

Datasheet: MCA838F

Description:	MOUSE ANTI BOVINE WC1:FITC
Specificity:	WC1
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	CC15
Isotype:	IgG2a
Quantity:	0.1 mg

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								
Species Cross Reactivity	Reacts with: Sheep, Goat N.B. Antibody reactivity and working conditions may vary between species.								
Product Form	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid								
Max Ex/Em	<table><tr><th>Fluorophore</th><th>Excitation Max (nm)</th><th>Emission Max (nm)</th></tr><tr><td>FITC</td><td>490</td><td>525</td></tr></table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	FITC	490	525		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
FITC	490	525							
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue cult								
Buffer Solution	Phosphate buffered saline								
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin								
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml								
Immunogen	Bovine lymphocytes								
External Database Links	UniProt:								

Entrez Gene:

[338056](#) CD163L1 [Related reagents](#)

Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS1 myeloma cell line
Specificity	Mouse anti Bovine WC1 antibody, clone CC15 recognizes bovine WC1, a ~215/300 kDa antigen expressed on the majority of gamma/delta T lymphocytes. These cells also express low levels of CD5, but are negative for other B and T cell markers. The WC1 antigen is reported to be involved in a number of processes, including activation of gamma/delta T cells and the development of a Th1-biased acquired immune response (Rogers et al. 2005). Mouse anti Bovine WC1 antibody, clone CC15 is routinely tested in flow cytometry on bovine peripheral blood lymphocytes.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	- Howard, C.J. <i>et al.</i> (1989) <i>In vivo</i> depletion of BoT4 (CD4) and of non-T4/T8 lymphocyte subsets in cattle with monoclonal antibodies. Eur J Immunol. 19 (4): 757-64. - Clevers, H. <i>et al.</i> (1990) Identification of a bovine surface antigen uniquely expressed on CD4-CD8- T cell receptor gamma/delta+ T lymphocytes. Eur J Immunol. 20 (4): 809-17. - Gutierrez, M. <i>et al.</i> (1999) The detection of CD2+, CD4+, CD8+, and WC1+ T lymphocytes, B cells and macrophages in fixed and paraffin embedded bovine tissue using a range of antigen recovery and signal amplification techniques. Vet Immunol Immunopathol. 71 (3-4): 321-34. - Brodersen, R. <i>et al.</i> (1998) Analysis of the immunological cross reactivities of 213 well characterized monoclonal antibodies with specificities against various leucocyte surface antigens of human and 11 animal species. Vet Immunol Immunopathol. 64 (1): 1-13. - Winkler, M.T. <i>et al.</i> (2000) Persistence and reactivation of bovine herpesvirus 1 in the tonsils of latently infected calves. J Virol. 74 (11): 5337-46. - Sanchez, J. <i>et al.</i> (2011) Microscopical and immunological features of tuberculoid granulomata and cavitary pulmonary tuberculosis in naturally infected goats. J Comp Pathol. 145 (2-3): 107-17. - Fulton, B.E. Jr. <i>et al.</i> (2006) Dissemination of bovine leukemia virus-infected cells from a newly infected sheep lymph node. J Virol. 80: 7873-84. - Glew, E.J. and Howard, C.J. (2001) Antigen-presenting cells from calves persistently infected with bovine viral diarrhoea virus, a member of the Flaviviridae, are not compromised in their ability to present viral antigen. J Gen Virol. 82: 1677-85. - Liebana, E. <i>et al.</i> (2007) Distribution and activation of T-lymphocyte subsets in tuberculous bovine lymph-node granulomas. Vet Pathol. 44: 366-72. - Lynch, E.M. <i>et al.</i> (2010) Effect of abrupt weaning at housing on leukocyte distribution, functional activity of neutrophils, and acute phase protein response of beef calves. BMC Vet Res. 6: 39. - Summers, C. <i>et al.</i> (2012) The distribution of immune cells in the lungs of classical and atypical ovine pulmonary adenocarcinoma. Vet Immunol Immunopathol. 146: 1-7. - Maślanka T <i>et al.</i> (2012) The presence of CD25 on bovine WC1+ γ/δ T cells is positively correlated with their production of IL-10 and TGF-β, but not IFN-γ. Pol J Vet Sci. 15 (1): 11-20. - Herzig, C.T. <i>et al.</i> (2010) Evolution of the CD163 family and its relationship to the bovine gamma delta T cell co-receptor WC1. BMC Evol Biol. 10: 181. - Romero-Palomo F <i>et al.</i> (2015) Immunopathologic Changes in the Thymus of Calves

Pre-infected with BVDV and Challenged with BHV-1. [Transbound Emerg Dis. Aug 25. \[Epub ahead of print\]](#)

15. Goh, S. *et al.* (2016) Identification of *Theileria lestoquardi* Antigens Recognized by CD8+ T Cells. [PLoS One. 11 \(9\): e0162571.](#)
16. Wattegedera, S.R. *et al.* (2017) Enhancing the toolbox to study IL-17A in cattle and sheep. [Vet Res. 48 \(1\): 20.](#)
17. Franzin, A.M. *et al.* (2017) Immune and biochemical responses in skin differ between bovine hosts genetically susceptible and resistant to the cattle tick *Rhipicephalus microplus*. [Parasit Vectors. 10 \(1\): 51.](#)
18. Palomares, R.A. *et al.* (2015) Acute infection with bovine viral diarrhea virus of low or high virulence leads to depletion and redistribution of WC1(+) $\gamma\delta$ T cells in lymphoid tissues of beef calves. [Vet Immunol Immunopathol. 167 \(3-4\): 190-5.](#)
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24. Albertsson, A.M. *et al.* (2018) $\gamma\delta$ T Cells Contribute to Injury in the Developing Brain. [Am J Pathol. 188 \(3\): 757-67.](#)

Storage

Store at +4°C or at -20°C if preferred.

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.

Shelf Life

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:FITC \(MCA929F\)](#)

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