

VCAM-1 (P8M1): sc-20069

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 an important role in embryogenesis and development. Neuronal cell adhesion molecule (NCAM) expression is observed in a variety of human tumors including neuroblastomas, rhabdomyosarcomas, Wilm's tumors, Ewing's sarcomas and some primitive myeloid malignancies. The intracellular adhesion molecule-1 (ICAM-1), also referred to as CD54, is an integral membrane protein of the immunoglobulin superfamily and recognizes the B2 α 1 and B2 α M integrins. PECAM-1 (platelet/endothelial cell adhesion molecule-1), also referred to as CD31, is a glycoprotein expressed on the cell surfaces of monocytes, neutrophils, platelets and a subpopulation of T cells. VCAM-1 (vascular cell adhesion molecule-1) was first identified as an adhesion molecule induced on human endothelial cells by inflammatory cytokines such as IL-1, tumor necrosis factor (TNF) and lipopolysaccharide (LPS). The KALIG gene encodes a nerve cell adhesion molecule (NCAM)-like protein and is deleted in 66% of patients with Kallmann's syndrome, anosmia with secondary hypogonadism.

REFERENCES

1. Cowen, M.A. and Green, M. 1993. The Kallmann's syndrome variant (KSV) model of the schizophrenias. *Schizo. Res.* 9: 1-10.
2. Patel, K., et al. 1993. Vase mini-exon usage by NCAM is not restricted to tumours of neuroectodermal origin. *Intl. J. Cancer* 54: 772-777.
3. Jorgensen, O.S. 1995. Neural cell adhesion molecule (NCAM) as a quantitative marker in synaptic remodeling. *Neurochem. Res.* 20: 533-547.
4. Edelman, G.M. and Jones, F.S. 1995. Developmental control of N-CAM expression by Hox and Pax gene products. *Phil. Trans. Royal Soc. London Biol. Sci.* 349: 305-312.
5. Dominici, C., et al. 1996. Bone marrow micrometastases in a patient with localized Wilms' tumor. *Med. Ped. Oncol.* 26: 125-128.
6. Briskin, M.J., et al. 1996. Structural requirements for mucosal vascular addressin binding to its lymphocyte receptor α 4 β 7. Common themes among integrin-Ig family interactions. *J. Immunol.* 156: 719-726.
7. Berman, M.E., et al. 1996. Roles of platelet/endothelial cell adhesion molecule-1 (PECAM-1, CD31) in natural killer cell transendothelial migration and β 2 integrin activation. *J. Immunol.* 156: 1515-1524.

CHROMOSOMAL LOCATION

Genetic locus: VCAM1 (human) mapping to 1p21.2.

SOURCE

VCAM-1 (P8M1) is a mouse monoclonal antibody raised against IL-1 β activated human bone marrow stroma cells.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available azide-free for inhibiting VCAM-1 binding, sc-20069 L, 200 μ g/0.1 ml.

APPLICATIONS

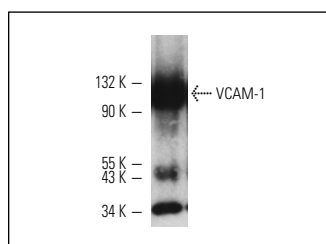
VCAM-1 (P8M1) is recommended for detection of VCAM-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for VCAM-1 siRNA (h): sc-29519, VCAM-1 shRNA Plasmid (h): sc-29519-SH and VCAM-1 shRNA (h) Lentiviral Particles: sc-29519-V.

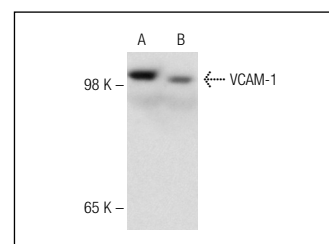
Molecular Weight of VCAM-1: 110 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HEL 92.1.7 cell lysate: sc-2270.

DATA



Western blot analysis of purified human VCAM-1 immunoprecipitated with VCAM-1 (P8M1): sc-20069 and detected with VCAM-1 (H-276): sc-8304.



VCAM-1 (P8M1): sc-20069. Western blot analysis of VCAM-1 expression in Jurkat (A) and HEL 92.1.7 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Iwaki, K., et al. 1997. Decrease in the amount of focal adhesion kinase (p125FAK) in interleukin-1 β -stimulated human umbilical vein endothelial cells by binding of human monocytic cell lines. *J. Biol. Chem.* 272: 20665-20670.
2. Rouleau, L., et al. 2010. Concentration and time effects of dextran exposure on endothelial cell viability, attachment, and inflammatory marker expression *in vitro*. *Ann. Biomed. Eng.* 38: 1451-1462.

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.