

Datasheet: MCA1774F BATCH NUMBER 162833

Description:	MOUSE ANTI DOG CD3:FITC	
Specificity:	CD3	
Format:	FITC	
Product Type:	Monoclonal Antibody	
Clone:	CA17.2A12	
Isotype:	lgG1	
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 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 conjugat	ed to Fluorescein Isoth	niocyanate Isomer 1	(FITC) - liquid
Max Ex/Em	Fluorophore FITC	Excitation Max (nm) 490	Emission Max (nm)
Preparation	Purified IgG prepared	by affinity chromatogo	raphy on Protein G	
Buffer Solution	Phosphate buffered s	saline		
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum			
Approx. Protein Concentrations	IgG concentration 0.1	l 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 10⁶ 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.</u> 172: 1508-14.

- 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. <u>Vet Immunol Immunopathol. 177: 58-63.</u>
- 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. <u>Vaccine</u>. 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. <u>Vet Immunol Immunopathol. 155 (3): 211-7.</u>
- 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[®], and Leish-Tec[®] 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.
- 37. Akiyama, S. *et al.* (2019) Th17 cells increase during maturation in peripheral blood of healthy dogs. <u>Vet Immunol Immunopathol. 209: 17-21.</u>
- 38. Martins, G.C. *et al.* (2018) Clinical-pathological and immunological biomarkers in dogs with atopic dermatitis. <u>Vet Immunol Immunopathol. 205: 58-64.</u>
- 39. Sayag, D. *et al.* (2020) Proof-of-concept study: Evaluation of plasma and urinary electrolytes as markers of response to L-asparaginase therapy in dogs with high-grade lymphoma. <u>Vet Clin Pathol. 49 (3): 476-83.</u>
- 40. Lee, J. *et al.* (2021) Canine Natural Killer Cell-Derived Exosomes Exhibit Antitumor Activity in a Mouse Model of Canine Mammary Tumor. <u>Biomed Res Int. 2021: 6690704</u>.
- 41. Rotolo, A. *et al.* (2021) Genetic re-direction of canine primary T cells for clinical trial use in pet dogs with spontaneous cancer <u>STAR Protocols. 2 (4): 100905.</u>
- 42. Grudzien, M. *et al.* (2021) A newly established canine NK-type cell line and its cytotoxic properties. <u>Vet Comp Oncol. 19 (3): 567-77.</u>
- 43. Yang, Y. *et al.* (2021) Canine Multicentric Large B Cell Lymphoma with Increased Mott Cells Diagnosed by Flow Cytometry <u>Journal of Veterinary Clinics</u>. 38 (1): 36-40.
- 44. Enciso, N. *et al.* (2020) Regenerative potential of allogeneic adipose tissue-derived mesenchymal cells in canine cutaneous wounds. <u>Acta Vet Scand. 62 (1): 13.</u>
- 45. Lee, S.H. *et al.* (2021) Safety and immunological effects of recombinant canine IL-15 in dogs. Cytokine. 148: 155599.
- 46. Knebel, A. *et al.* (2021) Measurement of canine Th17 cells by flow cytometry. <u>Vet Immunol Immunopathol. 243: 110366.</u>
- 47. do Prado Duzanski, A. *et al.* (2022) Cell-mediated immunity and expression of MHC class I and class II molecules in dogs naturally infected by canine transmissible venereal tumor: Is there complete spontaneous regression outside the experimental CTVT?

Research in Veterinary Science. 145: 193-204.

48. Troupel, T. et al. (2022) Generalised idiopathic polymyositis mimicking masticatory myositis in a dog Vety Rec Case Rep. e452. [Epub ahead of print].

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/MCA1774F 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

America

North & South Tel: +1 800 265 7376 Fax: +1 919 878 3751 Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_us@bio-rad.com

Email: antibody_sales_uk@bio-rad.com

Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M384982:210513'

Printed on 21 Mar 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint