

# ICAM-1 (28): sc-135946

## BACKGROUND

Cell adhesion molecules 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  $\alpha V$  family and  $\alpha IIb\beta 3$ , 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

- Jorgensen, O.S. 1995. Neural cell adhesion molecule (NCAM) as a quantitative marker in synaptic remodeling. *Neurochem. Res.* 20: 533-547.
- Edelman, G.M. and Jones, F.S. 1995. Developmental control of N-CAM expression by Hox and Pax gene products. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 349: 305-312.
- 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.
- Heiska, L., et al. 1996. Binding of the cytoplasmic domain of intercellular adhesion molecule-2 (ICAM-2) to  $\alpha$ -actinin. *J. Biol. Chem.* 271: 26214-26219.
- Tian, L., et al. 2000. Binding of T lymphocytes to hippocampal neurons through ICAM-5 (telencephalin) and characterization of its interaction with the leukocyte integrin CD11a/CD18. *Eur. J. Immunol.* 30: 810-818.
- 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

ICAM-1 (28) is a mouse monoclonal antibody raised against amino acids 46-160 of ICAM-1 of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

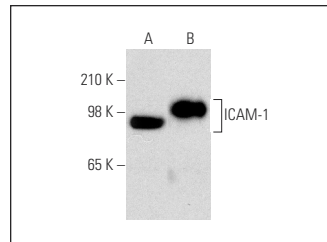
ICAM-1 (28) is recommended for detection of ICAM-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

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.

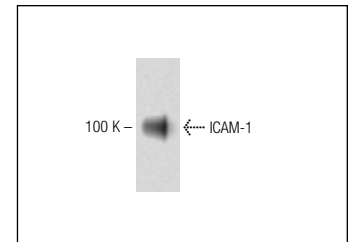
Molecular Weight of ICAM-1: 85-110 kDa.

Positive Controls: HCT-8 cell lysate: sc-24675, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

## DATA



ICAM-1 (28): sc-135946. Western blot analysis of ICAM-1 expression in Jurkat (A) and TNF treated U-937 (B) whole cell lysates.



ICAM-1 (28): sc-135946. Western blot analysis of ICAM-1 expression in HCT-8 whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



See **ICAM-1 (G-5): sc-8439** for ICAM-1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.