Datasheet: MCA2311PE

Description:	MOUSE ANTI PIG CD163:RPE
Specificity:	CD163
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	2A10/11
Isotype:	IgG1
Quantity:	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.

	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 R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1.0ml distilled water

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin
5% Sucrose

Immunogen

Porcine alveolar macrophages.

External Database Links

UniProt:
Q2VL90 Related reagents

Entrez Gene:
397031 CD163 Related reagents

Synonyms	M130
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the X63-Ag.8.653 myeloma cell line.
Specificity	**Mouse anti Pig CD163 antibody, clone 2A10/11** recognises porcine CD163, a ~120 kDa single pass type 1 transmembrane cell surface glycoprotein expressed on cells of the monocyte/macrophage lineage. The expression levels of CD163 vary during the course of macrophage differentiation. The highest levels of CD163 expression are found on tissue macrophages but bone marrow derived cells are CD163 negative. Expression of CD163 on peripheral blood monocytes varies between about 5% and 50% depending on the donor (Sanchez *et al.* 1999). Mouse anti Pig CD163, clone 2A10/11 is reported to inhibit both African swine fever infection and viral particle binding to alveolar macrophages in a dose-dependent manner (Sanchez-Torres *et al.* 2003).
Flow Cytometry	Use 10ul of the suggested working dilution to 1x10^6 cells in 100ul.
References	1. Yang, P. *et al.* (2002) Immune cells in the porcine retina: distribution, characterization and morphological features. Invest Ophthalmol Vis Sci. 43 (5): 1488-92. 2. Thacker, E. *et al.* (2001) Summary of workshop findings for porcine myelomonocytic markers. Vet Immunol Immunopathol. 80 (1-2): 93-109. 3. Sánchez-Torres, C. *et al.* (2003) Expression of porcine CD163 on monocytes/macrophages correlates with permissiveness to African swine fever infection. Arch Virol. 148 (12): 2307-23. 4. Gómez del Moral M *et al.* (1999) African swine fever virus infection induces tumor necrosis factor alpha production: implications in pathogenesis. J Virol. 73 (3): 2173-80. 5. De Baere, M.I. *et al.* (2012) Interaction of the European genotype porcine reproductive and respiratory syndrome virus (PRRSV) with sialoadhesin (CD169/Siglec-1) inhibits alveolar macrophage phagocytosis. Vet Res. 43: 47. 6. Prather, R.S. *et al.* (2013) An Intact Sialoadhesin (Sn/SIGLEC1/CD169) Is Not Required for Attachment/Internalization of the Porcine Reproductive and Respiratory Syndrome Virus. J Virol. 87: 9538-46. 7. Delrue, I. *et al.* (2010) Susceptible cell lines for the production of porcine reproductive and respiratory syndrome virus by stable transfection of sialoadhesin and CD163. BMC Biotechnol. 10: 48. 8. Katchman, H. *et al.* (2008) Embryonic porcine liver as a source for transplantation: advantage of intact liver implants over isolated hepatoblasts in overcoming homeostatic inhibition by the quiescent host liver. Stem Cells. 26: 1347-55. 9. Moreno, S.*et al.* (2010) Porcine monocyte subsets differ in the expression of CCR2 and in their responsiveness to CCL2. Vet Res. 41: 76. 10. Ondrackova, P. *et al.* (2010) Porcine mononuclear phagocyte subpopulations in the lung, blood and bone marrow: dynamics during inflammation induced by *Actinobacillus pleuropneumoniae*. Vet Res. 41: 64. 11. Urbieta Caceres, V.H. *et al.* (2011) Early experimental hypertension preserves the myocardial microvasculature but aggravates cardiac injury distal to chronic coronary artery obstruction. Am J Physiol Heart Circ Physiol. 300: H693-701. 12. Das, P.B. *et al.* (2010) The minor envelope glycoproteins GP2a and GP4 of porcine reproductive and respiratory syndrome virus interact with the receptor CD163. J Virol. 84: 1731-40. 13. 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. 14. Costa-Hurtado, M. *et al.* (2013) Changes in macrophage phenotype after infection of pigs with

