

PECAM-1 (P2B1): sc-20071

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

SOURCE

PECAM-1 (P2B1) is a mouse monoclonal antibody raised against IL-1 β activated human umbilical vein endothelial cells.

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.

PECAM-1 (P2B1) is available conjugated to fluorescein (sc-20071 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

In addition, PECAM-1 (P2B1) is available conjugated to TRITC (sc-20071 TRITC, 200 μ g/ml), for IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

PECAM-1 (P2B1) 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 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 x 10⁶ cells).

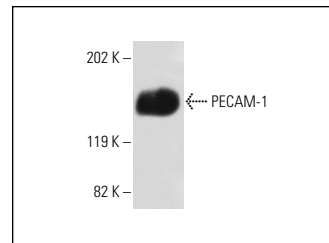
Suitable for use as control antibody for PECAM-1 siRNA (h): sc-29445, PECAM-1 siRNA (m): sc-29446, PECAM-1 shRNA Plasmid (h): sc-29445-SH, PECAM-1 shRNA Plasmid (m): sc-29446-SH, PECAM-1 shRNA (h) Lentiviral Particles: sc-29445-V and PECAM-1 shRNA (m) Lentiviral Particles: sc-29446-V.

Molecular Weight of PECAM-1: 130 kDa.

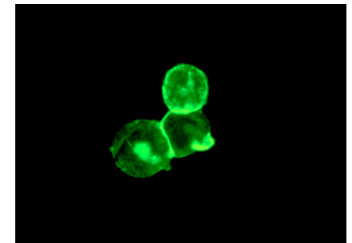
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 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.

DATA



Western blot analysis of PECAM-1 expression in THP-1 whole cell lysate immunoprecipitated with PECAM-1 (P2B1): sc-20071 and detected with PECAM-1 (M-20): sc-1506.



PECAM-1 (P2B1): sc-20071. Immunofluorescence staining of methanol-fixed THP-1 cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Laranjeira, M.S., et al. 2012. Reciprocal induction of human dermal microvascular endothelial cells and human mesenchymal stem cells: time-dependent profile in a co-culture system. *Cell Prolif.* 45: 320-334.
- Laranjeira, M.S., et al. 2013. Response of monocultured and co-cultured human microvascular endothelial cells and mesenchymal stem cells to macroporous granules of nanostructured-hydroxyapatite agglomerates. *J. Biomed. Nanotechnol.* 9: 1594-1606.
- Ribeiro, V., et al. 2014. Bisphosphonates induce the osteogenic gene expression in co-cultured human endothelial and mesenchymal stem cells. *J. Cell. Mol. Med.* 18: 27-37.
- Santos, C., et al. 2018. Vascular biosafety of commercial hydroxyapatite particles: discrepancy between blood compatibility assays and endothelial cell behavior. *J. Nanobiotechnology* 16: 27.

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **PECAM-1 (H-3): sc-376764** for PECAM-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.