

Datasheet: MCA2312F BATCH NUMBER 166715

Description:	MOUSE ANTI PIG CD172a:FITC
Specificity:	CD172a
Other names:	SWC3
Format:	FITC
<b>Product Type:</b>	Monoclonal Antibody
Clone:	BL1H7
Isotype:	lgG1
Quantity:	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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	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.

Target Species	Pig				
Product Form	Purified IgG conjugat	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer			
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nn	n)	
	FITC	490	525		
Buffer Solution	supernatant  Phosphate buffered s	ealine			
Preservative	0.09% sodium azide	(NaN <sub>3</sub> )			
Stabilisers	1% bovine serum alb	umin			
Approx. Protein	IgG concentration 0.1	l mg/ml			

### Concentrations

Immunogen	Porcine alveolar macrophages.
External Database Links	UniProt:  Q5K4Q3 Related reagents
RRID	AB_2188073
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 myeloma cell line.
Specificity	<b>Mouse anti Pig CD172a, clone BL1H7</b> recognizes porcine CD172a, a member of the signal regulatory protein (SIRP) family ( <u>Alvarez et al. 2000</u> ).
	Mouse anti Pig CD172a, clone BL1H7 was originally clustered as SWC3 at the Third International Swine Cluster of Differentiation Workshop (Haverson et al. 2001; Thacker et al. 2001). CD172a is expressed on monocyte derived dendritic cells (MoDCs) (Facci et al. 2010) also conventional (cDCs), plasmacytoid (pDCs) DCs and blood DCs.(Facci; Jeong et al. 2010). 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 (Alvarez et al. 2000). Aberrant expression of CD172a has been noted on porcine leukemias (Sipos et al. 2006) with blast cells co-expressing lymphocytic markers CD5 and CD25 whilst expressing the Myeloid marker CD172a in a bi-phenotypic pattern as opposed to the more characteristic single population of CD172+ cells seen in normal blood PBMC (Chamorro et al. 2005).
	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">Domenech et al. 2003</a> ).
Flow Cytometry	Use 10µl of the suggested working dilution to 1x10 <sup>6</sup> cells in 100µl
References	<ol> <li>Alvarez, B. et al. (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. <u>Tissue Antigens</u>. 55 (4): 342-51.</li> <li>Domenech, N. et al. (2003) Identification of porcine macrophages with monoclonal antibodies in formalin-fixed, paraffin-embedded tissues. <u>Vet Immunol Immunopathol</u>. 94 (1-2): 77-81.</li> </ol>
	<ol> <li>Carrillo, A. <i>et al.</i> (2002) Isolation and characterization of immortalized porcine aortic endothelial cell lines. <u>Vet Immunol Immunopathol. 89 (1-2): 91-8.</u></li> <li>Fraile, L. <i>et al.</i> (2012) Immunomodulatory properties of beta-sitosterol in pig immune responses. <u>Int Immunopharmacol. 13 (3): 316-21.</u></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</li> </ol>

syndrome virus. Clin Vaccine Immunol. 17 (4): 503-12.

- 6. 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.
- 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. <u>Immunology</u>. 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. Argilaguet, 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. <u>J Immunol. 188: 3382-94.</u>
- 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. <u>Virus Res. 203: 56-65.</u>
- 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 IFNα, IL-10, IL-8 and IL-1β 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. <u>PLoS One. 12 (9): e0183398.</u>
- 20. Auray, G. *et al.* (2013) Porcine neonatal blood dendritic cells, but not monocytes, are more responsive to TLRs stimulation than their adult counterparts. <u>PLoS One. 8 (5):</u> 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. <u>Nutrients. 13(4):1097.</u>
- 23. Melgoza-González, A.E. *et al.* (2022) Antigen Targeting of Porcine Skin DEC205+ Dendritic Cells <u>Vaccines</u>. 10 (5): 684.
- 24. Zhou, L. *et al.* (2022) Clinical improvement of sepsis by extracorporeal centrifugal leukocyte apheresis in a porcine model. <u>J Transl Med. 20 (1): 538.</u>
- 25. Álvarez, B. *et al.* (2023) Porcine Macrophage Markers and Populations: An Update. Cells. 12 (16): 2103.

Further Reading	1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an upda Vet Res. 39: 54.	ate.	
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. This product is photosensitive and should be protected from light.		
Guarantee	12 months from date of despatch		
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2312F">https://www.bio-rad-antibodies.com/SDS/MCA2312F</a> 10041		
Regulatory	For research purposes only		

# **Related Products**

## **Recommended Negative Controls**

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M414391:221206'

#### Printed on 19 Jan 2024

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