Haemophilus parasuis strains with different levels of virulence. Infect Immun. 81 (7): 2327-33.
15. Ma, H. *et al.* (2016) Crystal Structure of the Fifth Scavenger Receptor Cysteine-Rich Domain (SRCR5) from Porcine CD163 Reveals an Important Residue Involved in Porcine Reproductive and Respiratory Syndrome Virus Infection. J Virol. pii: JVI.01897-16. [Epub ahead of print]
16. Popescu, L. *et al.* (2017) Genetically edited pigs lacking CD163 show no resistance following infection with the African swine fever virus isolate, Georgia 2007/1. Virology. 501: 102-6.
17. Stenfeldt, C. *et al.* (2014) Morphologic and phenotypic characteristics of myocarditis in two pigs infected by foot-and mouth disease virus strains of serotypes O or A. Acta Vet Scand. 56: 42.
18. Sang, Y. *et al.* (2014) Antiviral Regulation in Porcine Monocytic Cells at Different Activation States. J Virol. pii: JVI.01714-14.
19. Haslauer, C.M. *et al.* (2014) Gene expression of catabolic inflammatory cytokines peak before anabolic inflammatory cytokines after ACL injury in a preclinical model. J Inflamm (Lond). 11 (1): 34.
20. Kyrova K *et al.* (2014) The response of porcine monocyte derived macrophages and dendritic cells to *Salmonella typhimurium* and lipopolysaccharide. BMC Vet Res. 10: 244.
21. Le Luduec, J.B. *et al.* (2016) Intradermal vaccination with un-adjuvanted sub-unit vaccines triggers skin innate immunity and confers protective respiratory immunity in domestic swine. Vaccine. 34 (7): 914-22.
22. Zhang, L. *et al.* (2016) Developing a Triple Transgenic Cell Line for High-Efficiency Porcine Reproductive and Respiratory Syndrome Virus Infection. PLoS One. 11 (5): e0154238.
23. Gu, M.J. *et al.* (2016) Barrier protection via Toll-like receptor 2 signaling in porcine intestinal epithelial cells damaged by deoxynivalnol. Vet Res. 47: 25.
24. Li, H. *et al.* (2015) Function of CD163 fragments in porcine reproductive and respiratory syndrome virus infection. Int J Clin Exp Med. 8 (9): 15373-82.
25. Deloizy, C. *et al.* (2016) Expanding the tools for identifying mononuclear phagocyte subsets in swine: Reagents to porcine CD11c and XCR1. Dev Comp Immunol. 65: 31-40.
26. Kapetanovic, R. *et al.* (2012) Pig bone marrow-derived macrophages resemble human macrophages in their response to bacterial lipopolysaccharide. J Immunol. 188: 3382-94.
27. Westover, A.J. *et al.* (2016) An Immunomodulatory Device Improves Insulin Resistance in Obese Porcine Model of Metabolic Syndrome. J Diabetes Res. 2016: 3486727.
28. Contreras, G.A. *et al.* (2016) Adipose tissue remodeling in late-lactation dairy cows during feed-restriction-induced negative energy balance. J Dairy Sci. 99 (12): 10009-21.
29. Garba, A. *et al.* (2017) Immortalized porcine mesenchymal cells derived from nasal mucosa, lungs, lymph nodes, spleen and bone marrow retain their stemness properties and trigger the expression of siglec-1 in co-cultured blood monocytic cells PLOS ONE. 12 (10): e0186343.
30. Singleton, H. *et al.* (2016) Establishing Porcine Monocyte-Derived Macrophage and Dendritic Cell Systems for Studying the Interaction with PRRSV-1. Front Microbiol. 7: 832.
31. Li, L. *et al.* (2017) Generation of murine macrophage-derived cell lines expressing porcine CD163 that support porcine reproductive and respiratory syndrome virus infection. BMC Biotechnol. 17 (1): 77.
32. Wu, X. *et al.* (2018) Establishment and Characterization of a High and Stable Porcine CD163-Expressing MARC-145 Cell Line. Biomed Res Int. 2018: 4315861.

Further Reading

1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.

Storage

Store at +4^{o}C. DO NOT FREEZE.
This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

12 months from date of despatch.

Health And Safety

Material Safety Datasheet documentation #10075 available at:

Information	10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA928PE)

North & South America
Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: antibody_sales_us@bio-rad.com

Worldwide
Tel: +44 (0)1865 852 700
Fax: +44 (0)1865 852 739
Email: antibody_sales_uk@bio-rad.com

Europe
Tel: +49 (0) 89 8090 95 21
Fax: +49 (0) 89 8090 95 50
Email: antibody_sales_de@bio-rad.com

'M300671:170106'

Printed on 01 Aug 2018