

## Datasheet: MCA1037PB

**BATCH NUMBER 152606**

<b>Description:</b>	RAT ANTI DOG CD5:Pacific Blue®
<b>Specificity:</b>	CD5
<b>Format:</b>	Pacific Blue®
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	YKIX322.3
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	100 TESTS/1ml

### 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](http://www.bio-rad-antibodies.com/protocols).

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

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.

<b>Target Species</b>	Dog		
<b>Product Form</b>	Purified IgG conjugated to Pacific Blue® - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	Pacific Blue®	410	455
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )		
<b>Stabilisers</b>	1% Bovine Serum Albumin		
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05 mg/ml		

<b>Immunogen</b>	Concanavalin A activated canine peripheral blood cells
<b>Fusion Partners</b>	Spleen cells from an immunised DA rat were fused with cells of the rat Y3/Ag1.2.3 myeloma cell line
<b>Specificity</b>	<p><b>Rat anti Dog CD5 antibody, clone YKIX322.3</b> recognizes canine CD5, a 67 kDa cell surface type 1 transmembrane glycoprotein also known as lymphocyte antigen T1, Ly-1 or Leu-1. CD5 is expressed on the surface of T-cells and thymocytes, CD5 is also expressed by NK cells at low levels (<a href="#">Huang et al. 2008</a>). Rat anti dog CD5, clone YKIX322.3 was clustered as canine CD5 in the First Canine Leucocyte Antigen Workshop (<a href="#">Cobbold et al. 1994</a>).</p> <p>In a study of 73 cases of canine chronic lymphocytic leukemia (CLL) CD5 expression was absent on all cases of B-cell CLL as defined by CD21 expression and lack of CD3 or other T cell antigen expression (<a href="#">Vernau and Moore 1999</a>). Rat anti dog CD5 serves as a useful marker for the discrimination of canine leukemias of differing origins (<a href="#">Deravi et al. 2017</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul of whole blood.
<b>References</b>	<ol style="list-style-type: none"> <li>Cobbold, S/ &amp; Metcalfe, S. (1994) Monoclonal antibodies that define canine homologues of human CD antigens: summary of the First International Canine Leukocyte Antigen Workshop (CLAW). <a href="#">Tissue Antigens. 43 (3): 137-54.</a></li> <li>Hewicker-Trautwein, M. et al. (1999) Immunocytochemical demonstration of lymphocyte subsets and MHC class II antigen expression in synovial membranes from dogs with rheumatoid arthritis and degenerative joint disease. <a href="#">Vet Immunol Immunopathol. 67 (4): 341-57.</a></li> <li>Huang, Y.C. (2008) CD5-low expression lymphocytes in canine peripheral blood show characteristics of natural killer cells. <a href="#">J Leukoc Biol. 84: 1501-10.</a></li> <li>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. <a href="#">Vet Immunol Immunopathol. 141: 64-75.</a></li> <li>Burnett, R.C. et al. (2003) Diagnosis of canine lymphoid neoplasia using clonal rearrangements of antigen receptor genes. <a href="#">Vet Pathol. 40: 32-41.</a></li> <li>Fosmire, S.P. et al. (2007) Inactivation of the p16 cyclin-dependent kinase inhibitor in high-grade canine non-Hodgkin's T-cell lymphoma. <a href="#">Vet Pathol. 44: 467-78.</a></li> <li>Guarga, J.L. et al. (2002) Evaluation of a specific immunochemotherapy for the treatment of canine visceral leishmaniasis. <a href="#">Vet Immunol Immunopathol. 88: 13-20.</a></li> <li>Vernau, W. Moore, P.F. et al. (1999) An immunophenotypic study of canine leukemias and preliminary assessment of clonality by polymerase chain reaction. <a href="#">Vet Immunol Immunopathol. 69: 145-64.</a></li> <li>Lamerato-kozicki, A.R. et al. (2006) Canine hemangiosarcoma originates from hematopoietic precursors with potential for endothelial differentiation. <a href="#">Exp Hematol. 34 (7): 870-8.</a></li> <li>Rütgen BC et al. (2012) Authentication of primordial characteristics of the CLBL-1 cell line prove the integrity of a canine B-cell lymphoma in a murine in vivo model. <a href="#">PLoS One. 7 (6): e40078.</a></li> <li>Aresu, L. et al. (2014) VEGF and MMP-9: biomarkers for canine lymphoma. <a href="#">Vet Comp Oncol. 12: 29-36.</a></li> </ol>

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**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.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1037PB>  
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**Regulatory** For research purposes only

## Related Products

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA1212A647\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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