

Datasheet: MCA2445GA

BATCH NUMBER 165773

Description:	MOUSE ANTI BOVINE MHC CLASS II MONOMORPHIC
Specificity:	MHC CLASS II MONOMORPHIC
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	IL-A21
Isotype:	IgG2a
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Bovine
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes

Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
RRID	AB_11152592
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the X63.Ag8.653 myeloma cell line.
Specificity	<p>Mouse anti Bovine MHC Class II Monomorphic antibody, clone IL-A21 recognizes a monomorphic epitope within the bovine MHC II cell surface antigen. Clone IL-A21 is reported to react with an epitope which is common to both BoLA DR and DQ (Howard et al. 1997).</p> <p>Expression of MHC II molecules have been demonstrated on bovine B cells, activated T cells, alveolar macrophages, monocytes and mammary and bronchial epithelial cells.</p> <p>Clone IL-A21 is reported to inhibit T cell proliferation following FMDV infection (Collen et al. 1991).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.
References	<ol style="list-style-type: none"> 1. Collen, T. <i>et al.</i> (1991) A T cell epitope in VP1 of foot-and-mouth disease virus is immunodominant for vaccinated cattle. J Immunol. 146 (2): 749-55. 2. Davies, C.J. <i>et al.</i> (1992) Characterization of bovine MHC class II polymorphism using three typing methods: serology, RFLP and IEF. Eur J Immunogenet. 19 (5): 253-62. 3. Demartini, J.C. <i>et al.</i> (1993) Differential <i>in vitro</i> and <i>in vivo</i> expression of MHC class II antigens in bovine lymphocytes infected by <i>Theileria parva</i>. Vet Immunol Immunopathol. 35 (3-4): 253-73. 4. Howard, C.J. <i>et al.</i> (1997) Identification of two distinct populations of dendritic cells in afferent lymph that vary in their ability to stimulate T cells. J Immunol. 159 (11): 5372-82. 5. Daubenberger, C. <i>et al.</i> (1999) Bovine gammadelta T-cell responses to the intracellular protozoan parasite <i>Theileria parva</i> Infect Immun. 67:2241-9. 6. Ballingall, K. <i>et al.</i> (2001) Transcription of the unique ruminant class II major histocompatibility complex-DYA and DIB genes in dendritic cells. Eur J Immunol. 31 (1): 82-6. 7. Sathiyaseelan, T. <i>et al.</i> (2002) Immunological characterization of a gammadelta T-cell stimulatory ligand on autologous monocytes. Immunology. 105:181-9 8. Constantinoiu, C.C. <i>et al.</i> (2010) Local immune response against larvae of <i>Rhipicephalus (Boophilus) microplus</i> in <i>Bos taurus indicus</i> and <i>Bos taurus taurus</i> cattle. Int J Parasitol. 40: 865-75. 9. Dorneles, E.M. <i>et al.</i> (2015) Immune Response of Calves Vaccinated with <i>Brucella abortus</i> S19 or RB51 and Revaccinated with RB51. PLoS One. 10 (9): e0136696. 10. Sei, J.J. <i>et al.</i> (2016) Effect of Foot-and-Mouth Disease Virus Infection on the Frequency, Phenotype and Function of Circulating Dendritic Cells in Cattle. PLoS One. 11 (3): e0152192. 11. Choi, K.S. (2017) The effect of bovine viral diarrhea virus on bovine monocyte phenotype. Iran J Vet Res. 18 (1): 13-17. 12. Pérez-caballero, R. <i>et al.</i> (2018) Comparative dynamics of peritoneal cell

immunophenotypes in sheep during the early and late stages of the infection with *Fasciola hepatica* by flow cytometric analysis. [Parasit Vectors. 11 \(1\): 640.](#)

13. Imrie, H. & Williams, D.J.L. (2019) Stimulation of bovine monocyte-derived macrophages with lipopolysaccharide, interferon- γ , Interleukin-4 or Interleukin-13 does not induce detectable changes in nitric oxide or arginase activity. [BMC Vet Res. 15 \(1\): 45.](#)

14. Brodzki, P. *et al.* (2020) Selected leukocyte subpopulations in peripheral blood and uterine washings in cows before and after intrauterine administration of cefapirin and methisoprinol. [Anim Sci J. 91 \(1\): e13306.](#)

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

16. 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.](#)

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.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2445GA 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®550 , DyLight®650 , DyLight®680 , DyLight®800 , FITC , HRP
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA929\)](#)

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

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