

## Datasheet: MCA2312PE

**BATCH NUMBER 170067**

<b>Description:</b>	MOUSE ANTI PIG CD172a:RPE
<b>Specificity:</b>	CD172a
<b>Other names:</b>	SWC3
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	BL1H7
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat - 1/10

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.

<b>Target Species</b>	Pig									
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized									
<b>Reconstitution</b>	Reconstitute with 1 ml distilled water									
<b>Max Ex/Em</b>	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>RPE 488nm laser</td> <td>496</td> <td>578</td> </tr> <tr> <td>RPE 561nm laser</td> <td>546</td> <td>578</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578	RPE 561nm laser	546	578
Fluorophore	Excitation Max (nm)	Emission Max (nm)								
RPE 488nm laser	496	578								
RPE 561nm laser	546	578								
<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</b>	0.09% Sodium Azide (NaN <sub>3</sub> )									

<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose
<b>Immunogen</b>	Porcine alveolar macrophages.
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">Q5K4Q3</a> <a href="#">Related reagents</a>
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Pig CD172a, clone BL1H7</b> recognizes porcine CD172a, a member of the signal regulatory protein (SIRP) family (<a href="#">Alvarez et al. 2000</a>).</p> <p>Mouse anti Pig CD172a, clone BL1H7 was originally clustered as SWC3 at the Third International Swine Cluster of Differentiation Workshop (<a href="#">Haverson et al. 2001</a>; <a href="#">Thacker et al. 2001</a>). CD172a is expressed on monocyte derived dendritic cells (MoDCs) (<a href="#">Facci et al. 2010</a>) also conventional (cDCs), plasmacytoid (pDCs) DCs and blood DCs. (<a href="#">Facci; Jeong et al. 2010</a>). Mouse anti Pig CD172a, clone BL1H7 immunoprecipitates a single band of ~90-110 kDa from preparations of biotinylated alveolar macrophages, a result confirmed by Western blotting analysis of alveolar macrophage lysates under non reducing conditions (<a href="#">Alvarez et al. 2000</a>). Aberrant expression of CD172a has been noted on porcine leukemias (<a href="#">Sipos et al. 2006</a>) with blast cells co-expressing lymphocytic markers CD5 and CD25 whilst expressing the Myeloid marker CD172a in a <a href="#">bi-phenotypic pattern</a> as opposed to the more characteristic <a href="#">single population</a> of CD172+ cells seen in normal blood PBMC (<a href="#">Chamorro et al. 2005</a>).</p> <p>Mouse anti Pig CD172a, clone BL1H7 has proved a useful and reliable tool for immunohistochemical analysis of routinely processed, formalin fixed, paraffin embedded porcine tissues (<a href="#">Domenech et al. 2003</a>).</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>Alvarez, B. <i>et al.</i> (2000) A porcine cell surface receptor identified by monoclonal antibodies to SWC3 is a member of the signal regulatory protein family and associates with protein-tyrosine phosphatase SHP-1. <a href="#">Tissue Antigens. 55 (4): 342-51.</a></li> <li>Domenech, N. <i>et al.</i> (2003) Identification of porcine macrophages with monoclonal antibodies in formalin-fixed, paraffin-embedded tissues. <a href="#">Vet Immunol Immunopathol. 94 (1-2): 77-81.</a></li> <li>Carrillo, A. <i>et al.</i> (2002) Isolation and characterization of immortalized porcine aortic endothelial cell lines. <a href="#">Vet Immunol Immunopathol. 89 (1-2): 91-8.</a></li> <li>Fraille, L. <i>et al.</i> (2012) Immunomodulatory properties of beta-sitosterol in pig immune responses. <a href="#">Int Immunopharmacol. 13 (3): 316-21.</a></li> <li>Jeong, H.J. <i>et al.</i> (2010) Comparative measurement of cell-mediated immune responses of swine to the M and N proteins of porcine reproductive and respiratory syndrome virus. <a href="#">Clin Vaccine Immunol. 17 (4): 503-12.</a></li> <li>Gimeno, M. <i>et al.</i> (2011) Cytokine profiles and phenotype regulation of antigen</li> </ol>

