Datasheet: MCA1774GA

BATCH NUMBER 167008

Description:	MOUSE ANTI DOG CD3
Specificity:	CD3
Format:	Purified
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 www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/25 - 1/50
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
Immunofluorescence	▪			

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 - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from ascites
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN_3)
Approx. Protein	IgG concentration 1.0 mg/ml

Concentrations	
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_1125250
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 10µl of the suggested working dilution to label 10^6 cells or 100µl whole blood
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. Vet. Pathol. 30: 457. Abstract 117. 2. Vernau, W and Moore, P. F. (1999) An immunophenotypic study of canine leukemias and preliminary assessment of clonality by polymerase chain reaction. Vet Immunol Immunopathol. 69:145-64. 3. Moreno, J. *et al* (1999) The immune response and PBMC subsets in canine visceral leishmaniasis before, and after, chemotherapy. Vet Immunol Immunopathol. 71:181-95. 4. McDonough, S. P. and Moore, P. F. (2000) Clinical, hematologic, and immunophenotypic characterization of canine large granular lymphocytosis. Vet Pathol. 37:637-46. 5. Byrne, K. *et al* (2000) A standardized gating technique for the generation of flow cytometry data for normal canine and normal feline blood lymphocytes. Vet Immunol Immunopathol. 73:167-82. 6. Out, T.A. *et al.* (2002) Local T-cell activation after segmental allergen challenge in the lungs of allergic dogs. Immunology. 105: 499-508. 7. Zentek, J. *et al.* (2002) Morphology and immunopathology of the small and large intestine in dogs with nonspecific dietary sensitivity. J Nutr. 132: 1652S-4S. 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. J Immunol. 172: 1508-14. 9. Moore, P.F. *et al.* (2006) Canine hemophagocytic histiocytic sarcoma: a proliferative

