

Datasheet: MCA1774F BATCH NUMBER 154810

Description:	MOUSE ANTI DOG CD3:FITC	
Specificity:	CD3	
Format:	FITC	
Product Type:	Monoclonal Antibody	
Clone:	CA17.2A12	
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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry				Neat - 1/10

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Dog			
Product Form	Purified IgG conju	gated to Fluorescein Isoth	niocyanate Isomer 1	(FITC) - liquid
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)	)
	FITC	490	525	
Preparation	Purified IgG prepa	ared by affinity chromatog	raphy on Protein G	
Buffer Solution	Phosphate buffere	ed saline		
Preservative	0.09% Sodium Az	ide		
Stabilisers	1% Bovine Ser			
Approx. Protein Concentrations	IgG concentration	0.1 mg/ml		

#### Immunogen

Affinity enriched TCR/CD3 membrane proteins isolated from thymocytes and the T cell line CLGL-90

# **External Database**

Links

**UniProt:** 

P27597 Related reagents

**Entrez Gene:** 

442981 CD3E Related reagents

**RRID** 

AB\_2291174

#### **Specificity**

**Mouse anti Dog CD3 antibody, clone CA17.2A12** recognizes the canine CD3 cell surface antigen, expressed by thymocytes and mature T lymphocytes. CD3 is engaged in the surface expression of the T-cell antigen receptor (TCR) and the signal transduction pathway resulting from MHC ligand binding to the TCR. CD3 is made up of a number of invariant subchains of the immunoglobulin superfamily.

Mouse anti Dog CD3 clone CA17.2A12 is a valuable flow cytometric and immunohistologic tool for canine lymphoma detection of T-cell origin (Miniscalco et al. 2003).

### **Flow Cytometry**

Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells or 100ul whole blood.

**N.B.**. MCA1774F should not be used with MCA1781PE (mouse anti canine B-cells), in dual colour flow cytometry, due to non-specific interactions between the two reagents.

## References

- 1. Moore, P.F. and Rossitto, P.V. (1993) Development of monoclonal antibodies to canine T cell receptor complex (TCR/CD3) and their utilisation in the diagnosis of T cell neoplasia. <u>Vet. Pathol. 30: 457. Abstract 117</u>
- 2. McDonough, S. P. and Moore, P. F. (2000) Clinical, hematologic, and immunophenotypic characterization of canine large granular lymphocytosis. <u>Vet Pathol.</u> 37:637-46.
- 3. Moore, P.F. *et al.* (2006) Canine hemophagocytic histiocytic sarcoma: a proliferative disorder of CD11d+ macrophages. <u>Vet Pathol. 43 (5): 632-45.</u>
- 4. Vernau, W and Moore, P. F. (1999) An immunophenotypic study of canine leukemias and preliminary assessment of clonality by polymerase chain reaction. <u>Vet Immunol Immunopathol</u>. 69:145-64.
- 5. Moreno, J. *et al* (1999) The immune response and PBMC subsets in canine visceral leishmaniasis before, and after, chemotherapy. <u>Vet Immunol Immunopathol. 71:181-95.</u>
- 6. Fellman, C.L. *et al.* (2011) Cyclosporine A affects the *in vitro* expression of T cell activation-related molecules and cytokines in dogs. <u>Vet Immunol Immunopathol. 140:</u> 175-80.
- 7. Watabe, A. *et al.* (2011) Alterations of lymphocyte subpopulations in healthy dogs with aging and in dogs with cancer. Vet Immunol Immunopathol. 142: 189-200.
- 8. Hsiao, Y.W. *et al* (2004) Tumor-infiltrating lymphocyte secretion of IL-6 antagonizes tumor-derived TGF-beta 1 and restores the lymphokine-activated killing activity. <u>J Immunol. 172: 1508-14.</u>

