# Datasheet: MCA1774GA

## BATCH NUMBER 154992

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| **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 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.

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| **Target Species** | Dog |
| **Product Form** | Purified IgG - liquid |
| **Preparation** | Purified IgG prepared by affinity chromatography on Protein G |
| **Buffer Solution** | Phosphate buffered saline |
| **Preservative Stabilisers** | 0.09% Sodium Azide |
| **Approx. Protein** | IgG concentration 1.0 mg/ml |

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| **Concentrations** | |
| **Immunogen** | Affinity enriched TCR/CD3 membrane proteins isolated from thymocytes and the T cell line CLGL-90 |
| **External Database Links** | **UniProt:**<br>P27597 Related reagents<br><br>**Entrez Gene:**<br>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.<br><br>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 $10^6$ cells or 100ul 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<br>2. McDonough, S. P. and Moore, P. F. (2000) Clinical, hematologic, and immunophenotypic characterization of canine large granular lymphocytosis. Vet Pathol. 37:637-46.<br>3. Moore, P.F. *et al.* (2006) Canine hemophagocytic histiocytic sarcoma: a proliferative disorder of CD11d+ macrophages. Vet Pathol. 43 (5): 632-45.<br>4. 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.<br>5. 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.<br>6. 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.<br>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.<br>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.<br>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. Immunology. 105: 499-508.
11. 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.
12. 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.
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. Vet Parasitol. 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. J Neuroinflammation. 9: 226.
17. Aresu, L. *et al.* (2014) VEGF and MMP-9: biomarkers for canine lymphoma. Vet Comp 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. Vet Immunol Immunopathol. 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. Vet Res Commun. 39 (1): 19-30.
24. Miller, J. *et al.* (2015) Humoral and Cellular Immune Response in Canine Hypothyroidism. J Comp Pathol. 153 (1): 28-37.
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. PLoS One. 11 (2): e0148229.
26. Constantinoiu CC *et al.* (2015) Mucosal tolerance of the hookworm *Ancylostoma caninum* in the gut of naturally infected wild dogs. Parasite Immunol. Jul 27 [Epub ahead of print]
27. 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.
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. Vet Immunol Immunopathol. 159 (1-2): 91-6.
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. BMC Vet Res. 9: 94.
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. Vaccines (Basel). 8 (4)Nov 17 [Epub ahead of print].
36. 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.

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| **Storage** | Store at +4°C or at -20°C if preferred.<br><br>This product should be stored undiluted. 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 #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1774GA<br>10040 |
| **Regulatory** | For research purposes only |

## Related Products

### Recommended Secondary Antibodies

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| 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 |

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|---|---|
| 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)


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|---|---|---|---|---|---|
| **North & South America** | Tel: +1 800 265 7376<br>Fax: +1 919 878 3751<br>Email: antibody_sales_us@bio-rad.com | **Worldwide** | Tel: +44 (0)1865 852 700<br>Fax: +44 (0)1865 852 739<br>Email: antibody_sales_uk@bio-rad.com | **Europe** | Tel: +49 (0) 89 8090 95 21<br>Fax: +49 (0) 89 8090 95 50<br>Email: antibody_sales_de@bio-rad.com |


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**Printed on 05 Jul 2024**

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