SANTA CRUZ BIOTECHNOLOGY, INC.

ICAM-1 (15.2): sc-107

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

ICAM-1 (15.2) is a mouse monoclonal antibody raised against an ICAM-1 positive cell preparation.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Also available azide-free for biological studies, sc-107 L, 200 µg/0.1 ml.

ICAM-1 (15.2) is available conjugated to agarose (sc-107 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-107 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-107 PE), fluorescein (sc-107 FITC), Alexa Fluor® 488 (sc-107 AF488), Alexa Fluor® 546 (sc-107 AF546), Alexa Fluor® 594 (sc-107 AF594) or Alexa Fluor® 647 (sc-107 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-107 AF680) or Alexa Fluor® 790 (sc-107 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, ICAM-1 (15.2) is available conjugated to Alexa Fluor® 405 (sc-107 AF405, 200 µg/ml), 100 tests in 2 ml, for IF, IHC(P) and FCM.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

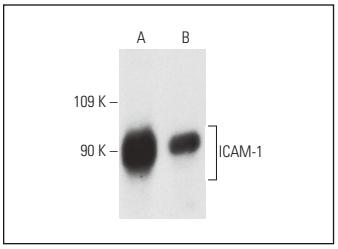
ICAM-1 (15.2) is recommended for detection of ICAM-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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.

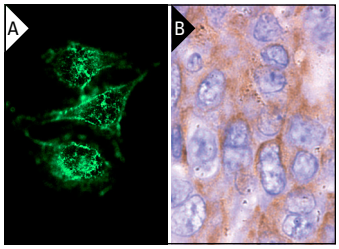
Molecular Weight of ICAM-1: 85-110 kDa.

Positive Controls: SW480 cell lysate: sc-2219, HeLa whole cell lysate: sc-2200 or SK-N-MC cell lysate: sc-2237.

DATA



ICAM-1 (15.2): sc-107. Western blot analysis of ICAM-1 expression in SW480 (**A**) and HeLa (**B**) whole cell lysates.



ICAM-1 (15.2): sc-107. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil showing membrane staining (**B**).

SELECT PRODUCT CITATIONS

1. Treadwell, M.D., et al. 1996. Increased neutrophil adherence to endothelial cells exposed to asbestos. Toxicol. Appl. Pharmacol. 139: 62-70.
2. Zou, C., et al. 2020. Reduction of mNAT1/hNAT2 contributes to cerebral endothelial necroptosis and Aβ accumulation in Alzheimer's disease. Cell Rep. 33: 108447.
3. Shrestha, P., et al. 2021. Pomalidomide restores immune recognition of primary effusion lymphoma through upregulation of ICAM-1 and B7-2. PLoS Pathog. 17: e1009091.
4. Stevenson, T.J., et al. 2022. Pericytes take up and degrade α-synuclein but succumb to apoptosis under cellular stress. Sci. Rep. 12: 17314.
5. Zheng, G., et al. 2023. GLSP and GLSP-derived triterpenes attenuate atherosclerosis and aortic calcification by stimulating ABCA1/G1-mediated macrophage cholesterol efflux and inactivating RUNX2-mediated VSMC osteogenesis. Theranostics 13: 1325-1341.

RESEARCH USE

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