

Datasheet: MCA5665

**BATCH NUMBER 164565**

<b>Description:</b>	MOUSE ANTI HUMAN CD16
<b>Specificity:</b>	CD16
<b>Other names:</b>	FcRIII
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	KD1
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.2 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	▪			1/25 - 1/200
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Functional Assays (1)	▪			

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.

(1) This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays.

### 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.

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<b>Product Form</b>	Purified IgG - liquid
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<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
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<b>Buffer Solution</b>	Phosphate buffered saline
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<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
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<b>Carrier Free</b>	Yes
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<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
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<b>Immunogen</b>	A polyclonal population of NK cells.
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<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>
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<b>Synonyms</b>	CD16A, CD16B, FCG3, FCGR3, FCGR3III, IGFR3
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<b>RRID</b>	AB_10964919
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<b>Fusion Partners</b>	Spleen cells from immunised mice were fused with cells of the P3U1 myeloma cell line.
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<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="#">Bonocchi 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>
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<b>Flow Cytometry</b>	Use 100ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
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## References

1. Moretta, A. *et al.* (1989) CD16 surface molecules regulate the cytolytic function of CD3CD16+ human natural killer cells. [Int J Cancer. 44 \(4\): 727-30.](#)
2. Ciccone, E. *et al.* (1990) Specific recognition of human CD3-CD16+ natural killer cells requires the expression of an autosomic recessive gene on target cells. [J Exp Med. 172 \(1\): 47-52.](#)
3. Zocchi, M.R. *et al.* (1998) HIV-1 Tat inhibits human natural killer cell function by blocking L-type calcium channels. [J Immunol. 161: 2938-43.](#)
4. Hernández-Caselles, T. *et al.* (2006) A study of CD33 (SIGLEC-3) antigen expression 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.](#)
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9. Elnaggar, M.M. *et al.* (2017) Identification of monoclonal antibodies cross-reactive with bottlenose dolphin orthologues of the major histocompatibility complex and leukocyte differentiation molecules. [Vet Immunol Immunopathol. 192: 54-9.](#)
10. 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.](#)
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12. Liu, J. *et al.* (2020) *Theileria annulata*. transformation altered cell surface molecules expression and endocytic function of monocyte-derived dendritic cells. [Ticks Tick Borne Dis. 11 \(3\): 101365.](#)
13. Kolar, Q.K. *et al.* (2020) Anatomical distribution of respiratory tract leukocyte cell subsets in neonatal calves. [Vet Immunol Immunopathol. 227: 110090.](#)
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.](#)

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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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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10040 available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA5665>  
10040

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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)

Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL \(MCA929\)](#)

**North & South** Tel: +1 800 265 7376

**America** 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://www.bio-rad-antibodies.com/datasheets)

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