

## Datasheet: MCA1655GA

<b>Description:</b>	MOUSE ANTI BOVINE WC1
<b>Specificity:</b>	WC1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC101
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
Functional Assays			▪	

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.

<b>Target Species</b>	Bovine
<b>Species Cross Reactivity</b>	Reacts with: Pig, Sheep <b>N.B.</b> Antibody reactivity and working conditions may vary between species.
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml

**Immunogen**

Con A stimulated bovine lymphocytes

**External Database Links****UniProt:**[P30205](#) [Related reagents](#)**Entrez Gene:**[338056](#) [CD163L1](#) [Related reagents](#)**Specificity**

**Mouse anti Bovine WC1 antibody, clone CC101**, recognizes a subset of WC1<sup>+</sup> T-cells expressing the WC1.1 isoform (MacHugh *et al.* 1993). The bovine WC1 cell surface antigen is expressed by a population of gamma/delta T-cells that lack CD2, CD4 and CD8, but express CD3. WC1 expression appears to be heterogeneous and antibodies to this cluster show differing reaction patterns (Crocker *et al.* 1993).

Mouse anti bovine WC1, clone CC101, immunoprecipitates a 215 kDa molecule from bovine cells and also recognizes the swine homolog of WC1, which is a 180 kDa molecule. In pigs, the 180 kDa molecule is expressed by a gamma/delta TCR positive T-cell population that also lack CD2, CD4 and CD8 (Carr *et al.* 1994).

**Flow Cytometry**Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul.**References**

1. Carr, M.M. *et al.* (1994) Expression on porcine gamma/delta lymphocytes of a phylogenetically conserved surface antigen previously restricted in expression to ruminant gamma/delta T lymphocytes. [Immunology 81: 36-40.](#)
2. Howard, C.J. & Naessens, J. (1993) Summary of workshop findings for cattle. [Vet Immunol Immunopathol. 39: 25-48.](#)
3. MacHugh, N. *et al.* (1993) Clustering of monoclonal antibodies recognizing different members of the WC1 gene family. [Vet Immunol Immunopathol. 39: 155-60.](#)
4. Crocker, G. *et al.* (1993) Analysis of the gamma/delta T cell restricted antigen WC1. [Vet Immunol Immunopathol. 39: 137-44.](#)
5. Lund, B. *et al.* (1993) Expression of T19 (WC1) molecules by ovine lymphocytes. [Vet Immunol Immunopathol. 39: 145-53.](#)
6. Schröder, A.C. & Hamann, J. (2005) The influence of technical factors on differential cell count in milk. [J Dairy Res. 72: 153-8.](#)
7. Liu, X. *et al.* (2014) Crusted scabies is associated with increased IL-17 secretion by skin T cells. [Parasite Immunol. 36: 594-604.](#)
8. Patarroyo, J.H. *et al.* (2009) Immune response of bovines stimulated by synthetic vaccine SBm7462 against *Rhipicephalus (Boophilus) microplus*. [Vet Parasitol. 166: 333-9.](#)
9. Heiser, A. *et al.* (2015) Grazing dairy cows had decreased interferon- $\gamma$ , tumor necrosis factor, and interleukin-17, and increased expression of interleukin-10 during the first week after calving. [Dairy Sci. 98: 937-46.](#)
10. Takamatsu, H.H. *et al.* (2006) Porcine gammadelta T cells: possible roles on the innate and adaptive immune responses following virus infection. [Vet Immunol Immunopathol. 112: 49-61.](#)
11. Sedlak, C. *et al.* (2014) IL-12 and IL-18 induce interferon- $\gamma$  production and de novo CD2 expression in porcine  $\gamma\delta$  T cells. [Dev Comp Immunol. 47: 115-22.](#)
12. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. [Sci Rep. 7 \(1\): 3441.](#)
13. Hussen, J. *et al.* (2018) Expression Patterns of Cell Adhesion Molecules on CD4<sup>+</sup> T Cells and WC1<sup>+</sup> T Cells in the Peripheral Blood of Dromedary Camels. [Pakistan Veterinary Journal. 38 \(03\): 231-236.](#)

**Further Reading**

1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. [Vet Res.](#)

[39: 54.](#)

2. Wijngaard, P. *et al.* (1992) Molecular characterization of the WC1 antigen expressed specifically on bovine CD4-CD8- gamma delta T lymphocytes. [J Immunol. 149: 3273-7.](#)

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**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.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)  
Goat Anti Mouse IgG (STAR77...) [HRP](#)  
Rabbit Anti Mouse IgG (STAR12...) [RPE](#)  
Rabbit Anti Mouse IgG (STAR8...) [DyLight@800](#)  
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)  
Goat Anti Mouse IgG (STAR76...) [RPE](#)  
Goat Anti Mouse IgG (STAR70...) [FITC](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
Human Anti Mouse IgG2a (HCA037...) [FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@680](#),  
[DyLight@800](#), [FITC](#), [HRP](#)

### Recommended Negative Controls

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

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