

ICAM-1 (1H4): sc-51632

BACKGROUND

Cell adhesion molecules (CAMs) are a family of closely related cell surface glycoproteins involved in cell-cell interactions during growth and are thought to play important, yet separate, roles in embryogenesis and development. The intracellular adhesion molecule-1 (ICAM-1), also referred to as CD54, is an integral membrane protein of the immunoglobulin superfamily and recognizes the $\beta 2/\alpha 1$ and $\beta 2/\alpha M$ Integrins. ICAM-2 functions as a ligand for lymphocyte function-associated antigen-1 (LFA-1) and is involved in leukocyte adhesion. ICAM-3 is highly expressed on the surface of human eosinophils, and when bound to ligand, may inhibit eosinophil inflammatory responses and survival. ICAM-4, also known as LW glycoprotein, interacts with the Integrins $\alpha L/\beta 2$, $\alpha M/\beta 2$, $\alpha 4/\beta 1$, the αV family and $\alpha I b/\beta 3$, and selective binding to different integrins may be relevant to the pathology in a number of red blood cell associated diseases. Lastly, ICAM-5, expressed on telencephalic neurons, binds CD11a/CD18 and thus may act as an adhesion molecule for leukocyte binding in the central nervous system.

REFERENCES

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- Briskin, M.J., et al. 1996. Structural requirements for mucosal vascular addressin binding to its lymphocyte receptor $\alpha 4/\beta 7$. Common themes among integrin-Ig family interactions. *J. Immunol.* 156: 719-726.
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- Lu, T.T. and Cyster, J.G. 2002. Integrin-mediated long-term B cell retention in the splenic marginal zone. *Science* 297: 409-412.
- Zuccarello, D., et al. 2002. Familial chronic nail candidiasis with ICAM-1 deficiency: a new form of chronic mucocutaneous candidiasis. *J. Med. Genet.* 39:671-675.
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CHROMOSOMAL LOCATION

Genetic locus: ICAM1 (human) mapping to 19p13.2.

SOURCE

ICAM-1 (1H4) is a mouse monoclonal antibody raised against human Raji cells and spleen cells fused with NS1 cells.

PRODUCT

Each vial contains 100 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as phycoerythrin (sc-51632 PE) or fluorescein (sc-51632 FITC) conjugates for flow cytometry, 100 tests.

APPLICATIONS

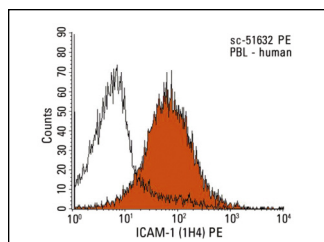
ICAM-1 (1H4) is recommended for detection of ICAM-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for ICAM-1 siRNA (h): sc-29354, ICAM-1 shRNA Plasmid (h): sc-29354-SH and ICAM-1 shRNA (h) Lentiviral Particles: sc-29354-V.

Molecular Weight of ICAM-1: 85-110 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-N-MC cell lysate: sc-2237 or Jurkat whole cell lysate: sc-2204.

DATA



ICAM-1 (1H4): sc-51632. Indirect FCM analysis of human peripheral blood leukocytes stained with ICAM-1 (1H4), followed by PE-conjugated goat anti-mouse IgG_{2b}: sc-3766. Black line histogram represents the isotype control, normal mouse IgG_{2b}: sc-3879.

SELECT PRODUCT CITATIONS

- Cardile, V., et al. 2010. Antiinflammatory effects of a red orange extract in human keratinocytes treated with interferon- γ and histamine. *Phytother. Res.* 24: 414-418.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.