

Datasheet: MCA2434PE

Description:	MOUSE ANTI BOVINE CD45RO:RPE
Specificity:	CD45RO
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	IL-A116
Isotype:	IgG3
Quantity:	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.

	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.								
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized								
Reconstitution	Reconstitute with 1.0 ml distilled water Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.								
Max Ex/Em	<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							
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant								
Buffer Solution	Phosphate buffered saline								
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 5% Sucrose								
Immunogen	Bovine peripheral blood mononuclear cells.								

Fusion Partners Spleen cells from immunised BALB/c mice were fused with cells of the X63.Ag8.653 myeloma cell line.

Specificity **Mouse anti Bovine CD45RO, clone IL-A116** recognises the bovine homologue of the human CD45RO cell surface antigen.

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+ CD8+ T cells increase from approximately 5% in neonatal calves to approximately 35% in adult cattle over the age of 5 years ([Hogg et al. 2011](#)). It has been demonstrated that mouse anti bovine CD45RO, clone IL-A116 immunoprecipitates a molecule of ~180 kDa ([Bembridge et al. 1995](#)) which is analogous to the molecular weight of human and mouse CD45RO.

Mouse anti Bovine CD45RO, clone IL-A116 has been demonstrated to recognise the CD45RO cell surface antigen by flow cytometry in both European cattle, *Bos taurus*, and in Zebu, *B.indicus* ([Bembridge et al. 1995](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 1x10⁶ cells in 100ul

References

1. Bembridge, G.P. *et al.* (1995) CD45RO expression on bovine T cells: relation to biological function. [Immunology. 86 \(4\): 537-44.](#)
2. Hogg, A.E. *et al.* (2011) Characterization of age-related changes in bovine CD8+ T-cells. [Vet Immunol Immunopathol. 140 \(1-2\): 47-54.](#)
3. 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.](#)
4. Howard, C.J. & Naessens, J. (1993) Summary of workshop findings for cattle (tables 1 and 2). [Vet Immunol Immunopathol. 39 \(1-3\): 25-47.](#)
5. Sopp, P. & 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. [Vet Immunol Immunopathol. 81 \(1-2\): 85-96.](#)
6. McInnes, E. *et al.* (1999) Phenotypic analysis of local cellular responses in calves 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.](#)

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.

Guarantee 12 months from date of reconstitution

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

Information

Regulatory For research purposes only

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