

Datasheet: MCA1568SBV610 BATCH NUMBER 64623307

Description:	MOUSE ANTI HUMAN CD14:StarBright Violet 610
Specificity:	CD14
Format:	StarBright Violet 610
Product Type:	Monoclonal Antibody
Clone:	TÜK4
Isotype:	lgG2a
Quantity:	100 TESTS/0.5ml

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 <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 necessarily exclude its use in such procedures. Suggested working dilutions are g a guide only. It is recommended that the user titrates the product for use in their of system using appropriate negative/positive controls.							
Target Species	Human							
Species Cross Reactivity	Reacts with: Dog, Goat, Cat, Rabbit, Mink, Bovine, Pig, Sheep, Cynomolgus monkey, Llama 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 to StarBright Violet 610 - liquid							
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)					
	StarBright Violet 610	403	607					
Preparation	Purified IgG prepared supernatant	d by affinity chromatog	raphy on Protein A fror	n tissue culture				

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
External Database Links	UniProt: P08571 Related reagents Entrez Gene: 929 CD14 Related reagents
Specificity	 Mouse anti Human CD14 antibody, clone TÜK4 recognizes the human CD14 cell surface antigen. CD14 is a ~55 kDa glycoprotein that contains multiple leucine-rich repeats. It is anchored to the cell membrane via a glycosylphosphatidylinositol (GPI) linkage (Simmons <i>et al.</i> 1989), a soluble form of CD14 also exists (Bazil <i>et al.</i> 1986). CD14 is strongly expressed on the surface of monocytes and macrophages but has also been shown to be expressed on the surface of non-myeloid cells (Jersmann 2005). CD14 functions as a pattern recognition receptor (Pugin <i>et al.</i> 1994, Dziarski <i>et al.</i> 1998) in innate immunity for a variety of ligands, in particular for the LPS (endotoxin) of Gram-negative bacteria. Mouse anti human CD14 antibody, clone TÜK4 has been shown to block SDF-induced chemotaxis of U937 cells in a dose –dependent manner (Yang <i>et al.</i> 2003). Use of the anti-human CD14 antibody, Low Endotoxin format is recommended for this purpose.
Flow Cytometry	Use 5µl of the suggested working dilution to label 10 ⁶ cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
References	 Jacobsen, C.N. <i>et al.</i> (1993) Reactivities of 20 anti-human monoclonal antibodies with leucocytes from ten different animal species. <u>Vet Immunol Immunopathol. 39 (4): 461-6.</u> Gupta, V.K. <i>et al.</i> (1996) Identification of the sheep homologue of the monocyte cell surface moleculeCD14. <u>Vet Immunol Immunopathol. 51 (1-2): 89-99.</u> Sopp, P. & Howard, C.J. (1997) Cross-reactivity of monoclonal antibodies to defined human leucocyte differentiation antigens with bovine cells. <u>Vet Immunol Immunopathol. 56</u> (<u>1-2): 11-25.</u> Werling, D. <i>et al.</i> (1998) Analysis of the phenotype and phagocytic activity of monocytes/macrophages from cattle infected with the bovine leukaemia virus. <u>Vet Immunol Immunopathol. 62 (3): 185-95.</u> Weiss, D.J. (2001) Evaluation of proliferative disorders in canine bone marrow by use of flow cytometric scatter plots and monoclonal antibodies. <u>Vet Pathol. 38: 512-8.</u> Bryan, S.A. <i>et al.</i> (2002) Responses of leukocytes to chemokines in whole blood and their antagonism by novel CC-chemokine receptor 3 antagonists. <u>Am J Respir Crit Care Med. 165: 1602-9.</u>

7. Yang, H. *et al.* (2003) Antibody to CD14 like CXCR4-specific antibody 12G5 could inhibit CXCR4-dependent chemotaxis and HIV Env-mediated cell fusion. <u>Immunol Lett. 88</u> (<u>1): 27-30.</u>

 Schenk, M. *et al.* (2005) Macrophages expressing triggering receptor expressed on myeloid cells-1 are underrepresented in the human intestine. <u>J Immunol. 174 (1): 517-24.</u>
 Fulton, B.E. Jr. *et al.* (2006) Dissemination of bovine leukemia virus-infected cells from a newly infected sheep lymph node. <u>J Virol. 80: 7873-84.</u>

10. Willett, B.J. *et al.* (2007) Probing the interaction between feline immunodeficiency virus and CD134 by using the novel monoclonal antibody 7D6 and the CD134 (Ox40) ligand. \underline{J} <u>Virol. 81: 9665-79</u>.