disorder of CD11d+ macrophages. Vet Pathol. 43 (5): 632-45.
10. 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.
11. Miranda, S. *et al.* (2007) Characterization of circulating lymphocyte subpopulations in canine leishmaniasis throughout treatment with antimonials and allopurinol. Vet Parasitol. 144: 251-60.
12. 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.
13. 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.
14. Hai, M. *et al.* (2008) Potential genotoxicity from integration sites in CLAD dogs treated successfully with gammaretroviral vector-mediated gene therapy. Gene Ther. 15: 1067-71.
15. Fellman, C.L. *et al.* (2011) Cyclosporine A affects the *in vitro* expression of T cell activation-related molecules and cytokines in dogs. Vet Immunol Immunopathol. 140: 175-80.
16. 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.
17. Machado, G.F. *et al.* (2011) Intravascular Lymphomatosis in the Central Nervous System of Dogs: Immunohistochemical Investigation in Two Cases Braz J Vet Pathol 4: 47-51.
18. 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. J Neuroinflammation. 9: 226.
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. Aricò, A. *et al.* (2013) The role of vascular endothelial growth factor and matrix metalloproteinases in canine lymphoma: *in vivo* and *in vitro* study. BMC Vet Res. 9: 94.
21. Michael, H.T. *et al.* (2013) Isolation and characterization of canine natural killer cells. Vet Immunol Immunopathol. 155 (3): 211-7.
22. Duz, A.L. *et al.* (2014) The TcI and TcII *Trypanosoma cruzi* experimental infections induce distinct immune responses and cardiac fibrosis in dogs. Mem Inst Oswaldo Cruz. 109 (8): 1005-13.
23. Aresu, L. *et al.* (2014) VEGF and MMP-9: biomarkers for canine lymphoma. Vet Comp Oncol. 12: 29-36.
24. Perosso, J. *et al.* (2014) Alteration of sFAS and sFAS ligand expression during canine visceral leishmaniosis. Vet Parasitol. 205 (3-4): 417-23.
25. Gelain, M.E. *et al.* (2014) CD44 in canine leukemia: analysis of mRNA and protein expression in peripheral blood. Vet Immunol Immunopathol. 159 (1-2): 91-6.
26. Constantinoiu, C.C. *et al.* (2015) Mucosal tolerance of the hookworm Ancylostoma caninum in the gut of naturally infected wild dogs. Parasite Immunol. 37 (10): 510-20.
27. Grøndahl-Rosado C *et al.* (2015) NCR1+ cells in dogs show phenotypic characteristics of natural killer cells. Vet Res Commun. 39 (1): 19-30.
28. Miller, J. *et al.* (2015) Humoral and Cellular Immune Response in Canine Hypothyroidism. J Comp Pathol. 153 (1): 28-37.
29. 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.
30. 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.
31. 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.
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. 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.
34. 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. PLoS One. 11 (2): e0148229.
35. Martins, G.C. *et al.* (2018) Clinical-pathological and immunological biomarkers in dogs with atopic dermatitis. Vet Immunol Immunopathol. 205: 58-64.
36. 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.
37. Akiyama, S. *et al.* (2019) Th17 cells increase during maturation in peripheral blood of healthy dogs. Vet Immunol Immunopathol. 209: 17-21.
38. 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. Vaccines (Basel). 8 (4): 690.
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. Vet Clin Pathol. 49 (3): 476-83.
40. Enciso, N. *et al.* (2020) Regenerative potential of allogeneic adipose tissue-derived mesenchymal cells in canine cutaneous wounds. Acta Vet Scand. 62 (1): 13.
41. Marchetti, C. *et al.* (2020) Profile of gamma-delta (γδ) T lymphocytes in the peripheral blood of crossbreed dogs during stages of life and implication in aging. BMC Vet Res. 16 (1): 278.
42. Lee, J. *et al.* (2021) Canine Natural Killer Cell-Derived Exosomes Exhibit Antitumor Activity in a Mouse Model of Canine Mammary Tumor. Biomed Res Int. 2021: 6690704.
43. Rotolo, A. *et al.* (2021) Genetic re-direction of canine primary T cells for clinical trial use in pet dogs with spontaneous cancer STAR Protocols. 2 (4): 100905.
44. Grudzien, M. *et al.* (2021) A newly established canine NK-type cell line and its cytotoxic properties. Vet Comp Oncol. 19 (3): 567-77.
45. Yang, Y. *et al.* (2021) Canine Multicentric Large B Cell Lymphoma with Increased Mott Cells Diagnosed by Flow Cytometry Journal of Veterinary Clinics. 38 (1): 36-40.
46. Lee, S.H. *et al.* (2021) Safety and immunological effects of recombinant canine IL-15 in dogs. Cytokine. 148: 155599.
47. Knebel, A. *et al.* (2021) Measurement of canine Th17 cells by flow cytometry. Vet Immunol Immunopathol. 243: 110366.
48. Troupel, T. *et al.* (2022) Generalised idiopathic polymyositis mimicking masticatory myositis in a dog Vety Rec Case Rep. 10: e452.

49. 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.
50. Konno, H. *et al.* (2022) An experimental challenge model for *Leishmania donovani* in beagle dogs, showing a similar pattern of parasite burden in the peripheral blood and liver. Parasitol Res. 121 (12): 3569-3579.
51. Rotolo, A. *et al.* (2023) Unedited allogeneic iNKT cells show extended persistence in MHC-mismatched canine recipients. Cell Rep Med. 4 (10): 101241.
52. 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.
53. Yamauchi, A. *et al.* (2023) Negative Influence of Aging on Differentiation and Proliferation of CD8(+) T-Cells in Dogs. Vet Sci. 10 (9): 541.

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.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1774GA 10040
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
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

North & South America Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: antibody_sales_us@bio-rad.com

Worldwide Tel: +44 (0)1865 852 700
Fax: +44 (0)1865 852 739
Email: antibody_sales_uk@bio-rad.com

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

'M411462:221103'

Printed on 05 Jul 2024