

VCAM-1 (HAE-2z): sc-13506

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. Thornhill, M.H., et al. 1991. Tumor necrosis factor combines with IL-4 or IFN- γ to selectively enhance endothelial cell adhesiveness for T cells. The contribution of vascular cell adhesion molecule-1-dependent and -independent binding mechanisms. *J. Immunol.* 146: 592-598.
2. Bevilacqua, M.P. 1993. Endothelial-leukocyte adhesion molecules. *Annu. Rev. Immunol.* 11: 767-804.

CHROMOSOMAL LOCATION

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

SOURCE

VCAM-1 (HAE-2z) is a mouse monoclonal antibody raised against domain 1 of VCAM-1 of human origin.

PRODUCT

Each vial contains 200 μ g 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 blocking, sc-13506 L, 200 μ g/0.1 ml.

VCAM-1 (HAE-2z) is available conjugated to either phycoerythrin (sc-13506 PE) or fluorescein (sc-13506 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

VCAM-1 (HAE-2z) is recommended for detection of VCAM-1 of human origin by 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).

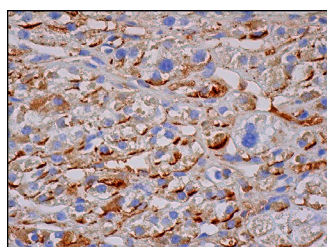
Suitable for use as control antibody for VCAM-1 siRNA (h): sc-29519, VCAM-1 shRNA Plasmid (h): sc-29519-SH and VCAM-1 shRNA (h) Lentiviral Particles: sc-29519-V.

Molecular Weight of VCAM-1: 110 kDa.

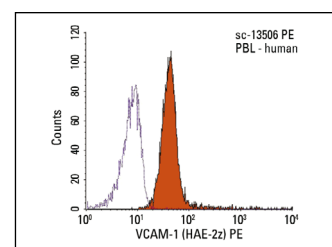
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



VCAM-1 (HAE-2z): sc-13506. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing membrane and cytoplasmic staining of glandular cells.



VCAM-1 (HAE-2z) PE: sc-13506 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG $_1$ -PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Seye, C.I., et al. 2003. The P2Y $_2$ nucleotide receptor mediates UTP-induced vascular cell adhesion molecule-1 expression in coronary artery endothelial cells. *J. Biol. Chem.* 278: 24960-24965.
2. Yang, D., et al. 2006. The A2B adenosine receptor protects against inflammation and excessive vascular adhesion. *J. Clin. Invest.* 116: 1913-1923.
3. Bushway, P.J., et al. 2008. A comparative analysis of standard microtiter plate reading versus imaging in cellular assays. *Assay Drug Dev. Technol.* 6: 557-567.
4. Milbauer, L.C., et al. 2009. Blood outgrowth endothelial cell migration and trapping *in vivo*: a window into gene therapy. *Transl. Res.* 153: 179-189.
5. Zerr, M., et al. 2011. Major contribution of the P2Y $_1$ receptor in purinergic regulation of TNF α -induced vascular inflammation. *Circulation* 123: 2404-2413.
6. Wang, D.G., et al. 2014. Anti-tumor activity of the X-linked inhibitor of apoptosis (XIAP) inhibitor embelin in gastric cancer cells. *Mol. Cell. Biochem.* 386: 143-152.
7. Wang, D., et al. 2018. Antiproliferative effects of the CDK6 inhibitor PD0332991 and its effect on signaling networks in gastric cancer cells. *Int. J. Mol. Med.* 41: 2473-2484.

STORAGE

Store at 4 $^{\circ}$ 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.