

Datasheet: MCA1044SBV570

Description:	RAT ANTI DOG MHC CLASS II MONOMORPHIC:StarBright Violet 570
Specificity:	MHC CLASS II MONOMORPHIC
Format:	StarBright Violet 570
Product Type:	Monoclonal Antibody
Clone:	YKIX334.2
Isotype:	IgG2a
Quantity:	100 TESTS/0.5ml

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

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		
Species Cross Reactivity	Does not react with:Hooded Seal		
Product Form	Purified IgG conjugated to StarBright Violet 570 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright Violet 570	404	571
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350		

0.05% Tween 20

Approx. Protein Concentrations	For information on the concentration of our StarBright Dye conjugated reagents please visit our FAQ page.
Immunogen	Con A activated canine peripheral blood cells.
Fusion Partners	Spleen cells from immunized DA rats were fused with cells of the rat Y3/Ag1.2.3 myeloma cell line.
Specificity	Rat anti Dog MHC Class II Monomorphic antibody, clone YKIX334.2 recognizes a monomorphic epitope on canine MHC Class II and was classified at the First Canine Leucocyte Antigen Workshop (Cobbold et al. 1994). The major histocompatibility complex (MHC) is a cluster of genes that are important in the immune response to infections. In dogs, this is referred to as the dog leukocyte antigen (DLA) region. Rat anti Dog MHC Class II immunoprecipitates an antigen of ~32/34 kDa and blocks the proliferation of MHC Class II dependent responses <i>in vitro</i> . In dogs, MHC Class II is expressed by all peripheral blood mononuclear cells.
Flow Cytometry	Use 5µl of the suggested working dilution to label 0.5x10 ⁶ cells in 100µl. Best practices suggest a 5 min centrifugation at 6,000g prior to sample application.
References	<ol style="list-style-type: none">1. Cobbold, S. & Metcalfe, S. (1994) Monoclonal antibodies that define canine homologues of human CD antigens: summary of the First International Canine Leukocyte Antigen Workshop (CLAW). Tissue Antigens. 43 (3): 137-54.2. Watson, C.J. et al. (1994) Immunosuppression of canine renal allograft recipients by CD4 and CD8 monoclonal antibodies. Tissue Antigens. 43 (3): 155-62.3. Liu, Y. et al. (2000) Immunosuppressant-free allotransplantation of the trachea The antigenicity of tracheal grafts can be reduced by removing the epithelium and mixed glands from the graft by detergent treatment. J Thorac Cardiovasc Surg. 120: 108-14.4. Sanchez, M.A. et al. (2004) Organ-specific immunity in canine visceral leishmaniasis: analysis of symptomatic and asymptomatic dogs naturally infected with <i>Leishmania chagasi</i>. Am J Trop Med Hyg. 70: 618-24.5. Reis, A.B. et al. (2006) Phenotypic features of circulating leucocytes as immunological markers for clinical status and bone marrow parasite density in dogs naturally infected by <i>Leishmania chagasi</i>. Clin Exp Immunol. 146: 303-11.6. Bonnefont-Rebeix, C. et al. (2007) Toll-like receptor 3 (TLR3): a new marker of canine monocytes-derived dendritic cells (cMo-DC). Vet Immunol Immunopathol. 2007 Jul 15;118(1-2):134-9.7. Schütze, N. et al. (2009) Inactivated parapoxvirus ovis activates canine blood phagocytes and T lymphocytes. Vet Microbiol. 137: 260-7.8. Bund, D. et al. (2010) Canine-DCs using different serum-free methods as an approach to provide an animal-model for immunotherapeutic strategies. Cell Immunol. 263: 88-98.9. Mito, K. et al. (2010) IFNγ markedly cooperates with intratumoral dendritic cell vaccine in dog tumor models. Cancer Res. 70: 7093-101.10. Araújo, M.S. et al. (2011) Immunological changes in canine peripheral blood leukocytes triggered by immunization with first or second generation vaccines against canine visceral leishmaniasis. Vet Immunol Immunopathol. 141: 64-75.

