

## Datasheet: MCA2434GA

**BATCH NUMBER 159874**

<b>Description:</b>	MOUSE ANTI BOVINE CD45RO
<b>Specificity:</b>	CD45RO
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	IL-A116
<b>Isotype:</b>	IgG3
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/10 - 1/50
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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.

<b>Target Species</b>	Bovine
<b>Species Cross Reactivity</b>	<p>Reacts with: Goat</p> <p><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>
<b>Product Form</b>	Purified IgG - liquid
<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 Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Bovine peripheral blood mononuclear cells.
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the X63.Ag8.653 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Bovine CD45RO, clone IL-A116</b> recognizes the bovine homologue of the human CD45RO cell surface antigen.</p> <p>CD45, also known as Leucocyte Common Antigen or LCA, occurs in a number of isoforms, clone IL-A116 is specific for the low molecular weight isoform termed CD45RO, the isoform associated with expression on memory T-cells. Bovine CD45RO is expressed by monocytes, granulocytes and subsets of thymocytes, CD4+ T cells and CD8+ T cells. CD45RO<sup>+</sup> CD8<sup>+</sup> T cells increase from approximately 5% in neonatal calves to approximately 35% in adult cattle over the age of 5 years (<a href="#">Hogg et al. 2011</a>). Mouse anti Bovine CD45RO, clone IL-A116 immunoprecipitates a molecule of ~180 kDa (<a href="#">Bembridge et al. 1995</a>), analogous to the molecular weight of human and mouse CD45RO.</p> <p>Mouse anti Bovine CD45RO, clone IL-A116 recognizes the CD45RO cell surface antigen by flow cytometry in both European cattle, <i>Bos taurus</i>, and in Zebu, <i>B.indicus</i> (<a href="#">Bembridge et al. 1995</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul
<b>References</b>	<ol style="list-style-type: none"> <li>Howard, C.J. &amp; Naessens, J. (1993) Summary of workshop findings for cattle (tables 1 and 2). <a href="#">Vet Immunol Immunopathol. 39 (1-3): 25-47.</a></li> <li>Naessens, J. et al. (1993) Cross-reactivity of workshop antibodies with cells from domestic and wild ruminants. <a href="#">Vet Immunol Immunopathol. 39 (1-3): 283-90.</a></li> <li>Bembridge, G.P. et al. (1993) Comparison of monoclonal antibodies with potential specificity for restricted isoforms of the leukocyte common antigen (CD45R). <a href="#">Vet Immunol Immunopathol. 39 (1-3): 129-36.</a></li> <li>Bembridge, G.P. et al. (1995) CD45RO expression on bovine T cells: relation to biological function. <a href="#">Immunology. 86 (4): 537-44.</a></li> <li>McInnes, E. et al. (1999) Phenotypic analysis of local cellular responses in calves infected with bovine respiratory syncytial virus. <a href="#">Immunology. 96 (3): 396-403.</a></li> <li>Sopp, P. &amp; Howard, C.J. (2001) IFN gamma and IL-4 production by CD4, CD8 and WC1 gamma delta TCR(+) T cells from cattle lymph nodes and blood. <a href="#">Vet Immunol Immunopathol. 81 (1-2): 85-96.</a></li> <li>Hogg, A.E. et al. (2011) Characterization of age-related changes in bovine CD8+</li> </ol>

T-cells. [Vet Immunol Immunopathol. 140 \(1-2\): 47-54.](#)

8. Whelan, A.O. *et al.* (2011) Development of an antibody to bovine IL-2 reveals multifunctional CD4 T(EM) cells in cattle naturally infected with bovine tuberculosis. [PLoS One. 6 \(12\): e29194.](#)

9. Schmidt, N. *et al.* (2018) Decreased STEC shedding by cattle following passive and active vaccination based on recombinant *Escherichia coli* Shiga toxoids. [Vet Res. 49 \(1\): 28.](#)

10. Arrieta-Villegas, C. *et al.* (2020) Immunogenicity and Protection against *Mycobacterium caprae* Challenge in Goats Vaccinated with BCG and Revaccinated after One Year. [Vaccines \(Basel\). 8 \(4\): 751.](#)

11. Wherry, T.L.T. *et al.* (2022) Effects of 1,25-Dihydroxyvitamin D<sub>3</sub> and 25-Hydroxyvitamin D<sub>3</sub> on PBMCs From Dairy Cattle Naturally Infected With *Mycobacterium avium* subsp. *paratuberculosis*. [Front Vet Sci. 9: 830144.](#)

12. Hidalgo-Ruiz, M. *et al.* (2022) **Babesia bovis** AMA-1, MSA-2c and RAP-1 contain conserved B and T-cell epitopes, which generate neutralizing antibodies and a long-lasting Th1 immune response in vaccinated cattle. [Vaccine. S0264-410X\(22\)00049-4.](#)

13. Seemann, L. *et al.* (2024) Dietary L-carnitine supplementation modifies blood parameters of mid-lactating dairy cows during standardized lipopolysaccharide-induced inflammation. [Front Immunol. 15: 1390137.](#)

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**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.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2434GA>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)  
Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)  
Goat Anti Mouse IgG (STAR76...) [RPE](#)  
Goat Anti Mouse IgG (STAR70...) [FITC](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)  
Goat Anti Mouse IgG (STAR77...) [HRP](#)  
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)

Rabbit Anti Mouse IgG (STAR9...) [FITC](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M383925:210513'

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