

## Datasheet: MCA2317A647

<b>Description:</b>	MOUSE ANTI PIG MACROPHAGES:Alexa Fluor® 647
<b>Specificity:</b>	MACROPHAGES
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	BA4D5
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			Neat

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.

**(1) Membrane permeabilization is required for this application. The use of Leucoperm (Product Code [BUF09](#)) is recommended for this purpose.**

<b>Target Species</b>	Pig		
<b>Product Form</b>	Purified IgG conjugated to Alexa Fluor® 647 - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	Alexa Fluor®647	650	665
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin		
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05 mg/ml		

<b>Immunogen</b>	Porcine alveolar macrophages.
<b>Fusion Partners</b>	Spleen cells from immunized BALB/c mice were fused with cells of the mouse SP2/0 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Pig Macrophages antibody, clone BA4D5</b> recognizes porcine cells of the monocyte/macrophage lineage. Expression of the antigen is increased with maturation, with higher expression on peritoneal and alveolar macrophages.</p> <p>Some expression has also been observed on peripheral blood lymphocytes.</p> <p>The antigen recognized by clone BA4D5 has a broad tissue distribution and this antibody stains macrophages in a range of tissues, including the thymus, spleen periarteriolar lymphoid sheath (PALS), spleen red pulp and the Peyer's patches. Expression has also been reported on some non-haematopoietic cells including endothelial cells.</p> <p>It is believed that clone BA4D5 may be specific for porcine CD68 (<a href="#">Poulsen et al. 2016</a>) although the protein recognized by this antibody has not yet been fully characterized. The protein is expressed on the cell surface, although it is most abundantly expressed in the cytoplasm.</p>
<b>Flow Cytometry</b>	Use 10µl of the suggested working dilution to 1x10 <sup>6</sup> cells in 100µl
<b>References</b>	<ol style="list-style-type: none"> <li>Luechtenborg, B. <i>et al.</i> (2008) Function of scavenger receptor class A type I/II is not important for smooth muscle foam cell formation. <a href="#">Eur J Cell Biol. 87: 91-9.</a></li> <li>Ezquerro, A. <i>et al.</i> (2009) Porcine myelomonocytic markers and cell populations. <a href="#">Dev Comp Immunol. 33 (3): 284-98.</a></li> <li>Muscari C <i>et al.</i> (2010) Comparison between Culture Conditions Improving Growth and Differentiation of Blood and Bone Marrow Cells Committed to the Endothelial Cell Lineage. <a href="#">Biol Proced Online. 12 (1): 9023.</a></li> <li>Fujita M <i>et al.</i> (2013) Technique of endoscopic biopsy of islet allografts transplanted into the gastric submucosal space in pigs. <a href="#">Cell Transplant. 22 (12): 2335-44.</a></li> <li>Sohn, E.H. <i>et al.</i> (2015) Allogenic iPSC-derived RPE cell transplants induce immune response in pigs: a pilot study. <a href="#">Sci Rep. 5: 11791.</a></li> <li>Liu, G. <i>et al.</i> (2015) Influenza A Virus Panhandle Structure is Directly Involved in RIG-I Activation and IFN Induction. <a href="#">J Virol. pii: JVI.00232-15.</a></li> <li>Poulsen, C.B. <i>et al.</i> (2016) Treatment with a human recombinant monoclonal IgG antibody against oxidized LDL in atherosclerosis-prone pigs reduces cathepsin S in coronary lesions. <a href="#">Int J Cardiol. 215: 506-515.</a></li> <li>Rayat, G.R. <i>et al.</i> (2016) First update of the International Xenotransplantation Association consensus statement on conditions for undertaking clinical trials of porcine islet products in type 1 diabetes - Chapter 3: Porcine islet product manufacturing and release testing criteria. <a href="#">Xenotransplantation. 23 (1): 38-45.</a></li> <li>Wang, L. <i>et al.</i> (2017) Porcine alveolar macrophage polarization is involved in inhibition of porcine reproductive and respiratory syndrome virus (PRRSV) replication. <a href="#">J Vet Med Sci. Sep 17 [Epub ahead of print].</a></li> <li>Porras, A.M. <i>et al.</i> (2018) Creation of disease-inspired biomaterial environments to</li> </ol>

mimic pathological events in early calcific aortic valve disease. [Proc Natl Acad Sci U S A. 115 \(3\): E363-E371.](#)

11. Maciag, S.S. *et al.* (2022) The influence of source of porcine colostrum in development of early immune ontogeny in the piglet [Res Sq. Mar 24 \[Epub ahead of print\].](#)

12. dos Santos, M.C. *et al.* (2023) Effect of yeast extracted  $\beta$ -glucans on the immune response and reproductive performance of gilts in the adaptation, gestation, and lactation periods [Livestock Science. 275: 105289.](#)

13. Haach, V. *et al.* (2023) A polyvalent virosomal influenza vaccine induces broad cellular and humoral immunity in pigs. [Virology J. 20 \(1\): 181.](#)

14. Petitpas, K. *et al.* (2022) Genetic modifications designed for xenotransplantation attenuate sialoadhesin-dependent binding of human erythrocytes to porcine macrophages. [Xenotransplantation. 29 \(6\): e12780.](#)

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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.](#)

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**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.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2317A647>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA691A647\)](#)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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