

Datasheet: MCA1820A647

## **BATCH NUMBER 166009**

Description:	MOUSE ANTI BOVINE INTERLEUKIN-4:Alexa Fluor® 647		
Specificity:	IL-4		
Format:	ALEXA FLUOR® 647		
Product Type:	Monoclonal Antibody		
Clone:	CC303		
Isotype:	lgG2a		
Quantity:	100 TESTS/1ml		

# **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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	•			1/10 - 1/25

Where this product 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 product for use in their own system using appropriate negative/positive controls.

(1) Membrane permeabilization is required for this application. The use of Leucoperm (Product Code <u>BUF09</u>) is recommended for this purpose.

Target Species	Bovine				
Species Cross Reactivity	<b>N.B.</b> Antibody reactivity is derived	ctivity and working condition of from testing within our lications from the originate	at, Dolphin, Mink, Fin Whale ons may vary between species. Cross aboratories, peer-reviewed publication ors. Please refer to references indicate	ns or	
Product Form	Purified IgG conjugated to Alexa Fluor® 647 - liquid				
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)		
	Alexa Fluor®647	650	665		
Preparation	Purified IgG prepar supernatant	red by affinity chromatog	raphy on Protein A from tissue culture	<b>)</b>	

Buffer Solution	Phosphate buffered saline			
Preservative Stabilisers	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin			
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml			
External Database Links	UniProt: P30367 Related reagents  Entrez Gene: 280824 IL4 Related reagents			
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the mouse SP2/0 myeloma cell line.			
Specificity	Mouse anti Bovine Interleukin-4 antibody, clone CC303 recognizes bovine interleukin 4			
Flow Cytometry	Use 10µl of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100µl			
References	1. Pedersen, L.G. <i>et al.</i> (2002) Identification of monoclonal antibodies that cross-react verytokines from different animal species. Vet Immunol Immunopathol. 88 (3-4): 111-22.  2. Aasted, B. <i>et al.</i> (2002) Cytokine profiles in peripheral blood mononuclear cells and lymph node cells from piglets infected in utero with porcine reproductive and respiratory syndrome virus. Clin Diagn Lab Immunol. 9 (6): 1229-34.  3. Jensen, P.V. <i>et al.</i> (2003) Cytokine profiles in adult mink infected with Aleutian mink disease parvovirus. J Virol. 77: 7444-51.  4. Dean, G.S. <i>et al.</i> (2005) Minimum infective dose of <i>Mycobacterium bovis</i> in cattle. In Immun. 73 (10): 6467-71.  5. Hamza, E. <i>et al.</i> (2007) Modulation of allergy incidence in icelandic horses is associated with a change in IL-4-producing T cells. Int Arch Allergy Immunol. 144: 325-6. Taubert A <i>et al.</i> (2008) Antigen-induced cytokine production in lymphocytes of <i>Eimenbovis</i> primary and challenge infected calves. Vet Immunol Immunopathol. 126 (3-4): 309-20.  7. Rutigliano, J.A. <i>et al.</i> (2008) Screening monoclonal antibodies for cross-reactivity in the ferret model of influenza infection. J Immunol Methods. 336: 71-7.  8. Araújo, M.S. <i>et al.</i> (2009) T-cell-derived cytokines, nitric oxide production by peripher blood monocytes and seric anti-Leishmania (Leishmania) chagasi IgG subclass pattern following immunization against canine visceral leishmaniasis using Leishvaccine and Leishmune. Vaccine. 27 (7): 1008-17.  9. Papadogiannakis, E.I. <i>et al.</i> (2009) Determination of intracellular cytokines IFN-gamm and IL-4 in canine T lymphocytes by flow cytometry following whole-blood culture. Can Vet Res. 73: 137-43.  10. Martel, C.J. & Aasted, B. (2009) Characterization of antibodies against ferret immunoglobulins, cytokines and CD markers. Vet Immunol Immunopathol. 132:109-15.  11. Nielsen, L. <i>et al.</i> (2009) Lymphotropism and host responses during acute wild-type			

canine distemper virus infections in a highly susceptible natural host. <u>J Gen Virol. 90:</u> 2157-65.

