

Datasheet: MCA1568P750

Description:	MOUSE ANTI HUMAN CD14:RPE-Alexa Fluor® 750
Specificity:	CD14
Format:	RPE-ALEXA FLUOR® 750
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 antibody 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 antibody 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.		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - Alexa Fluor® 750 - lyophilized		
Reconstitution	Reconstitute with 1.0 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE-Alexa Fluor®750 488nm laser	496	779
	RPE-Alexa Fluor®750 561nm laser	546	779
Preparation	Purified IgG prepared by affinity chromatography on Protein A		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		
	5% Sucrose		

**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 *et al.* 1989](#)), a soluble form of CD14 also exists ([Bazil *et al.* 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 *et al.* 1994](#), [Dziarski *et al.* 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 *et al.* 2003](#)). Use of the [anti-human CD14 antibody, Low Endotoxin format](#) is recommended for this purpose.

Flow Cytometry

Use 5ul of the suggested working dilution to label 10⁶ cells or 100ul whole blood.

References

1. Soell, M. *et al.* (1995) Activation of human monocytes by streptococcal rhamnose glucose polymers is mediated by CD14 antigen, and mannan binding protein inhibits TNF-alpha release. [J Immunol. 154 \(2\): 851-60.](#)
2. Gupta, V.K. *et al.* (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. Willett, B.J. *et al.* (2003) Expression of CXCR4 on feline peripheral blood mononuclear cells: effect of feline immunodeficiency virus infection. [J Virol. 77 \(1\): 709-12.](#)
5. Werling, D. *et al.* (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.](#)
6. Yang, H. *et al.* (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.](#)
7. Yoshino, N. *et al.* (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (*Macaca fascicularis*) by using anti-human cross-reactive antibodies. [Exp Anim. 49 \(2\): 97-110.](#)
8. Jacobsen, C.N. *et al.* (1993) Reactivities of 20 anti-human monoclonal antibodies with leucocytes from ten different animal species. [Vet Immunol Immunopathol. 39 \(4\): 461-6.](#)
9. Martel, C.J. & Aasted, B. (2009) Characterization of antibodies against ferret immunoglobulins, cytokines and CD markers. [Vet Immunol Immunopathol. 132:109-15.](#)
10. Dalli J *et al.* (2008) Annexin 1 mediates the rapid anti-inflammatory effects of neutrophil-derived microparticles. [Blood. 112 \(6\): 2512-9.](#)
11. 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: 1003-11.](#)
12. 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.](#)
13. 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.](#)

14. 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.](#)
15. 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.](#)
16. Lund Hege *et al.* (2016) Transient Migration of Large Numbers of CD14⁺⁺ CD16⁺ Monocytes to the Draining Lymph Node after Onset of Inflammation [Frontiers in Immunology. 7: 322.](#)
17. Krueger LA *et al.* (2016) Gamma delta T cells are early responders to *Mycobacterium avium* ssp. *paratuberculosis* in colostrum-replete Holstein calves. [J Dairy Sci. Sep 7. pii: S0022-0302\(16\)30611-7. \[Epub ahead of print\]](#)
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. Westover, A.J. *et al.* (2016) An Immunomodulatory Device Improves Insulin Resistance in Obese Porcine Model of Metabolic Syndrome. [J Diabetes Res. 2016: 3486727.](#)
21. 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.](#)
22. Gibson, A.J. *et al.* (2016) Differential macrophage function in Brown Swiss and Holstein Friesian cattle. [Vet Immunol Immunopathol. 181: 15-23.](#)
23. Martini, V. *et al.* (2017) Flow cytometry for feline lymphoma: a retrospective study regarding pre-analytical factors possibly affecting the quality of samples. [J Feline Med Surg. : 1098612X17717175.](#)
24. Novacco, M. *et al.* (2016) Prognostic factors in canine acute leukaemias: a retrospective study. [Vet Comp Oncol. 14 \(4\): 409-16.](#)
25. 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.](#)

Further Reading

1. Simmons, D. L. *et al.* (1989) Monocyte antigen CD14 is a phospholipid anchored membrane protein. [Blood. 73:284-9.](#)
2. Bazil, V. *et al.* (1986) Biochemical characterization of a soluble form of the 53-kDa monocyte surface antigen. [Eur J Immunol. 16:1583-9.](#)
3. Jersmann, H.P. (2005) Time to abandon dogma: CD14 is expressed by non-myeloid lineage cells. [Immunol Cell Biol. 83:462-7.](#)
4. Pugin, J. *et al.* (1994) CD14 is a pattern recognition receptor. [Immunity 1:509-16.](#)
5. Dziarski, R. *et al.* (1998) Binding of bacterial peptidoglycan to CD14. [J Biol Chem. 273:8680-90.](#)
6. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. [Vet Res. 39: 54.](#)

Storage

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.

Shelf Life

12 months from date of reconstitution.

Acknowledgements

This product is provided under an intellectual property license from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research conducted by the buyer, 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

Health And Safety Information Material Safety Datasheet documentation #10075 available at:
10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

Regulatory For research purposes only

Related Products

Recommended Useful Reagents

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

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

North & South Tel: +1 800 265 7376

America 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

'M299770:170104'

Printed on 21 Jun 2018

© 2018 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)