

Datasheet: MCA5665A647

BATCH NUMBER 166561

Description:	MOUSE ANTI HUMAN CD16:Alexa Fluor® 647
Specificity:	CD16
Other names:	FcR111
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 A from tissue culture

supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 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	<p>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.</p> <p>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).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 ⁶ cells in 100ul
References	<ol style="list-style-type: none">1. Moretta, A. <i>et al.</i> (1989) CD16 surface molecules regulate the cytolytic function of CD3CD16+ human natural killer cells. Int J Cancer. 44 (4): 727-30.2. 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. J Exp Med. 172 (1): 47-52.3. Zocchi, M.R. <i>et al.</i> (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. <i>et al.</i> (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.](#)

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11. Elnaggar, M.M. *et al.* (2019) Pattern of CD14, CD16, CD163 and CD172a expression on water buffalo (*Bubalus bubalis*.) leukocytes. [Vet Immunol Immunopathol. 211: 1-5.](#)
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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.](#)
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.](#)

Storage	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p>
Guarantee	12 months from date of despatch
Acknowledgements	<p>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,</p>

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
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Regulatory	For research purposes only
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Related Products

Recommended Negative Controls

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

Recommended Useful Reagents

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

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

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M409721:221020'

Printed on 29 Apr 2024

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