

Datasheet: MCA1736A488

Description:	MOUSE ANTI PIG CD25:Alexa Fluor® 488
Specificity:	CD25
Other names:	IL-2R ALPHA CHAIN
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	K231.3B2
Isotype:	lgG1
Quantity:	100 TESTS/1ml

# **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 conjugate	ed to Alexa Fluor 488	- liquid
Max Ex/Em	Fluorophore Alexa Fluor®488	Excitation Max (nm) 495	Emission Max (nn
Preparation	Purified IgG prepared supernatant	by affinity chromatog	raphy on Protein A
Buffer Solution	Phosphate buffered sa	aline	
Preservative Stabilisers	0.09% sodium azide (l 1% bovine serum albu	•	
Approx. Protein Concentrations	IgG concentration 0.09	5 mg/ml	

lm	m	un	O	ae	n
	•••	ч.,	•	9~	••

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-2R $\alpha$ ), also known as the low affinity Interleukin 2 receptor. The IL-2 receptor exists in three forms, the high affinity heterodimer, the intermediate affinity  $\beta$  monomer and the low affinity  $\alpha$  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 (<u>Bailey et al. 1992</u>).

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 (<u>Bullido et al. 1999</u>).

#### Flow Cytometry

Use 10µl of the suggested working dilution to label 1x10<sup>6</sup> cells in 100µl

# References

- 1. Bailey, M. *et al.* (1992) A monoclonal antibody recognising an epitope associated with pig interleukin-2 receptors. <u>J Immunol Methods</u>. 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. <u>Clin Exp Immunol. 143: 6-14.</u>
- 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. <u>Virology. 387: 373-9.</u>
- 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. <u>Virology.</u> 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. <u>Plast Reconstr Surg. 127: 569-79.</u>
- 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. <u>J Immunol. 191: 2446-56.</u>
- 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. <u>PLoS One. 10 (9): e0138772.</u>
- 11. Singleton, H. *et al.* (2016) Establishing Porcine Monocyte-Derived Macrophage and Dendritic Cell Systems for Studying the Interaction with PRRSV-1. <u>Front Microbiol. 7: 832.</u>
- 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. <u>Vaccine. 34 (5):</u> 609-15.
- 14. Williams, A.R. *et al.* (2016) Polymerization-dependent activation of porcine  $\gamma\delta$  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. <u>Transpl Immunol. 39: 74-83.</u>
- 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. <u>Front Immunol. 10: 579.</u>
- 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'. <u>Transbound Emerg Dis. 68 (5): 2733-49.</u>
- 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. <u>Theranostics. 12</u> (10): 4656-4670.
- 23. Nielsen, O.L. *et al.* (2022) A porcine model of subcutaneous Staphylococcus aureus infection: a pilot study. <u>APMIS. 130 (7): 359-70.</u>
- 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. <u>Sci Rep. 12 (1): 15630.</u>
- 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. <u>Dev Comp Immunol</u>. 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. <u>Anim</u> Sci J. 90 (9): 1248-60.

28. Amimo, J.O. *et al.* (2024) Maternal immunization and vitamin A sufficiency impact sow primary adaptive immunity and passive protection to nursing piglets against porcine epidemic diarrhea virus infection. Front Immunol. 15: 1397118.

#### **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. 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.

#### Guarantee

12 months from date of despatch

# Acknowledgements

This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com

# Health And Safety Information

Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1736A488">https://www.bio-rad-antibodies.com/SDS/MCA1736A488</a> 10041

## Regulatory

For research purposes only

# Related Products

## **Recommended Negative Controls**

MOUSE IgG1 NEGATIVE CONTROL: Alexa Fluor® 488 (MCA928A488)

## **Recommended Useful Reagents**

MOUSE ANTI PIG CD4 ALPHA:FITC (MCA1749F)

MOUSE ANTI PIG CD14:FITC (MCA1218F)

MOUSE ANTI PIG CD4 ALPHA:RPE (MCA1749PE)

MOUSE ANTI PIG wCD8 ALPHA:FITC (MCA1223F)

MOUSE ANTI PIG wCD8 ALPHA:RPE (MCA1223PE)

MOUSE ANTI PIG CD45:Alexa Fluor® 647 (MCA1222A647)

North & South Tel: +1 800 265 7376 Worldwide Tel: +44 (0)1865 852 700 Tel: +49 (0) 89 8090 95 21 То Europe America Fax: +1 919 878 3751 Fax: +44 (0)1865 852 739 Fax: +49 (0) 89 8090 95 50 find a Email: antibody\_sales\_de@bio-rad.com

Email: antibody\_sales\_us@bio-rad.com Email: antibody\_sales\_uk@bio-rad.com

batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M411228:221102'

## Printed on 24 Feb 2025

© 2025 Bio-Rad Laboratories Inc | Legal | Imprint