

## Datasheet: MCA5916PE

**BATCH NUMBER 167396**

<b>Description:</b>	MOUSE ANTI DOG CD25:RPE
<b>Specificity:</b>	CD25
<b>Other names:</b>	IL-2R ALPHA CHAIN
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	P4A10
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://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.

<b>Target Species</b>	Dog
<b>Product Form</b>	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

<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose
<b>Immunogen</b>	Enriched and stimulated canine T cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">O62802</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">403870</a>    IL2RA    <a href="#">Related reagents</a></p>
<b>Fusion Partners</b>	Spleen cells from immunized RBF/DnJ mice were fused with cells of the mouse P3-653 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Dog CD25, clone P4A10</b> recognizes the canine homologue of the human CD25 cell surface antigen, also known as IL-2R<math>\alpha</math>, a glycoprotein of approximately 55 kDa expressed primarily by activated T lymphocytes (<a href="#">Abrams <i>et al.</i> 2010</a>).</p> <p>The IL-2 receptor is composed of 3 subunits, an <math>\alpha</math> chain (CD25), a <math>\beta</math> chain (CD122) and a <math>\gamma</math> 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 (<a href="#">Rissetto <i>et al.</i> 2010</a>). 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 (<a href="#">Abrams <i>et al.</i> 2010</a>).</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 (<a href="#">Paoloni <i>et al.</i> 2008</a>), and in genetically related diseases of the hemopoietic system (<a href="#">Bauer Jr.<i>et al.</i> 2009</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul
<b>References</b>	<ol style="list-style-type: none"> <li>1. Abrams, V.K. <i>et al.</i> (2010) A novel monoclonal antibody specific for canine CD25 (P4A10): selection and evaluation of canine Tregs. <a href="#">Vet Immunol Immunopathol. 135 (3-4): 257-65.</a></li> <li>2. Finn, J.D. <i>et al.</i> (2010) Eradication of neutralizing antibodies to factor VIII in canine hemophilia A after liver gene therapy. <a href="#">Blood.116: 5842-8.</a></li> <li>3. Mizutani, N. <i>et al.</i> (2020) Measurement of the concentration of serum soluble interleukin-2 receptor alpha chain in dogs with lymphoma. <a href="#">Vet Immunol Immunopathol. 225: 110054.</a></li> <li>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. <a href="#">BMC</a></li> </ol>

[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.](#)

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**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.](#)

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**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.

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**Guarantee**

12 months from date of despatch

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**Health And Safety Information**

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

For research purposes only

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## 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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