

## Datasheet: MCA1648GA

**BATCH NUMBER 171508**

<b>Description:</b>	MOUSE ANTI BOVINE WC4
<b>Specificity:</b>	WC4
<b>Other names:</b>	CD19, SWC7
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC55
<b>Isotype:</b>	IgG1
<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	▪			1/50 - 1/100

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

#### Buffer Solution

Phosphate buffered saline

#### Preservative

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

## Stabilisers

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**Carrier Free** Yes

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

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**Specificity** **Mouse anti Bovine WC4 antibody, clone CC55** recognizes the bovine WC4 cell surface antigen, a ~90kDa molecule expressed by a subpopulation of B cells in peripheral blood and lymphoid tissues ([Howard \*et al.\* 1993](#)). It is suggested that WC4, like SWC7 in pigs, is the bovine orthologue of human CD19 ([Naessens and Howard 1991](#), [Ikebuchi \*et al.\* 2013](#)).

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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. *et al.* (1991) Summary of workshop findings for leukocyte antigens of cattle. [Vet Immunol Immunopathol. 27 \(1-3\): 21-7.](#)
  2. Denham, S. *et al.* (1994) Monoclonal antibodies recognising differentiation antigens on porcine B cells. [Vet Immunol Immunopathol. 43 \(1-3\): 259-67.](#)
  3. Naessens, J. *et al.* (1997) Nomenclature and characterization of leukocyte differentiation antigens in ruminants. [Immunol Today. 18 \(8\): 365-8.](#)
  4. Andersen, J.K. *et al.* (1999) Systematic characterization of porcine ileal Peyer's patch, I. apoptosis-sensitive immature B cells are the predominant cell type. [Immunology. 98: 612-21.](#)
  5. Boersma, W.J. *et al.* (2001) Summary of workshop findings for porcine B-cell markers. [Vet Immunol Immunopathol. 80 \(1-2\): 63-78.](#)
  6. Szymańska-Czerwińska, M. *et al.* (2009) Effect of tylosin and prebiotics on the level of cytokines and lymphocyte immunophenotyping parameters in calves [Central European Journal of Immunology. 34: 1-6.](#)
  7. Ikebuchi, R. *et al.* (2013) Blockade of bovine PD-1 increases T cell function and inhibits bovine leukemia virus expression in B cells *in vitro*. [Vet Res. 44: 59.](#)
  8. Ikebuchi, R. *et al.* (2014) Differences in cellular function and viral protein expression between IgM<sup>high</sup> and IgM<sup>low</sup> B-cells in bovine leukemia virus-infected cattle. [J Gen Virol. 95: 1832-42.](#)
  9. Nishimori, A. *et al.* (2016) Direct polymerase chain reaction from blood and tissue samples for rapid diagnosis of bovine leukemia virus infection. [J Vet Med Sci. 78 \(5\): 791-6.](#)
  10. Maciag, S.S. *et al.* (2022) On the influence of the source of porcine colostrum in the development of early immune ontogeny in piglets. [Sci Rep. 12 \(1\): 15630.](#)
  11. Haach, V. *et al.* (2023) A polyvalent virosomal influenza vaccine induces broad cellular and humoral immunity in pigs. [Virology. 20 \(1\): 181.](#)
  12. Maciag, S. *et al.* (2022) Effects of freezing storage on the stability of maternal cellular and humoral immune components in porcine colostrum. [Vet Immunol Immunopathol. 254: 110520.](#)
  13. Forner, R. *et al.* (2021) Distribution difference of colostrum-derived B and T cells subsets in gilts and sows. [PLoS One. 16 \(5\): e0249366.](#)
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**Further Reading** 1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update.

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<b>Storage</b>	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.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1648GA">https://www.bio-rad-antibodies.com/SDS/MCA1648GA</a>
<b>Regulatory</b>	For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <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 IgG1 NEGATIVE CONTROL \(MCA928\)](#)

**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)

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