

## Datasheet: MCA2213PE

<b>Description:</b>	MOUSE ANTI SHEEP CD4:RPE
<b>Specificity:</b>	CD4
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	44.38
<b>Isotype:</b>	IgG2a
<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 - 1/5

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>	Sheep								
<b>Species Cross Reactivity</b>	Reacts with: Goat <b>N.B.</b> Antibody reactivity and working conditions may vary between species.								
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized								
<b>Reconstitution</b>	Reconstitute with 1 ml distilled water								
<b>Max Ex/Em</b>	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>RPE 488nm laser</td> <td>496</td> <td>578</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
RPE 488nm laser	496	578							
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant								
<b>Buffer Solution</b>	Phosphate buffered saline								
<b>Preservative</b>	0.09% Sodium Azide								
<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose								
<b>Immunogen</b>	Fetal thymocytes.								
<b>External Database Links</b>	<b>UniProt:</b>								

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<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3-NS1/1-Ag-4-1 myeloma cell line.
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<b>Specificity</b>	<b>Mouse anti Sheep CD4 antibody, clone 44.38</b> recognizes the ovine CD4 cell surface glycoprotein, which is expressed by a subset of mature T lymphocytes. Mouse anti Sheep CD4 antibody, clone 44.38 immunoprecipitates a protein of ~56 kDa under reducing conditions.
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<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
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<b>References</b>	<ol style="list-style-type: none"><li>1. Maddox, J.F. <i>et al.</i> (1985) Surface antigens, SBU-T4 and SBU-T8, of sheep T lymphocyte subsets defined by monoclonal antibodies. <a href="#">Immunology. 55 (4): 739-48.</a></li><li>2. Mackay, C.R. <i>et al.</i> (1986) Three distinct subpopulations of sheep T lymphocytes. <a href="#">Eur J Immunol. 16 (1): 19-25.</a></li><li>3. Mackay, C.R. <i>et al.</i> (1987) A monoclonal antibody to the p220 component of sheep LCA identifies B cells and a unique lymphocyte subset. <a href="#">Cell Immunol. 110 (1): 46-55.</a></li><li>4. Mackay, C.R. <i>et al.</i> (1986) Thymocyte subpopulations during early fetal development in sheep. <a href="#">J Immunol. 136 (5): 1592-9.</a></li><li>5. Breugelmans, S. <i>et al.</i> (2010) Immunoassay of lymphocyte subsets in ovine palatine tonsils. <a href="#">Acta Histochem. 113: 416-22.</a></li><li>6. Connelley, T. <i>et al.</i> (2011) NKp46 defines ovine cells that have characteristics corresponding to NK cells. <a href="#">Vet Res. 42: 37.</a></li><li>7. Brown, M.N. <i>et al.</i> (2010) Chemoattractant receptors and lymphocyte egress from extralymphoid tissue: changing requirements during the course of inflammation. <a href="#">J Immunol. 185: 4873-82.</a></li><li>8. Chan, S.S. <i>et al.</i> (2002) Generation and characterization of ovine dendritic cells derived from peripheral blood monocytes. <a href="#">Immunology. 107: 366-72.</a></li><li>9. Foulon, E. <i>et al.</i> (2008) Two populations of ovine bone marrow-derived dendritic cells can be generated with recombinant GM-CSF and separated on CD11b expression. <a href="#">J Immunol Methods. 339: 1-10.</a></li><li>10. Debes, G.F. <i>et al.</i> (2005) Chemokine receptor CCR7 required for T lymphocyte exit from peripheral tissues. <a href="#">Nat Immunol. 6: 889-94.</a></li><li>11. Gillan, S. <i>et al.</i> (2010) Identification of immune parameters to differentiate disease states among sheep infected with <i>Mycobacterium avium</i> subsp. <i>paratuberculosis</i>. <a href="#">Clin Vaccine Immunol. 17: 108-17.</a></li><li>12. Lacroux, C. <i>et al.</i> (2011) Prionemia and leuco-platelet associated infectivity in sheep TSE models. <a href="#">J Virol. 86: 2056-66.</a></li><li>13. Summers, C. <i>et al.</i> (2012) The distribution of immune cells in the lungs of classical and atypical ovine pulmonary adenocarcinoma. <a href="#">Vet Immunol Immunopathol. 146: 1-7.</a></li><li>14. Lybeck, K.R. <i>et al.</i> (2012) Intestinal Strictures, Fibrous Adhesions and High Local Interleukin-10 Levels in Goats Infected Naturally with <i>Mycobacterium avium</i> subsp. <i>paratuberculosis</i>. <a href="#">J Comp Pathol. 148: 157-72.</a></li><li>15. Umeshappa, C.S. <i>et al.</i> (2010) Cell-mediated immune response and cross-protective efficacy of binary ethylenimine-inactivated bluetongue virus serotype-1 vaccine in sheep. <a href="#">Vaccine. 28: 2522-31.</a></li><li>16. Kalyanasundaram, A. <i>et al.</i> (2015) Comparative immunoprophylactic efficacy of <i>Haemonchus contortus</i> recombinant enolase (rHcENO) and Con A purified native glycoproteins in sheep. <a href="#">Exp Parasitol. 154: 98-107.</a></li><li>17. Goh S <i>et al.</i> (2016) Identification of <i>Theileria lestoquardi</i> Antigens Recognized by CD8+ T Cells. <a href="#">PLoS One. 11 (9): e0162571.</a></li><li>18. Wattedgedera, S.R. <i>et al.</i> (2017) Enhancing the toolbox to study IL-17A in cattle and sheep. <a href="#">Vet Res. 48 (1): 20.</a></li></ol>
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19. Gómez, D. *et al.* (2015) Effector T Cell Egress via Afferent Lymph Modulates Local Tissue Inflammation. [J Immunol. 195 \(8\): 3531-6.](#)
20. Silva, A.P. *et al.* (2015) Encapsulated *Brucella ovis* Lacking a Putative ATP-Binding Cassette Transporter ( $\Delta$ abcBA) Protects against Wild Type *Brucella ovis* in Rams. [PLoS One. 10 \(8\): e0136865.](#)
21. Greer, A.W. *et al.* (2018) Immune development and performance characteristics of Romney sheep selected for either resistance or resilience to gastrointestinal nematodes. [Vet Parasitol. 250: 60-7.](#)

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**Further Reading** 1. Lybeck, K. R. *et al.* (2009) Neutralization of interleukin-10 from CD14(+) monocytes enhances gamma interferon production in peripheral blood mononuclear cells from *Mycobacterium avium* subsp. paratuberculosis-infected goats. [Clin. Vaccine. Immunol. 16: 1003-11.](#)

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**Storage** Prior to reconstitution store at +4°C. Following 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.

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**Shelf Life** 12 months from date of reconstitution.

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**Health And Safety Information** Material Safety Datasheet documentation #10075 available at: 10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

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**Regulatory** For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:RPE \(MCA929PE\)](#)

<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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