

# Datasheet: MCA1653GA

**BATCH NUMBER 165105**

<b>Description:</b>	MOUSE ANTI BOVINE CD4
<b>Specificity:</b>	CD4
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC8
<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	▪			1/100 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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.

<b>Target Species</b>	Bovine
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A 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
<b>Immunogen</b>	Bovine lymphocytes.
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">A7YY52</a> <a href="#">Related reagents</a>
<b>Fusion Partners</b>	Spleen cells from an immunized mouse were fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Bovine CD4 antibody, clone CC8</b> recognizes bovine CD4, the homolog of human CD4 and immunoprecipitates a ~50 kDa molecule. The phenotype, tissue distribution and function of T-cells expressing the bovine CD4 antigen are similar to those in other species. However, expression on macrophages has not yet been detected. Mouse anti Bovine CD4 antibody, clone CC8 has been reported as being suitable for use on formalin dichromate (FD5) fixed paraffin embedded tissue with amplification and antigen retrieval techniques (<a href="#">Eskra et al. 1991</a>).</p> <p>A mutation in the bovine CD4 gene resulting in an amino acid substitution at A324 T, located in the D4 domain of the CD4 gene product can occur. This mutation results in lowered binding of Mouse anti Bovine CD4 antibody, clone CC8 to CD4 in Japanese Black (JB) cattle where this mutation has been identified (<a href="#">Kato-Mori, et al., 2020</a>). CD4 in JB cattle can be identified using clone CACT138A (<a href="#">MCA6081</a>) whose binding to bovine CD4 is unaffected by the A324T mutation (<a href="#">Kato-Mori, et al., 2020</a>).</p>
<b>Flow Cytometry</b>	Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl
<b>References</b>	<ol style="list-style-type: none"> <li>1. Bensaid, A. &amp; Hadam, M. (1991) Individual antigens of cattle. Bovine CD4 (BoCD4). <a href="#">Vet Immunol Immunopathol. 27 (1-3): 51-4.</a></li> <li>2. Eskra, L. et al. (1991) Effect of monoclonal antibodies on <i>in vitro</i> function of T-cell subsets. <a href="#">Vet Immunol Immunopathol. 27 (1-3): 215-22.</a></li> <li>3. Howard, C.J. et al. (1991) Summary of workshop findings for leukocyte antigens of cattle. <a href="#">Vet Immunol Immunopathol. 27 (1-3): 21-7.</a></li> <li>4. Gutierrez, M. et al. (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. <a href="#">Vet Immunol Immunopathol. 71 (3-4): 321-34.</a></li> <li>5. Harris, J. et al. (2002) Expression of caveolin by bovine lymphocytes and antigen-presenting cells <a href="#">Immunology. 105: 190-5.</a></li> <li>6. Kruger, E.F. et al. (2003) Bovine monocytes induce immunoglobulin production in peripheral blood B lymphocytes. <a href="#">Dev Comp Immunol. 27 (10): 889-97.</a></li> <li>7. Buddle, B.M. et al. (2003) Revaccination of neonatal calves with <i>Mycobacterium bovis</i> BCG reduces the level of protection against bovine tuberculosis induced by a single vaccination. <a href="#">Infect Immun. 71: 6411-9.</a></li> <li>8. Endsley, J.J. et al. (2004) Characterization of bovine homologues of granulysin and NK-lysin. <a href="#">J Immunol. 173 (4): 2607-14.</a></li> </ol>

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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.

<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/MCA1653GA">https://www.bio-rad-antibodies.com/SDS/MCA1653GA</a> 10040
<b>Regulatory</b>	For research purposes only

## 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 \(MCA929\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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