

Datasheet: MCA2678SBV610

Description:	MOUSE ANTI BOVINE CD14:StarBright Violet 610
Specificity:	CD14
Format:	StarBright Violet 610
Product Type:	Monoclonal Antibody
Clone:	CC-G33
Isotype:	lgG1
Quantity:	100 TESTS/0.5ml

Product Details

Applications	derived from testing wit communications from the information. For genera	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 nformation. For general protocol recommendations, please visit <u>www.bio-</u> 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 a guide only. It is recon system using appropria	nmended that	the use	r titrates the product f	g dilutions are given as for use in their own		
Target Species	Bovine						
Species Cross Reactivity	Reacts with: Sheep, Human, Water Buffalo N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.						
Product Form	Purified IgG conjugated	d to StarBright	Violet 6	610 - liquid			
Max Ex/Em	Fluorophore StarBright Violet 610	Excitation Max 403	c (nm)	Emission Max (nm) 607			
Preparation	Purified IgG prepared b supernatant	by affinity chro	matogra	aphy on Protein A fror	n tissue culture		
Buffer Solution	Phosphate buffered sal	line					

Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
Immunogen	Partially purified polypeptides isolated from bovine leucocyte cell surface membrane.
External Database Links	UniProt: Q95122 Related reagents Entrez Gene: 281048 CD14 Related reagents
RRID	AB_2943397
Fusion Partners	Spleen cells from immunized Balb/c mice were fused with cells of the NS1 myeloma cell line.
Specificity	 Mouse anti Bovine CD14, clone CC-G33 recognizes bovine CD14. CD14 is a GPI-anchored membrane glycoprotein and monocyte/macrophage differentiation antigen, belonging to the lipopolysaccharide receptor family, also expressed weakly on microglia and Langerhans cells. CD14 acts as a receptor for the potent bacterial endotoxin, lipopolysaccharide (LPS), facilitated by LPS-binding protein (LBP). The binding of LPS to CD14 results in cell activation and the release of cytokines and the inflammatory response, and has been shown to upregulate the cell surface expression of adhesion molecules. Mouse anti Bovine CD14 clone CC-G33 cross-reacts with human CD14 expressed on transfected COS-7 cells (Berthon & Hopkins 1996), ovine CD14 (Sopp <i>et al.</i> 1996) and Water buffalo (<i>Bubalus bubalis</i>) CD14, (Mirielli <i>et al.</i> 2013).
Flow Cytometry	Use 5μ I of the suggested working dilution to label 10^6 cells in 100μ I. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
References	 Berthon, P. & Hopkins, J. (1996) Ruminant cluster CD14. <u>Vet Immunol Immunopathol.</u> 52 (4): 245-8. Haas, K.M. and Estes, D.M. (2001) The identification and characterization of a ligand for bovine CD5. <u>J Immunol. 166: 3158-66.</u> Altreuther, G. <i>et al.</i> (2001) Morphologic and functional changes in bovine monocytes infected in vitro with the bovine leukaemia virus. <u>Scand J Immunol. 54: 459-69.</u> Fikri Y <i>et al.</i> (2002) Costimulatory molecule requirement for bovine WC1+gammadelta T cells' proliferative response to bacterial superantigens. <u>Scand J Immunol. 55 (4)</u>: <u>373-81.</u> Glew, E.J. <i>et al.</i> (2003) Differential effects of bovine viral diarrhoea virus on monocytes and dendritic cells. <u>J Gen Virol. 84: 1771-80.</u>

6. Harris, J. *et al.* (2003) Expression of caveolin by bovine lymphocytes and antigenpresenting cells. <u>Immunology. 105: 190-5.</u>

7. Villarreal-Ramos, B. *et al.* (2003) Investigation of the role of CD8+ T cells in bovine tuberculosis *in vivo*. Infect Immun.71: 4297-303.

