

Datasheet: MCA5916GA

BATCH NUMBER 165730

Description:	MOUSE ANTI DOG CD25
Specificity:	CD25
Other names:	IL-2R ALPHA CHAIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	P4A10
Isotype:	IgG1
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/50 - 1/100
Immunohistology - Frozen		▪		
Immunohistology - Paraffin		▪		
Immunohistology - Resin		▪		
ELISA		▪		
Immunoprecipitation		▪		
Western Blotting (1)	▪			

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.

(1) Clone P4A10 produces a double band at approximately 55kDa under non-reducing conditions. A non-specific band may be observed at 116kDa

Target Species	Dog
Product Form	Purified IgG - liquid
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
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Enriched and stimulated canine T cells.
External Database Links	<p>UniProt:</p> <p>O62802 Related reagents</p> <p>Entrez Gene:</p> <p>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 (Rissetto <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 1×10^6 cells in 100ul.
Western Blotting	Clone P4A10 detects a double band of approximately 55kDa in PMA-IO activated canine PBMC lysates.
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. *et al.* (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. *et al.* (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	<p>1. Paoloni, M. & Khanna, C. (2008) Translation of new cancer treatments from pet dogs to humans. Nat Rev Cancer. 8 (2): 147-56.</p> <p>2. Bauer, T.R. Jr <i>et al.</i> (2009) Potential large animal models for gene therapy of human genetic diseases of immune and blood cell systems. ILAR J. 50 (2): 168-86.</p> <p>3. Risetto, K.C. <i>et al.</i> (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.</p> <p>4. Pinheiro, D. <i>et al.</i> (2011) Phenotypic and functional characterization of a CD4(+) CD25(high) FOXP3(high) regulatory T-cell population in the dog. Immunology. 132 (1): 111-22.</p>
Storage	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
Guarantee	12 months from date of despatch
Health And Safety Information	<p>Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA5916GA</p> <p>10040</p>
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®550 , DyLight®650 , DyLight®680 , DyLight®800 , FITC , HRP

Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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

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