

PECAM-1 (E-8): sc-133091

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.

SOURCE

PECAM-1 (E-8) is a mouse monoclonal antibody raised against amino acids 28-327 mapping at the N-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.

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 (E-8) is recommended for detection of PECAM-1 of 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 shRNA Plasmid (h): sc-29445-SH and PECAM-1 shRNA (h) Lentiviral Particles: sc-29445-V.

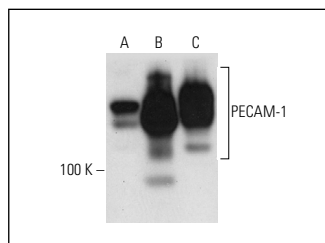
Molecular Weight of PECAM-1: 130 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, THP-1 cell lysate: sc-2238 or K-562 whole cell lysate: sc-2203.

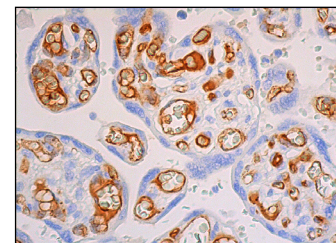
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PECAM-1 (E-8): sc-133091. Western blot analysis of PECAM-1 expression in Jurkat (A), human PBL (B) and THP-1 (C) whole cell lysates.



PECAM-1 (E-8): sc-133091. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane staining of endothelial cells.

SELECT PRODUCT CITATIONS

- Seidlits, S.K., et al. 2011. Fibronectin-hyaluronic acid composite hydrogels for three-dimensional endothelial cell culture. *Acta Biomater.* 7: 2401-2409.
- Zhang, N., et al. 2013. Suppression of renal cell carcinoma growth *in vivo* by forced expression of vascular endothelial growth inhibitor. *Int. J. Oncol.* 42: 1664-1673.
- Lander, H.M., et al. 2014. Endothelial cell permeability and adherens junction disruption induced by junin virus infection. *Am. J. Trop. Med. Hyg.* 90: 993-1002.
- Li, Y., et al. 2015. Preeclampsia does not alter vascular growth and expression of CD31 and vascular endothelial cadherin in human placentas. *J. Histochem. Cytochem.* 63: 22-31.
- Pettinato, G., et al. 2019. Generation of fully functional hepatocyte-like organoids from human induced pluripotent stem cells mixed with endothelial cells. *Sci. Rep.* 9: 8920.

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.