Datasheet: MCA1971A647

BATCH NUMBER 161819

Description:	MOUSE ANTI PIG CD16:Alexa Fluor® 647
Specificity:	CD16
Other names:	FcRIII
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	G7
Isotype:	IgG1
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 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 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

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	Porcine peripheral blood leucocytes
External Database Links	**UniProt:** Q28942 Related reagents **Entrez Gene:** 397684 FCGR3B Related reagents
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the mouse P3-X63-Ag8.653 myeloma cell line
Specificity	**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). 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).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Dato, M.E. *et al.* (1992) A triggering structure recognized by G7 monoclonal antibody on porcine lymphocytes and granulocytes. Cell Immunol. 140 (2): 468-77. 2. Wierda, W.G. *et al.* (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. *et al.* (1994) Biochemical characterization of the porcine Fc gamma RIII alpha homologue G7. Cell Immunol. 158 (2): 400-13. 4. Devriendt, B. *et al.* (2010) Targeting of *Escherichia coli* F4 fimbriae to Fcgamma receptors enhances the maturation of porcine dendritic cells. Vet Immunol Immunopathol. 135 (3-4): 188-98. 5. Inman, C.F. *et al.* (2010) Dendritic cells interact with CD4 T cells in intestinal mucosa. J Leukoc Biol. 88 (3): 571-8. 6. Terzic, S. *et al.* (2002) Immunophenotyping of leukocyte subsets in peripheral blood and palatine tonsils of prefattening pigs. Vet Res Commun. 26: 273 - 83. 7. Masure, D. *et al.* (2013) A Role for Eosinophils in the Intestinal Immunity against Infective *Ascaris suum* Larvae. PLoS Negl Trop Dis. 7: e2138. 8. Hester, S.N. *et al.* (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. *et al.* (2012) Pig bone marrow-derived macrophages resemble human macrophages in their response to bacterial lipopolysaccharide. J Immunol. 188: 3382 - 94. 10. Gimeno, M. *et al.* (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. *et al.* (2011) Interaction of porcine conventional dendritic cells with swine

influenza virus. Virology 420: 125-34.
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banded ($CD16^{dim}$/$CD62L^{bright}$) neutrophils in peripheral blood - An observational study during extensive trauma-surgery in pigs. Injury. 52 (3): 426-33.
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32. Boettcher, A.N. *et al.* (2020) $CD3\varepsilon^{+}$ Cells in Pigs With Severe Combined Immunodeficiency Due to Defects in ARTEMIS Frontiers in Immunology. 11 [Epub ahead of print].
33. Zhao, H. *et al.* (2022) Development of *RAG2* $^{-/-}$ *IL2Rγ* $^{-/Y}$ immune deficient FAH-knockout miniature pig. Front Immunol. 13: 950194.

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 αβ T cells: current knowledge and available tools. Mol Immunol. 66 (1): 3-13.

Storage

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.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee

12 months from date of despatch

Acknowledgements

Health And Safety Information

Material Safety Datasheet documentation #10041 available at:
https://www.bio-rad-antibodies.com/SDS/MCA1971A647
10041

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 (MCA928A647)

North & South America Tel: +1 800 265 7376 Fax: +1 919 878 3751
Worldwide Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739
Europe Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_us@bio-rad.com Email: antibody_sales_uk@bio-rad.com 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

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