

## Datasheet: MCA503PE

**BATCH NUMBER INN1608**

<b>Description:</b>	RAT ANTI HUMAN CD18:RPE
<b>Specificity:</b>	CD18
<b>Other names:</b>	INTEGRIN BETA 2 CHAIN
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	YFC118.3
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	100 TESTS

### 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

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

Human

#### Species Cross Reactivity

Reacts with: Dog, Guinea Pig

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

#### Product Form

Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized

#### Reconstitution

Reconstitute with 1 ml distilled water

#### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

#### Preparation

Purified IgG prepared by affinity chromatography on Protein G

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide 1% Bovine Serum Albumin 5% Sucrose
<b>Immunogen</b>	Human neutrophils
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">P05107</a> <a href="#">Related reagents</a>  <b>Entrez Gene:</b> <a href="#">3689</a> ITGB2 <a href="#">Related reagents</a>
<b>Synonyms</b>	CD18, MFI7
<b>RRID</b>	AB_321328
<b>Fusion Partners</b>	Spleen cells from immunized LOU rats were fused with cells of the rat Y3/Ag.1.2.3 myeloma cell line
<b>Specificity</b>	<p><b>Rat anti Human CD18 antibody, clone YFC118.3</b> was clustered at the Fourth International Workshop on Leucocyte Differentiation Antigens (code number N221) as recognizing the CD18 antigen.</p> <p>CD18 is an integral membrane glycoprotein of ~95 kDa, also known as the beta 2 chain, of the LFA-1 complex. CD18 links non-covalently to either CD11a, b or c molecules forming the heteromeric LFA-1 complex. CD18 acts as the receptor for ICAM-1 and is important for cell adhesion and cell-cell interactions (<a href="#">Reina &amp; Espel 2017</a>).</p> <p>Rat anti Human CD18 antibody, clone YFC118.3 demonstrates strong reactivity with leucocytes and is not reactive with platelets.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 100ul whole blood or 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Bindon, C.I. <i>et al.</i> (1988) Importance of antigen specificity for complement-mediated lysis by monoclonal antibodies. <a href="#">Eur J Immunol. 18 (10): 1507-14.</a></li> <li>2. Chabanne, L. <i>et al.</i> (1994) Screening of 78 monoclonal antibodies directed against human leukocyte antigens for cross-reactivity with surface markers on canine lymphocytes. <a href="#">Tissue Antigens. 43 (3): 202-5.</a></li> <li>3. Sampaio, W.M. <i>et al.</i> (2007) <i>In vitro</i> binding and survival assays of Leishmania parasites to peripheral blood monocytes and monocyte-derived macrophages isolated from dogs naturally and experimentally infected with <i>Leishmania chagasi</i>. <a href="#">BMC Vet Res. 3:11.</a></li> <li>4. Canalli, A.A. <i>et al.</i> (2011) Participation of Mac-1, LFA-1 and VLA-4 integrins in the in vitro adhesion of sickle cell disease neutrophils to endothelial layers, and reversal of</li> </ol>

- adhesion by simvastatin. [Haematologica. 96: 526-33.](#)
5. Gonçalves, R. *et al.* (2005) A sensitive flow cytometric methodology for studying the binding of *L. chagasi* to canine peritoneal macrophages. [BMC Infect Dis. 5:39.](#)
  6. Zimmerman, K.L. *et al.* (2013) Leukocyte adhesion deficiency type I in a mixed-breed dog. [J Vet Diagn Invest. 25: 291-6.](#)
  7. 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.](#)
  8. Garland, R.J. *et al.* (2002) Human CD8+ CTL recognition and in vitro lysis of herpes simplex virus-infected cells by a non-MHC restricted mechanism. [Scand J Immunol. 55: 61-9.](#)
  9. Grote, K. *et al.* (2007) The angiogenic factor CCN1 promotes adhesion and migration of circulating CD34+ progenitor cells: potential role in angiogenesis and endothelial regeneration. [Blood. 110: 877-85.](#)
  10. Holst, B.S. *et al.* (2010) Expression of four canine leukocyte adhesion factors in fresh and stored whole blood samples evaluated using a no-lyse, no-wash method. [Vet Immunol Immunopathol. 139: 271-6.](#)
  11. Kupatt, C. *et al.* (1999) Tumor necrosis factor-alpha contributes to ischemia- and reperfusion-induced endothelial activation in isolated hearts. [Circ Res. 84: 392-400.](#)
  12. Marconato, L. (2013) The dog as a possible animal model for human non-Hodgkin lymphoma: a review. [Hematol Oncol. 31: 1-9.](#)
  13. Spring, F.A. *et al.* (2001) Intercellular adhesion molecule-4 binds alpha(4)beta(1) and alpha(V)-family integrins through novel integrin-binding mechanisms. [Blood. 98: 458-66.](#)
  14. Salvatierra, A. *et al.* (2001) Antithrombin III prevents early pulmonary dysfunction after lung transplantation in the dog. [Circulation. 104: 2975-80.](#)
  15. Mizuno, T. *et al.* (1997) cDNA cloning and chromosomal localization of the human telencephalin and its distinctive interaction with lymphocyte function-associated antigen-1. [J Biol Chem. 272: 1156-63.](#)
  16. Lana, S. *et al.* (2006) Diagnosis of mediastinal masses in dogs by flow cytometry. [J Vet Intern Med. 20: 1161-5.](#)
  17. Waché, Y.J. *et al.* (2009) The mycotoxin deoxynivalenol inhibits the cell surface expression of activation markers in human macrophages. [Toxicology. 262: 239-44.](#)
  18. Crosby, H.A. *et al.* (2009) Adhesion of human haematopoietic (CD34+) stem cells to human liver compartments is integrin and CD44 dependent and modulated by CXCR3 and CXCR4. [J Hepatol. 51: 734-49.](#)
  19. Levy, O. *et al.* (2015) Apolipoprotein E promotes subretinal mononuclear phagocyte survival and chronic inflammation in age-related macular degeneration. [EMBO Mol Med. pii: e201404524.](#)
  20. Alex, J. *et al.* (2005) Pretreatment with hyperbaric oxygen and its effect on neuropsychometric dysfunction and systemic inflammatory response after cardiopulmonary bypass: a prospective randomized double-blind trial. [J Thorac Cardiovasc Surg. 130: 1623-30.](#)
  21. Sutcliffe, J.E.S. *et al.* (2017) Changes in the extracellular matrix surrounding human chronic wounds revealed by 2-photon imaging. [Int Wound J. Jul 20 \[Epub ahead of print\].](#)
  22. Cremer, S.E. *et al.* (2019) Proteomic profiling of the thrombin-activated canine platelet secretome (CAPS). [PLoS One. 14 \(11\): e0224891.](#)
  23. Wolf-Ringwall, A. *et al.* (2020) Prospective evaluation of flow cytometric

characteristics, histopathologic diagnosis and clinical outcome in dogs with naïve B-cell lymphoma treated with a 19-week CHOP protocol. [Vet Comp Oncol. 18 \(3\): 342-52.](#)

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**Storage** Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA503PE>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

[RAT IgG2b NEGATIVE CONTROL:RPE \(MCA6006PE\)](#)

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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