Datasheet: MCA1615PB

BATCH NUMBER 1611

Description:	MOUSE ANTI HUMAN CD54:Pacific Blue®
Specificity:	CD54
Other names:	ICAM-1
Format:	Pacific Blue®
Product Type:	Monoclonal Antibody
Clone:	15.2
Isotype:	IgG1
Quantity:	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.

	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

Human

Species Cross Reactivity

Reacts with: 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 Pacific Blue - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Pacific Blue®	410	455

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
Immunogen	Human monocytes
External Database Links	**UniProt:** P05362 Related reagents **Entrez Gene:** 3383 ICAM1 Related reagents
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse Sp2/0-Ag14 myeloma cell line
Specificity	**Mouse anti Human CD54 antibody, clone 15.2** recognizes the human CD54 cell surface antigen also known as intracellular Adhesion Molecule -1 (ICAM-1) or Major group rhinovirus receptor. CD54 is expressed by many cells following activation by inflammatory mediators. It is a 505 amino acid with an additional 27 amino acid signal peptide ~90 kDa single pass type I transmembrane glycoprotein bearing 5 Ig-like C2-type domains. Mouse anti Human CD54 antibody, clone 15.2 blocks CD54 function (Berendt *et al.* 1992). Mouse anti Human CD54 antibody, clone 15.2 binds to an epitope on the N-terminal Ig-like domain within a region designated the L43 loop (Chakravorty and Craig 2005).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul
References	1. Dransfield, I. *et al*. (1992) Interaction of leukocyte integrins with ligand is necessary but not sufficient for function. J Cell Biol. 116:1527-35. 2. Berendt, A. *et al*. (1992) The binding site on ICAM-1 for plasmodium falciparum-infected erythrocytes overlaps, but is distinct from, the LFA-1- binding site. Cell. 68: 71-81. 3. Urquhart, P. *et al.* (2007) Carbon monoxide-releasing molecules modulate leukocyte-endothelial interactions under flow. J Pharmacol Exp Ther. 321 (2): 656-62. 4. Baratin, M. *et al.* (2007) Dissection of the role of PfEMP1 and ICAM-1 in the sensing of *Plasmodium-falciparum*-infected erythrocytes by natural killer cells. PLos One 2: e228. 5. van Buul, J.D. *et al.* (2010) Inside-out regulation of ICAM-1 dynamics in TNF-alpha-activated endothelium. PLoS One 5: e11336. 6. Diaz-Romero, J. *et al.* (2008) Immunophenotypic changes of human articular chondrocytes during monolayer culture reflect bona fide dedifferentiation rather than amplification of progenitor cells. J Cell Physiol. 214: 75-83. 7. Di Lorenzo, A. *et al.* (2011) Endothelial reticulon-4B (Nogo-B) regulates ICAM-1-

mediated leukocyte transmigration and acute inflammation. Blood. 117: 2284-95.
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16. Murphy, A.J. *et al.* (2013) Anti-inflammatory functions of apolipoprotein a-I and high-density lipoprotein are preserved in trimeric apolipoprotein a-I. J Pharmacol Exp Ther. 344: 41-9.
17. Sumagin R *et al.* (2014) Transmigrated neutrophils in the intestinal lumen engage ICAM-1 to regulate the epithelial barrier and neutrophil recruitment. Mucosal Immunol. 7 (4): 905-15.
18. Sugden SM *et al.* (2017) HIV-1 Vpu Downmodulates ICAM-1 Expression, Resulting in Decreased Killing of Infected $CD4^+$ T Cells by NK Cells. J Virol. 91 (8): pii: e02442-16.
19. Lennartz, F. *et al.* (2015) Mapping the Binding Site of a Cross-Reactive *Plasmodium falciparum* PfEMP1 Monoclonal Antibody Inhibitory of ICAM-1 Binding. J Immunol. 195 (7): 3273-83.

Storage

Store at +4^{o}C or at -20^{o}C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.
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

Acknowledgements

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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA1615PB 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Pacific Blue® (MCA928PB)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

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

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