

Datasheet: MCA1615F BATCH NUMBER 160323

Description:	MOUSE ANTI HUMAN CD54:FITC	
Specificity:	CD54	
Other names:	ICAM-1	
Format:	FITC	
Product Type:	Monoclonal Antibody	
Clone:	15.2	
Isotype:	lgG1	
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	-			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	Reacts with: Pig			
Reactivity	reactivity is derive	activity and working conditied from testing within our land inceptions from the originaton.	aboratories, peer-re	viewed publications or
Product Form	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid			
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm))
	FITC	490	525	
Preparation	Purified IgG prep supernatant	ared by affinity chromatog	raphy on Protein A f	rom tissue culture

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	1% Bovine Serum Albumin 0.09% Sodium Azide
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Human monocytes
External Database Links	UniProt: P05362 Related reagents Entrez Gene: 3383 ICAM1 Related reagents
RRID	AB_322958
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 (<u>Berendt <i>et al.</i> 1992</u>). 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 (<u>Chakravorty and Craig 2005</u>).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	 Dransfield, I. <i>et al.</i> (1992) Interaction of leukocyte integrins with ligand is necessary but not sufficient for function. <u>J Cell Biol. 116:1527-35.</u> Berendt, A. <i>et al.</i> (1992) The binding site on ICAM-1 for plasmodium falciparum-infected erythrocytes overlaps, but is distinct from, the LFA-1- binding site. <u>Cell. 68: 71-81.</u> Urquhart, P. <i>et al.</i> (2007) Carbon monoxide-releasing molecules modulate leukocyte-endothelial interactions under flow. <u>J Pharmacol Exp Ther. 321 (2): 656-62.</u> Baratin, M. <i>et al.</i> (2007) Dissection of the role of PfEMP1 and ICAM-1 in the sensing of <i>Plasmodium-falciparum</i>-infected erythrocytes by natural killer cells. <u>PLos One 2: e228.</u> van Buul, J.D. <i>et al.</i> (2010) Inside-out regulation of ICAM-1 dynamics in TNF-alphaactivated endothelium. <u>PLos One 5: e11336.</u> Diaz-Romero, J. <i>et al.</i> (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. <u>Blood</u>. 117: 2284-95.
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- 9. Corvaisier, M. *et al.* (2005) V gamma 9V delta 2 T cell response to colon carcinoma cells. J Immunol. 175: 5481-8.
- 10. Horrocks, P. *et al.* (2005) PfEMP1 expression is reduced on the surface of knobless Plasmodium falciparum infected erythrocytes. <u>J Cell Sci. 118: 2507-18.</u>
- 11. Lozanoska-Ochser, B. *et al.* (2008) Expression of CD86 on human islet endothelial cells facilitates T cell adhesion and migration. <u>J Immunol</u>. 181: 6109-16.
- 12. Norling, L.V. *et al.* (2008) Inhibitory control of endothelial galectin-1 on *in vitro* and *in vivo* lymphocyte trafficking. FASEB J. 22: 682-90.
- 13. Baumer, Y. *et al.* (2011) Telomerase-based immortalization modifies the angiogenic/inflammatory responses of human coronary artery endothelial cells. <u>Exp Biol Med (Maywood)</u>. 236: 692-700.
- 14. Lask, A. *et al.* (2011) TCR-independent killing of B cell malignancies by anti-third-party CTLs: the critical role of MHC-CD8 engagement. <u>J Immunol. 187 (4): 2006-14.</u>
- 15. Sommaggio, R. *et al.* (2012) Multiple Receptors Trigger Human NK Cell-Mediated Cytotoxicity against Porcine Chondrocytes. <u>J Immunol</u>. 188: 2075-83.
- 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. <u>J Pharmacol Exp Ther.</u> 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. <u>Mucosal Immunol. 7</u> (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. <u>J Virol. 91 (8): pii: e02442-16.</u>
- 19. Lennartz, F. *et al.* (2015) Mapping the Binding Site of a Cross-Reactive *Plasmodium falciparum* PfEMP1 Monoclonal Antibody Inhibitory of ICAM-1 Binding. <u>J Immunol. 195</u> (7): 3273-83.
- 20. Schoppmeyer, R. *et al.* (2022) The endothelial diapedesis synapse regulates transcellular migration of human T lymphocytes in a CX3CL1- and SNAP23-dependent manner. <u>Cell Rep. 38 (3): 110243.</u>
- 21. Grönloh, M.L.B. *et al.* (2022) Endothelial transmigration hotspots limit vascular leakage through heterogeneous expression of ICAM1 <u>bioRxiv 17 Jan [Epub ahead of print].</u>

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. This product is photosensitive and should be protected from light.

Guarantee

12 months from date of despatch

Health And Safety

Information

Material Safety Datasheet documentation #10041 available at:

https://www.bio-rad-antibodies.com/SDS/MCA1615F

10041

Regulatory For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Europe

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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 'M385475:210513'

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