

# Datasheet: MCA2041GA

**BATCH NUMBER 167606**

<b>Description:</b>	MOUSE ANTI BOVINE CD172a
<b>Specificity:</b>	CD172a
<b>Other names:</b>	SIRP ALPHA
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC149
<b>Isotype:</b>	IgG2b
<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> )

Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Bovine afferent veiled dendritic cells
External Database Links	<p><b>UniProt:</b>  <a href="#">O46631</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">327666</a>    SIRPA    <a href="#">Related reagents</a></p>
Synonyms	MYD1, PTPNS1, SHPS1, SIRP
Specificity	<p><b>Mouse anti Bovine CD172a antibody, clone CC149</b> recognizes bovine CD172a, also known as MyD-1 antigen and SIRPA.</p> <p>CD172a is a ~55 kDa single pass type 1 membrane protein belonging to the family of signal regulatory proteins (SIRP). CD172a has been identified as the receptor for CD47. Bovine CD172a is strongly expressed by splenic macrophages, monocytes and a subset of afferent lymph veiled cells (ALVC) and by dendritic cells in the skin.</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl
References	<ol style="list-style-type: none"> <li>1. Smith, R. <i>et al.</i> (2003) A novel MyD-1 (SIRP-1alpha) signaling pathway that inhibits LPS-induced TNFalpha production by monocytes. <a href="#">Blood.102: 2532-40.</a></li> <li>2. Brackenbury, L.S. <i>et al.</i> (2005) Identification of a cell population that produces alpha/beta interferon <i>in vitro</i> and <i>in vivo</i> in response to noncytopathic bovine viral diarrhea virus. <a href="#">J Virol. 79: 7738-44.</a></li> <li>3. Price, S.J. &amp; Hope, J.C.. (2009) Enhanced secretion of interferon-gamma by bovine gammadelta T cells induced by coculture with <i>Mycobacterium bovis</i>-infected dendritic cells: evidence for reciprocal activating signals. <a href="#">Immunology. 126:201-8</a></li> <li>4. Waters, W.R. (2009) Signal regulatory protein alpha (SIRPalpha) cells in the adaptive response to ESAT-6/CFP-10 protein of tuberculous mycobacteria. <a href="#">PLoS One. 4: e6414.</a></li> <li>5. Jensen, K. <i>et al.</i> (2014) Comparison of small interfering RNA (siRNA) delivery into bovine monocyte-derived macrophages by transfection and electroporation. <a href="#">Vet Immunol Immunopathol. 158 : 224-32.</a></li> <li>6. Hussen J <i>et al.</i> (2014) The chemokine CCL5 induces selective migration of bovine classical monocytes and drives their differentiation into LPS-hyporesponsive macrophages <i>in vitro</i>. <a href="#">Dev Comp Immunol. 47 (2): 169-77.</a></li> <li>7. Eger, M. <i>et al.</i> (2015) Impacts of parturition and body condition score on glucose uptake capacity of bovine monocyte subsets. <a href="#">Vet Immunol Immunopathol. 166 (1-2): 33-42.</a></li> <li>8. Vachieri N <i>et al.</i> (2015) An <i>in vitro</i> model to assess the immunosuppressive effect of tick saliva on the mobilization of inflammatory monocyte-derived cells. <a href="#">Vet Res. 46 (1): 117.</a></li> <li>9. Tahoun, A. <i>et al.</i> (2015) Functional analysis of bovine TLR5 and association with IgA</li> </ol>

- responses of cattle following systemic immunisation with H7 flagella. [Vet Res. 46: 9.](#)
10. Pridans, C. *et al.* (2016) A Csf1r-EGFP Transgene Provides a Novel Marker for Monocyte Subsets in Sheep. [J Immunol. 197 \(6\): 2297-305.](#)
11. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. [Sci Rep. 7 \(1\): 3441.](#)
12. Liu, J. *et al.* (2020) *Theileria annulata*. transformation altered cell surface molecules expression and endocytic function of monocyte-derived dendritic cells. [Ticks Tick Borne Dis. 11 \(3\): 101365.](#)
13. Okino, C.H. *et al.* (2020) A polymorphic CD4 epitope related to increased susceptibility to *Babesia bovis* in Canchim calves. [Vet Immunol Immunopathol. 230: 110132.](#)
14. Barut, G.T. *et al.* (2020) Transcriptomic profiling of bovine blood dendritic cells and monocytes following TLR stimulation. [Eur J Immunol. 50 \(11\): 1691-711.](#)
15. Kolar, Q.K. *et al.* (2020) Anatomical distribution of respiratory tract leukocyte cell subsets in neonatal calves. [Vet Immunol Immunopathol. 227: 110090.](#)
16. Park, D.S. *et al.* (2021) Dynamic changes in blood immune cell composition and function in Holstein and Jersey steers in response to heat stress. [Cell Stress Chaperones. 26 \(4\): 705-20.](#)
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18. Tahoun, A. *et al.* (2020) Inflammasome Activation in Bovine Peripheral Blood-Derived Macrophages Is Associated with Actin Rearrangement. [Animals \(Basel\). 10 \(4\): 655.](#)
19. Marzo, S. *et al.* (2022) Characterisation of dendritic cell frequency and phenotype in bovine afferent lymph reveals kinetic changes in costimulatory molecule expression. [Vet Immunol Immunopathol. 243: 110363.](#)
20. Casaro, S. *et al.* (2022) Flow cytometry panels for immunophenotyping dairy cattle peripheral blood leukocytes [Vet Immunol Immunopathol. 248: 110417.](#)

<b>Further Reading</b>	1. Howard, C.J. <i>et al.</i> (1999) Dendritic cells in cattle: phenotype and function. <a href="#">Vet Immunol Immunopathol. 72 (1-2): 119-24.</a>
<b>Storage</b>	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
<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/MCA2041GA">https://www.bio-rad-antibodies.com/SDS/MCA2041GA</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>
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>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>

## Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)

## Recommended Useful Reagents

[BOVINE DENDRITIC CELL GROWTH KIT \(PBP014KZZ\)](#)

[BOVINE DENDRITIC CELL GROWTH KIT \(PBP015KZZ\)](#)

[MOUSE ANTI BOVINE CD205:FITC \(MCA1651F\)](#)

[MOUSE ANTI BOVINE CD205 \(MCA1651GA\)](#)

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