- 12. Jaber, J.R. *et al.* (2010) Cross-reactivity of anti-human, anti-porcine and anti-bovine cytokine antibodies with cetacean tissues. <u>J Comp Pathol. 143: 45-51.</u>
- 13. Araújo, M.S. *et al.* (2011) Immunological changes in canine peripheral blood leukocytes triggered by immunization with first or second generation vaccines against canine visceral leishmaniasis. Vet Immunol Immunopathol. 141: 64-75.
- 14. Fellman, C.L. *et al.* (2011) Cyclosporine A affects the in vitro expression of T cell activation-related molecules and cytokines in dogs. <u>Vet Immunol Immunopathol. 140:</u> 175-80.
- 15. Yang, J. *et al.* (2012) Comparison of worm development and host immune responses in natural hosts of *Schistosoma japonicum*, yellow cattle and water buffalo. <u>BMC Vet Res.</u> 8: 25.
- 16. Geherin, S.A. *et al.* (2013) Ovine skin-recirculating γδ T cells express IFN-γ and IL-17 and exit tissue independently of CCR7. <u>Vet Immunol Immunopathol</u>. 155 (1-2): 87-97.
- 17. Costa-Pereira, C. *et al.* (2015) One-year timeline kinetics of cytokine-mediated cellular immunity in dogs vaccinated against visceral leishmaniasis. <u>BMC Vet Res. 11 (1): 92.</u>
- 18. Moreira, M.L. *et al.* (2016) Vaccination against canine leishmaniosis increases the phagocytic activity, nitric oxide production and expression of cell activation/migration molecules in neutrophils and monocytes. Vet Parasitol. 220: 33-45.
- 19. Aguiar-Soares, R.D.O. *et al.* (2020) Phase I and II Clinical Trial Comparing the LBSap, Leishmune<sup>®</sup>, and Leish-Tec<sup>®</sup> Vaccines against Canine Visceral Leishmaniasis. <u>Vaccines</u> (Basel). 8 (4)Nov 17 [Epub ahead of print].
- 20. Villa-Mancera, A. *et al.* (2021) Phage display-based vaccine with cathepsin L and excretory-secretory products mimotopes of *Fasciola hepatica*. induces protective cellular and humoral immune responses in sheep. <u>Vet Parasitol. 289: 109340.</u>
- 21. Blanco, C.F. *et al.* (2021) Semi-stable production of bovine IL-4 and GM-CSF in the mammalian episomal expression system <u>Journal of Veterinary Research</u>. 65, Aug 19 [Epub ahead of print]
- 22. Matralis, D.T. *et al.* (2023) Intracellular IFN-γ and IL-4 levels of CD4 + and CD8 + T cells in the peripheral blood of naturally infected (*Leishmania infantum*) symptomatic dogs before and following a 4-week treatment with miltefosine and allopurinol: a double-blinded, controlled and cross-sectional study. <u>Acta Vet Scand. 65 (1): 2.</u>
- 23. Dawson, H.D. *et al.* (2020) Porcine cytokines, chemokines and growth factors: 2019 update. Res Vet Sci. 131: 266-300.

## Storage

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.

#### Guarantee

12 months from date of despatch

### Acknowledgements

This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research, excluding contract research or any fee for service research,

and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com

Health And Safety Information

Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1820A647">https://www.bio-rad-antibodies.com/SDS/MCA1820A647</a>

10041

**Regulatory** For research purposes only

## Related Products

## **Recommended Negative Controls**

MOUSE IgG2a NEGATIVE CONTROL:FITC (MCA929F)

North & South Tel: +1 800 265 7376 America Fax: +1 919 878 3751 Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody\_sales\_us@bio-rad.com

Email: antibody\_sales\_uk@bio-rad.com

Email: antibody\_sales\_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M426210:231205'

### Printed on 22 Feb 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint