Datasheet: MCA5916F

BATCH NUMBER 169916

Description:	MOUSE ANTI DOG CD25:FITC
Specificity:	CD25
Other names:	IL-2R ALPHA CHAIN
Format:	FITC
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	▪			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

Dog

Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

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 (NaN_3)
1% Bovine Serum Albumin

Approx. Protein

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 immunized 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 at IL-2Rα, 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 α chain (CD25), a β chain (CD122) and a γ chain (CD132), CD25 functions as a low affinity receptor for IL-2. Antibodies to CD4, Mouse anti Human CD25 antibody, clone ACT1, which has demonstrated cross reactivity to canine CD25 (Rissetto *et al.* 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 *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 Jr.*et al.* 2009).
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. 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.
6. Szydłowski, P. *et al.* (2025) Tregitopes derived from canine proteins can enhance T regulatory lymphocytes frequency in dog peripheral blood mononuclear cells (PBMC) culture *in vitro*. J Leukoc Biol. 117 (11): qiaf143.
7. Foos, K.M. *et al.* (2026) Generation of functional canine TIL products for solid tumors. Front Immunol. 17: 1810955.

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. Rissetto, 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	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. This product is photosensitive and should be protected from light.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA5916F
Regulatory	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)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M384827:210513'