

Datasheet: MCA1971A647

BATCH NUMBER 159560

Description:	MOUSE ANTI PIG CD16:Alexa Fluor® 647		
Specificity:	CD16		
Other names:	FcRIII		
Format:	ALEXA FLUOR® 647		
Product Type:	Monoclonal Antibody		
Clone:	G7		
Isotype:	lgG1		
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	0.09% Sodium Azide	(NaN ₃)			
Stabilisers	1% Bovine Serum Albumin				
Approx. Protein Concentrations	IgG concentration 0.0	5 mg/ml			

Immunogen	lm	m	un	OQ	en
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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 (<u>Wierda et al. 1993</u>). Subsequent cloning and characterization of the G7 molecule indicated that G7 was the porcine homologue of Human CD16 (<u>Halloran et al. 1994</u>).

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

References

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- 5. Inman, C.F. *et al.* (2010) Dendritic cells interact with CD4 T cells in intestinal mucosa. <u>J Leukoc Biol. 88 (3): 571-8.</u>
- 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.
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- 11. Mussá, T. et al. (2011) Interaction of porcine conventional dendritic cells with swine

- influenza virus. Virology 420: 125-34.
- 12. Vincent, I.E. *et al.* (2003) Dendritic cells harbor infectious porcine circovirus type 2 in the absence of apparent cell modulation or replication of the virus. <u>J Virol. 77: 13288 300.</u>
- 13. Inman, C.F. *et al.* (2012) Neonatal colonisation expands a specific intestinal antigenpresenting cell subset prior to CD4 T-cell expansion, without altering T-cell repertoire. <u>PLoS One 7: e33707.</u>
- 14. Sánchez, C. *et al.* (1999) The porcine 2A10 antigen is homologous to human CD163 and related to macrophage differentiation. J Immunol. 162 (9): 5230-7.
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- 19. Mair, K.H. *et al.* (2013) Porcine CD8αdim/-NKp46high 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. <u>J Immunol. Nov 11. pii: 1600672. [Epub ahead of print]</u>
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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) CD3ε⁺ Cells in Pigs With Severe Combined Immunodeficiency Due to Defects in ARTEMIS <u>Frontiers in Immunology. 11 [Epub ahead of print].</u>
- 33. Zhao, H. *et al.* (2022) Development of *RAG2 -l- IL2Ry -lY* immune deficient FAH-knockout miniature pig. <u>Front Immunol. 13: 950194.</u>

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

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

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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 Tel: +1 800 265 7376

America 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

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Printed on 17 May 2024

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