

Datasheet: MCA773

Description:	MOUSE ANTI RAT CD54
Specificity:	CD54
Other names:	ICAM-1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	1A29
Isotype:	IgG1
Quantity:	0.2 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	■			1/25 - 1/50
Immunohistology - Frozen	■			
Immunohistology - Paraffin (1)	■			
ELISA			■	
Immunoprecipitation	■			
Western Blotting	■			

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.

(1) **This clone is suitable for use on paraffin embedded material using target unmasking fluid [HIS003B](#) for this purpose.**

Target Species	Rat
Product Form	Purified IgG - liquid
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
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml

Immunogen	Rat Ax cells (a HEV derived cell line).
External Database Links	UniProt: Q00238 Related reagents Entrez Gene: 25464 Icam1 Related reagents
Synonyms	Icam-1
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells from the PA1 mouse myeloma cell line.
Specificity	Mouse anti Rat CD54 antibody, clone 1A29 recognizes the rat CD54 cell surface antigen, also known as intercellular adhesion molecule-1 (ICAM-1), a ~90 kDa adhesion molecule belonging to the immunoglobulin superfamily. CD54 is a cell surface ligand of the lymphocyte integrin, LFA-1 and is known to play an important role in various cell-cell interactions in the immune system. Studies suggest that cross-linking of ICAM-1 using clone 1A29 induces calcium signalling (Etienne et al.). Functionally Mouse anti Rat CD54 antibody, clone 1A29 inhibits homotypic aggregation of PHA blasts.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. Kawai, T. <i>et al.</i> (1999) Selective diapedesis of Th1 cells induced by endothelial cell RANTES. J Immunol. 163: 3269-78. 2. Sato, N. <i>et al.</i> (2000) Roles of ICAM-1 for abnormal leukocyte recruitment in the microcirculation of bleomycin-induced fibrotic lung injury. Am J Respir Crit Care Med. 161: 1681-8. 3. Etienne, S. <i>et al.</i> (1998) ICAM-1 signaling pathways associated with Rho activation in microvascular brain endothelial cells. J Immunol. 161 (10): 5755-61. 4. Etienne-Manneville, S. <i>et al.</i> (2000) ICAM-1-coupled cytoskeletal rearrangements and transendothelial lymphocyte migration involve intracellular calcium signaling in brain endothelial cell lines. J Immunol. 165 (6): 3375-83. 5. McKechnie, N. M. <i>et al.</i> (2002) Antigenic mimicry: Onchocerca volvulus antigen-specific T cells and ocular inflammation. Invest Ophthalmol Vis Sci. 43:411-8. 6. Banerjee, S. <i>et al.</i> (2003) Development of organised conjunctival leucocyte aggregates after corneal transplantation in rats. Br J Ophthalmol. 2003 Dec;87(12):1515-22. 7. Kielian, T. <i>et al.</i> (2000) Proinflammatory cytokine, chemokine, and cellular adhesion molecule expression during the acute phase of experimental brain abscess development. Am J Pathol. 157: 647-58. 8. Trinh, L. <i>et al.</i> (2008) The corneal endothelium in an endotoxin-induced uveitis model: correlation between <i>in vivo</i> confocal microscopy and immunohistochemistry. Mol Vis. 14: 1149-56. 9. Adamson, P. <i>et al.</i> (1999) Lymphocyte migration through brain endothelial cell monolayers involves signaling through endothelial ICAM-1 via a rho-dependent pathway. J Immunol. 162: 2964-73. 10. Arsenović-Ranin, N. <i>et al.</i> (2000) A monoclonal antibody to the rat Crry/p65 antigen, a complement regulatory membrane protein, stimulates adhesion and proliferation of thymocytes. Immunology. 100: 334-44. 11. Beck-Schimmer, B. <i>et al.</i> (2001) Hypoxia mediates increased neutrophil and macrophage adhesiveness to alveolar epithelial cells. Am J Respir Cell Mol Biol. 25: 780-7.

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19. Azcutia V *et al.* (2010) Inflammation determines the pro-adhesive properties of high extracellular d-glucose in human endothelial cells *in vitro* and rat microvessels *in vivo*. [PLoS One. 5 \(4\): e10091.](#)
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Storage	Store at +4°C or at -20°C if preferred. This product should be stored undiluted. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®800 , FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA1209\)](#)

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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