

# Datasheet: MCA1568A647

**BATCH NUMBER 0615**

<b>Description:</b>	MOUSE ANTI HUMAN CD14:Alexa Fluor® 647
<b>Specificity:</b>	CD14
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	TÜK4
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	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](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 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	<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>
Specificity	<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 leucin-rich repeats. It is anchored to the cell membrane via a glycosylphosphatidylinositol (GPI) linkage (<a href="#">Simmons et al. 1989</a>) but 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>). Bio-Rad recommend the use of the <a href="#">anti-human CD14 antibody, Low Endotoxin format</a> for this purpose.</p>
Flow Cytometry	Use 5ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood.
References	<ol style="list-style-type: none"> <li>1. Soell, M. <i>et al.</i> (1995) Activation of human monocytes by streptococcal rhamnose glucose polymers is mediated by CD14 antigen, and mannan binding protein inhibits TNF-alpha release. <a href="#">J Immunol. 154 (2): 851-60.</a></li> <li>2. 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>3. 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>4. Willett, B.J. <i>et al.</i> (2003) Expression of CXCR4 on feline peripheral blood mononuclear cells: effect of feline immunodeficiency virus infection. <a href="#">J Virol. 77 (1): 709-12.</a></li> <li>5. 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>6. 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. <a href="#">Immunol Lett. 88 (1): 27-30.</a></li> <li>7. Yoshino, N. <i>et al.</i> (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (<i>Macaca fascicularis</i>) by</li> </ol>

- 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 $\alpha$  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

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](mailto:outlicensing@thermofisher.com)

---

**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](mailto: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](mailto: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](mailto: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://bio-rad-antibodies.com/datasheets)  
'M280900:160211'

**Printed on 14 Mar 2024**