

Datasheet: MCA1223SBUV605

Description:	MOUSE ANTI PIG wCD8 ALPHA:StarBright UltraViolet 605
Specificity:	CD8 ALPHA
Other names:	CD8
Format:	StarBright UltraViolet 605
Product Type:	Monoclonal Antibody
Clone:	MIL12
Isotype:	IgG2a
Quantity:	100 TESTS/0.5ml

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 (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) Staining at lower temperatures generally requires longer incubation to reach antibody binding equilibrium, and this effect is more pronounced for StarBright Dyes due to their larger size. For optimum staining, Bio-Rad recommends incubating samples either overnight at 4°C or 1 hour at room temperature.

Target Species	Pig		
Product Form	Purified IgG conjugated to StarBright UltraViolet 605 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright UltraViolet 605	340	609
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 (NaN ₃) 1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
Approx. Protein Concentrations	For information on the concentration of our StarBright Dye conjugated reagents please visit our FAQ page.
Immunogen	Porcine mesenteric lymphocytes.
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the P3 - X63 - Ag.653 myeloma cell line.
Specificity	Mouse anti Pig wCD8 alpha antibody, clone MIL12 recognizes an epitope on the alpha chain of porcine wCD8. Clone MIL12 was clustered at the Third International Swine CD Workshop (Haverson et al. 2001). Mouse anti Pig wCD8 alpha antibody, clone MIL12 was determined to bind to the CD8a epitope on the alpha chain based on its staining pattern on T lymphocytes and on its ability to block binding of the previously characterized CD8a antibody clone 76-2-11 to T lymphocytes (Saalmuller et al. 2001).
Flow Cytometry	Use 5µl of the suggested working dilution to label 0.5x10 ⁶ cells in 100µl. Best practices suggest a 5 min centrifugation at 6,000g prior to sample application.
References	- Goujon, J.M. <i>et al.</i> (2000) Influence of cold-storage conditions on renal function of autotransplanted large pig kidneys. Kidney Int. 58: 838-50. - Spreeuwenberg, M.A. <i>et al.</i> (2001) Small intestine epithelial barrier function is compromised in pigs with low feed intake at weaning. J Nutr. 131: 1520-7. - Carter, D.B. <i>et al.</i> (2002) Phenotyping of transgenic cloned piglets. Cloning Stem Cells. 4: 131-45. - Hauet, T. <i>et al.</i> (2002) Polyethylene glycol reduces the inflammatory injury due to cold ischemia/reperfusion in autotransplanted pig kidneys. Kidney Int. 62: 654-67. - Swamy, H.V. <i>et al.</i> (2003) Effects of feeding a blend of grains naturally contaminated with Fusarium mycotoxins on growth and immunological measurements of starter pigs, and the efficacy of a polymeric glucomannan mycotoxin adsorbent. J Anim Sci. 81: 2792-803. - Sarradell, J. <i>et al.</i> (2003) A morphologic and immunohistochemical study of the bronchus-associated lymphoid tissue of pigs naturally infected with <i>Mycoplasma hyopneumoniae</i>. Vet Pathol. 40: 395-404. - Ostrowska, E. <i>et al.</i> (2004) Effects of dietary conjugated linoleic acid on haematological and humoral responses in the grower pig Austral J Agric Res. 55 (7): 711. - Piva, A. <i>et al.</i> (2005) Activated carbon does not prevent the toxicity of culture material containing fumonisin B1 when fed to weanling piglets. J Anim Sci. 83 (8): 1939-47. - Clapperton, M. <i>et al.</i> (2005) Innate immune traits differ between Meishan and Large White pigs. Vet Immunol Immunopathol. 104: 131-44. - Shi, K. <i>et al.</i> (2008) Changes in peripheral blood leukocyte subpopulations in piglets co-infected experimentally with porcine reproductive and respiratory syndrome virus and porcine circovirus type 2. Vet Microbiol. 129: 367-77.

