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

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 monouclear 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 analogus 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 $1x10^6$ 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 +4ºC. Following reconstitution store at +4ºC. 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.
Shelf Life	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

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