

PECAM-1 (E-4): sc-365804

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.

CHROMOSOMAL LOCATION

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

SOURCE

PECAM-1 (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 712-738 at the C-terminus of PECAM-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PECAM-1 (E-4) is available conjugated to agarose (sc-365804 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365804 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365804 PE), fluorescein (sc-365804 FITC), Alexa Fluor® 488 (sc-365804 AF488), Alexa Fluor® 546 (sc-365804 AF546), Alexa Fluor® 594 (sc-365804 AF594) or Alexa Fluor® 647 (sc-365804 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365804 AF680) or Alexa Fluor® 790 (sc-365804 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365804 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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 for detailed protocols and support products.

APPLICATIONS

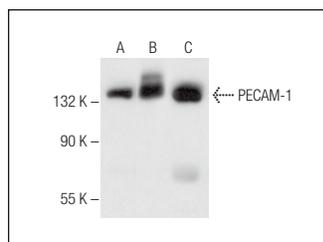
PECAM-1 (E-4) is recommended for detection of PECAM-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (r): sc-270626, PECAM-1 shRNA Plasmid (h): sc-29445-SH, PECAM-1 shRNA Plasmid (m): sc-29446-SH, PECAM-1 shRNA Plasmid (r): sc-270626-SH, PECAM-1 shRNA (h) Lentiviral Particles: sc-29445-V, PECAM-1 shRNA (m) Lentiviral Particles: sc-29446-V and PECAM-1 shRNA (r) Lentiviral Particles: sc-270626-V.

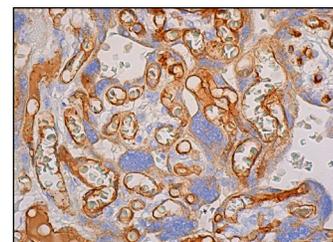
Molecular Weight of PECAM-1: 130 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, human platelet extract: sc-363773 or Jurkat whole cell lysate: sc-2204.

DATA



PECAM-1 (E-4): sc-365804. Western blot analysis of PECAM-1 expression in human PBL (A), THP-1 (B) whole cell lysates and human platelet extract (C).



PECAM-1 (E-4): sc-365804. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane staining of endothelial cells.

SELECT PRODUCT CITATIONS

- Chou, C.H., et al. 2018. IL-6 *trans*-signalling contributes to aldosterone-induced cardiac fibrosis. *Cardiovasc. Res.* 114: 690-702.
- Colás-Algora, N., et al. 2020. Compensatory increase of VE-cadherin expression through ETS1 regulates endothelial barrier function in response to TNF α . *Cell. Mol. Life Sci.* 77: 2125-2140.
- Zhang, Z., et al. 2021. Inverse and reciprocal regulation of p53/p21 and Bmi-1 modulates vasculogenic differentiation of dental pulp stem cells. *Cell Death Dis.* 12: 644.
- Chen, R., et al. 2022. Alantolactone-loaded chitosan/hyaluronic acid nanoparticles suppress psoriasis by deactivating STAT3 pathway and restricting immune cell recruitment. *Asian J. Pharm. Sci.* 17: 268-283.
- Gao, R., et al. 2023. The interaction of apelin and FGFR1 ameliorated the kidney fibrosis through suppression of TGF β -induced endothelial-to-mesenchymal transition. *Oxid. Med. Cell. Longev.* 2023: 5012474.

RESEARCH USE

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