

Datasheet: MCA5665PE

BATCH NUMBER 166226

Description:	MOUSE ANTI HUMAN CD16:RPE
Specificity:	CD16
Other names:	FcRIII
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	KD1
Isotype:	IgG2a
Quantity:	100 TESTS

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	▪			

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 R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1.0 ml distilled water

Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
	RPE 561nm laser	546	578
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide (NaN ₃)		
Stabilisers	1% Bovine Serum Albumin 5% Sucrose		
Immunogen	A polyclonal population of NK cells.		
External Database Links	<p>UniProt:</p> <p>P79107 Related reagents</p> <p>P08637 Related reagents</p> <p>O75015 Related reagents</p> <p>Entrez Gene:</p> <p>281766 FCGR3A Related reagents</p> <p>2214 FCGR3A Related reagents</p> <p>2215 FCGR3B Related reagents</p>		
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 (Elhmouzi-Younes et al. 2010).</p>		
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 ⁶ cells in 100ul		
References	<p>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.</p> <p>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.</p>		

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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.](#)
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.](#)
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.](#)

Storage	<p>Prior to reconstitution store at +4°C.</p> <p>After reconstitution store at +4°C.</p> <p>DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use</p>
Guarantee	12 months from date of despatch
Health And Safety Information	<p>Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA5665PE</p> <p>20487</p>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:RPE \(MCA929PE\)](#)

Recommended Useful Reagents

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

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

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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

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