Datasheet: MCA1736SBV570

Description:	MOUSE ANTI PIG CD25:StarBright Violet 570
Specificity:	CD25
Other names:	IL-2R ALPHA CHAIN
Format:	StarBright Violet 570
Product Type:	Monoclonal Antibody
Clone:	K231.3B2
Isotype:	IgG1
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	▪			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.

Target Species

Pig

Product Form

Purified IgG conjugated to StarBright Violet 570 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright Violet 570	404	571

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

Immunogen	Con A activated porcine peripheral blood lymphocytes.
External Database Links	**UniProt:** O02733 Related reagents **Entrez Gene:** 396814 IL2RA Related reagents
Fusion Partners	Spleen cells from immunized mice were fused with cells of the mouse P3-X63-Ag.8.653 myeloma cell line.
Specificity	**Mouse anti Pig CD25, clone K231.3B2** recognizes porcine CD25, the alpha chain of the interleukin 2 receptor (IL-2Rα), also known as the low affinity Interleukin 2 receptor. The IL-2 receptor exists in three forms, the high affinity heterodimer, the intermediate affinity β monomer and the low affinity α monomer configurations. Clone K231.3B2 was clustered as CD25 at the First International Workshop to Define Swine Cluster of Differentiation (CD) Antigens (Lunney *et al.* 1994). Mouse anti pig CD25, clone K231.3B2 immunoprecipitates a protein of ~65-70 kDa from activated lymphocyte preparations (Bailey *et al.* 1992). CD25 is a 270 amino acid single pass type I transmembrane glycoprotein containing 2 Sushi domains. Low expression of CD25 is seen on resting peripheral blood mononuclear cells, rapidly up-regulated following stimulation by concanavalin A and phorbol myristate acetate, indicative of its role as an activation antigen (Bullido *et al.* 1999).
Flow Cytometry	Use 5µl of the suggested working dilution to label 10^6 cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
References	1. Bailey, M. *et al.* (1992) A monoclonal antibody recognising an epitope associated with pig interleukin-2 receptors. J Immunol Methods. 153 (1-2): 85-91. 2. Barker, E. *et al.* (2006) The larynx as an immunological organ: immunological architecture in the pig as a large animal model. Clin Exp Immunol. 143: 6-14. 3. Silva-Campa, E. *et al.* (2009) Induction of T helper 3 regulatory cells by dendritic cells infected with porcine reproductive and respiratory syndrome virus. Virology. 387: 373-9. 4. Silva-Campa, E. *et al.* (2010) European genotype of porcine reproductive and respiratory syndrome (PRRSV) infects monocyte-derived dendritic cells but does not induce Treg cells. Virology. 396 (2): 264-71. 5. Kick, A.R. *et al.* (2011) Evaluation of peripheral lymphocytes after weaning and vaccination for *Mycoplasma hyopneumoniae*. Res Vet Sci. 91 (3): e68-72. 6. LeRoith, T. *et al.* (2011) A modified live PRRSV vaccine and the pathogenic parent strain induce regulatory T cells in pigs naturally infected with *Mycoplasma hyopneumoniae*. Vet Immunol Immunopathol. 140 (3-4): 312-6. 7. Kuo, Y.R. *et al.* (2011) Prolongation of composite tissue allotransplant survival by treatment with bone marrow mesenchymal stem cells is correlated with T-cell regulation in a swine hind-limb model. Plast Reconstr Surg. 127: 569-79. 8. Young, D. *et al.* (2012) Soy-derived di- and tripeptides alleviate colon and ileum

inflammation in pigs with dextran sodium sulfate-induced colitis. J Nutr. 142: 363-8.
9. Chattha, K.S. *et al.* (2013) Divergent immunomodulating effects of probiotics on T cell responses to oral attenuated human rotavirus vaccine and virulent human rotavirus infection in a neonatal gnotobiotic piglet disease model. J Immunol. 191: 2446-56.
10. Fan, B. *et al.* (2015) The 15N and 46R Residues of Highly Pathogenic Porcine Reproductive and Respiratory Syndrome Virus Nucleocapsid Protein Enhance Regulatory T Lymphocytes Proliferation. PLoS One. 10 (9): e0138772.
11. 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.
12. Ferrari, L. *et al.* (2016) Phenotypic modulation of porcine CD14+ monocytes, natural killer/natural killer T cells and CD8αβ+ T cell subsets by an antibody-derived killer peptide (KP). Res Vet Sci. 109: 29-39.
13. Suradhat, S. *et al.* (2016) Transdermal delivery of plasmid encoding truncated nucleocapsid protein enhanced PRRSV-specific immune responses. Vaccine. 34 (5): 609-15.
14. Williams, A.R. *et al.* (2016) Polymerization-dependent activation of porcine γδ T-cells by proanthocyanidins. Res Vet Sci. 105: 209-15.
15. Pan, H. *et al.* (2016) Lymphodepletive effects of rabbit anti-pig thymocyte globulin in neonatal swines. Transpl Immunol. 39: 74-83.
16. Sirisereewan, C. *et al.* (2017) Positive immunomodulatory effects of heterologous DNA vaccine- modified live vaccine, prime-boost immunization, against the highly-pathogenic PRRSV infection. Vet Immunol Immunopathol. 183: 7-15.
17. An, C.H. *et al.* (2018) Plant synthetic GP4 and GP5 proteins from porcine reproductive and respiratory syndrome virus elicit immune responses in pigs. Planta. 247 (4): 973-85.
18. Nedumpun, T. *et al.* (2019) Negative Immunomodulatory Effects of Type 2 Porcine Reproductive and Respiratory Syndrome Virus-Induced Interleukin-1 Receptor Antagonist on Porcine Innate and Adaptive Immune Functions. Front Immunol. 10: 579.
19. Christoforidou, Z. *et al.* (2019) Sexual Dimorphism in Immune Development and in Response to Nutritional Intervention in Neonatal Piglets. Front Immunol. 10: 2705.
20. Uehlein, S. *et al.* (2021) Human-like Response of Pig T Cells to Superagonistic Anti-CD28 Monoclonal Antibodies. J Immunol .ji2100174.
21. Schäfer, A. *et al.* (2021) T-cell responses in domestic pigs and wild boar upon infection with the moderately virulent African swine fever virus strain 'Estonia2014'. Transbound Emerg Dis. 68 (5): 2733-49.
22. Monguió-Tortajada, M. *et al.* (2022) Acellular cardiac scaffolds enriched with MSC-derived extracellular vesicles limit ventricular remodelling and exert local and systemic immunomodulation in a myocardial infarction porcine model. Theranostics. 12 (10): 4656-4670.
23. Nielsen, O.L. *et al.* (2022) A porcine model of subcutaneous Staphylococcus aureus infection: a pilot study. APMIS. 130 (7): 359-70.
24. 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.
25. Haach, V. *et al.* (2023) A polyvalent virosomal influenza vaccine induces broad cellular and humoral immunity in pigs. Virol J. 20 (1): 181.
26. Bettin, L. *et al.* (2023) Co-stimulation by TLR7/8 ligand R848 modulates IFN-γ production of porcine γδ T cells in a microenvironment-dependent manner. Dev Comp Immunol. 138: 104543.

27. Shimazu, T. *et al.* (2019) Addition of Wakame seaweed (*Undaria pinnatifida*) stalk to animal feed enhances immune response and improves intestinal microflora in pigs. Anim Sci J. 90 (9): 1248-60.

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°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/MCA1736SBV570 20471
Regulatory	For research purposes only

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'M426131:231121'

Printed on 09 Feb 2024