

# PECAM-1 (V-16): sc-31045

## 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 $\alpha$ 1 and B2 $\alpha$ 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. et al. 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.

## CHROMOSOMAL LOCATION

Genetic locus: PECAM1 (human) mapping to 17q23.3; Pecam1 (mouse) mapping to 11 E1.

## SOURCE

PECAM-1 (V-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of PECAM-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31045 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

PECAM-1 (V-16) is recommended for detection of PECAM-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PECAM-1 siRNA (h): sc-29445, PECAM-1 siRNA (m): sc-29446, PECAM-1 shRNA Plasmid (h): sc-29445-SH, PECAM-1 shRNA Plasmid (m): sc-29446-SH, PECAM-1 shRNA (h) Lentiviral Particles: sc-29445-V and PECAM-1 shRNA (m) Lentiviral Particles: sc-29446-V.

Molecular Weight of PECAM-1: 130 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or AML-193 whole cell lysate: sc-364182.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Hohsfield, L.A. and Humpel, C. 2010. Homocysteine enhances transmigration of rat monocytes through a brain capillary endothelial cell monolayer via ICAM-1. *Curr. Neurovasc. Res.* 7: 192-200.
2. Rattan, R., et al. 2011. Metformin suppresses ovarian cancer growth and metastasis with enhancement of Cisplatin cytotoxicity *in vivo*. *Neoplasia* 13: 483-491.
3. Zhang, J., et al. 2011. Differentiation induction of cardiac c-kit positive cells from rat heart into sinus node-like cells by 5-azacytidine. *Tissue Cell* 43: 67-74.
4. Banerjee, E.R., et al. 2012. Human embryonic stem cells differentiated to lung lineage-specific cells ameliorate pulmonary fibrosis in a xenograft transplant mouse model. *PLoS ONE* 7: e33165.



Try **PECAM-1 (H-3): sc-376764** or **PECAM-1 (E-4): sc-365804**, our highly recommended monoclonal alternatives to PECAM-1 (V-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PECAM-1 (H-3): sc-376764**.