

Datasheet: MCA832F

BATCH NUMBER 1807

Description:	MOUSE ANTI BOVINE CD45:FITC
Specificity:	CD45
Other names:	LCA
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	CC1
Isotype:	IgG1
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 antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Bovine		
Product Form	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative Stabilisers	0.09% Sodium Azide		
	1%	Bovine Serum Albumin	
Approx. Protein	IgG concentration 0.1mg/ml		

Concentrations

Immunogen Bovine thoracic duct lymphocytes

RRID AB_2174255

Fusion Partners Spleen cells from immunised BALB/c mice were fused with cells of the NS1 mouse myeloma cell line

Specificity **Mouse anti Bovine CD45 antibody, clone CC1** recognizes the bovine homologue of the human CD45 antigen, also known as leucocyte common antigen (LCA), a pan leucocyte cell surface marker expressed on all cells of hematopoietic origin except for erythrocytes ([Bembridge *et al.* 1993](#)).

CD45 occurs in a number of isoforms, which in bovine includes CD45R, CD45RA, CD45RB and CD45RO and which have restricted cellular expression.

Flow Cytometry Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.

References

1. Bembridge, G.P. *et al.* (1993) Identification of monoclonal antibodies specific for bovine leukocyte common antigen (CD45) together with a novel broadly expressed leukocyte differentiation antigen, BoWC11. [Vet Immunol Immunopathol. 39: 115-20.](#)
2. Inchaisri, C. *et al.* (2000) Studies on the modulation of leucocyte subpopulations and immunoglobulins following intramammary infusion of beta 1,3-glucan into the bovine udder during the dry period. [J Vet Med B Infect Dis Vet Public Health. 47 \(5\): 373-86.](#)
3. Hu, S. *et al.* (2001) Effect of subcutaneous injection of ginseng on cows with subclinical *Staphylococcus aureus* mastitis. [J Vet Med B Infect Dis Vet Public Health. 48 \(7\): 519-28.](#)
4. Gånheim, C. *et al.* (2005) Changes in peripheral blood leucocyte counts and subpopulations after experimental infection with BVDV and/or *Mannheimia haemolytica*. [J Vet Med B Infect Dis Vet Public Health. 52 \(9\): 380-5.](#)
5. Niku, M. *et al.* (2006) Identification of major cell types in paraffin sections of bovine tissues. [BMC Vet Res. 2: 5.](#)
6. Grönlund, U. *et al.* (2006) Changes in blood and milk lymphocyte sub-populations during acute and chronic phases of *Staphylococcus aureus* induced bovine mastitis. [Res Vet Sci. 80 \(2\): 147-54.](#)
7. Galatowicz, G. *et al.* (2007) Ocular anti-allergic compounds selectively inhibit human mast cell cytokines *in vitro* and conjunctival cell infiltration *in vivo*. [Clin Exp Allergy. 37 \(11\): 1648-56.](#)
8. Riondato, F. *et al.* (2008) Effects of road transportation on lymphocyte subsets in calves. [Vet J. 175 \(3\): 364-8.](#)
9. Huang, L. *et al.* (2010) A hierarchy of endothelial colony-forming cell activity displayed by bovine corneal endothelial cells. [Invest Ophthalmol Vis Sci. 51: 3943-9.](#)
10. Spalenza, V. *et al.* (2011) Identification of internal control genes for quantitative expression analysis by real-time PCR in bovine peripheral lymphocytes. [Vet J. 189 \(3\): 278-83.](#)
11. Lynch, E.M. *et al.* (2012) Effect of pre-weaning concentrate supplementation on peripheral distribution of leukocytes, functional activity of neutrophils, acute phase protein and behavioural responses of abruptly weaned and housed beef calves. [BMC Veterinary](#)

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12. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. [Sci Rep. 7 \(1\): 3441.](#)

13. Lee, J. *et al.* (2020) Bovine tongue epithelium-derived cells: A new source of bovine mesenchymal stem cells. [Biosci Rep. 40 \(4\): BSR20181829.](#)

Further Reading	1. Ballingall, K.T. <i>et al.</i> (2001) The CD45 locus in cattle: allelic polymorphism and evidence for exceptional positive natural selection. Immunogenetics. 52: 276-83.
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Storage	Store at +4°C or at -20°C if preferred.
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This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee	12 months from date of despatch
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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA832F10041
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Regulatory	For research purposes only
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Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

North & South Tel: +1 800 265 7376

America 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

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Email: antibody_sales_de@bio-rad.com

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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