SANTA CRUZ BIOTECHNOLOGY, INC.

ICAM-1 (G-5): sc-8439

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 β2α1 and β2αM 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 αLβ2, αMβ2, α4β1, the αV family and αIIbβ3, 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

1. Jorgensen, O.S. 1995. Neural cell adhesion molecule (NCAM) as a quantitative marker in synaptic remodeling. Neurochem. Res. 20: 533-547.
2. Edelman, G.M. and Jones, F.S. 1995. Developmental control of NCAM expression by HOX and PAX gene products. Philos. Trans. R. Soc. Lond. B, Biol. Sci. 349: 305-312.

CHROMOSOMAL LOCATION

Genetic locus: ICAM1 (human) mapping to 19p13.2; Icam1 (mouse) mapping to 9 A3.

SOURCE

ICAM-1 (G-5) is a mouse monoclonal antibody raised against amino acids 258-365 of ICAM-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ICAM-1 (G-5) is available conjugated to agarose (sc-8439 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8439 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8439 PE), fluorescein (sc-8439 FITC), Alexa Fluor® 488 (sc-8439 AF488), Alexa Fluor® 546 (sc-8439 AF546), Alexa Fluor® 594 (sc-8439 AF594) or Alexa Fluor® 647 (sc-8439 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8439 AF680) or Alexa Fluor® 790 (sc-8439 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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.

APPLICATIONS

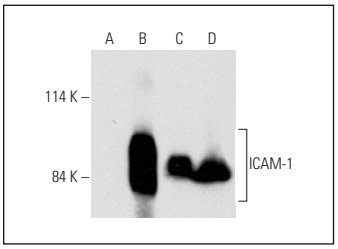
ICAM-1 (G-5) is recommended for detection of ICAM-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ICAM-1 siRNA (h): sc-29354, ICAM-1 siRNA (m): sc-29355, ICAM-1 shRNA Plasmid (h): sc-29354-SH, ICAM-1 shRNA Plasmid (m): sc-29355-SH, ICAM-1 shRNA (h) Lentiviral Particles: sc-29354-V and ICAM-1 shRNA (m) Lentiviral Particles: sc-29355-V.

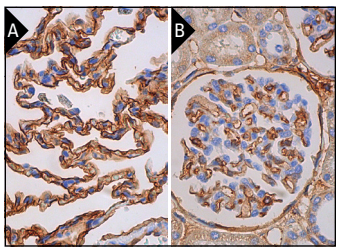
Molecular Weight of ICAM-1: 85-110 kDa.

Positive Controls: ICAM-1 (h): 293T Lysate: sc-176625, TF-1 cell lysate: sc-2412 or Raji whole cell lysate: sc-364236.

DATA



ICAM-1 (G-5) HRP: sc-8439 HRP. Direct western blot analysis of ICAM-1 expression in non-transfected 293T: sc-117752 (**A**), human ICAM-1 transfected 293T: sc-176625 (**B**), Raji (**C**) and TF-1 (**D**) whole cell lysates.



ICAM-1 (G-5): sc-8439. Immunoperoxidase detection of ICAM-1 in formalin fixed, paraffin-embedded human lung tissue, showing membrane and cytoplasmic staining of pneumocytes (**A**). Immunoperoxidase detection of ICAM-1 in formalin fixed, paraffin-embedded human kidney tissue, showing membrane and cytoplasmic staining of endothelial cells in glomeruli and cytoplasmic staining of cells in tubules (**B**). Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Galeazzi, F., et al. 1999. Cigarette smoke aggravates experimental colitis in rats. Gastroenterology 117: 877-883.
2. Sun, J.L., et al. 2024. CTRP4 ameliorates inflammation, thereby attenuating the interaction between HUVECs and THP-1 monocytes through SIRT6/Nrf2 signaling. Biochem. Biophys. Res. Commun. 691: 149293.
3. Alonso, C., et al. 2025. Investigation in blood-brain barrier integrity and susceptibility to immune cell penetration in a mouse model of Dravet syndrome. Brain Behav. Immun. Health 44: 100955.

PROTOCOLS

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