11. Larsen, A.K. *et al.* (2013) Entry and elimination of marine mammal *Brucella* spp. by hooded seal (*Cystophora cristata*) alveolar macrophages *in vitro*. [PLoS One. 8: e70186.](#)
12. Lin, S-C. *et al.* (2014) Immune Characterization of Peripheral Blood Mononuclear cells of the Dogs Restored from Inoculation of Canine Transmissible Venereal Tumor Cells. [Tai Vet J. 40 \(04\): 181-90.](#)
13. 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.](#)
14. 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.](#)
15. Lu, T. *et al.* (2017) Effects of cryopreservation on tracheal allograft antigenicity in dogs. [J Thorac Dis. 9 \(7\): 2038-2047.](#)
16. Reineking, W. *et al.* (2018) Canine primary jejunal and colonic epithelial cells predominantly express TLR5 and TLR9 but do not change TLR expression pattern after stimulation with certain Toll-like receptor ligands. [Vet Immunol Immunopathol. 206: 16-24.](#)
17. Martini, V. *et al.* (2019) Prognostic role of non-neoplastic lymphocytes in lymph node aspirates from dogs with diffuse large B-cell lymphoma treated with chemo-immunotherapy. [Res Vet Sci. 125: 130-5.](#)
18. Grudzien, M. *et al.* (2021) A newly established canine NK-type cell line and its cytotoxic properties. [Vet Comp Oncol. 19 \(3\): 567-77.](#)
19. Bragato, J.P. *et al.* (2022) miRNA-21 regulates CD69 and IL-10 expression in canine leishmaniasis. [PLoS One. 17 \(3\): e0265192.](#)
20. Riccardo, F. *et al.* (2022) Antigen mimicry as an effective strategy to induce CSPG4-targeted immunity in dogs with oral melanoma: a veterinary trial. [J Immunother Cancer. 10 \(5\): e004007.](#)
21. Jaensch, S.M. *et al.* (2022) Clinicopathologic and immunophenotypic features in dogs with presumptive large granular lymphocyte leukaemia. [Aust Vet J. 100 \(11\): 527-32.](#)
22. Yang, V.K. *et al.* (2021) Intravenous administration of allogeneic Wharton jelly-derived mesenchymal stem cells for treatment of dogs with congestive heart failure secondary to myxomatous mitral valve disease. [Am J Vet Res. 82 \(6\): 487-93.](#)
23. Crain, S.K. *et al.* (2019) Extracellular Vesicles from Wharton's Jelly Mesenchymal Stem Cells Suppress CD4 Expressing T Cells Through Transforming Growth Factor Beta and Adenosine Signaling in a Canine Model. [Stem Cells Dev. 28 \(3\): 212-26.](#)
24. Martini, V. *et al.* (2018) A retrospective study of flow cytometric characterization of suspected extranodal lymphomas in dogs. [J Vet Diagn Invest. 30 \(6\): 830-6.](#)
25. Sainz, Á. *et al.* (2021) Effect of chemically modified tetracycline-8 (CMT-8) on hematology, blood chemistry, cytokines and peripheral blood lymphocyte subsets of healthy dogs. [Res Vet Sci. 136: 200-8.](#)
26. Milhau, N. *et al.* (2020) *In vitro* evaluations on canine monocyte-derived dendritic cells of a nanoparticles delivery system for vaccine antigen against *Echinococcus granulosus*. [PLoS One. 15 \(2\): e0229121.](#)
27. 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.](#)
28. Benavides, F.P. *et al.* (2021) Intrathecal Transplantation of Autologous and Allogeneic Bone Marrow-Derived Mesenchymal Stem Cells in Dogs. [Cell Transplant. 30: 9636897211034464.](#)

29. Stokol, T. *et al.* (2024) Flow cytometric-based detection of CD80 is a useful diagnostic marker of acute myeloid leukemia in dogs. [Front Vet Sci. 11: 1405297.](#)
30. Rogato, F. *et al.* (2024) Leukemia cutis as a prominent clinical sign in a dog with acute myeloid leukemia. [Vet Clin Pathol. 53 \(4\): 448-457.](#)
31. de Camargo, G.C. *et al.* (2025) Polyvinyl alcohol can replace the fetal bovine serum during cryopreservation of canine adipose mesenchymal stromal cells. [In Vitro Cell Dev Biol Anim. 61 \(4\): 369-373.](#)

Storage	This product is shipped at ambient temperature. Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA1044SBV570
Regulatory	For research purposes only

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
'M447812:260123'

Printed on 30 Jan 2026