

## Datasheet: MCA2434GA

**BATCH NUMBER 1709**

<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>	Reacts with: Goat <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.
<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> recognises 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. Studies utilizing clone IL-A116 have demonstrated that the percentage of 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>). It has been demonstrated that mouse anti bovine CD45RO, clone IL-A116 immunoprecipitates a molecule of ~180 kDa (<a href="#">Bembridge et al. 1995</a>) which is analogous to the molecular weight of human and mouse CD45RO.</p> <p>Mouse anti Bovine CD45RO, clone IL-A116 has been demonstrated to recognise 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>1. Bembridge, G.P. <i>et al.</i> (1995) CD45RO expression on bovine T cells: relation to biological function. <a href="#">Immunology. 86 (4): 537-44.</a></li> <li>2. Hogg, A.E. <i>et al.</i> (2011) Characterization of age-related changes in bovine CD8+ T-cells. <a href="#">Vet Immunol Immunopathol. 140 (1-2): 47-54.</a></li> <li>3. Whelan, A.O. <i>et al.</i> (2011) Development of an antibody to bovine IL-2 reveals multifunctional CD4 T(EM) cells in cattle naturally infected with bovine tuberculosis. <a href="#">PLoS One. 6 (12): e29194.</a></li> <li>4. 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>5. 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>6. Mcinnes, E. <i>et al.</i> (1999) Phenotypic analysis of local cellular responses in calves</li> </ol>

- infected with bovine respiratory syncytial virus. [Immunology. 96 \(3\): 396-403.](#)
7. Bembridge, G.P. *et al.* (1993) Comparison of monoclonal antibodies with potential specificity for restricted isoforms of the leukocyte common antigen (CD45R). [Vet Immunol Immunopathol. 39 \(1-3\): 129-36.](#)
8. Naessens, J. *et al.* (1993) Cross-reactivity of workshop antibodies with cells from domestic and wild ruminants. [Vet Immunol Immunopathol. 39 \(1-3\): 283-90.](#)
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.](#)

<b>Storage</b>	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. 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 #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2434GA">https://www.bio-rad-antibodies.com/SDS/MCA2434GA</a> 10040
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight@488</a> , <a href="#">DyLight@550</a> , <a href="#">DyLight@650</a> , <a href="#">DyLight@680</a> , <a href="#">DyLight@800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>

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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://www.bio-rad-antibodies.com/datasheets)

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