

Datasheet: MCA2445F

BATCH NUMBER 148235

Description:	MOUSE ANTI BOVINE MHC CLASS II MONOMORPHIC:FITC
Specificity:	MHC CLASS II MONOMORPHIC
Format:	FITC
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	▪			Neat - 1/10

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 conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide (NaN ₃)		
Stabilisers	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml		

RRID AB_11152766

Fusion Partners Spleen cells from immunised BALB/c mice were fused with cells of the X63.Ag8.653 myeloma cell line.

Specificity **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](#)).

Expression of MHC II molecules have been demonstrated on bovine B cells, activated T cells, alveolar macrophages, monocytes and mammary and bronchial epithelial cells.

Clone IL-A21 is reported to inhibit T cell proliferation following FMDV infection ([Collen et al. 1991](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

- References**
1. Collen, T. *et al.* (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. *et al.* (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. *et al.* (1993) Differential *in vitro* and *in vivo* expression of MHC class II antigens in bovine lymphocytes infected by *Theileria parva*. [Vet Immunol Immunopathol. 35 \(3-4\): 253-73.](#)
 4. Howard, C.J. *et al.* (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. Ballingall, K. *et al.* (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.](#)
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 7. Daubenberger, C. *et al.* (1999) Bovine gammadelta T-cell responses to the intracellular protozoan parasite *Theileria parva* [Infect Immun. 67:2241-9.](#)
 8. Constantinoiu, C.C. *et al.* (2010) Local immune response against larvae of *Rhipicephalus (Boophilus) microplus* in *Bos taurus indicus* and *Bos taurus taurus* cattle. [Int J Parasitol. 40: 865-75.](#)
 9. Dorneles, E.M. *et al.* (2015) Immune Response of Calves Vaccinated with *Brucella abortus* S19 or RB51 and Revaccinated with RB51. [PLoS One. 10 \(9\): e0136696.](#)
 10. Choi, K.S. (2017) The effect of bovine viral diarrhoea virus on bovine monocyte phenotype. [Iran J Vet Res. 18 \(1\): 13-17.](#)
 11. Sei, J.J. *et al.* (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.](#)
 12. Pérez-caballero, R. *et al.* (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. Brodzki, P. *et al.* (2019) Selected leukocyte subpopulations in peripheral blood and

uterine washings in cows before and after intrauterine administration of cefapirin and methisoprinol. [Anim Sci J. Nov 06 \[Epub ahead of print\]](#).

14. 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](#).

Storage Store at +4°C or at -20°C if preferred.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. This product is photosensitive and should be protected from light.
Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2445F>
10041

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:FITC \(MCA929F\)](#)

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