

Datasheet: MCA5656PE

Description:	MOUSE ANTI BOVINE MHC CLASS II DR:RPE
Specificity:	MHC CLASS II DR
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	CC108
Isotype:	IgG1
Quantity:	100 TESTS

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

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) - lyophilized		
Reconstitution	Reconstitute with 1.0ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
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		
	5% Sucrose		

**External Database
Links**

UniProt:

[Q30309](#)

[Related reagents](#)

[P79464](#)

[Related reagents](#)

RRID

AB_11152779

Fusion Partners

Spleen cells from immunized BALB/c mice were fused with cells of the Mouse NS1 myeloma cell line.

Specificity

Mouse anti Bovine MHC class II DR antibody, clone CC108 recognizes Bovine MHC Class II DR. MHC Class II molecules are constitutively expressed on antigen presenting cells such as dendritic cells, B lymphocytes, monocytes, macrophages, activated T lymphocytes and may be induced on a range of other cell types by interferon gamma.

The major histocompatibility complex (MHC) is a cluster of genes some of which are important in the immune response to infections. In cattle, this complex is referred to as the bovine leukocyte antigen (BoLA) region. There are 2 major types of MHC class IIa molecules encoded by the BoLA which are DR and DQ each composed of an alpha and beta chain.

Flow Cytometry

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

References

1. Stephens, S.A. & Howard, C.J. (2002) Infection and transformation of dendritic cells from bovine afferent lymph by *Theileria annulata*. [Parasitology. 124 \(Pt 5\): 485-93.](#)
2. Yamakawa, Y. *et al.* (2008) Identification and functional characterization of a bovine orthologue to DC-SIGN. [J Leukoc Biol. 83 \(6\): 1396-403.](#)
3. Corripio-Miyar, Y. *et al.* (2015) Phenotypic and functional analysis of monocyte populations in cattle peripheral blood identifies a subset with high endocytic and allogeneic T-cell stimulatory capacity. [Vet Res. 46: 112.](#)
4. Guzman, E. *et al.* (2014) Bovine $\gamma\delta$ T cells are a major regulatory T cell subset. [J Immunol. 193 \(1\): 208-22.](#)
5. Childerstone, A.J. *et al.* (1999) Demonstration of bovine CD8+ T-cell responses to foot-and-mouth disease virus. [J Gen Virol. 80 \(Pt 3\): 663-9.](#)
6. Sopp, P. *et al.* (1994) Detection of bovine viral diarrhoea virus p80 protein in subpopulations of bovine leukocytes. [J Gen Virol. 75 \(Pt 5\): 1189-94.](#)
7. Bembridge, G.P. *et al.* (1995) CD45RO expression on bovine T cells: relation to biological function. [Immunology. 86 \(4\): 537-44.](#)
8. Gibson, A.J. *et al.* (2016) Differential macrophage function in Brown Swiss and Holstein Friesian cattle. [Vet Immunol Immunopathol. 181: 15-23.](#)
9. Corripio-miyar, Y. *et al.* (2017) 1,25-Dihydroxyvitamin D3 modulates the phenotype and function of Monocyte derived dendritic cells in cattle [BMC Veterinary Research. 13 \(1\) \[Epub ahead of print\].](#)
10. Risalde, M.A. *et al.* (2020) BVDV permissiveness and lack of expression of co-stimulatory molecules on PBMCs from calves pre-infected with BVDV. [Comp Immunol Microbiol Infect Dis. 68: 101388.](#)
11. 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.](#)

Storage	Prior to reconstitution store at +4°C. After reconstitution 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
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: 20487: https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

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
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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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