

PECAM-1 (LCI-4): sc-80912

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, Wilms' 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 $\beta 2/\alpha 1$ and $\beta 2/\alpha M$ 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. Patel, K., et al. 1993. Vase mini-exon usage by NCAM is not restricted to tumours of neuroectodermal origin. *Int. J. Cancer* 54: 772-777.
2. Cowen, M.A. and Green, M. 1993. The Kallmann's syndrome variant (KSV) model of the schizophrenias. *Schizophr. Res.* 9: 1-10.
3. Buck, C.A., et al. 1994. Cell adhesion receptors and early mammalian heart development: an overview. *C.R. Acad. Sci. III, Sci. Vie* 316: 838-859.
4. DeLisser, H.M., et al. 1994. Platelet endothelial cell adhesion molecule (CD31). *Curr. Top. Microbiol. Immunol.* 184: 37-45.
5. Jorgensen, O.S. 1995. Neural cell adhesion molecule (NCAM) as a quantitative marker in synaptic remodeling. *Neurochem. Res.* 20: 533-547.
6. Edelman, G.M. and Jones, F.S. 1996. Developmental control of NCAM expression by Hox and Pax gene products. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 349: 305-312.
7. Dominici, C., et al. 1996. Bone marrow micrometastases in a patient with localized Wilms' tumor. *Med. Pediatr. Oncol.* 26: 125-128.
8. Briskin, M.J., et al. 1996. Structural requirements for mucosal vascular addressin binding to its lymphocyte receptor $\alpha 4\beta 7$. Common themes among integrin-Ig family interactions. *J. Immunol.* 156: 719-726.
9. Berman, M.E., et al. 1996. Roles of platelet/endothelial cell adhesion molecule-1 (PECAM-1, CD31) in natural killer cell trans-endothelial migration and $\beta 2$ Integrin activation. *J. Immunol.* 156: 1515-1524.

CHROMOSOMAL LOCATION

Genetic locus: PECAM1 (human) mapping to 17q23.3.

SOURCE

PECAM-1 (LCI-4) is a mouse monoclonal antibody raised against a porcine PECAM-1-human IgGfC fusion protein.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PECAM-1 (LCI-4) is recommended for detection of PECAM-1 of porcine and human origin by 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) and flow cytometry (1 μ g per 1×10^6 cells).

Suitable for use as control antibody for PECAM-1 siRNA (h): sc-29445, PECAM-1 shRNA Plasmid (h): sc-29445-SH and PECAM-1 shRNA (h) Lentiviral Particles: sc-29445-V.

Molecular Weight of PECAM-1: 130 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Wang, W., et al. 2011. Statins enhance clonal growth of late outgrowth endothelial progenitors and increase myocardial capillary density in the chronically ischemic heart. *PLoS ONE* 6: e24868.

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.

PROTOCOLS

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