

## Datasheet: MCA1971F

<b>Description:</b>	MOUSE ANTI PIG CD16:FITC
<b>Specificity:</b>	CD16
<b>Other names:</b>	FcR111
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	G7
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://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.

<b>Target Species</b>	Pig		
<b>Product Form</b>	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	FITC	490	525
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide		
<b>Stabilisers</b>	1% Bovine Serum Albumin		
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1 mg/ml		
<b>Immunogen</b>	Porcine peripheral blood leucocytes		
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">Q28942</a> <a href="#">Related reagents</a>		
	<b>Entrez Gene:</b>		

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<b>Fusion Partners</b>	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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<b>Specificity</b>	<p><b>Mouse anti Pig CD16, clone G7</b> 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 (<a href="#">Saalmuller et al. 1998</a>).</p> <p>Mouse anti pig CD16 immunoprecipitates a protein of ~40 kDa from porcine neutrophils and NK cells (<a href="#">Wierda et al. 1993</a>). Subsequent cloning and characterization of the G7 molecule indicated that G7 was the porcine homologue of Human CD16 (<a href="#">Halloran et al. 1994</a>).</p>
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<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
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<b>References</b>	<ol style="list-style-type: none"><li>1. Dato, M.E. <i>et al.</i> (1992) A triggering structure recognized by G7 monoclonal antibody on porcine lymphocytes and granulocytes. <a href="#">Cell Immunol. 140 (2): 468-77.</a></li><li>2. Wierda, W.G. <i>et al.</i> (1993) Two distinct porcine natural killer lytic trigger molecules as PNK-E/G7 molecular complex. <a href="#">Cell Immunol. 146 (2): 270-83.</a></li><li>3. Halloran, P.J. <i>et al.</i> (1994) Biochemical characterization of the porcine Fc gamma RIII alpha homologue G7. <a href="#">Cell Immunol. 158 (2): 400-13.</a></li><li>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. <a href="#">Vet Immunol Immunopathol. 135 (3-4): 188-98.</a></li><li>5. Inman, C.F. <i>et al.</i> (2010) Dendritic cells interact with CD4 T cells in intestinal mucosa. <a href="#">J Leukoc Biol. 88 (3): 571-8.</a></li><li>6. Terzic, S. <i>et al.</i> (2002) Immunophenotyping of leukocyte subsets in peripheral blood and palatine tonsils of prefattening pigs. <a href="#">Vet Res Commun. 26: 273 - 83.</a></li><li>7. Masure, D. <i>et al.</i> (2013) A Role for Eosinophils in the Intestinal Immunity against Infective <i>Ascaris suum</i> Larvae. <a href="#">PLoS Negl Trop Dis. 7: e2138.</a></li><li>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. <a href="#">Clin Vaccine Immunol. 19 (9): 1499-508.</a></li><li>9. Kapetanovic, R. <i>et al.</i> (2012) Pig bone marrow-derived macrophages resemble human macrophages in their response to bacterial lipopolysaccharide. <a href="#">J Immunol. 188: 3382 - 94.</a></li><li>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. <a href="#">Vet Res. 42: 9.</a></li><li>11. Mussá, T. <i>et al.</i> (2011) Interaction of porcine conventional dendritic cells with swine influenza virus. <a href="#">Virology 420: 125-34.</a></li><li>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. <a href="#">J Virol. 77: 13288 - 300.</a></li><li>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. <a href="#">PLoS One 7: e33707.</a></li><li>14. Sánchez, C. <i>et al.</i> (1999) The porcine 2A10 antigen is homologous to human CD163 and related to macrophage differentiation. <a href="#">J Immunol. 162 (9): 5230-7.</a></li><li>15. Lecours, M.P. <i>et al.</i> (2011) Characterization of porcine dendritic cell response to <i>Streptococcus suis</i>. <a href="#">Vet Res. 42: 72.</a></li><li>16. Inman, C.F. <i>et al.</i> (2010) Rearing environment affects development of the immune system in neonates. <a href="#">Clin Exp Immunol. 160 (3): 431-9.</a></li><li>17. Summerfield, A. <i>et al.</i> (2003) Porcine peripheral blood dendritic cells and natural interferon-producing cells. <a href="#">Immunology 110: 440-9.</a></li><li>18. Mair, K.H. <i>et al.</i> (2012) NKp46 expression discriminates porcine NK cells with different functional properties. <a href="#">Eur J Immunol. 42: 1261-71.</a></li></ol>
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19. Mair, K.H. *et al.* (2013) Porcine CD8<sup>dim</sup>/-NKp46<sup>high</sup> 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.](#)

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**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.](#)

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**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. 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.

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**Shelf Life** 18 months from date of despatch.

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

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**Regulatory** For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto:antibody_sales_uk@bio-rad.com)

**Europe**

Tel: +49 (0) 89 8090 95 21

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