- 9. Huang, Y.C. *et al.* (2008) CD5-low expression lymphocytes in canine peripheral blood show characteristics of natural killer cells. J Leukoc Biol. 84: 1501-10.
- 10. Out, T.A. *et al.* (2002) Local T-cell activation after segmental allergen challenge in the lungs of allergic dogs. <u>Immunology</u>. 105: 499-508.
- 11. Zentek, J. *et al.* (2002) Morphology and immunopathology of the small and large intestine in dogs with nonspecific dietary sensitivity. <u>J Nutr. 132: 1652S-4S.</u>
- 12. Hai, M. *et al.* (2008) Potential genotoxicity from integration sites in CLAD dogs treated successfully with gammaretroviral vector-mediated gene therapy. <u>Gene Ther. 15: 1067-71.</u>
- 13. Altmann, S. *et al.* (2008) High Mobility Group Box 1-Protein expression in canine haematopoietic cells and influence on canine peripheral blood mononuclear cell proliferative activity Vet Immunol Immunopathol. 126: 367-72.
- 14. Ting-De Ravin, S.S. *et al.* (2006) Correction of canine X-linked severe combined immunodeficiency by in vivo retroviral gene therapy. Blood. 107: 3091-7.
- 15. Miranda, S. *et al.* (2007) Characterization of circulating lymphocyte subpopulations in canine leishmaniasis throughout treatment with antimonials and allopurinol. <u>Vet Parasitol.</u> 144: 251-60.
- 16. Maiolini, A. *et al.* (2012) Toll-like receptors 4 and 9 are responsible for the maintenance of the inflammatory reaction in canine steroid-responsive meningitis-arteritis, a large animal model for neutrophilic meningitis. <u>J Neuroinflammation</u>. 9: 226.
- 17. Aresu, L. *et al.* (2014) VEGF and MMP-9: biomarkers for canine lymphoma. <u>Vet Comp</u> Oncol. 12: 29-36.
- 18. Schaut, R.G. *et al.* (2016) Regulatory IgDhi B Cells Suppress T Cell Function via IL-10 and PD-L1 during Progressive Visceral Leishmaniasis. J Immunol. 196 (10): 4100-9.
- 19. Villaescusa A *et al.* (2012) Evaluation of peripheral blood lymphocyte subsets in family-owned dogs naturally infected by *Ehrlichia canis*. Comp Immunol Microbiol Infect Dis. 35 (4): 391-6.
- 20. Riondato, F. *et al.* (2016) Analytical and diagnostic validation of a flow cytometric strategy to quantify blood and marrow infiltration in dogs with large B-cell lymphoma. Cytometry B Clin Cytom. 90 (6): 525-530.
- 21. Byrne, K. *et al* (2000) A standardized gating technique for the generation of flow cytometry data for normal canine and normal feline blood lymphocytes. <u>Vet Immunol Immunopathol</u>. 73:167-82.
- 22. Perosso, J. *et al.* (2014) Alteration of sFAS and sFAS ligand expression during canine visceral leishmaniosis. Vet Parasitol. 205 (3-4): 417-23.
- 23. Grøndahl-Rosado C *et al.* (2015) NCR1+ cells in dogs show phenotypic characteristics of natural killer cells. <u>Vet Res Commun. 39 (1): 19-30.</u>
- 24. Miller, J. *et al.* (2015) Humoral and Cellular Immune Response in Canine Hypothyroidism. <u>J Comp Pathol. 153 (1): 28-37.</u>
- 25. McGill, J.L. et al. (2016) Vaccination with an Attenuated Mutant of *Ehrlichia chaffeensis* Induces Pathogen-Specific CD4+ T Cell Immunity and Protection from Tick-Transmitted Wild-Type Challenge in the Canine Host. <u>PLoS One. 11 (2): e0148229.</u>
- 26. Constantinoiu CC *et al.* (2015) Mucosal tolerance of the hookworm *Ancylostoma caninum* in the gut of naturally infected wild dogs. <u>Parasite Immunol. Jul 27 [Epub ahead of print]</u>
- 27. Duz, A.L. *et al.* (2014) The Tcl and Tcll *Trypanosoma cruzi* experimental infections induce distinct immune responses and cardiac fibrosis in dogs. Mem Inst Oswaldo Cruz. 109 (8): 1005-13.

- 28. Mie, K. *et al.* (2016) Change in peripheral blood lymphocyte count in dogs following adoptive immunotherapy using lymphokine-activated T killer cells combined with palliative tumor resection. Vet Immunol Immunopathol. 177: 58-63.
- 29. Schaut, R.G. *et al.* (2016) Recovery of antigen-specific T cell responses from dogs infected with *Leishmania* (*L.*) *infantum* by use of vaccine associated TLR-agonist adjuvant. Vaccine. 34 (44): 5225-34.
- 30. Gelain, M.E. *et al.* (2014) CD44 in canine leukemia: analysis of mRNA and protein expression in peripheral blood. <u>Vet Immunol Immunopathol. 159 (1-2): 91-6.</u>
- 31. Michael, H.T. *et al.* (2013) Isolation and characterization of canine natural killer cells. Vet Immunol Immunopathol. 155 (3): 211-7.
- 32. Bonnefont-Rebeix, C. *et al.* (2016) Characterization of a novel canine T-cell line established from a spontaneously occurring aggressive T-cell lymphoma with large granular cell morphology. Immunobiology. 221 (1): 12-22.
- 33. Schmidli, M.R. *et al.* (2018) Inflammatory pattern of the infrapatellar fat pad in dogs with canine cruciate ligament disease. BMC Vet Res. 14 (1): 161.
- 34. Aricò, A. *et al.* (2013) The role of vascular endothelial growth factor and matrix metalloproteinases in canine lymphoma: *in vivo* and *in vitro* study. <u>BMC Vet Res. 9: 94.</u>
- 35. Aguiar-Soares, R.D.O. *et al.* (2020) Phase I and II Clinical Trial Comparing the LBSap, Leishmune<sup>®</sup>, and Leish-Tec<sup>®</sup> Vaccines against Canine Visceral Leishmaniasis. <u>Vaccines</u> (Basel). 8 (4)Nov 17 [Epub ahead of print].
- 36. Marchetti, C. *et al.* (2020) Profile of gamma-delta ( $\gamma\delta$ ) T lymphocytes in the peripheral blood of crossbreed dogs during stages of life and implication in aging. <u>BMC Vet Res. 16</u> (1): 278.

## **Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. 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 #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1774F">https://www.bio-rad-antibodies.com/SDS/MCA1774F</a> 10041
Regulatory	For research purposes only

## Related Products

**Recommended Negative Controls** 

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

North & South Tel: +1 800 265 7376 Worldwide Tel: +44 (0)1865 852 700 Tel: +49 (0) 89 8090 95 21 То Europe America Fax: +1 919 878 3751 Fax: +44 (0)1865 852 739 Fax: +49 (0) 89 8090 95 50 find a Email: antibody\_sales\_de@bio-rad.com

Email: antibody\_sales\_us@bio-rad.com Email: antibody\_sales\_uk@bio-rad.com

batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M365705:200529'

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