

# Datasheet: MCA773F BATCH NUMBER 150013

Description:	MOUSE ANTI RAT CD54:FITC
Specificity:	CD54
Other names:	ICAM-1
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	1A29
Isotype:	IgG1
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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	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	Rat					
Product Form	Purified IgG conjug	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer				
ax Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nn			
	FITC	490	525			
reparation	supernatant	ed by affinity chromatog	raphy on Protein A			
fer Solution	Phosphate buffered	d saline				
reservative	0.09% Sodium Azio	de				
tabilisers	1% Bovine Seru	m Albumin				

# Concentrations **Immunogen** Rat Ax cells (a HEV derived cell line). **External Database UniProt:** Links Q00238 Related reagents **Entrez Gene:** 25464 Icam1 Related reagents **Synonyms** Icam-1 **RRID** AB 321790 **Fusion Partners** Spleen cells from immunised BALB/c mice were fused with cells from the PAI 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<sup>6</sup> cells in 100ul.

### References

- 1. Kawai, T. *et al.* (1999) Selective diapedesis of Th1 cells induced by endothelial cell RANTES. J Immunol. 163: 3269-78.
- 2. Sato, N. *et al.* (2000) Roles of ICAM-1 for abnormal leukocyte recruitment in the microcirculation of bleomycin-induced fibrotic lung injury. <u>Am J Respir Crit Care Med. 161:</u> 1681-8.
- 3. Etienne, S. *et al.* (1998) ICAM-1 signaling pathways associated with Rho activation in microvascular brain endothelial cells. <u>J Immunol</u>. 161 (10): 5755-61.
- 4. Etienne-Manneville, S. *et al.* (2000) ICAM-1-coupled cytoskeletal rearrangements and transendothelial lymphocyte migration involve intracellular calcium signaling in brain endothelial cell lines. <u>J Immunol. 165 (6): 3375-83.</u>
- 5. McKechnie, N. M. *et al.* (2002) Antigenic mimicry: Onchocerca volvulus antigen-specific T cells and ocular inflammation. <u>Invest Ophthalmol Vis Sci. 43:411-8.</u>
- 6. Banerjee, S. *et al.* (2003) Development of organised conjunctival leucocyte aggregates after corneal transplantation in rats. <u>Br J Ophthalmol. 2003 Dec;87(12):1515-22.</u>
- 7. Kielian, T. *et al.* (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. *et al.* (2008) The corneal endothelium in an endotoxin-induced uveitis model: correlation between *in vivo* confocal microscopy and immunohistochemistry. <u>Mol Vis. 14:</u> 1149-56.
- 9. Adamson, P. *et al.* (1999) Lymphocyte migration through brain endothelial cell monolayers involves signaling through endothelial ICAM-1 via a rho-dependent pathway. <u>J. Immunol.</u> 162: 2964-73.
- 10. Arsenović-Ranin, N. *et al.* (2000) A monoclonal antibody to the rat Crry/p65 antigen, a complement regulatory membrane protein, stimulates adhesion and proliferation of thymocytes. <a href="https://linear.com/linear
- 11. Beck-Schimmer, B. *et al.* (2001) Hypoxia mediates increased neutrophil and macrophage adhesiveness to alveolar epithelial cells. <u>Am J Respir Cell Mol Biol. 25:</u> 780-7.
- 12. Couty, J.P. (2007) PECAM-1 engagement counteracts ICAM-1-induced signaling in brain vascular endothelial cells. J Neurochem. 103: 793-801.
- 13. Deng, H. *et al.* (2003) Mild hypothermia inhibits inflammation after experimental stroke and brain inflammation. Stroke. 34: 2495-501.
- 14. Ikezumi, Y. *et al.* (2004) Macrophage-mediated renal injury is dependent on signaling via the JNK pathway. <u>J Am Soc Nephrol. 15: 1775-84.</u>
- 15. Kanellis, J. *et al.* (2010) JNK signalling in human and experimental renal ischaemia/reperfusion injury. Nephrol Dial Transplant. 25: 2898-908.
- 16. Westermann, D. *et al.* (2007) Cardioprotective and anti-inflammatory effects of interleukin converting enzyme inhibition in experimental diabetic cardiomyopathy. Diabetes. 56: 1834-41.
- 17. Zhu, X. *et al.* (2003) Matrine protects sinusoidal endothelial cells from cold ischemia and reperfusion injury in rat orthotopic liver transplantation. Ann Clin Lab Sci. 33: 216-25.
- 18. Choi, J.S. *et al.* (2011) Mild Hypothermia Attenuates Intercellular Adhesion Molecule-1 Induction via Activation of Extracellular Signal-Regulated Kinase-1/2 in a Focal Cerebral Ischemia Model. Stroke Res Treat. 2011: 846716.
- 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.
- 20. Li, W. & Klein, S.L. (2012) Seoul virus-infected rat lung endothelial cells and alveolar macrophages differ in their ability to support virus replication and induce regulatory T cell phenotypes. J Virol. 86 (21): 11845-55.
- 21. Gates, D. *et al.* (2012) Apo J/clusterin expression and secretion: evidence for 15-deoxy-Δ(12,14)-PGJ(2)-dependent mechanism. <u>Biochim Biophys Acta. 1821 (2): 335-42.</u>
- 22. Li, Z. *et al.* (2015) Three-dimensional graphene foams loaded with bone marrow derived mesenchymal stem cells promote skin wound healing with reduced scarring. <u>Mater Sci Eng C Mater Biol Appl. 57: 181-8.</u>
- 23. Gautier, S. *et al.* (2015) PPAR-Alpha Agonist Used at the Acute Phase of Experimental Ischemic Stroke Reduces Occurrence of Thrombolysis-Induced Hemorrhage in Rats. PPAR Research. 2015: 1-6.
- 24. Liu, Y.C. *et al.* (2013) A biodegradable, sustained-released, prednisolone acetate microfilm drug delivery system effectively prolongs corneal allograft survival in the rat keratoplasty model. <u>PLoS One. 8 (8): e70419.</u>
- 25. Ichihara, Y. et al. (2018) Self-assembling peptide hydrogel enables instant epicardial

coating of the heart with mesenchymal stromal cells for the treatment of heart failure. <u>Biomaterials</u>. 154: 12-23.

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. 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

Health And Safety
Information Material Safety Datasheet documentation #10041 available at:
https://www.bio-rad-antibodies.com/SDS/MCA773F
10041

Regulatory For research purposes only

# Related Products

North & South Tel: +1 800 265 7376

# **Recommended Negative Controls**

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA1209F)

**America** Fax: +1 919 878 3751 Fax: +44 (0)1865 852 739

Worldwide

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M368957:200529'

Tel: +44 (0)1865 852 700

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