Datasheet: MCA2041C

BATCH NUMBER 166055

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

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	**UniProt:** O46631 Related reagents **Entrez Gene:** 327666 SIRPA Related reagents
Synonyms	MYD1, PTPNS1, SHPS1, SIRP
Specificity	**Mouse anti Bovine CD172a antibody, clone CC149** recognizes bovine CD172a, also known as MyD-1 antigen and SIRPA. 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.
Flow Cytometry	Use 10µl of the suggested working dilution to label 10^6 cells in 100µl
References	1. Smith, R. *et al.* (2003) A novel MyD-1 (SIRP-1alpha) signaling pathway that inhibits LPS-induced TNFalpha production by monocytes. Blood.102: 2532-40. 2. Brackenbury, L.S. *et al.* (2005) Identification of a cell population that produces alpha/beta interferon *in vitro* and *in vivo* in response to noncytopathic bovine viral diarrhea virus. J Virol. 79: 7738-44. 3. Price, S.J. & Hope, J.C.. (2009) Enhanced secretion of interferon-gamma by bovine gammadelta T cells induced by coculture with *Mycobacterium bovis*-infected dendritic cells: evidence for reciprocal activating signals. Immunology. 126:201-8 4. 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. 5. Jensen, K. *et al.* (2014) Comparison of small interfering RNA (siRNA) delivery into bovine monocyte-derived macrophages by transfection and electroporation. Vet Immunol Immunopathol. 158 : 224-32. 6. Hussen J *et al.* (2014) The chemokine CCL5 induces selective migration of bovine classical monocytes and drives their differentiation into LPS-hyporesponsive macrophages *in vitro*. Dev Comp Immunol. 47 (2): 169-77. 7. Eger, M. *et al.* (2015) Impacts of parturition and body condition score on glucose uptake capacity of bovine monocyte subsets. Vet Immunol Immunopathol. 166 (1-2): 33-42. 8. Vachiery N *et al.* (2015) An *in vitro* model to assess the immunosuppressive effect of tick saliva on the mobilization of inflammatory monocyte-derived cells. Vet Res. 46 (1): 117. 9. Tahoun, A. *et al.* (2015) Functional analysis of bovine TLR5 and association with IgA 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.
17. 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.
18. 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.
19. Casaro, S. *et al.* (2022) Flow cytometry panels for immunophenotyping dairy cattle peripheral blood leukocytes Vet Immunol Immunopathol. 248: 110417.

Further Reading	1. Howard, C.J. *et al.* (1999) Dendritic cells in cattle: phenotype and function. Vet Immunol Immunopathol. 72 (1-2): 119-24.
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 America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

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

'M412568:221114'

Printed on 06 Feb 2025