## External Database Links

**UniProt:**  
[P06332](#) [Related reagents](#)

**Entrez Gene:**  
[12504](#) Cd4 [Related reagents](#)

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RRID AB\_1898234

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**Fusion Partners** Spleen cells from immunised Lewis rats were fused with cells of the SP2/0 myeloma cell line.

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**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 transmembrane 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<sup>+</sup> CD25<sup>+</sup>), 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<sup>+</sup> 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<sup>+</sup> T-cells.

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**Flow Cytometry** Use 10ul of the suggested working dilution to label 1x10<sup>6</sup> cells in 100ul.

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## References

1. Dialynas, D.P. *et al.* (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. *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. 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.](#)
4. 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.](#)
5. 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](#)
6. 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.](#)
7. Pletinckx, K. *et al.* (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.](#)
8. 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.](#)
9. Steinl, D.C. *et al.* (2016) Noninvasive Contrast-Enhanced Ultrasound Molecular Imaging Detects Myocardial Inflammatory Response in Autoimmune Myocarditis. [Circ Cardiovasc Imaging. 9 \(8\): .](#)
10. Olesen, M. N. *et al.* (2018) CD4 T cells react to local increase of  $\alpha$ -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.](#)

<b>Further Reading</b>	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. <a href="#">Immunol Rev. 74: 29-56.</a>
<b>Storage</b>	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.  Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA4635T">https://www.bio-rad-antibodies.com/SDS/MCA4635T</a> 10040
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

- Goat Anti Rat IgG (STAR69...) [FITC](#)
- Goat Anti Rat IgG (STAR73...) [RPE](#)
- Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) [DyLight®550](#), [DyLight®650](#), [DyLight®800](#)

Rabbit Anti Rat IgG (STAR21...)

[HRP](#)

Rabbit Anti Rat IgG (STAR16...)

[DyLight@800](#)

Goat Anti Rat IgG (STAR131...)

[Alk. Phos., Biotin](#)

Rabbit Anti Rat IgG (STAR17...)

[FITC](#)

Goat Anti Rat IgG (STAR72...)

[HRP](#)

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