

Datasheet: MCA1568A700

Description:	MOUSE ANTI HUMAN CD14:Alexa Fluor® 700
Specificity:	CD14
Format:	ALEXA FLUOR® 700
Product Type:	Monoclonal Antibody
Clone:	TÜK4
Isotype:	IgG2a
Quantity:	100 TESTS/1ml

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 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	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 Alexa Fluor® 700 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Alexa Fluor®700	702	723
Preparation	Purified IgG prepared by affinity chromatography on Protein A 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 0.05 mg/ml
External Database Links	<p>UniProt: P08571 Related reagents</p> <p>Entrez Gene: 929 CD14 Related reagents</p>
RRID	AB_844479
Specificity	<p>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).</p> <p>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.</p> <p>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.</p>
Flow Cytometry	Use 5µl of the suggested working dilution to label 10 ⁶ cells or 100µl whole blood
References	<ol style="list-style-type: none"> 1. Jacobsen, C.N. <i>et al.</i> (1993) Reactivities of 20 anti-human monoclonal antibodies with leucocytes from ten different animal species. Vet Immunol Immunopathol. 39 (4): 461-6. 2. Gupta, V.K. <i>et al.</i> (1996) Identification of the sheep homologue of the monocyte cell surface molecule--CD14. Vet Immunol Immunopathol. 51 (1-2): 89-99. 3. Sopp, P. & Howard, C.J. (1997) Cross-reactivity of monoclonal antibodies to defined human leucocyte differentiation antigens with bovine cells. Vet Immunol Immunopathol. 56 (1-2): 11-25. 4. 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. Vet Immunol Immunopathol. 62 (3): 185-95. 5. Weiss, D.J. (2001) Evaluation of proliferative disorders in canine bone marrow by use of flow cytometric scatter plots and monoclonal antibodies. Vet Pathol. 38: 512-8. 6. 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. Am J Respir Crit Care Med. 165: 1602-9. 7. Yang, H. <i>et al.</i> (2003) Antibody to CD14 like CXCR4-specific antibody 12G5 could

- inhibit CXCR4-dependent chemotaxis and HIV Env-mediated cell fusion. [Immunol Lett. 88 \(1\): 27-30.](#)
8. Schenk, M. *et al.* (2005) Macrophages expressing triggering receptor expressed on myeloid cells-1 are underrepresented in the human intestine. [J Immunol. 174 \(1\): 517-24.](#)
 9. Fulton, B.E. Jr. *et al.* (2006) Dissemination of bovine leukemia virus-infected cells from a newly infected sheep lymph node. [J Virol. 80: 7873-84.](#)
 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. [J Virol. 81: 9665-79.](#)
 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. [Vet Res. 42 \(1\): 95.](#)
 12. Dalli J *et al.* (2008) Annexin 1 mediates the rapid anti-inflammatory effects of neutrophil-derived microparticles. [Blood. 112 \(6\): 2512-9.](#)
 13. Martel, C.J. & Aasted, B. (2009) Characterization of antibodies against ferret immunoglobulins, cytokines and CD markers. [Vet Immunol Immunopathol. 132:109-15.](#)
 14. 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. [Clin Vaccine Immunol. 16 \(7\): 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. [PLoS One. 5: e13705.](#)
 16. Xiong, W. *et al.* (2010) Human Flt3L generates dendritic cells from canine peripheral blood precursors: implications for a dog glioma clinical trial. [PLoS One. 5: e11074.](#)
 17. Kallapur, S.G. *et al.* (2011) Pulmonary and systemic inflammatory responses to intra-amniotic IL-1 α in fetal sheep. [Am J Physiol Lung Cell Mol Physiol. 301 \(3\): L285-95.](#)
 18. Gelain, M.E. *et al.* (2014) CD44 in canine leukemia: analysis of mRNA and protein expression in peripheral blood. [Vet Immunol Immunopathol. 159 \(1-2\): 91-6.](#)
 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. [Virus Res. 208: 44-55.](#)
 20. Novacco, M. *et al.* (2016) Prognostic factors in canine acute leukaemias: a retrospective study. [Vet Comp Oncol. 14 \(4\): 409-16.](#)
 21. Gibson, A.J. *et al.* (2016) Differential macrophage function in Brown Swiss and Holstein Friesian cattle. [Vet Immunol Immunopathol. 181: 15-23.](#)
 22. Krueger, L.A. *et al.* (2016) Gamma delta T cells are early responders to *Mycobacterium avium* ssp. *paratuberculosis* in colostrum-replete Holstein calves. [J Dairy Sci. 99 \(11\): 9040-50.](#)
 23. Lund, H. *et al.* (2016) Transient Migration of Large Numbers of CD14(++) CD16(+) Monocytes to the Draining Lymph Node after Onset of Inflammation. [Front Immunol. 7: 322.](#)
 24. Westover, A.J. *et al.* (2016) An Immunomodulatory Device Improves Insulin Resistance in Obese Porcine Model of Metabolic Syndrome. [J Diabetes Res. 2016: 3486727.](#)
 25. Pomeroy, B. *et al.* (2017) Counts of bovine monocyte subsets prior to calving are

