Datasheet: MCA1424A647

Description:	MOUSE ANTI BOVINE CD21:Alexa Fluor® 647
Specificity:	CD21
Other names:	CR2
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	CC21
Isotype:	IgG1
Quantity:	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.

	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, Sheep, Red deer, Mule deer
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

Preservative Stabilisers	0.09% sodium azide (NaN_3) 1% bovine serum albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the mouse NSI myeloma cell line.
Specificity	**Mouse anti Bovine CD21 monoclonal antibody, clone CC21** recognizes the bovine CD21 cell surface antigen, a ~145 kDa single pass type I membrane glycoprotein containing multiple sushi domains. CD21 is also known as complement receptor type 2. In cattle CD21 expression is restricted to B lymphocytes (Naessens *et al.* 1990). CD21 may be expressed on B cells as either a long or a short form (Pringle *et al.* 2012) Mouse anti bovine CD21, clone CC21 has been used to demonstrate the co-expression of CD21 with PrP^c on B cells of scrapie infected sheep (Halliday *et al.* 2005).
Flow Cytometry	Use 10µl of the suggested working dilution to label 10^6 cells in 100µl
References	1. Naessens, J. *et al*. (1990) Characterization of a bovine leucocyte differentiation antigen of 145,000 Mw restricted to B lymphocytes. Immunology 69: 525-30. 2. Howard, C.J. *et al.* (1991) Summary of workshop findings for leukocyte antigens of cattle. Vet Immunol Immunopathol. 27 (1-3): 21-7. 3. 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. 4. Sigurdson, C.J. *et al.* (2002) PrP(CWD) lymphoid cell targets in early and advanced chronic wasting disease of mule deer. J Gen Virol. 83: 2617-28. 5. Kruger, E.F. *et al.* (2003) Bovine monocytes induce immunoglobulin production in peripheral blood B lymphocytes. Dev Comp Immunol. 27 (10): 889-97. 6. Newland, A. *et al.* (2004) Ovine dendritic cells transduced with an adenoviral CTLA4eEGFP fusion protein construct induce hyporesponsiveness to allostimulation. Immunology. 113: 310-7. 7. Halliday, S. *et al.* (2005) Expression of PrPC on cellular components of sheep blood. J Gen Virol. 86 (Pt 5): 1571-9. 8. Brackenbury, L.S. *et al.* (2005) Identification of a cell population that produces alpha/beta interferon *in vitro* and *in vivo* in response to noncytopathic bovine viral diarrhea virus. J Virol. 79: 7738-44. 9. Weiss, D.J. *et al.* (2006) Mucosal immune response in cattle with subclinical Johne's disease. Vet Pathol. 43: 127-35. 10. Richt, J.A. *et al.* (2007) Production of cattle lacking prion protein. Nat Biotechnol. 25: 132-8. 11. Lwin, S. *et al.* (2009) Immune cell types involved in early uptake and transport of recombinant mouse prion protein in Peyer's patches of calves. Cell Tissue Res. 338: 343-54. 12. Ekman, A. *et al.* (2010) B-cell development in bovine fetuses proceeds via a pre-B like cell in bone marrow and lymph nodes. Dev Comp Immunol. 34 (8): 896-903.

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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.

Guarantee

12 months from date of despatch

Acknowledgements

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Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 (MCA928A647)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

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