

Datasheet: MCA5665GA

Description:	MOUSE ANTI HUMAN CD16
Specificity:	CD16
Other names:	FcR111
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	KD1
Isotype:	IgG2a
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			
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. Our [Slide-A-Lyzer® Dialysis Cassette \(EQU003\)](#) is recommended suitable for this purpose.**

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.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide (NaN ₃)

Stabilisers

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0mg/ml

Immunogen A polyclonal population of NK cells.

External Database Links

UniProt:

[P79107](#) [Related reagents](#)

[P08637](#) [Related reagents](#)

[O75015](#) [Related reagents](#)

Entrez Gene:

[281766](#) FCGR3A [Related reagents](#)

[2214](#) FCGR3A [Related reagents](#)

[2215](#) FCGR3B [Related reagents](#)

Synonyms CD16A, CD16B, FCG3, FCGR3, FCGR3B, IGFR3

Fusion Partners Spleen cells from immunised mice were fused with cells of the P3U1 myeloma cell line.

Specificity **Mouse anti Human CD16 antibody, clone KD1** 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 (<http://www.ncbi.nlm.nih.gov/pubmed/?term=2137855> target="_blank">Moretta *et al.* 1990), whereas CD16B is primarily expressed by granulocytes ([Bonecchi *et al.* 1999](#)). Clone KD1 recognizes both forms of CD16 and will therefore recognize all cell types expressing CD16.

Mouse anti Human CD16, clone KD1 can be used to identify CD16 in a range of species including bovine ([Boysen *et al.* 2010](#)) and ovine ([Elh mouzi-Younes *et al.* 2010](#)).

Flow Cytometry Use 100ul of the suggested working dilution to label 1x10⁶ cells in 100ul.

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. 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.](#)
3. 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.](#)
4. 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.](#)
5. 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.](#)
6. Elh mouzi-Younes, J. *et al.* (2010) Ovine CD16+/CD14- blood lymphocytes present all the major characteristics of natural killer cells. [Vet Res. 41 \(1\): 4.](#)
7. Connelley, T. *et al.* (2011) NKp46 defines ovine cells that have characteristics corresponding to

NK cells. [Vet Res. 42: 37.](#)

8. Cantón, G.J. *et al.* (2013) Phenotypic characterisation of the cellular immune infiltrate in placentas of cattle following experimental inoculation with *Neospora caninum* in late gestation. [Vet Res. 44: 60.](#)

9. 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.](#)

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.](#)

11. Gibson, A.J. *et al.* (2016) Differential macrophage function in Brown Swiss and Holstein Friesian cattle. [Vet Immunol Immunopathol. 181: 15-23.](#)

12. 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.](#)

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

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

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

Recommended Negative Controls

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

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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