

## Datasheet: MCA1078PE

**BATCH NUMBER 149097**

<b>Description:</b>	MOUSE ANTI HORSE CD4:RPE
<b>Specificity:</b>	CD4
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CVS4
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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 [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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>	Horse		
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
<b>Reconstitution</b>	Reconstitute with 1.0 ml distilled water		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	RPE 488nm laser	496	578
<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 (NaN <sub>3</sub> )		
<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose		

<b>Immunogen</b>	Equine thymocytes.
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">F6Y6X8</a> <a href="#">Related reagents</a>
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the X63-Ag 8.653 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Horse CD4 antibody, clone CVS4</b> recognizes Equine CD4, a ~58 kDa cell surface glycoprotein that is primarily expressed on a subpopulation of T lymphocytes. As in humans, equine CD4 expression is mutually exclusive with CD8 expression on mature T-cells</p> <p>A study undertaken using Mouse anti Horse CD4, clone CVS4 to identify CD4 on several wild african equid species indicates that the CVS4 clone recognizes Somali wild ass (<i>Equus asinus</i>) but not Grévy's Zebra (<i>E. grevyi</i>) or Hartmann's Mountain Zebra (<i>E. zebra</i>).</p> <p>In addition to the CVS4 clone, other <a href="#">CVS clones</a> recognising equine cell surface and MHC antigen are available from Bio-Rad.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>Lunn, D.P. <i>et al.</i> (1991) Three monoclonal antibodies identifying antigens on all equine T lymphocytes, and two mutually exclusive T-lymphocyte subsets. <a href="#">Immunology. 74 (2): 251-7.</a></li> <li>Kydd, J. <i>et al.</i> (1994) Report of the First International Workshop on Equine Leucocyte Antigens, Cambridge, UK, July 1991. <a href="#">Vet Immunol Immunopathol. 42 (1): 3-60.</a></li> <li>Deeg, C.A. <i>et al.</i> (2004) The uveitogenic potential of retinal S-antigen in horses. <a href="#">Invest Ophthalmol Vis Sci. 45: 2286-92</a></li> <li>Pearson, W. <i>et al.</i> (2007) Low-dose ginseng (<i>Panax quinquefolium</i>) modulates the course and magnitude of the antibody response to vaccination against equid herpesvirus 1 in horses. <a href="#">Can J Vet Res. 71: 213-7.</a></li> <li>Brault, S.A. <i>et al.</i> (2010) The immune response of foals to natural infection with equid herpesvirus-2 and its association with febrile illness. <a href="#">Vet Immunol Immunopathol. 137: 136-41.</a></li> <li>Goodman, L.B. <i>et al.</i> (2007) A point mutation in a herpesvirus polymerase determines neuropathogenicity. <a href="#">PLoS Pathog. 3(11):e160.</a></li> <li>Hamza, E. <i>et al.</i> (2012) CD4+CD25+ T cells expressing FoxP3 in Icelandic horses affected with insect bite hypersensitivity. <a href="#">Vet Immunol Immunopathol. 148 (1-2): 139-44.</a></li> <li>Go, Y.Y. <i>et al.</i> (2010) Complex interactions between the major and minor envelope proteins of equine arteritis virus determine its tropism for equine CD3+ T lymphocytes and CD14+ monocytes. <a href="#">J Virol. 84: 4898-911</a></li> <li>Lunn, D.P. <i>et al.</i> (1998) Report of the Second Equine Leucocyte Antigen Workshop, Squaw valley, California, July 1995. <a href="#">Vet Immunol Immunopathol. 62: 101-143</a></li> <li>Ibrahim, S. <i>et al.</i> (2007) Screening of anti-human leukocyte monoclonal antibodies for reactivity with equine leukocytes. <a href="#">Vet Immunol Immunopathol. 119 (1-2): 63-80.</a></li> </ol>

