Datasheet: MCA1568A647

BATCH NUMBER 0615

Description:	MOUSE ANTI HUMAN CD14:Alexa Fluor® 647
Specificity:	CD14
Format:	ALEXA FLUOR® 647
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. 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® 647 - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative

0.09% Sodium Azide

Stabilisers	1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
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 leucin-rich repeats. It is anchored to the cell membrane via a glycosylphosphatidylinositol (GPI) linkage (Simmons *et al.* 1989) but 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). Bio-Rad recommend the use of the anti-human CD14 antibody, Low Endotoxin format for this purpose.
Flow Cytometry	Use 5ul of the suggested working dilution to label 10^6 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-1α in fetal sheep. Am J Physiol Lung Cell Mol Physiol. 301 (3): L285-95.

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 or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.
Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee

18 months from date of despatch.

Acknowledgements

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Health And Safety Information	Material Safety Datasheet documentation available at: https://www.bio-rad-antibodies.com/SDS/MCA1568A647 Material Safety Datasheet Documentation #10041 available at: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 (MCA929A647)

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

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