- predictive for postpartum occurrence of mastitis and metritis. [Vet Res. 48 \(1\): 13.](#)
26. Martini, V. *et al.* (2018) Flow cytometry for feline lymphoma: a retrospective study regarding pre-analytical factors possibly affecting the quality of samples. [J Feline Med Surg. 20 \(6\): 494-501.](#)
 27. Feng, P.H. *et al.* (2018) S100A9⁺ MDSC and TAM-mediated EGFR-TKI resistance in lung adenocarcinoma: the role of *RELB*. [Oncotarget. 9 \(7\): 7631-43.](#)
 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. [Vet Immunol Immunopathol. 202: 74-84.](#)
 29. Lessard, M. *et al.* (2018) Piglet weight gain during the first two weeks of lactation influences the immune system development. [Vet Immunol Immunopathol. 206: 25-34.](#)
 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. [Stem Cells Int. 2019: 9792369.](#)
 31. Kolar, Q.K. *et al.* (2020) Anatomical distribution of respiratory tract leukocyte cell subsets in neonatal calves. [Vet Immunol Immunopathol. 227: 110090.](#)
 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. [Comp Immunol Microbiol Infect Dis. 68: 101388.](#)
 33. Muñoz-Silvestre, A. *et al.* (2020) Pathogenesis of Intradermal Staphylococcal Infections: Rabbit Experimental Approach to Natural *Staphylococcus aureus* Skin Infections. [Am J Pathol. 190 \(6\): 1188-210.](#)
 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. [Vet Immunol Immunopathol. 230: 110148.](#)
 36. Schwarz, E.R. *et al.* (2020) Experimental Infection of Mid-Gestation Pregnant Female and Intact Male Sheep with Zika Virus. [Viruses. 12 \(3\): 291.](#)
 37. Penadés, M. *et al.* (2020) Early deviations in performance, metabolic and immunological indicators affect stayability in rabbit females. [Animal. 14 \(4\): 780-9.](#)
 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. [Vet Comp Oncol. 18 \(1\): 64-75.](#)
 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. [Cell Stress Chaperones. 26 \(4\): 705-20.](#)
 40. Grudzien, M. *et al.* (2021) A newly established canine NK-type cell line and its cytotoxic properties. [Vet Comp Oncol. 19 \(3\): 567-77.](#)
 41. Jaensch, S.M. *et al.* (2022) Clinicopathologic and immunophenotypic features in dogs with presumptive large granular lymphocyte leukaemia. [Aust Vet J. 100 \(11\): 527-32.](#)
 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. [J Immunother Cancer. 10\(5\):e004007.](#)
 43. Shiue, S.J. *et al.* (2022) Arthrospira Enhances Seroclearance in Patients with Chronic Hepatitis B Receiving Nucleos(t)ide Analogue through Modulation of TNF- α /IFN- γ Profile.

