

### Analyte Specific Reagent.

Analytical and performance characteristics are not established.

#### SPECIFICITY

CD54, previously known as ICAM-1 (Inter Cellular Adhesion Molecule 1), is a 90 kDa transmembrane glycoprotein (1). Its structure, as that of CD50 (ICAM-3) and CD102 (ICAM-2), is related to the immunoglobulin superfamily (2).

The expression and functional role of CD54 on human blood cells is reviewed in Ref. (3). CD54 is also expressed by activated endothelial cells (4).

84H10, previously studied in the IIIrd International Workshop on Human Leucocyte Differentiation Antigens (5), was assigned to the CD54 cluster of differentiation at the Vth International Workshop on Human Leucocyte Differentiation Antigens in Boston, U.S.A., in 1993 (6).

#### REAGENT

IOTest CD54-PE Conjugated Antibody  
PN IM1239U – 2 mL Liquid – 20 µL / test\*.

<b>Clone</b>	84H10
<b>Isotype</b>	IgG1, mouse
<b>Immunogen</b>	K562 cell line
<b>Hybridoma</b>	MOPC 315 x Balb/c
<b>Source</b>	Ascites fluid
<b>Purification</b>	Ion exchange or affinity chromatography
<b>Conjugation</b>	R-phycoerythrin (PE) is conjugated at 0.5 – 1.5 moles of PE per mole of Ig.
<b>Fluorescence</b>	PE (orange-red) Excites at 486 – 580 nm Emits at 568 – 590 nm

#### REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN<sub>3</sub>) as preservative, and 2.0 mg / mL bovine serum albumin (BSA).

#### STATEMENT OF WARNINGS

1. This reagent contains 0.1% sodium azide. Sodium azide under acid 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, wash excessively with water.

2. Do not use antibody beyond the expiration date on the label.
3. Samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
4. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

#### STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. Minimize exposure to light.

#### EVIDENCE OF DETERIORATION

Any change in the physical appearance of this PE-labeled reagent (clear colorless to pinkish liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

#### REAGENT PREPARATION

No preparation is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

#### SELECTED RESEARCH REFERENCES

1. Johnson, J.P., Shaw, S., "Cluster report: CD54", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens. W. Knapp, et al., Eds., Oxford University Press, 681-694.
2. Buck, C.A., "Immunoglobulin superfamily : structure, function and relationship to other receptor molecules", 1992, Seminars in Cell Biology, 3, 179-188.
3. Lebedeva, T., Dustin, M.L., Sykulev, Y., "ICAM-1 co-stimulates target cells to facilitate antigen presentation", 2005, Curr Opin Immunol., 17, 251-258.
4. Kaplanski, G., Marin, V., Fabrigoule, M., Boulay, V., Benoliel, A-M., Bongrand, P.,

Kaplanski, S., Farnarier, C., "Thrombin-activated human endothelial cells support monocyte adhesion in vitro following expression of intercellular adhesion molecule-1 (ICAM-1; CD54) and vascular cell adhesion molecule-1 (VCAM-1; CD106)", 1998, Blood, 92, 1259-1267.

5. Pebusque, M.J., Lopez, M.G., Branch, D., Guilbert, L., Linklater, L., Tabilio, A., Lavezzi, C., Mannoni, P., "Phenotypic analysis of human long-term bone marrow culture cells and derived cell lines", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, McMichael A.J., et al., Eds., Oxford University Press, 636-642.
6. Klickstein, L.B., Springer, T.A., "CD54 (ICAM-1) cluster report", 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Schlossman, S.F., et al., Eds., Oxford University Press, 1548-1550.

#### PRODUCT AVAILABILITY

IOTest CD54-PE Conjugated Antibody  
PN IM1239U – 2 mL Liquid – 20 µL / test\*.

PE is licensed under patent 4,520,110.

For additional information in the USA, call 800-526-7694.  
Outside the USA, contact your local Beckman Coulter representative.

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(\*) : 20 µL is the quantity of product sufficient to stain

5 x 10<sup>5</sup> cells in a standard immunofluorescence assay