

## Datasheet: MCA5665F

<b>Description:</b>	MOUSE ANTI HUMAN CD16:FITC
<b>Specificity:</b>	CD16
<b>Other names:</b>	FcRIII
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	KD1
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.1 mg

## 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 product 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 product for use in their own system using appropriate negative/positive controls.

### Target Species

Human

### Species Cross Reactivity

Reacts with: Bovine, Sheep, Dolphin

Does not react with: Rat, Dog

Reacts weakly with: Horse, Pig

**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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

### Preparation

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

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1mg/ml
<b>Immunogen</b>	A polyclonal population of NK cells.
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">P79107</a>      <a href="#">Related reagents</a></p> <p><a href="#">P08637</a>      <a href="#">Related reagents</a></p> <p><a href="#">O75015</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">281766</a>      FCGR3A      <a href="#">Related reagents</a></p> <p><a href="#">2214</a>      FCGR3A      <a href="#">Related reagents</a></p> <p><a href="#">2215</a>      FCGR3B      <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CD16A, CD16B, FCG3, FCGR3, FCGRIII, IGFR3
<b>RRID</b>	AB_10961759
<b>Fusion Partners</b>	Spleen cells from immunised mice were fused with cells of the P3U1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD16 antibody, clone KD1</b> recognizes human CD16, a 50-65 kDa cell surface molecule, which is the low affinity receptor for IgG (FcR III). CD16 exists as a transmembranous form (Fc gammaRIIIA, or CD16A) and a glycosyl phosphatidylinositol (GPI) anchored form (Fc gammaRIIIB, or CD16B). CD16A is expressed by NK cells, some T cells, and macrophages (<a href="#">Moretta et al. 1990</a>), whereas CD16B is primarily expressed by granulocytes (<a href="#">Bonecchi et al. 1999</a>). Clone KD1 recognizes both forms of CD16 and will therefore recognize all cell types expressing CD16.</p> <p>Mouse anti Human CD16, clone KD1 can be used to identify CD16 in a range of species including bovine (<a href="#">Boysen et al. 2010</a>) and ovine (<a href="#">Elhmouzi-Younes et al. 2010</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>Moretta, A. <i>et al.</i> (1989) CD16 surface molecules regulate the cytolytic function of CD3CD16+ human natural killer cells. <a href="#">Int J Cancer. 44 (4): 727-30.</a></li> <li>Ciccone, E. <i>et al.</i> (1990) Specific recognition of human CD3-CD16+ natural killer cells requires the expression of an autosomic recessive gene on target cells. <a href="#">J Exp Med. 172 (1): 47-52.</a></li> <li>Zocchi, M.R. <i>et al.</i> (1998) HIV-1 Tat inhibits human natural killer cell function by blocking L-type calcium channels. <a href="#">J Immunol. 161: 2938-43.</a></li> <li>Hernández-Caselles, T. <i>et al.</i> (2006) A study of CD33 (SIGLEC-3) antigen expression</li> </ol>

- and function on activated human T and NK cells: two isoforms of CD33 are generated by alternative splicing. [J Leukoc Biol. 79: 46-58.](#)
5. Boysen, P. *et al.* (2008) Natural killer cells in lymph nodes of healthy calves express CD16 and show both cytotoxic and cytokine-producing properties. [Dev Comp Immunol. 32: 773-83.](#)
  6. Connelley, T. *et al.* (2011) NKp46 defines ovine cells that have characteristics corresponding to NK cells. [Vet Res. 42: 37.](#)
  7. Gibson, A.J. *et al.* (2016) Differential macrophage function in Brown Swiss and Holstein Friesian cattle. [Vet Immunol Immunopathol. 181: 15-23.](#)
  8. Pomeroy, B. *et al.* (2016) Longitudinal characterization of bovine monocyte-derived dendritic cells from mid-gestation into subsequent lactation reveals nadir in phenotypic maturation and macrophage-like cytokine profile in late gestation. [J Reprod Immunol. 118: 1-8.](#)
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  14. Park, D.S. *et al.* (2021) Dynamic changes in blood immune cell composition and function in Holstein and Jersey steers in response to heat stress. [Cell Stress Chaperones. 26 \(4\): 705-20.](#)
  15. Fiorenza, M.F. *et al.* (2021) Neutrophils recognize and amplify IFNT signals derived from day 7 bovine embryo for stimulation of ISGs expression *in vitro*.: A possible implication for the early maternal recognition of pregnancy. [Biochem Biophys Res Commun. 553: 37-43.](#)
  16. Howell, A. *et al.* (2024) Resting and activated bovine neutrophils and eosinophils differ in their responses to adrenergic agonists. [Vet Immunol Immunopathol. 272: 110758.](#)
  17. Hong, S. *et al.* (2024) Impact of an Injectable Trace Mineral Supplement on the Immune Response and Outcome of *Mannheimia haemolytica* Infection in Feedlot Cattle. [Biol Trace Elem Res. Jun 10 \[Epub ahead of print\].](#)
  18. Scatà, C.M. *et al.* (2024) Characterization of Cellular Immune System at Different Ages in Water Buffalo (*Bubalus bubalis*) [Journal of Buffalo Science. 13: 133-139.](#)
  19. Gilbert, F.B. *et al.* (2025) Expression of FcγR by bovine mononuclear blood leukocytes. [Dev Comp Immunol. 162: 105304.](#)

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#### Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in

frost-free freezers is not recommended.

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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA5665F">https://www.bio-rad-antibodies.com/SDS/MCA5665F</a>
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:FITC \(MCA929F\)](#)

### Recommended Useful Reagents

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

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

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](http://bio-rad-antibodies.com/datasheets)  
'M437663:250318'

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