

# Datasheet: MCA1820PE

| Description:  | MOUSE ANTI BOVINE INTERLEUKIN-4:RPE |  |  |  |
|---------------|-------------------------------------|--|--|--|
| Specificity:  | IL-4                                |  |  |  |
| Format:       | RPE                                 |  |  |  |
| Product Type: | Monoclonal Antibody                 |  |  |  |
| Clone:        | CC303                               |  |  |  |
| lsotype:      | lgG2a                               |  |  |  |
| Quantity:     | 100 TESTS                           |  |  |  |

### **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 <u>www.bio-rad-antibodies.com/protocols</u> .  |                       |           |                         |                    |  |  |
|-----------------------------|---|-----------------------|-----------|-------------------------|--------------------|--|--|
|                             |   | Yes                   | No        | Not Determined          | Suggested Dilution |  |  |
|                             | Flow Cytometry (1)  | -                     |           |                         | Neat - 1/5         |  |  |
|                             | <ul> <li>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.</li> <li>(1) Membrane permeabilization is required for this application. The use of Leucoperm (Product Code <u>BUF09</u>) is recommended for this purpose.</li> </ul> |                       |           |                         |                    |  |  |
| Target Species              | Bovine  |                       |           |                         |                    |  |  |
| Species Cross<br>Reactivity | Reacts with: Dog, Pig, Sheep, Mustelid, Goat, Dolphin, Mink, Fin Whale<br><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross<br>reactivity is derived from testing within our laboratories, peer-reviewed publications or<br>personal communications from the originators. Please refer to references indicated for<br>further information.   |                       |           |                         |                    |  |  |
| Product Form                | Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized   |                       |           |                         |                    |  |  |
| Reconstitution              | Reconstitute with 1 ml distilled water  |                       |           |                         |                    |  |  |
| Max Ex/Em                   | Fluorophore<br>RPE 488nm laser  | Excitation Max<br>496 | k (nm) Ei | mission Max (nm)<br>578 |                    |  |  |
| Preparation                 | Purified IgG prepared   | by affinity chro      | matograp  | hy on Protein A from    | tissue culture     |  |  |

|                             | supernatant   |  |  |
|-----------------------------|---|--|--|
| Buffer Solution             | Phosphate buffered saline   |  |  |
| Preservative<br>Stabilisers | 0.09% sodium azide (NaN <sub>3</sub> )<br>1% bovine serum albumin<br>5% sucrose   |  |  |
| External Database<br>Links  | UniProt:<br><u>P30367</u> <u>Related reagents</u><br>Entrez Gene:<br>280824 IL4 Related reagents  |  |  |
| RRID                        | AB_324011   |  |  |
| 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 $1x10^6$ cells in 100µl   |  |  |
| References                  | <ol> <li>Pedersen, L.G. <i>et al.</i> (2002) Identification of monoclonal antibodies that cross-react with cytokines from different animal species. <u>Vet Immunol Immunopathol. 88 (3-4): 111-22.</u></li> <li>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. <u>Clin Diagn Lab Immunol. 9 (6): 1229-34.</u></li> <li>Jensen, P.V. <i>et al.</i> (2003) Cytokine profiles in adult mink infected with Aleutian mink disease parvovirus. <u>J Virol. 77: 7444-51.</u></li> <li>Dean, G.S. <i>et al.</i> (2005) Minimum infective dose of <i>Mycobacterium bovis</i> in cattle. <u>Infect Immun. 73 (10): 6467-71.</u></li> <li>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. <u>Int Arch Allergy Immunol. 144: 325-37.</u></li> <li>Taubert A <i>et al.</i> (2008) Antigen-induced cytokine production in lymphocytes of <i>Eimeria bovis</i> primary and challenge infected calves. <u>Vet Immunol Immunopathol. 126 (3-4): 309-20.</u></li> <li>Rutigliano, J.A. <i>et al.</i> (2009) T-cell-derived cytokines, nitric oxide production by peripheral blood monocytes and seric anti-Leishmania (Leishmania) chagasi IgG subclass patterns following immunization against canine visceral leishmaniasis using Leishvaccine and Leishmune. <u>Vaccine. 27 (7): 1008-17.</u></li> <li>Papadogiannakis, E.I. <i>et al.</i> (2009) Determination of intracellular cytokines IFN-gamma and IL-4 in canine T lymphocytes by flow cytometry following whole-blood culture. <u>Can J Vet Res. 73: 137-43.</u></li> <li>Martel, C.J. &amp; Aasted, B. (2009) Characterization of antibodies against ferret</li> </ol> |  |  |

immunoglobulins, cytokines and CD markers. <u>Vet Immunol Immunopathol. 132:109-15.</u> 11. Nielsen, L. *et al.* (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. <u>Vet Immunol Immunopathol. 141: 64-75.</u>

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> <u>8: 25.</u>

16. Geherin, S.A. *et al.* (2013) Ovine skin-recirculating  $\gamma\delta$  T cells express IFN- $\gamma$  and IL-17 and exit tissue independently of CCR7. <u>Vet Immunol Immunopathol. 155 (1-2): 87-97.</u>

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>
 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. 65, Aug 19</u> [Epub ahead of print]

22. Matralis, D.T. *et al.* (2023) Intracellular IFN- $\gamma$  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. <u>Res Vet Sci. 131: 266-300.</u>

24. Vieira, J.F.P. *et al.* (2022) CD4(+) T-lymphocytes from asymptomatic dogs infected with Leishmania infantum are able to activate macrophages for higher leishmanicidal ability in an *in vitro* co-culture experiment. <u>Mol Immunol. 151: 61-9</u>.

Storage

This product is shipped at ambient temperature.
Store at +4°C.
DO NOT FREEZE
This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

| Guarantee 12 months from date of despatch |   |  |  |  |
|---|---|--|--|--|
| Health And Safety<br>Information          | Material Safety Datasheet documentation #20487 available at:<br>https://www.bio-rad-antibodies.com/SDS/MCA1820PE<br>20487 |  |  |  |
| Regulatory                                | For research purposes only  |  |  |  |

## **Related Products**

#### **Recommended Negative Controls**

MOUSE IgG2a NEGATIVE CONTROL:RPE (MCA929PE)

| North & South | Tel: +1 800 265 7376       | Worldwide   | Tel: +44 (0)1865 852 700     | Europe    | Tel: +49 (0) 89 8090 95 21           |
|---------------|----------------------------|-------------|------------------------------|-----------|--------------------------------------|
| America       | Fax: +1 919 878 3751       |             | Fax: +44 (0)1865 852 739     |           | Fax: +49 (0) 89 8090 95 50           |
|               | Email: antibody_sales_us@t | pio-rad.com | Email: antibody_sales_uk@bio | o-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 'M440259:250523'

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