Datasheet: MCA4635EL

Description:	RAT ANTI MOUSE CD4:Low Endotoxin
Specificity:	CD4
Other names:	L3T4 ANTIGEN, LY-4
Format:	Low Endotoxin
Product Type:	Monoclonal Antibody
Clone:	GK1.5
Isotype:	IgG2b
Quantity:	0.5 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	▪			1/25 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting	▪			
Immunofluorescence	▪			
Functional Assays	▪			

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 - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	None present

Carrier Free	Yes
Endotoxin Level	< 0.01 EU/ug
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Murine CD4.
External Database Links	**UniProt:** P06332 Related reagents **Entrez Gene:** 12504 Cd4 Related reagents
RRID	AB_1833754
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 $1x10^6$ cells in 100ul.
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.
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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. *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.
Storage	Store at -20^{o}C only. This product should be stored undiluted. Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. 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 #10162 available at: https://www.bio-rad-antibodies.com/SDS/MCA4635EL 10162
Regulatory	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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