11. Dewals, B.G. & Vanderplasschen, A. (2011) Malignant catarrhal fever induced by Alcelaphine herpesvirus 1 is characterized by an expansion of activated CD3+CD8+CD4-T cells expressing a cytotoxic phenotype in both lymphoid and non-lymphoid tissues. <u>Vet</u> <u>Res. 42 (1): 95.</u>

12. Dalli J *et al.* (2008) Annexin 1 mediates the rapid anti-inflammatory effects of neutrophil-derived microparticles. <u>Blood. 112 (6): 2512-9.</u>

 Martel, C.J. & Aasted, B. (2009) Characterization of antibodies against ferret immunoglobulins, cytokines and CD markers. <u>Vet Immunol Immunopathol. 132:109-15.</u>
 Lybeck, K.R. *et al.* (2009) Neutralization of interleukin-10 from CD14(+) monocytes enhances gamma interferon production in peripheral blood mononuclear cells from *Mycobacterium avium* subsp. *paratuberculosis*-infected goats. <u>Clin Vaccine Immunol. 16</u> (7): 1003-11.

15. Ferret-Bernard, S. *et al.* (2010) Cellular and molecular mechanisms underlying the strong neonatal IL-12 response of lamb mesenteric lymph node cells to R-848. <u>PLoS One.</u> <u>5: e13705.</u>

16. Xiong, W. *et al.* (2010) Human Flt3L generates dendritic cells from canine peripheral blood precursors: implications for a dog glioma clinical trial. <u>PLoS One. 5: e11074.</u>

17. Kallapur, S.G. *et al.* (2011) Pulmonary and systemic inflammatory responses to intraamniotic IL-1α in fetal sheep. <u>Am J Physiol Lung Cell Mol Physiol. 301 (3): L285-95.</u>

18. Gelain, M.E. *et al.* (2014) CD44 in canine leukemia: analysis of mRNA and protein expression in peripheral blood. <u>Vet Immunol Immunopathol. 159 (1-2): 91-6.</u>

19. Schaut, R.G. *et al.* (2015) Bovine viral diarrhea virus type 2 *in vivo* infection modulates TLR4 responsiveness in differentiated myeloid cells which is associated with decreased MyD88 expression. <u>Virus Res. 208: 44-55.</u>

20. Novacco, M. *et al.* (2016) Prognostic factors in canine acute leukaemias: a retrospective study. <u>Vet Comp Oncol. 14 (4): 409-16.</u>

21. Gibson, A.J. *et al.* (2016) Differential macrophage function in Brown Swiss and Holstein Friesian cattle. <u>Vet Immunol Immunopathol. 181: 15-23.</u>

22. Krueger, L.A. *et al.* (2016) Gamma delta T cells are early responders to *Mycobacterium avium* ssp. *paratuberculosis* in colostrum-replete Holstein calves. <u>J Dairy</u> <u>Sci. 99 (11): 9040-50.</u>

23. Lund, H. *et al.* (2016) Transient Migration of Large Numbers of CD14(++) CD16(+) Monocytes to the Draining Lymph Node after Onset of Inflammation. <u>Front Immunol. 7:</u> <u>322.</u>

24. Westover, A.J. *et al.* (2016) An Immunomodulatory Device Improves Insulin Resistance in Obese Porcine Model of Metabolic Syndrome. J Diabetes Res. 2016: <u>3486727.</u> 25. Pomeroy, B. *et al.* (2017) Counts of bovine monocyte subsets prior to calving are predictive for postpartum occurrence of mastitis and metritis. <u>Vet Res. 48 (1): 13.</u>
26. Martini, V. *et al.* (2018) Flow cytometry for feline lymphoma: a retrospective study regarding pre-analytical factors possibly affecting the quality of samples. <u>J Feline Med Surg. 20 (6): 494-501.</u>

27. Feng, P.H. *et al.* (2018) S100A9⁺ MDSC and TAM-mediated EGFR-TKI resistance in lung adenocarcinoma: the role of *RELB*. <u>Oncotarget. 9 (7): 7631-43.</u>

