

## Datasheet: MCA5916F

**BATCH NUMBER 148412**

<b>Description:</b>	MOUSE ANTI DOG CD25:FITC
<b>Specificity:</b>	CD25
<b>Other names:</b>	IL-2R ALPHA CHAIN
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	P4A10
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 mg

## 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 - 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.

<b>Target Species</b>	Dog						
<b>Product Form</b>	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid						
<b>Max Ex/Em</b>	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>FITC</td> <td>490</td> <td>525</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	FITC	490	525
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
FITC	490	525					
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant						
<b>Buffer Solution</b>	Phosphate buffered saline						
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )						
<b>Stabilisers</b>	1% Bovine Serum Albumin						
<b>Approx. Protein</b>	IgG concentration 0.1 mg/ml						

## Concentrations

---

**Immunogen** Enriched and stimulated Canine T cells.

---

## External Database Links

**UniProt:**

[O62802](#)    [Related reagents](#)

**Entrez Gene:**

[403870](#)    IL2RA    [Related reagents](#)

---

**Fusion Partners** Spleen cells from immunised RBF/DnJ mice were fused with cells of the mouse P3-653 myeloma cell line.

---

## Specificity

**Mouse anti Dog CD25, clone P4A10** recognizes the canine homologue of the human CD25 cell surface antigen, also known as IL-2R $\alpha$ , a glycoprotein of approximately 55 kDa expressed primarily by activated T lymphocytes ([Abrams et al. 2010](#)).

The IL-2 receptor is composed of 3 subunits, an  $\alpha$  chain (CD25), a  $\beta$  chain (CD122) and a  $\gamma$  chain (CD132), CD25 functions as a low affinity receptor for IL-2.

Research has demonstrated that antibodies to CD4, FoxP3 and CD25 may be used in studies of T regulatory cells (Tregs), a unique subset of T helper cells that function in the control of effector cells vital in preventing autoimmunity.

Previous studies of canine Tregs have utilized the mouse anti human CD25 monoclonal antibody, clone ACT1, which has demonstrated cross reactivity to canine CD25 ([Risetto et al. 2010](#)). However this clone has poor affinity for canine CD25. The development of clone P4A10 now offers a specific monoclonal Mouse anti Canine CD25, demonstrating a greater affinity for canine CD25 than the cross reactive anti human antibody ([Abrams et al. 2010](#)).

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 et al. 2008](#)), and in genetically related diseases of the hemopoietic system ([Bauer et al. 2009](#)). The generation of clone P4A10 provides an improved tool for the identification of canine CD25 and will facilitate studies in this species.

---

**Flow Cytometry** Use 10ul of the suggested working dilution to label  $10^6$  cells in 100ul

---

## References

1. Abrams, V.K. *et al.* (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. *et al.* (2010) Eradication of neutralizing antibodies to factor VIII in canine hemophilia A after liver gene therapy. [Blood.116: 5842-8.](#)
- 

## Further Reading

1. 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.](#)
2. 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.](#)
3. 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.](#)
4. Paoloni, M. & Khanna, C. (2008) Translation of new cancer treatments from pet dogs to humans. [Nat Rev Cancer. 8 \(2\): 147-56.](#)

<b>Storage</b>	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. 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.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA5916F">https://www.bio-rad-antibodies.com/SDS/MCA5916F</a> 10041
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

### Recommended Useful Reagents

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

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

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

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

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)  
'M368467:200529'

Printed on 05 Mar 2024