

Datasheet: MCA5916PE

Description:	MOUSE ANTI DOG CD25:RPE
Specificity:	CD25
Other names:	IL-2R ALPHA CHAIN
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	P4A10
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

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

Dog

Product Form

Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1.0 ml distilled water

Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.

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

0.09% Sodium Azide (NaN₃)

Stabilisers	1% Bovine Serum Albumin 5% Sucrose
Immunogen	Enriched and stimulated canine T cells.
External Database Links	<p>UniProt: O62802 Related reagents</p> <p>Entrez Gene: 403870 IL2RA Related reagents</p>
Fusion Partners	Spleen cells from immunized RBF/DnJ mice were fused with cells of the mouse P3-653 myeloma cell line.
Specificity	<p>Mouse anti Dog CD25, clone P4A10 recognizes the canine homologue of the human CD25 cell surface antigen, also known as IL-2Rα, a glycoprotein of approximately 55 kDa expressed primarily by activated T lymphocytes (Abrams <i>et al.</i> 2010).</p> <p>The IL-2 receptor is composed of 3 subunits, an α chain (CD25), a β chain (CD122) and a γ chain (CD132), CD25 functions as a low affinity receptor for IL-2.</p> <p>Antibodies to CD4,</p> <p>Mouse anti Human CD25 antibody, clone ACT1, which has demonstrated cross reactivity to canine CD25 (Risetto <i>et al.</i> 2010). However this clone has poor affinity for canine CD25. The development of clone P4A10 offers a specific monoclonal Mouse anti Canine CD25, demonstrating a greater affinity for canine CD25 than the cross reactive anti human antibody (Abrams <i>et al.</i> 2010).</p> <p>The dog is an important veterinary species in its own right. In addition dogs are used as an animal model in the study of a number of serious human disease states including various forms cancers (Paoloni <i>et al.</i> 2008), and in genetically related diseases of the hemopoietic system (Bauer Jr.<i>et al.</i> 2009).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul
References	<ol style="list-style-type: none"> 1. Abrams, V.K. <i>et al.</i> (2010) A novel monoclonal antibody specific for canine CD25 (P4A10): selection and evaluation of canine Tregs. Vet Immunol Immunopathol. 135 (3-4): 257-65. 2. Finn, J.D. <i>et al.</i> (2010) Eradication of neutralizing antibodies to factor VIII in canine hemophilia A after liver gene therapy. Blood.116: 5842-8. 3. Mizutani, N. <i>et al.</i> (2020) Measurement of the concentration of serum soluble interleukin-2 receptor alpha chain in dogs with lymphoma. Vet Immunol Immunopathol. 225: 110054. 4. Wesolowski, M. <i>et al.</i> (2023) Long-term changes of Th17 and regulatory T cells in peripheral blood of dogs with spinal cord injury after intervertebral disc herniation. BMC Vet Res. 19 (1): 90.

5. Sheng, R. *et al.* (2023) Prognostic significance of CD25 expression in dogs with a noninvasive diagnosis of B-cell lymphoma treated with CHOP chemotherapy. [Vet Comp Oncol. 21 \(1\): 28-35.](#)

Further Reading

1. Paoloni, M. & Khanna, C. (2008) Translation of new cancer treatments from pet dogs to humans. [Nat Rev Cancer. 8 \(2\): 147-56.](#)
2. Bauer, T.R. Jr *et al.* (2009) Potential large animal models for gene therapy of human genetic diseases of immune and blood cell systems. [ILAR J. 50 \(2\): 168-86.](#)
3. Risetto, K.C. *et al.* (2010) Cloning and expression of canine CD25 for validation of an anti-human CD25 antibody to compare T regulatory lymphocytes in healthy dogs and dogs with osteosarcoma. [Vet Immunol Immunopathol. 135 \(1-2\): 137-45.](#)
4. Pinheiro, D. *et al.* (2011) Phenotypic and functional characterization of a CD4(+) CD25(high) FOXP3(high) regulatory T-cell population in the dog. [Immunology. 132 \(1\): 111-22.](#)

Storage

Prior to reconstitution store at +4°C.
After reconstitution store at +4°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.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA5916PE>
20487

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

Recommended Useful Reagents

[RAT ANTI DOG CD8 \(MCA1039GA\)](#)

[RAT ANTI DOG CD4 \(MCA1038GA\)](#)

[MOUSE ANTI DOG CD3 \(MCA1774GA\)](#)

[MOUSE ANTI DOG CD3:FITC \(MCA1774F\)](#)

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