8. Gliddon, D.R. *et al.* (2004) DEC-205 expression on migrating dendritic cells in afferent lymph. <u>Immunology. 11: 262-72.</u>

9. Villarreal-Ramos, B. *et al.* (2006) Influence of the nature of the antigen on the boosting of responses to mycobacteria in *M. bovis*-BCG vaccinated cattle. <u>Vaccine. 24 (47-48)</u>: <u>6850-8.</u>

10. Herath, S. *et al.* (2006) Expression and function of Toll-like receptor 4 in the endometrial cells of the uterus. <u>Endocrinology. 147: 562-70.</u>

11. Yamakawa, Y. *et al.* (2008) Identification and functional characterization of a bovine orthologue to DC-SIGN. <u>J Leukoc Biol. 83: 1396-403.</u>

12. Pirson, C. *et al.* (2012) Differential effects of Mycobacterium bovis - derived polar and apolar lipid fractions on bovine innate immune cells. <u>Vet Res. 43: 54.</u>

13. Gibson, A. *et al.* (2012) Identification of a lineage negative cell population in bovine peripheral blood with the ability to mount a strong type I interferon response <u>Dev Comp</u> <u>Immunol. 36: 332-41.</u>

14. Miarelli, M. *et al.* (2013) Tyrosine phosphorylation of monocyte-derived macrophage proteins in buffalo (*Bubalus bubalis*): A potential phenotype of natural resistance <u>Open J</u> <u>Anim Sci. 03 (02): 127-31.</u>

15. Hecker YP *et al.* (2014) A *Neospora caninum* vaccine using recombinant proteins fails to prevent foetal infection in pregnant cattle after experimental intravenous challenge. <u>Vet</u> <u>Immunol Immunopathol. 162 (3-4): 142-53.</u>

16. Brodzki, P. *et al.* (2014) Phenotyping of leukocytes and granulocyte and monocyte phagocytic activity in the peripheral blood and uterus of cows with endometritis. Theriogenology. 82 (3): 403-10.

17. Vrieling, M. *et al.* (2015) Bovine *Staphylococcus aureus* Secretes the Leukocidin LukMF' To Kill Migrating Neutrophils through CCR1. <u>MBio. 6 (3): e00335.</u>

18. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. Sci Rep. 7 (1): 3441.

19. Pepponi, I. *et al.* (2017) A mycobacterial growth inhibition assay (MGIA) for bovine TB vaccine development. <u>Tuberculosis (Edinb). 106: 118-22.</u>

20. 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. <u>Parasit Vectors. 11 (1): 640.</u>

21. de Araújo, F.F.*et al.* (2019) Distinct immune response profile during *Rhipicephalus* (*Boophilus*) *microplus.* infestations of guzerat dairy herd according to the maternal lineage ancestry (mitochondrial DNA). <u>Vet Parasitol. 273: 36-44.</u>

22. Oliveira, B.M. *et al.* (2020) Characterization of Myeloid Cellular Populations in Mesenteric and Subcutaneous Adipose Tissue of Holstein-Friesian Cows. <u>Sci Rep. 10 (1):</u> 1771.

23. Liu, J. *et al.* (2020) *Theileria annulata.* transformation altered cell surface molecules expression and endocytic function of monocyte-derived dendritic cells. <u>Ticks Tick Borne</u> <u>Dis. 11 (3): 101365.</u>

24. Wu, Y. *et al.* (2019) Changes in the small intestine mucosal immune barrier in Muscovy ducklings infected with Muscovy duck reovirus. <u>Vet Microbiol. 233: 85-92.</u>

		 25. Andrés, S. <i>et al.</i> (2024) Essential oil supplementation in milk replacers: short- and long-term impacts on feed efficiency, the faecal microbiota and the plasma metabolome in dairy calves. J Dev Orig Health Dis. : 1-11. 26. Broberg, L. <i>et al.</i> (2021) Isolation and characterization of eosinophils in bovine blood and small intestine. Vet Immunol Immunopathol. 242: 110352. 27. Zhang, M. <i>et al.</i> (2024) PCV2 Induced Endothelial Derived IL-8 Affects MoDCs Maturation Mainly via NF-κB Signaling Pathway Viruses. 16 (4): 646. 						
Champers								
Storage		Store at +4°C. DO NOT FREEZE.						
		This product should	be stored undiluted.					
Guarante	90	12 months from date of despatch						
Acknowl	edgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts						
Health A	nd Safety	Material Safety Data	sheet documentation #20)471 available	at [.]			
Information		Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA2678SBV610						
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