

Datasheet: MCA838GA

BATCH NUMBER 1710

Description:	MOUSE ANTI BOVINE WC1
Specificity:	WC1
Format:	Purified
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	▪			1/25 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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.

(1) This product requires protein digestion pre-treatment of paraffin sections e.g. trypsin or pronase. Overnight incubation with clone CC15 is recommended.

Target Species	Bovine
Species Cross Reactivity	<p>Reacts with: Sheep, Goat</p> <p>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.</p>
Product Form	Purified IgG - liquid

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
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Bovine lymphocytes
External Database Links	<p>UniProt: P30205 Related reagents</p> <p>Entrez Gene: 338056 CD163L1 Related reagents</p>
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS1 myeloma cell line
Specificity	<p>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.</p> <p>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).</p> <p>Mouse anti Bovine WC1 antibody, clone CC15 is routinely tested in flow cytometry on bovine peripheral blood lymphocytes.</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul
References	<ol style="list-style-type: none"> 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.](#)
5. Winkler, M.T. *et al.* (2000) Persistence and reactivation of bovine herpesvirus 1 in the tonsils of latently infected calves. [J Virol. 74 \(11\): 5337-46.](#)
6. Sanchez, J. *et al.* (2011) Microscopical and immunological features of tuberculoid granulomata and cavitary pulmonary tuberculosis in naturally infected goats. [J Comp Pathol. 145 \(2-3\): 107-17.](#)
7. Fulton, B.E. Jr. *et al.* (2006) Dissemination of bovine leukemia virus-infected cells from a newly infected sheep lymph node. [J Virol. 80: 7873-84.](#)
8. 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.](#)
9. Liebana, E. *et al.* (2007) Distribution and activation of T-lymphocyte subsets in tuberculous bovine lymph-node granulomas. [Vet Pathol. 44: 366-72.](#)
10. Lynch, E.M. *et al.* (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.](#)
11. Summers, C. *et al.* (2012) The distribution of immune cells in the lungs of classical and atypical ovine pulmonary adenocarcinoma. [Vet Immunol Immunopathol. 146: 1-7.](#)
12. Maślanka T *et al.* (2012) The presence of CD25 on bovine WC1+ $\gamma\delta$ 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.](#)
13. Herzig, C.T. *et al.* (2010) Evolution of the CD163 family and its relationship to the bovine gamma delta T cell co-receptor WC1. [BMC Evol Biol. 10: 181.](#)
14. Romero-Palomo F *et al.* (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. Wattedgedera, 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 diarrhoea 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.](#)
19. Blumerman SL *et al.* (2007) Molecular cloning of bovine chemokine receptors and expression by WC1+ $\gamma\delta$ T cells. [Dev Comp Immunol. 31 \(1\): 87-102.](#)
20. Elsayed, M. *et al.* (2016) Comparison between Immunological and Molecular Based Methods for Diagnosis of *Mycobacterium* Infections in Cattle, Buffaloes and Human in Egypt. [Cell Mol Biol 62: 125.](#)
21. Hecker YP *et al.* (2013) Immune response and protection provided by live tachyzoites and native antigens from the NC-6 Argentina strain of *Neospora caninum* in pregnant heifers. [Vet Parasitol. 197 \(3-4\): 436-46.](#)
22. Martínez CM *et al.* (2005) Immunophenotypical characterization of lymphocyte subpopulations of the uterus of non-pregnant and pregnant goats. [Anat Histol Embryol. 34 \(4\): 240-6.](#)

23. Silva, A.P. *et al.* (2015) Encapsulated *Brucella ovis* Lacking a Putative ATP-Binding Cassette Transporter ($\Delta abcBA$) Protects against Wild Type *Brucella ovis* in Rams. [PLoS One. 10 \(8\): e0136865.](#)
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.](#)
25. Higgins, J.L. *et al.* (2018) Cell mediated immune response in goats after experimental challenge with the virulent *Brucella melitensis* strain 16M and the reduced virulence strain Rev. 1. [Vet Immunol Immunopathol. 202: 74-84.](#)
26. Baliu-piqué, M. *et al.* (2019) Age-related distribution and dynamics of T-cells in blood and lymphoid tissues of goats. [Dev Comp Immunol. 93: 1-10.](#)
27. Pérez-caballero, R. *et al.* (2018) Comparative dynamics of peritoneal cell immunophenotypes in sheep during the early and late stages of the infection with *Fasciola hepatica* by flow cytometric analysis. [Parasit Vectors. 11 \(1\): 640.](#)
28. Gondaira, S. *et al.* (2020) Immunosuppression in Cows following Intramammary Infusion of *Mycoplasma bovis*. [Infect Immun. 88 \(3\)Feb 20 \[Epub ahead of print\].](#)

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. 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

Health And Safety Information Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA838GA>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

- Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
- Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)
- Goat Anti Mouse IgG (STAR76...) [RPE](#)
- Goat Anti Mouse IgG (STAR70...) [FITC](#)
- Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@550](#), [DyLight@650](#), [DyLight@680](#), [DyLight@800](#), [FITC](#), [HRP](#)
- Goat Anti Mouse IgG (STAR77...) [HRP](#)
- Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
- Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
- Rabbit Anti Mouse IgG (STAR13...) [HRP](#)

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA929\)](#)

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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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M369038:200529'

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