

## Datasheet: MCA1568PET

<b>Description:</b>	MOUSE ANTI HUMAN CD14:RPE
<b>Specificity:</b>	CD14
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	TÜK4
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	25 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 - 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. 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 R. Phycoerythrin (RPE) - lyophilized

#### Reconstitution

Reconstitute with 0.25ml distilled water

Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative</b>	0.09% Sodium Azide
<b>Stabilisers</b>	1.0% Bovine Serum Albumin 5% Sucrose
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P08571</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">929</a>    CD14    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_1100725
<b>Specificity</b>	<p><b>Mouse anti human CD14 antibody, clone TÜK4</b> 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 (<a href="#">Simmons et al. 1989</a>), a soluble form of CD14 also exists (<a href="#">Bazil et al. 1986</a>).</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 (<a href="#">Jersmann 2005</a>). CD14 functions as a pattern recognition receptor (<a href="#">Pugin et al. 1994</a>, <a href="#">Dziarski et al. 1998</a>) 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 (<a href="#">Yang et al. 2003</a>). Use of the <a href="#">anti-human CD14 antibody, Low Endotoxin format</a> is recommended for this purpose.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood.
<b>References</b>	<ol style="list-style-type: none"> <li>Weiss, D.J. (2001) Evaluation of proliferative disorders in canine bone marrow by use of flow cytometric scatter plots and monoclonal antibodies. <a href="#">Vet Pathol. 38: 512-8.</a></li> <li>Gupta, V.K. <i>et al.</i> (1996) Identification of the sheep homologue of the monocyte cell surface molecule--CD14. <a href="#">Vet Immunol Immunopathol. 51 (1-2): 89-99.</a></li> <li>Sopp, P. &amp; Howard, C.J. (1997) Cross-reactivity of monoclonal antibodies to defined human leucocyte differentiation antigens with bovine cells. <a href="#">Vet Immunol Immunopathol. 56 (1-2): 11-25.</a></li> <li>Xiong, W. <i>et al.</i> (2010) Human Flt3L generates dendritic cells from canine peripheral blood precursors: implications for a dog glioma clinical trial. <a href="#">PLoS One. 5: e11074.</a></li> <li>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. <a href="#">Vet Immunol Immunopathol. 62 (3): 185-95.</a></li> <li>Yang, H. <i>et al.</i> (2003) Antibody to CD14 like CXCR4-specific antibody 12G5 could</li> </ol>

- 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 \(7\): 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 $\alpha$  in fetal sheep. [Am J Physiol Lung Cell Mol Physiol. 301 \(3\): L285-95.](#)
16. 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.](#)
17. 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.](#)
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.* (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.](#)
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<sup>+</sup> MDSC and TAM-mediated EGFR-TKI resistance in lung adenocarcinoma: the role of *RELB*. [Oncotarget. 9 \(7\): 7631-43.](#)

26. 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.](#)

27. Penadés, M. *et al.* (2019) Early deviations in performance, metabolic and immunological indicators affect stayability in rabbit females. [Animal. : 1-10.](#)

28. Schwarz, E.R. *et al.* (2020) Experimental Infection of Mid-Gestation Pregnant Female and Intact Male Sheep with Zika Virus. [Viruses. 12 \(3\)Mar 07 \[Epub ahead of print\].](#)

29. 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.](#)

---

#### 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.

---

#### Guarantee

12 months from date of despatch

---

#### Health And Safety Information

Material Safety Datasheet documentation #20487 available at:  
20487: <https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf>

---

#### Regulatory

For research purposes only

---

## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:RPE \(MCA929PE\)](#)

### Recommended Useful Reagents

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

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

From March 15, 2021, we will no longer supply printed datasheets with our products.

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>	<b>Look out for</b>
----------------------------------	---	------------------	---	---------------	---	---------------------

updates on how to access your digital version at [bio-rad-antibodies.com](https://www.bio-rad-antibodies.com)

'M375339:210104'

**Printed on 12 Feb 2021**

---

© 2021 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)