

Datasheet: MCA1971PE

Description:	MOUSE ANTI PIG CD16:RPE
Specificity:	CD16
Other names:	FcRIII
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	G7
Isotype:	IgG1
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	■			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Pig		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1.0 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by affinity chromatography on Protein A		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		
	5% Sucrose		
Immunogen	Porcine peripheral blood leucocytes		
External Database Links	UniProt: Q28942 Related reagents		
	Entrez Gene:		

Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the mouse P3-X63-Ag8.653 myeloma cell line
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Specificity	<p>Mouse anti Pig CD16, clone G7 recognizes porcine CD16 also known as Fc-gamma RIII or the low affinity IgG (Fc) receptor III. Clone G7 was clustered as CD16 at the Second International Workshop to Define Swine Cluster of Differentiation (CD) Antigens (Saalmuller et al. 1998).</p> <p>Mouse anti pig CD16 immunoprecipitates a protein of ~40 kDa from porcine neutrophils and NK cells (Wierda et al. 1993). Subsequent cloning and characterization of the G7 molecule indicated that G7 was the porcine homologue of Human CD16 (Halloran et al. 1994).</p>
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Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
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References	<ol style="list-style-type: none">1. Dato, M.E. <i>et al.</i> (1992) A triggering structure recognized by G7 monoclonal antibody on porcine lymphocytes and granulocytes. Cell Immunol. 140 (2): 468-77.2. Wierda, W.G. <i>et al.</i> (1993) Two distinct porcine natural killer lytic trigger molecules as PNK-E/G7 molecular complex. Cell Immunol. 146 (2): 270-83.3. Halloran, P.J. <i>et al.</i> (1994) Biochemical characterization of the porcine Fc gamma RIII alpha homologue G7. Cell Immunol. 158 (2): 400-13.4. Devriendt, B. <i>et al.</i> (2010) Targeting of <i>Escherichia coli</i> F4 fimbriae to Fcgamma receptors enhances the maturation of porcine dendritic cells. Vet Immunol Immunopathol. 135 (3-4): 188-98.5. Inman, C.F. <i>et al.</i> (2010) Dendritic cells interact with CD4 T cells in intestinal mucosa. J Leukoc Biol. 88 (3): 571-8.6. Terzic, S. <i>et al.</i> (2002) Immunophenotyping of leukocyte subsets in peripheral blood and palatine tonsils of prefattening pigs. Vet Res Commun. 26: 273 - 83.7. Masure, D. <i>et al.</i> (2013) A Role for Eosinophils in the Intestinal Immunity against Infective <i>Ascaris suum</i> Larvae. PLoS Negl Trop Dis. 7: e2138.8. Hester, S.N. <i>et al.</i> (2012) Intestinal and systemic immune development and response to vaccination are unaffected by dietary (1,3/1,6)-β-D-glucan supplementation in neonatal piglets. Clin Vaccine Immunol. 19 (9): 1499-508.9. Kapetanovic, R. <i>et al.</i> (2012) Pig bone marrow-derived macrophages resemble human macrophages in their response to bacterial lipopolysaccharide. J Immunol. 188: 3382 - 94.10. Gimeno, M. <i>et al.</i> (2011) Cytokine profiles and phenotype regulation of antigen presenting cells by genotype-I porcine reproductive and respiratory syndrome virus isolates. Vet Res. 42: 9.11. Mussá, T. <i>et al.</i> (2011) Interaction of porcine conventional dendritic cells with swine influenza virus. Virology 420: 125-34.12. Vincent, I.E. <i>et al.</i> (2003) Dendritic cells harbor infectious porcine circovirus type 2 in the absence of apparent cell modulation or replication of the virus. J Virol. 77: 13288 - 300.13. Inman, C.F. <i>et al.</i> (2012) Neonatal colonisation expands a specific intestinal antigen-presenting cell subset prior to CD4 T-cell expansion, without altering T-cell repertoire. PLoS One 7: e33707.14. Sánchez, C. <i>et al.</i> (1999) The porcine 2A10 antigen is homologous to human CD163 and related to macrophage differentiation. J Immunol. 162 (9): 5230-7.15. Lecours, M.P. <i>et al.</i> (2011) Characterization of porcine dendritic cell response to <i>Streptococcus suis</i>. Vet Res. 42: 72.16. Inman, C.F. <i>et al.</i> (2010) Rearing environment affects development of the immune system in neonates. Clin Exp Immunol. 160 (3): 431-9.17. Summerfield, A. <i>et al.</i> (2003) Porcine peripheral blood dendritic cells and natural interferon-producing cells. Immunology 110: 440-9.18. Mair, K.H. <i>et al.</i> (2012) NKp46 expression discriminates porcine NK cells with different functional properties. Eur J Immunol. 42: 1261-71.
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19. Mair, K.H. *et al.* (2013) Porcine CD8^{dim}/-NKp46^{high} NK cells are in a highly activated state. [Vet Res. 44: 13.](#)
20. Auray, G. *et al.* (2016) Characterization and Transcriptomic Analysis of Porcine Blood Conventional and Plasmacytoid Dendritic Cells Reveals Striking Species-Specific Differences. [J Immunol. Nov 11. pii: 1600672. \[Epub ahead of print\]](#)
21. Kyrova, K. *et al.* (2014) The response of porcine monocyte derived macrophages and dendritic cells to *Salmonella typhimurium* and lipopolysaccharide. [BMC Vet Res. 10: 244.](#)
22. Suzuki, S. *et al.* (2016) Generation and characterization of RAG2 knockout pigs as animal model for severe combined immunodeficiency. [Vet Immunol Immunopathol. 178: 37-49.](#)
23. Waide, E.H. *et al.* (2015) Not All SCID Pigs Are Created Equally: Two Independent Mutations in the Artemis Gene Cause SCID in Pigs. [J Immunol. 195 \(7\): 3171-9.](#)

Further Reading

1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. [Vet Res. 39: 54.](#)
2. Gerner W *et al.* (2015) Phenotypic and functional differentiation of porcine $\alpha\beta$ T cells: current knowledge and available tools. [Mol Immunol. 66 \(1\): 3-13.](#)

Storage

Store at +4°C.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

12 months from date of reconstitution.

Health And Safety Information

Material Safety Datasheet documentation #10075 available at: 10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

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