

## Datasheet: MCA5656PE

**BATCH NUMBER 0610R**

<b>Description:</b>	MOUSE ANTI BOVINE MHC CLASS II DR:RPE
<b>Specificity:</b>	MHC CLASS II DR
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC108
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://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.

<b>Target Species</b>	Bovine		
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
<b>Reconstitution</b>	Reconstitute with 1.0ml distilled water		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	RPE 488nm laser	496	578
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )		
<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose		

External Database  
Links

UniProt:

[Q30309](#)

[Related reagents](#)

[P79464](#)

[Related reagents](#)

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RRID

AB\_11152779

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Fusion Partners

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

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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.

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Flow Cytometry

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

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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.](#)

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**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.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #20487 available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA5656PE>  
20487

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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

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

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Email: [antibody\\_sales\\_de@bio-rad.com](mailto: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](https://www.bio-rad-antibodies.com/datasheets)  
'M375595:210104'

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