11. Lai SW *et al.* (2004) Influence of *Ganoderma lucidum* on blood biochemistry and immunocompetence in horses. [Am J Chin Med. 32 \(6\): 931-40.](#)
12. Ferreira-Dias, G. *et al.* (2005) Seasonal reproduction in the mare: possible role of plasma leptin, body weight and immune status. [Domest Anim Endocrinol. 29 \(1\): 203-13.](#)
13. Agrícola, R. *et al.* (2008) Blood lymphocyte subpopulations, neutrophil phagocytosis and proteinogram during late pregnancy and postpartum in mares. [Reprod Domest Anim. 43 \(2\): 212-7.](#)
14. de Bruijn, C.M. *et al.* (2007) Clinical, histopathological and immunophenotypical findings in five horses with cutaneous malignant lymphoma. [Res Vet Sci. 83 \(1\): 63-72.](#)
15. Roberto Da Costa, R.P. *et al.* (2003) Peripheral blood neutrophil function and lymphocyte subpopulations in cycling mares. [Reprod Domest Anim. 38 \(6\): 464-9.](#)
16. Uner, A. G. *et al.* (2013) Blood Levels of Selected Metabolic Factors, Cytokines, and Lymphocyte Subpopulations in Arabian and Thoroughbred Horses During the Longest and Shortest Days of the Year [J Equine Vet Sci. 33 \(11\): 969-976.](#)
17. Garcia-Tapia, D. *et al.* (2006) Replication of West Nile virus in equine peripheral blood mononuclear cells. [Vet Immunol Immunopathol. 110 \(3-4\): 229-44.](#)
18. Tessier, L. *et al.* (2015) Phenotypic and immunomodulatory properties of equine cord blood-derived mesenchymal stromal cells. [PLoS One. 10 \(4\): e0122954.](#)
19. Khol-Parisini, A. *et al.* (2012) Highly deoxynivalenol contaminated oats and immune function in horses. [Arch Anim Nutr. 66 \(2\): 149-61.](#)
20. Ziegler, A. *et al.* (2016) Identification and characterization of equine blood plasmacytoid dendritic cells. [Dev Comp Immunol. 65: 352-7.](#)
21. Behrens, N.E. & Gershwin, L.J. (2015) Immune modulation of T regulatory cells and IgE responses in horses vaccinated with West Nile virus vaccine combined with a CpG ODN. [Vaccine. 33 \(43\): 5764-71.](#)
22. Degroote, R.L. *et al.* (2017) Formin like 1 expression is increased on CD4+ T lymphocytes in spontaneous autoimmune uveitis. [J Proteomics. 154: 102-108.](#)
23. Krakowski, L. *et al.* (2017) Changes in Blood Lymphocyte Subpopulations and Expression of MHC-II Molecules in Wild Mares Before and After Parturition. [J Vet Res. 61 \(2\): 217-21.](#)
24. Witonsky, S. *et al.* (2019) Can levamisole upregulate the equine cell-mediated macrophage (M1) dendritic cell (DC1) T-helper 1 (CD4 Th1) T-cytotoxic (CD8) immune response *in vitro*? [J Vet Intern Med. 33 \(2\): 889-96.](#)
25. Marteles, D. *et al.* (2019) Effects of allergen-specific immunotherapy on peripheral blood regulatory T cells and serum concentrations of cytokines and immunoglobulins in horses with allergic dermatitis. [Int Immunopharmacol. 74: 105674.](#)
26. Hillmann, A. *et al.* (2019) A novel direct co-culture assay analyzed by multicolor flow cytometry reveals context- and cell type-specific immunomodulatory effects of equine mesenchymal stromal cells. [PLoS One. 14 \(6\): e0218949.](#)
27. Tomlinson, J.E. *et al.* (2018) Multispectral fluorescence-activated cell sorting of B and T cell subpopulations from equine peripheral blood. [Vet Immunol Immunopathol. 199: 22-31.](#)
28. Placci, M. *et al.* (2020) Natural Horse Boarding Vs Traditional Stable: A Comparison of Hormonal, Hematological and Immunological Parameters. [J Appl Anim Welf Sci. 23 \(3\): 366-77.](#)
29. Lucassen, A. *et al.* (2021) A *Saccharomyces cerevisiae* Fermentation Product (Olimond BB) Alters the Early Response after Influenza Vaccination in Racehorses.

[Animals \(Basel\). 11\(9\):2726.](#)

30. Schauer, M. *et al.* (2018) Interaction of septin 7 and DOCK8 in equine lymphocytes reveals novel insights into signaling pathways associated with autoimmunity. [Sci Rep. 8 \(1\): 12332.](#)

31. Cequier, A. *et al.* (2022) Equine Mesenchymal Stem Cells Influence the Proliferative Response of Lymphocytes: Effect of Inflammation, Differentiation and MHC-Compatibility. [Animals \(Basel\). 12 \(8\): 984.](#)

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<b>Storage</b>	Prior to reconstitution store at +4°C. After reconstitution 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.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1078PE">https://www.bio-rad-antibodies.com/SDS/MCA1078PE</a> 20487
<b>Regulatory</b>	For research purposes only

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## Related Products

### Recommended Useful Reagents

[MOUSE ANTI HORSE CD8:FITC \(MCA2385F\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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