28. Higgins, J.L. *et al.* (2018) Cell mediated immune response in goats after experimental challenge with the virulent Brucella melitensis strain 16M and the reduced virulence strain Rev. 1. <u>Vet Immunol Immunopathol. 202: 74-84.</u>

29. Lessard, M. *et al.* (2018) Piglet weight gain during the first two weeks of lactation influences the immune system development. <u>Vet Immunol Immunopathol. 206: 25-34.</u>

30. Moncada-Saucedo, N.K. *et al.* (2019) A Bioactive Cartilage Graft of IGF1-Transduced Adipose Mesenchymal Stem Cells Embedded in an Alginate/Bovine Cartilage Matrix Tridimensional Scaffold. <u>Stem Cells Int. 2019: 9792369.</u>

31. Kolar, Q.K. *et al.* (2020) Anatomical distribution of respiratory tract leukocyte cell subsets in neonatal calves. <u>Vet Immunol Immunopathol. 227: 110090.</u>

32. Risalde, M.A. *et al.* (2020) BVDV permissiveness and lack of expression of co-stimulatory molecules on PBMCs from calves pre-infected with BVDV. <u>Comp Immunol Microbiol Infect Dis. 68: 101388.</u>

33. Muñoz-Silvestre, A. *et al.* (2020) Pathogenesis of Intradermal Staphylococcal Infections: Rabbit Experimental Approach to Natural *Staphylococcus aureus* Skin Infections. <u>Am J Pathol. 190 (6): 1188-210.</u>

34. Sipka, A.S. *et al.* (2020) The effect of *ex vivo*. lipopolysaccharide stimulation and nutrient availability on transition cow innate immune cell AKT/mTOR pathway responsiveness. J Dairy Sci. 103 (2): 1956-1968.

35. Mas, A. *et al.* (2020) A further investigation of the leishmaniosis outbreak in Madrid (Spain): low-infectivity phenotype of the *Leishmania infantum* BOS1FL1 isolate to establish infection in canine cells. <u>Vet Immunol Immunopathol. 230: 110148.</u>

36. Schwarz, E.R. *et al.* (2020) Experimental Infection of Mid-Gestation Pregnant Female and Intact Male Sheep with Zika Virus. <u>Viruses. 12 (3): 291.</u>

37. Penadés, M. *et al.* (2020) Early deviations in performance, metabolic and immunological indicators affect stayability in rabbit females. <u>Animal. 14 (4): 780-9.</u>

38. Tuohy, J.L. *et al.* (2020) Immune dysregulation and osteosarcoma: *Staphylococcus aureus.* downregulates TGF- β and heightens the inflammatory signature in human and canine macrophages suppressed by osteosarcoma. <u>Vet Comp Oncol. 18 (1): 64-75.</u> 39. 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. <u>Cell Stress Chaperones.</u> <u>26 (4): 705-20.</u>

40. Grudzien, M. *et al.* (2021) A newly established canine NK-type cell line and its cytotoxic properties. <u>Vet Comp Oncol. 19 (3): 567-77.</u>

41. Jaensch, S.M. *et al.* (2022) Clinicopathologic and immunophenotypic features in dogs with presumptive large granular lymphocyte leukaemia. <u>Aust Vet J. 100 (11): 527-32.</u>
42. Riccardo, F. *et al.* (2022) Antigen mimicry as an effective strategy to induce CSPG4-

targeted immunity in dogs with oral melanoma: a veterinary trial. <u>J Immunother Cancer.</u> <u>10(5):e004007.</u>

43. Shiue, S.J. et al. (2022) Arthrospira Enhances Seroclearance in Patients with Chronic

Regulatory

For research purposes only

Related Products

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

North & South	Tel: +1 800 265 7376	Worldwide	Tel: +44 (0)1865 852 700	Europe	Tel: +49 (0) 89 8090 95 21
America	Fax: +1 919 878 3751		Fax: +44 (0)1865 852 739		Fax: +49 (0) 89 8090 95 50
	Email: antibody_sales_us@bio	-rad.com	Email: antibody_sales_uk@bio	-rad.com	Email: 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 'M422881:231003'

Printed on 26 Jun 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint