

Datasheet: MCA5665A647

BATCH NUMBER 1807

Description:	MOUSE ANTI HUMAN CD16:Alexa Fluor® 647
Specificity:	CD16
Other names:	FcRIII
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	KD1
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 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 Alexa Fluor 647 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®647	650	665

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture

supernatant

Buffer Solution Phosphate buffered saline

Preservative 0.09% Sodium Azide (NaN₃)
Stabilisers 1% Bovine Serum Albumin

Approx. Protein Concentrations IgG concentration 0.05 mg/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, FCGRIII, 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 ([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 ([Elhmouzi-Younes et al. 2010](#)).

Flow Cytometry Use 10ul 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. Elhmouzi-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. 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 12 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 purchased 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

Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA5665A647>
10041

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA929A647\)](#)

Recommended Useful Reagents

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

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

North & South Tel: +1 800 265 7376

America 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

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M344352:190111'

Printed on 03 Apr 2024