11. Clapperton, M. *et al.* (2008) Pig peripheral blood mononuclear leucocyte subsets are heritable and genetically correlated with performance. [Animal. 2: 1575-84.](#)
12. Kick, A.R. *et al.* (2011) Evaluation of peripheral lymphocytes after weaning and vaccination for *Mycoplasma hyopneumoniae*. [Res Vet Sci. 91 \(3\): e68-72.](#)
13. Monroy-Salazar, H.G. *et al.* (2012) Effects of a live yeast dietary supplement on fecal coliform counts and on peripheral blood CD4+ and CD8+ lymphocyte subpopulations in nursery pigs. [J Swine Health Prod. 20: 276-82.](#)
14. Lu, X. *et al.* (2012) Genome-wide association study for T lymphocyte subpopulations in swine. [BMC Genomics. 13: 488.](#)
15. Leifer, I. *et al.* (2012) Characterization of C-strain "Riems" TAV-epitope escape variants obtained through selective antibody pressure in cell culture. [Vet Res. 43: 33.](#)
16. Tuchscherer, M. *et al.* (2012) Effects of inadequate maternal dietary protein:carbohydrate ratios during pregnancy on offspring immunity in pigs. [BMC Vet Res. 8: 232.](#)
17. Kick, A.R. *et al.* (2012) Effects of stress associated with weaning on the adaptive immune system in pigs. [J Anim Sci. 90: 649-56.](#)
18. Tambuyzer, B.R. *et al.* (2012) Osteopontin alters the functional profile of porcine microglia *in vitro*. [Cell Biol Int. 36 \(12\): 1233-8.](#)
19. 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.](#)
20. Alex, P.J. (2014) Grouping Pig-Specific Responses to Mitogen with Similar Responder Animals may Facilitate the Interpretation of Results Obtained in an Out-Bred Animal Model [J Vaccines & Vaccination. 05 \(05\)](#)
21. Zeigler, B.M. *et al.* (2015) The development and validation of methods for evaluating the immune system in preweaning piglets. [Food Chem Toxicol. 84: 197-207.](#)
22. Liermann, W. *et al.* (2017) Effects of two commercial diets and technical feed treatment on stomach lesions and immune system of fattening pigs. [J Anim Physiol Anim Nutr \(Berl\). 101 \(5\): e414-e426.](#)
23. Hemmink, J.D. *et al.* (2016) Distinct immune responses and virus shedding in pigs following aerosol, intra-nasal and contact infection with pandemic swine influenza A virus, A(H1N1)09. [Vet Res. 47 \(1\): 103.](#)
24. López, E. *et al.* (2019) Identification of very early inflammatory markers in a porcine myocardial infarction model. [BMC Vet Res. 15 \(1\): 91.](#)
25. Hu, Z. *et al.* (2019) Genomic variant in porcine TNFRSF1A gene and its effects on TNF signaling pathway *in vitro*. [Gene. 700: 105-9.](#)
26. Fogle, J.E. *et al.* (2019) Antibiotic Therapy Does Not Alter the Humoral Response to Vaccination for Porcine Circovirus 2 in Weaned Pigs. [Vet Sci. 6 \(2\): 51.](#)
27. Nielsen, O.L. *et al.* (2022) A porcine model of subcutaneous *Staphylococcus aureus* infection: a pilot study. [APMIS. 130 \(7\): 359-70.](#)
28. Maciag, S.S. *et al.* (2022) On the influence of the source of porcine colostrum in the development of early immune ontogeny in piglets. [Sci Rep. 12 \(1\): 15630.](#)
29. Wu, M.C. *et al.* (2023) A protein-based subunit vaccine with biological adjuvants provides effective protection against *Pasteurella multocida* in pigs. [Vet Res. 54 \(1\): 17.](#)
30. Bujňák, L. *et al.* (2023) The Effect of Dietary Humic Substances on Cellular Immunity and Blood Characteristics in Piglets [Agriculture. 13 \(3\): 636.](#)
31. Haach, V. *et al.* (2023) A polyvalent virosomal influenza vaccine induces broad cellular

- and humoral immunity in pigs. [Virology J. 20 \(1\): 181.](#)
32. Maciag, S. *et al.* (2022) Effects of freezing storage on the stability of maternal cellular and humoral immune components in porcine colostrum. [Vet Immunol Immunopathol. 254: 110520.](#)
33. Forner, R. *et al.* (2021) Distribution difference of colostrum-derived B and T cells subsets in gilts and sows. [PLoS One. 16 \(5\): e0249366.](#)
34. Novotný, J. *et al.* (2024) The Use of Flow Cytometry in the Analysis of Sows' Colostrum and Milk [Folia Veterinaria. 68 \(3\): 44-51.](#)
35. Zhao, W. *et al.* (2025) Impact of Foot-and-Mouth Disease Virus on Memory T and B Cell Populations in Swine [Vet Microbiol. 110406. 5 Jan \[Preprint\]](#)
36. Arrigucci, R. *et al.* (2025) OMIP-113: Characterization of Cytokine Producing T Cells in Swine. [Cytometry A. 107 \(5\): 289-292.](#)
37. Tng, P.Y.L. *et al.* (2025) Early disruption of the innate-adaptive immune axis in vivo after infection with virulent Georgia 2007/1 ASFV. [Discov Immunol. 4 \(1\): kyaf014.](#)
38. Wu, H.C. *et al.* (2026) Prevention of Porcine Epidemic Diarrhea Virus With Nanotube-Adjuvanted Oral DNA Vaccines. [Transbound Emerg Dis. 2026: 6727844.](#)
39. de Oliveira Barbosa, A. *et al.* (2026) Immunogenicity of an inactivated vaccine against senecavirus a and duration of the immune response in pigs. [Arch Virol. 171 \(2\): 33.](#)
40. Sedaghat-Rostami, E. *et al.* (2026) Pathogen-specific immune responses might underlie divergent outcomes of coronavirus and influenza infection in the natural porcine host. [Commun Biol. 9 \(1\): 1043.](#)

Further Reading	1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.
Storage	This product is shipped at ambient temperature. Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA1223SBUV605
Regulatory	For research purposes only

Product inquiries: www.bio-rad-antibodies.com/technical-support

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

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Printed on 09 Oct 2026