



Datasheet: MCA2041C

BATCH NUMBER 157518

Description:	MOUSE ANTI BOVINE CD172a:RPE-Cy5
Specificity:	CD172a
Other names:	SIRP ALPHA
Format:	RPE-CY5
Product Type:	Monoclonal Antibody
Clone:	CC149
Isotype:	IgG2b
Quantity:	100 TESTS/1ml

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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat
Immunofluorescence			▪	

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						
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) -Cy5 - lyophilized						
Reconstitution	Reconstitute with 1.0ml distilled water Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.						
Max Ex/Em	<table><thead><tr><th>Fluorophore</th><th>Excitation Max (nm)</th><th>Emission Max (nm)</th></tr></thead><tbody><tr><td>RPE-Cy5 488nm laser</td><td>496</td><td>667</td></tr></tbody></table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE-Cy5 488nm laser	496	667
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
RPE-Cy5 488nm laser	496	667					
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant						
Buffer Solution	Phosphate buffered saline						

Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 5% Sucrose
Immunogen	Bovine afferent veiled dendritic cells
External Database Links	<p>UniProt: O46631 Related reagents</p> <p>Entrez Gene: 327666 SIRPA Related reagents</p>
Synonyms	MYD1, PTPNS1, SHPS1, SIRP
Specificity	<p>Mouse anti Bovine CD172a antibody, clone CC149 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 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> Howard, C.J. <i>et al.</i> (1999) Dendritic cells in cattle: phenotype and function. Vet Immunol Immunopathol. 72 (1-2): 119-24. Price, S.J. & 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. Immunology. 126:201-8 Waters, W.R. (2009) Signal regulatory protein alpha (SIRPalpha) cells in the adaptive response to ESAT-6/CFP-10 protein of tuberculous mycobacteria. PLoS One. 4: e6414. 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. J Virol. 79: 7738-44. Smith, R. <i>et al.</i> (2003) A novel MyD-1 (SIRP-1alpha) signaling pathway that inhibits LPS-induced TNFalpha production by monocytes. Blood.102: 2532-40. Jensen, K. <i>et al.</i> (2014) Comparison of small interfering RNA (siRNA) delivery into bovine monocyte-derived macrophages by transfection and electroporation. Vet Immunol Immunopathol. 158 : 224-32. Tahoun, A. <i>et al.</i> (2015) Functional analysis of bovine TLR5 and association with IgA responses of cattle following systemic immunisation with H7 flagella. Vet Res. 46: 9. 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>. Dev Comp Immunol. 47 (2): 169-77. Eger, M. <i>et al.</i> (2015) Impacts of parturition and body condition score on glucose uptake capacity of bovine monocyte subsets. Vet Immunol Immunopathol. 166 (1-2): 33-42. 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. [Vet Res. 46 \(1\): 117.](#)

11. Pridans, C. *et al.* (2016) A Csf1r-EGFP Transgene Provides a Novel Marker for Monocyte Subsets in Sheep. [J Immunol. 197 \(6\): 2297-305.](#)

12. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. [Sci Rep. 7 \(1\): 3441.](#)

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. 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.](#)

15. 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.](#)

16. Casaro, S. *et al.* (2022) Flow cytometry panels for immunophenotyping dairy cattle peripheral blood leukocytes [Vet Immunol Immunopathol. 248: 110417.](#)

17. 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.](#)

18. Kolar, Q.K. *et al.* (2020) Anatomical distribution of respiratory tract leukocyte cell subsets in neonatal calves. [Vet Immunol Immunopathol. 227: 110090.](#)

19. 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.](#)

20. Ibeagha-Awemu, E.M. *et al.* (2021) Regionally Distinct Immune and Metabolic Transcriptional Responses in the Bovine Small Intestine and Draining Lymph Nodes During a Subclinical *Mycobacterium avium* subsp. *paratuberculosis* Infection. [Front Immunol. 12: 760931.](#)

Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.
----------------	---

Guarantee	12 months from date of despatch
------------------	---------------------------------

Acknowledgements	Cy® and CyDye® are registered trademarks of GE Healthcare
-------------------------	---

Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA2041C 20487
--------------------------------------	---

Regulatory	For research purposes only
-------------------	----------------------------

Related Products

Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL:RPE-Cy5 \(MCA691C\)](#)

North & South Tel: +1 800 265 7376

Worldwide Tel: +44 (0)1865 852 700

Europe Tel: +49 (0) 89 8090 95 21

America Fax: +1 919 878 3751

Fax: +44 (0)1865 852 739

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_us@bio-rad.com

Email: antibody_sales_uk@bio-rad.com

Email: antibody_sales_de@bio-rad.com

batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M379697:210401'

Printed on 06 Feb 2025

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)