

Datasheet: MCA834GA

Description:	MOUSE ANTI BOVINE CD4
Specificity:	CD4
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CC30
Isotype:	IgG1
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	■			1/25 - 1/200
Immunohistology - Frozen	■			1/100
Immunohistology - Paraffin (1)	■			
ELISA			■	
Immunoprecipitation	■			
Western Blotting			■	

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.

(1)

Clone CC30 has been reported as being suitable for use on formal dichromate (FD5) fixed paraffin embedded tissue with amplification and antigen retrieval techniques, see [Gutierrez et al.](#) for details.

Target Species	Bovine
Species Cross Reactivity	Reacts with: Bison N.B. Antibody reactivity and working conditions may vary between species.
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	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes

Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Bovine thymocytes.
External Database Links	UniProt: A7YY52 Related reagents
Fusion Partners	Spleen cells from an immunised mouse were fused with cells of the mouse NS1 myeloma cell line.
Specificity	Mouse anti Bovine CD4 antibody, clone CC30 recognizes a ~50 kDa transmembrane molecule considered to be the bovine homologue of human CD4. The phenotype, tissue distribution and function of T-cells expressing the bovine CD4 antigen are similar to those in other species. However, expression on macrophages has not yet been detected. Mouse anti Bovine CD4, clone CC30 has successfully been used for immunohistochemical localization of CD4 on paraffin embedded material using zinc salt fixation (Cantón et al. 2013). Additionally, clone CC30 has been reported as being suitable for use on formal dichromate (FD5) fixed paraffin embedded tissue with amplification and antigen retrieval techniques (Gutierrez et al. 1999).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. Bensaid, A. & Hadam, M. (1991) Individual antigens of cattle. Bovine CD4 (BoCD4). Vet Immunol Immunopathol. 27 (1-3): 51-4. 2. Eskra, L. et al. (1991) Effect of monoclonal antibodies on in vitro function of T-cell subsets. Vet Immunol Immunopathol. 27 (1-3): 215-22. 3. Gutierrez, M. et al. (1999) The detection of CD2+, CD4+, CD8+, and WC1+ T lymphocytes, B cells and macrophages in fixed and paraffin embedded bovine tissue using a range of antigen recovery and signal amplification techniques. Vet Immunol Immunopathol. 71 (3-4): 321-34. 4. Winkler, M.T. et al. (1999) Bovine herpesvirus 1 can infect CD4(+) T lymphocytes and induce programmed cell death during acute infection of cattle. J Virol. 73 (10): 8657-68. 5. Winkler, M.T. et al. (2000) Persistence and reactivation of bovine herpesvirus 1 in the tonsils of latently infected calves. J Virol. 74 (11): 5337-46. 6. Riondato, F. et al. (2008) Effects of road transportation on lymphocyte subsets in calves Vet J. 175: 364-8. 7. Collins, R.A. et al. (1999) Bovine interleukin-12 and modulation of IFNgamma production. Vet Immunol Immunopathol. 68: 193-207. 8. Liebana, E. et al. (2007) Distribution and activation of T-lymphocyte subsets in tuberculous bovine lymph-node granulomas. Vet Pathol. 44: 366-72. 9. Sühwold, A. et al. (2010) T cell reactions of <i>Eimeria bovis</i> primary and challenge-infected calves. Parasitol Res. 106: 595-605. 10. Rhodes, S.G. et al. (2000) Bovine tuberculosis: immune responses in the peripheral blood and at the site of active disease. Immunology. 99: 195-202. 11. Machugh, N.D. et al. (1997) Identification of two distinct subsets of bovine gamma delta T cells with unique cell surface phenotype and tissue distribution. Immunology. 92: 340-5. 12. Childerstone, A.J. et al. (1999) Demonstration of bovine CD8+ T-cell responses to foot-and-mouth disease virus. J Gen Virol. 80: 663-9. 13. Rhodes, S.G. et al. (2001) Antigen recognition and immunomodulation by gamma delta T cells in bovine tuberculosis. J Immunol. 166: 5604-10. 14. Knowles, G. et al. (1996) Phenotypical characterization of lymphocytes infiltrating regressing papillomas. J Virol. 70: 8451-8.

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17. Juleff, N. et al. (2009) Foot-and-mouth disease virus can induce a specific and rapid CD4+ T-cell-independent neutralizing and isotype class-switched antibody response in naïve cattle. [J Virol. 83: 3626-36.](#)
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19. Sopp, P. et al. (2006) Flow cytometric detection of gamma interferon can effectively discriminate *Mycobacterium bovis* BCG-vaccinated cattle from *M. bovis*-infected cattle. [Clin Vaccine Immunol. 13: 1343-8.](#)
20. Sacchini, F. et al. (2011) A minor role of CD4+ T lymphocytes in the control of a primary infection of cattle with *Mycoplasma mycoides subsp. mycoides*. [Vet Res. 42: 77.](#)
21. Skyberg, J.A. et al. (2011) Murine and bovine $\gamma\delta$ T cells enhance innate immunity against *Brucella abortus* infections. [PLoS One. 6\(7\): e21978.](#)
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27. Aranday-Cortes, E. et al. (2013) Upregulation of IL-17A, CXCL9 and CXCL10 in early-stage granulomas induced by *Mycobacterium bovis* in cattle. [Transbound Emerg Dis. 60 \(6\): 525-37.](#)
28. Pirson, C. et al. (2015) Highly purified mycobacterial phosphatidylinositol mannosides drive cell-mediated responses and activate NKT cells in cattle. [Clin Vaccine Immunol. 22 \(2\): 178-84.](#)
29. Fuertes, M. et al. (2015) Immunohistochemical study and mRNA cytokine profile of the local immune response in cattle naturally infected with *Calicophoron daubneyi*. [Vet Parasitol. 214 \(1-2\): 178-83.](#)

Storage	Store at +4°C or at -20°C if preferred. 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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®549 , DyLight®649 , DyLight®680 , DyLight®800 , FITC , HRP

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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