SANTA CRUZ BIOTECHNOLOGY, INC.

PECAM-1 (MEC 13.3): sc-18916

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 B2α1 and B2αM 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 u origin. International journal of cancer. Int. J. Cancer 54: 772-777.
2. Cowen, M.A. and Green, M. 1993. The Kallmann's syndrome variant (KSV) model of the schizophrenias. Schizophr. Res. 9: 1-10.

CHROMOSOMAL LOCATION

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

SOURCE

PECAM-1 (MEC 13.3) is a rat monoclonal antibody raised against 129/Sv mouse derived endothelioma cell line tEnd.1.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for *in vitro* and *in vivo* blocking of adhesion, sc-18916 L, 200 µg/0.1 ml.

PECAM-1 (MEC 13.3) is available conjugated to agarose (sc-18916 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-18916 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-18916 PE), fluorescein (sc-18916 FITC), Alexa Fluor® 488 (sc-18916 AF488), Alexa Fluor® 546 (sc-18916 AF546), Alexa Fluor® 594 (sc-18916 AF594) or Alexa Fluor® 647 (sc-18916 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-18916 AF680) or Alexa Fluor® 790 (sc-18916 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

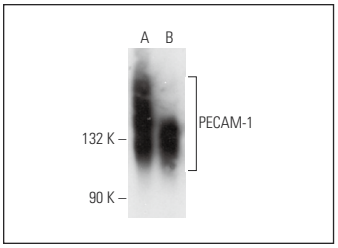
PECAM-1 (MEC 13.3) is recommended for detection of PECAM-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 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.

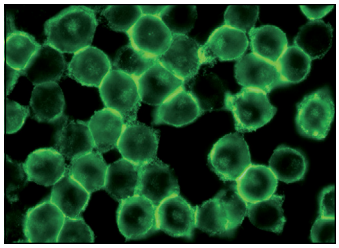
Molecular Weight of PECAM-1: 130 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242, WEHI-3 cell lysate: sc-3815 or mouse PBL whole cell lysate.

DATA



PECAM-1 (MEC 13.3): sc-18916. Western blot analysis of PECAM-1 expression in mouse PBL (**A**) and CTLL-2 (**B**) whole cell lysates under non-reducing conditions.



PECAM-1 (MEC 13.3): sc-18916. Immunofluorescence staining of methanol-fixed WEHI-3 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Volpert, O.V., et al. 2002. Id1 regulates angiogenesis through transcriptional repression of Thrombospondin 1. Cancer Cell 2: 473-483.
2. Biedermann, S.V., et al. 2016. The hippocampus and exercise: histological correlates of MR-detected volume changes. Brain Struct. Funct. 221: 1353-1363.
3. Nandi, P., et al. 2017. PGE2 promotes breast cancer-associated lymphangiogenesis by activation of EP4 receptor on lymphatic endothelial cells. BMC Cancer 17: 11.
4. Kuwahara, H., et al. 2018. Modulation of blood-brain barrier function by a heteroduplex oligonucleotide *in vivo*. Sci. Rep. 8: 4377.
5. Sun, C., et al. 2019. Purple sweet potato color attenuated NLRP3 inflammasome by inducing autophagy to delay endothelial senescence. J. Cell. Physiol. 234: 5926-5939.
6. SuB, P., et al. 2020. Chronic peripheral inflammation causes a region-specific myeloid response in the central nervous system. Cell Rep. 30: 4082-4095.e6.

RESEARCH USE

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