

VCAM-1 (P3C4): sc-20070

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.

CHROMOSOMAL LOCATION

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

SOURCE

VCAM-1 (P3C4) is a mouse monoclonal antibody raised against VCAM of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for inhibiting VCAM-1 binding, sc-20070 L, 200 μ g/0.1 ml.

VCAM-1 (P3C4) is available conjugated to either phycoerythrin (sc-20070 PE) or fluorescein (sc-20070 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

VCAM-1 (P3C4) 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)], 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 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.

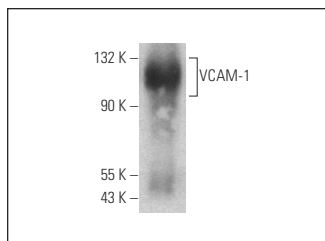
STORAGE

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

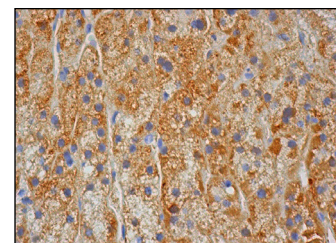
RESEARCH USE

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

DATA



Western blot analysis of purified human VCAM-1 immunoprecipitated with VCAM-1 (P3C4): sc-20070 and detected with VCAM-1 (H-276): sc-8304.



VCAM-1 (P3C4): sc-20070. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Kimura, F., et al. 2010. Epidermal growth factor-dependent enhancement of invasiveness of squamous cell carcinoma of the breast. *Cancer Sci.* 101: 1133-1140.
- Aldinucci, A., et al. 2010. Inhibition of immune synapse by altered dendritic cell actin distribution: a new pathway of mesenchymal stem cell immune regulation. *J. Immunol.* 185: 5102-5110.
- Whyte, J.L., et al. 2011. Density of human bone marrow stromal cells regulates commitment to vascular lineages. *Stem Cell Res.* 6: 238-250.
- Capozza, F., et al. 2012. Genetic ablation of Cav1 differentially affects melanoma tumor growth and metastasis in mice: role of Cav1 in Shh heterotypic signaling and transendothelial migration. *Cancer Res.* 72: 2262-2274.
- Frustaci, A., et al. 2014. Myocardial and microvascular inflammation/infection in patients with HIV-associated pulmonary artery hypertension. *AIDS* 28: 2541-2549.
- Li, X., et al. 2019. Down-regulation of Cx43 expression on PIH-HUVEC cells attenuates monocyte-endothelial adhesion. *Thromb. Res.* 179: 104-113.
- Ja, S., et al. 2020. Isolation and characterization of primary human trabecular meshwork cells from segmental flow regions: new tools for understanding segmental flow. *Exp. Eye Res.* 197: 108046.

PROTOCOLS

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



See **VCAM-1 (E-10): sc-13160** for VCAM-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.