

## Datasheet: MCA2434A647

<b>Description:</b>	MOUSE ANTI BOVINE CD45RO:Alexa Fluor® 647
<b>Specificity:</b>	CD45RO
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	IL-A116
<b>Isotype:</b>	IgG3
<b>Quantity:</b>	100 TESTS/1ml

## 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 - 1/10

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.

### Target Species

Bovine

### Species Cross Reactivity

Reacts with: Goat

**N.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.

### Product Form

Purified IgG conjugated to Alexa Fluor 647 - liquid

### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®647	650	665

### Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

### Buffer Solution

Phosphate buffered saline

<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	Ig concentration 0.05 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 infected with bovine respiratory syncytial virus. <a href="#">Immunology. 96 (3): 396-403.</a></li> <li>7. Bembridge, G.P. <i>et al.</i> (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> </ol>

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>Acknowledgements</b>	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or <a href="mailto:outlicensing@thermofisher.com">outlicensing@thermofisher.com</a>
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: 10041: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</a>
<b>Regulatory</b>	For research purposes only

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'M372681:200710'

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