

Datasheet: MCA1568P647T

Description:	MOUSE ANTI HUMAN CD14:RPE-Alexa Fluor® 647
Specificity:	CD14
Format:	RPE-ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	TÜK4
Isotype:	IgG2a
Quantity:	25 TESTS/0.25ml

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® 647 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE-Alexa Fluor®647 488nm laser	496	667
	RPE-Alexa Fluor®647 561nm laser	546	667
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 10ul 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, 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.* (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.](#)
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.](#)

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 despatch.

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10306: <https://www.bio-rad-antibodies.com/uploads/MSDS/10306.pdf>

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:RPE-Alexa Fluor® 647 \(MCA929P647\)](#)

Recommended Useful Reagents

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

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

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