

VCAM-1 (1G11): sc-18854

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 (1G11) is a mouse monoclonal antibody raised against a full length human protein.

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 T lymphocyte adhesion to TNF-stimulated endothelial cells, sc-18854 L, 200 μ g/0.1 ml.

VCAM-1 (1G11) is available conjugated to either phycoerythrin (sc-18854 PE) or fluorescein (sc-18854 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

VCAM-1 (1G11) 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), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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: human liver extract: sc-363766 or human tonsil tissue extract: sc-364263.

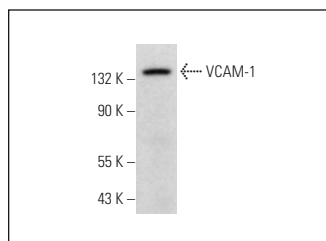
STORAGE

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

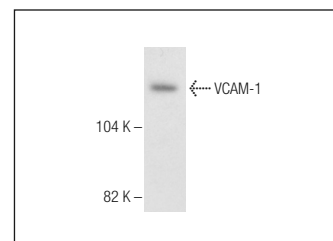
RESEARCH USE

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

DATA



VCAM-1 (1G11): sc-18854. Western blot analysis of VCAM-1 expression in human tonsil tissue extract.



VCAM-1 (1G11): sc-18854. Western blot analysis of VCAM-1 expression in human liver tissue extract.

SELECT PRODUCT CITATIONS

- Enns, A., et al. 2004. Integrins can directly mediate metastatic tumor cell adhesion within the liver sinusoids. *J. Gastrointest. Surg.* 8: 1049-1059.
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- Wang, Z., et al. 2013. NF κ B pathway mediates vascular smooth muscle response to nicotine. *Int. J. Biochem. Cell Biol.* 45: 375-383.
- Soroush, F., et al. 2016. A novel microfluidic assay reveals a key role for protein kinase C δ in regulating human neutrophil-endothelium interaction. *J. Leukoc. Biol.* 100: 1027-1035.
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- Pan, Y., et al. 2020. Bioinformatics analysis of vascular RNA-seq data revealed hub genes and pathways in a novel Tibetan minipig atherosclerosis model induced by a high fat/cholesterol diet. *Lipids Health Dis.* 19: 54.
- Lee, J., et al. 2021. Macrophage inhibitory cytokine-1 promotes angiogenesis by eliciting the GFRAL-mediated endothelial cell signaling. *J. Cell. Physiol.* 236: 4008-4023.

CONJUGATES

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