

## Datasheet: MCA1655GA

**BATCH NUMBER 171084**

<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 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: Pig, Sheep

**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 - liquid

#### Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture

supernatant

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**Buffer Solution** Phosphate buffered saline

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**Preservative Stabilisers** 0.09% sodium azide (NaN<sub>3</sub>)

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**Carrier Free** Yes

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**Approx. Protein Concentrations** IgG concentration 1.0 mg/ml

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**Immunogen** Con A stimulated bovine lymphocytes

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**External Database Links**

**UniProt:**

[P30205](#)

[Related reagents](#)

**Entrez Gene:**

[338056](#)

CD163L1

[Related reagents](#)

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**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](#)).

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**Flow Cytometry**

Use 10µl of the suggested working dilution to label 10<sup>6</sup> cells in 100µl

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**References**

1. Howard, C.J. & Naessens, J. (1993) Summary of workshop findings for cattle. [Vet Immunol Immunopathol. 39: 25-48.](#)
2. MacHugh, N. *et al.* (1993) Clustering of monoclonal antibodies recognizing different members of the WC1 gene family. [Vet Immunol Immunopathol. 39: 155-60.](#)
3. Crocker, G. *et al.* (1993) Analysis of the gamma/delta T cell restricted antigen WC1. [Vet Immunol Immunopathol. 39: 137-44.](#)
4. Lund, B. *et al.* (1993) Expression of T19 (WC1) molecules by ovine lymphocytes. [Vet Immunol Immunopathol. 39: 145-53.](#)
5. Schröder, A.C. & Hamann, J. (2005) The influence of technical factors on differential cell count in milk. [J Dairy Res. 72: 153-8.](#)
6. Patarroyo, J.H. *et al.* (2009) Immune response of bovines stimulated by synthetic vaccine SBm7462 against *Rhipicephalus (Boophilus) microplus*. [Vet Parasitol. 166: 333-9.](#)
7. Al-Mohammed Salem Kazem, T. *et al.* (2012) The Cellular Populations of Normal

Camel (*Camelus dromedaries*) Milk [Open Journal of Veterinary Medicine. 02 \(04\): 262-5.](#)

8. 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.](#)
9. Liu, X. *et al.* (2014) Crusted scabies is associated with increased IL-17 secretion by skin T cells. [Parasite Immunol. 36: 594-604.](#)
10. Al-Ashqar, R.A. *et al.* (2015) The CD markers of camel (*Camelus dromedarius*.) milk cells during mastitis: the LPAM-1 expression is an indication of possible mucosal nature of the cellular trafficking. [Res Vet Sci. 99: 77-81.](#)
11. 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. [J Dairy Sci. 98: 937-46.](#)
12. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. [Sci Rep. 7 \(1\): 3441.](#)
13. Hussien, J. *et al.* (2018) Expression Patterns of Cell Adhesion Molecules on CD4+ T Cells and WC1+ T Cells in the Peripheral Blood of Dromedary Camels. [Pakistan Veterinary Journal. 38 \(03\): 231-236.](#)
14. Kato-Mori, Y. *et al.* (2021) Characterization of a variant CD4 molecule in Japanese Black cattle. [Vet Immunol Immunopathol. 232: 110167.](#)
15. Blanco, F.C. *et al.* (2021) Identifying Bacterial and Host Factors Involved in the Interaction of *Mycobacterium bovis* with the Bovine Innate Immune Cells. [Front Immunol. 12: 674643.](#)

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**Further Reading**

1. 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.](#)
2. Takamatsu, H.H. *et al.* (2006) Porcine  $\gamma\delta$  T cells: possible roles on the innate and adaptive immune responses following virus infection. [Vet Immunol Immunopathol. 112: 49-61.](#)
3. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. [Vet Res. 39: 54.](#)

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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.

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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: <https://www.bio-rad-antibodies.com/SDS/MCA1655GA>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>

## Recommended Negative Controls

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

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](http://bio-rad-antibodies.com/datasheets)  
'M419038:230511'

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