[Nutrients. 14 \(14\): 2790.](#)

44. Wee, J.H. *et al.* (2022) Stem cell laden nano and micro collagen/PLGA bimodal fibrous patches for myocardial regeneration. [Biomater Res. 26 \(1\): 79.](#)
45. Arnaud-Franco, Á. *et al.* (2022) Effect of Adipose-Derived Mesenchymal Stem Cells (ADMSCs) Application in Achilles-Tendon Injury in an Animal Model. [Curr Issues Mol Biol. 44 \(12\): 5827-38.](#)
46. Ashwood, P. (2022) Preliminary Evidence of Differentially Induced Immune Responses by Microparticle-adsorbed LPS in Patients with Crohn's Disease. [J Cell Immunol. 4 \(6\): 211-218.](#)
47. Rotolo, A. *et al.* (2023) Unedited allogeneic iNKT cells show extended persistence in MHC-mismatched canine recipients. [Cell Rep Med. 4 \(10\): 101241.](#)
48. Rütgen, B.C. *et al.* (2022) Composition of lymphocyte subpopulations in normal and mildly reactive peripheral lymph nodes in cats. [J Feline Med Surg. 24 \(2\): 77-90.](#)
49. Ducournau, C. *et al.* (2020) Effective Nanoparticle-Based Nasal Vaccine Against Latent and Congenital Toxoplasmosis in Sheep [Front Immunol. 11:2183.](#)
50. Sheng, R. *et al.* (2023) Prognostic significance of CD25 expression in dogs with a noninvasive diagnosis of B-cell lymphoma treated with CHOP chemotherapy. [Vet Comp Oncol. 21 \(1\): 28-35.](#)
51. Miguelena Chamorro, B. *et al.* (2023) Characterization of Canine Peyer's Patches by Multidimensional Analysis: Insights from Immunofluorescence, Flow Cytometry, and Single-Cell RNA Sequencing. [Immunohorizons. 7 \(11\): 788-805.](#)
52. Mason, N.J. *et al.* (2021) Development of a fully canine anti-canine CTLA4 monoclonal antibody for comparative translational research in dogs with spontaneous tumors. [MAbs. 13 \(1\): 2004638.](#)
53. Gilbert, F.B. & Rainard, P. (2024) Expression of the receptor for IgM (FcμR) by bovine neutrophils. [Dev Comp Immunol. : 105235. 30 Jul \[Epub ahead of print\].](#)
54. delaO-Escamilla, A. *et al.* (2024) Comparison of microneedling and CO(2) laser with adipose-derived stem cells for facial rejuvenation: a randomized split-face study. [Int J Dermatol. Oct 31 \[Epub ahead of print\].](#)
55. Durazo-Martinez, K. *et al.* (2024) Porcine peritoneal macrophages are susceptible to porcine reproductive and respiratory syndrome virus infection. [Front Microbiol. 15: 1505900.](#)
56. Gilbert, F.B. *et al.* (2025) Expression of FcμR by bovine mononuclear blood leukocytes. [Dev Comp Immunol. 162: 105304.](#)
57. Rogato, F. *et al.* (2024) Leukemia cutis as a prominent clinical sign in a dog with acute myeloid leukemia. [Vet Clin Pathol. 53 \(4\): 448-57.](#)

Further Reading

1. Bazil, V. *et al.* (1986) Biochemical characterization of a soluble form of the 53-kDa monocyte surface antigen. [Eur J Immunol. 16:1583-9.](#)
2. Simmons, D. L. *et al.* (1989) Monocyte antigen CD14 is a phospholipid anchored membrane protein. [Blood. 73:284-9.](#)
3. Pugin, J. *et al.* (1994) CD14 is a pattern recognition receptor. [Immunity. 1:509-16.](#)
4. Dziarski, R. *et al.* (1998) Binding of bacterial peptidoglycan to CD14. [J Biol Chem. 273:8680-90.](#)
5. Jersmann, H.P. (2005) Time to abandon dogma: CD14 is expressed by non-myeloid lineage cells. [Immunol Cell Biol. 83:462-7.](#)
6. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update.

Storage	<p>This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p>
Guarantee	12 months from date of despatch
Acknowledgements	<p>This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com</p>
Health And Safety Information	<p>Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA1568A700</p> <p>10041</p>
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 700 \(MCA929A700\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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
----------------------------------	---	------------------	---	---------------	---

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)
'M410205:221027'

Printed on 25 Mar 2025