- presenting cells by genotype-I porcine reproductive and respiratory syndrome virus isolates. [Vet Res. 42: 9.](#)
7. Moreno, S. *et al.* (2010) Porcine monocyte subsets differ in the expression of CCR2 and in their responsiveness to CCL2. [Vet Res. 41: 76.](#)
  8. Facci, M.R. *et al.* (2010) A comparison between isolated blood dendritic cells and monocyte-derived dendritic cells in pigs. [Immunology. 129: 396-405.](#)
  9. Clapperton, M. *et al.* (2005) Innate immune traits differ between Meishan and Large White pigs. [Vet Immunol Immunopathol. 104: 131-44.](#)
  10. Argilagué, J.M. *et al.* (2012) DNA vaccination partially protects against African swine fever virus lethal challenge in the absence of antibodies. [PLoS One. 7 \(9\): e40942.](#)
  11. Kapetanovic, R. *et al.* (2012) Pig bone marrow-derived macrophages resemble human macrophages in their response to bacterial lipopolysaccharide. [J Immunol. 188: 3382-94.](#)
  12. Tambuyzer, B.R. *et al.* (2012) Osteopontin alters the functional profile of porcine microglia *in vitro*. [Cell Biol Int. 36 \(12\): 1233-8.](#)
  13. Robinson, S.R. *et al.* (2015) Broadly neutralizing antibodies against the rapidly evolving porcine reproductive and respiratory syndrome virus. [Virus Res. 203: 56-65.](#)
  14. Li, J. & Murtaugh, M.P. (2015) Functional analysis of porcine reproductive and respiratory syndrome virus N-glycans in infection of permissive cells. [Virology. 477: 82-8.](#)
  15. Prims, S. *et al.* (2016) Intestinal immune cell quantification and gram type classification of the adherent microbiota in conventionally and artificially reared, normal and low birth weight piglets. [J Livestock Sci 185: 1-7.](#)
  16. Gardner, D.S. *et al.* (2016) Remote effects of acute kidney injury in a porcine model. [Am J Physiol Renal Physiol. 310 \(4\): F259-71.](#)
  17. Valekova I *et al.* (2016) Revelation of the IFN $\alpha$ , IL-10, IL-8 and IL-1 $\beta$  as promising biomarkers reflecting immuno-pathological mechanisms in porcine Huntington's disease model. [J Neuroimmunol. 293: 71-81.](#)
  18. Gardner, D.S. *et al.* (2016) Remote effects of acute kidney injury in a porcine model. [Am J Physiol Renal Physiol. 310 \(4\): F259-71.](#)
  19. Thirion-Delalande, C. *et al.* (2017) Comparative analysis of the oral mucosae from rodents and non-rodents: Application to the nonclinical evaluation of sublingual immunotherapy products. [PLoS One. 12 \(9\): e0183398.](#)
  20. Auray, G. *et al.* (2013) Porcine neonatal blood dendritic cells, but not monocytes, are more responsive to TLRs stimulation than their adult counterparts. [PLoS One. 8 \(5\): e59629.](#)
  21. Hu, W. *et al.* (2021) shRNA transgenic swine display resistance to infection with the foot-and-mouth disease virus. [Sci Rep. 11 \(1\): 16377.](#)
  22. Radlowski, E.C. *et al.* (2021) Combination-Feeding Causes Differences in Aspects of Systemic and Mucosal Immune Cell Phenotypes and Functions Compared to Exclusive Sow-Rearing or Formula-Feeding in Piglets. [Nutrients. 13\(4\):1097.](#)
  23. Melgoza-González, A.E. *et al.* (2022) Antigen Targeting of Porcine Skin DEC205+ Dendritic Cells [Vaccines. 10 \(5\): 684.](#)
  24. Zhou, L. *et al.* (2022) Clinical improvement of sepsis by extracorporeal centrifugal leukocyte apheresis in a porcine model. [J Transl Med. 20 \(1\): 538.](#)
  25. Álvarez, B. *et al.* (2023) Porcine Macrophage Markers and Populations: An Update. [Cells. 12 \(16\): 2103.](#)
  26. Wei, H. *et al.* (2024) Novel Approach in DNA vaccine development against porcine circovirus type 2 [Theoretical and Applied Veterinary Medicine. 12 \(1\): 15-24.](#)

27. Chen, Y. *et al.* (2025) ASFV activates STAT3 to induce proviral M2 macrophage polarization. [Vet Microbiol. 311: 110733.](#)

28. Jaudas, F. *et al.* (2025) Perinatal dysfunction of innate immunity in cystic fibrosis. [Sci Transl Med. 17 \(782\): eadk9145.](#)

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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** Store at +4°C.  
DO NOT FREEZE.  
This product should be stored undiluted.  
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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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2312PE>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

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

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

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'M437372:250312'

**Printed on 20 Jan 2026**