

# PECAM-1 (EN4): sc-59169

## 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

- Robinson, A.P., et al. 1986. MRC OX-43: a monoclonal antibody which reacts with all vascular endothelium in the rat except that of brain capillaries. *Immunology* 57: 231-237.
- Balestrieri, M.L. and Lee, T. 2000. Regulation of the biosynthesis of acyl analogs of platelet-activating factor by purinergic agonist in endothelial cells. *FEBS Lett.* 479: 63-66.
- Bianchi, F., et al. 2006. Endothelial cell function on 2D and 3D micro-fabricated polymer scaffolds: applications in cardiovascular tissue engineering. *J. Biomater. Sci. Polym. Ed.* 17: 37-51.
- Eum, S.Y., et al. 2006. c-Src is the primary signaling mediator of polychlorinated biphenyl-induced interleukin-8 expression in a human microvascular endothelial cell line. *Toxicol. Sci.* 92: 311-320.
- He, J. and Baum, L.G. 2006. Endothelial cell expression of galectin-1 induced by prostate cancer cells inhibits T cell transendothelial migration. *Lab. Invest.* 86: 578-590.
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- Nishimura, M., et al. 2006. Lung microvascular endothelial cell injury caused by treatment with polymorphonuclear neutrophils and low-IgM serum: a model of transfusion-related acute lung injury. *Lung* 184: 25-32.
- Wetzel, A., et al 2006. Increased neutrophil adherence in psoriasis: role of the human endothelial cell receptor Thy-1 (CD90). *J. Invest. Dermatol.* 126: 441-452.

## CHROMOSOMAL LOCATION

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

## RESEARCH USE

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

## SOURCE

PECAM-1 (EN4) is a mouse monoclonal antibody raised against umbilical cord endothelial cells of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PECAM-1 (EN4) is recommended for detection of PECAM-1 of human and feline origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  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.

## SELECT PRODUCT CITATIONS

- Hottor, B., et al. 2010. Variation in composition of the intervillous space lining in term placentas of mothers with pre-eclampsia. *Placenta* 31: 409-417.
- Liu, R., et al. 2017. A new perspective for osteosarcoma therapy: proteasome inhibition by MLN9708/2238 successfully induces apoptosis and cell cycle arrest and attenuates the invasion ability of osteosarcoma cells *in vitro*. *Cell. Physiol. Biochem.* 41: 451-465.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **PECAM-1 (H-3): sc-376764** for PECAM-1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.