



CELL LAB Rat Anti-Mouse CD54 (ICAM-1)

Cat. No.	Form	Quantity
732178	Purified (UNLB) Antibody	0.5 mg
732179	Fluorescein (FITC) Conjugate	0.5 mg
732180	Biotin (BIOT) Conjugate	0.5 mg

For Laboratory Use Only

DESCRIPTION

Clone: YN1/1.7.4
Isotype: Rat IgG2b_K
Specificity: Mouse CD54/ICAM-1, Mr 95 kDa

CD54, a member of the immunoglobulin superfamily of cell surface receptors and also known as Intercellular Adhesion Molecule-1 (ICAM-1), is a type I transmembrane glycoprotein that mediates important cell/cell interactions. CD54 is expressed on endothelial cells, dendritic cells, keratinocytes and lymphocytes. Its expression is upregulated by inflammatory mediators such as IFN- γ , IL-1, TNF- α , lipopolysaccharide and phorbol esters. Endothelial CD54 contributes to the extravasation of leukocytes from blood vessels, particularly in areas of inflammation. CD54 on antigen-presenting cells contributes to antigen-specific T-cell activation, presumably by enhancing interactions between T cell and antigen-presenting cells. These adhesion reactions are mediated via the binding of CD54 to its major ligands, LFA-1 and Mac-1.

APPLICATIONS

- Flow cytometry²
- Immunohistochemistry (FS)⁴
- Immunoprecipitation²
- *In vitro* blocking studies¹
- Western blotting³

CHARACTERIZATION

To ensure lot-to-lot consistency, each batch of product is tested to conform with characteristics of a standard reference reagent using flow cytometry.

WORKING DILUTIONS

Flow Cytometry: Fluorescein conjugate $\leq 1 \mu\text{g}/10^6$ cells
Biotin conjugate $\leq 1 \mu\text{g}/10^6$ cells

Other Applications: Since applications vary, determine the optimum working dilution of the product that is appropriate for your specific needs.

HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of 100 mM borate buffered saline, pH 8.0. No preservatives or amine-containing buffer salts added.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- Protect fluorochrome-conjugated forms from light. Do not freeze.
- Reagent is stable until the expiration date on the vial when stored at 2-8°C.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Minimize exposure of reagent to light during storage or incubation.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use Good Laboratory Practice (GLP) when handling this reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.
9. Contains sodium azide. Sodium azide under acidic conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, immediately wash excessively with water.

TRADEMARKS

The Beckman Coulter logo is a trademark of Beckman Coulter, Inc.

For additional information or if damaged product is received, contact your local Beckman Coulter Representative.

REFERENCES

1. Takei F. 1985. Inhibition of mixed lymphocyte response by a rat monoclonal antibody to a novel murine lymphocyte activation antigen (MALA-2). *J Immunol*, 134:1403-1407.
2. Horley KJ, Carpenito C, Baker B and Takei F. 1989. Molecular cloning of murine intercellular adhesion molecule (ICAM-1). *EMBO J*, 8:2889-2896.
3. Welder CA, Lee DHS and Takei F. 1993. Inhibition of cell adhesion by microspheres coated with recombinant soluble intercellular adhesion molecule-1. *J Immunol*, 150:2203-2210.
4. Qin L, Quinlan WM, Doyle NA, Graham L, Sligh JE, Takei F, Beaudet AL and Doerschuk CM. 1996. The roles of CD11/CD18 and ICAM-1 in acute *Pseudomonas aeruginosa*-induced pneumonia in mice. *J Immunol*, 157:5016-5021.



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