SANTA CRUZ BIOTECHNOLOGY, INC.

PECAM-1 (0.N.100): sc-71872

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 β2/α1 and β2/αM 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 (0.N.100) is a mouse monoclonal antibody raised against spleen of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PECAM-1 (0.N.100) is available conjugated to either phycoerythrin (sc-71872 PE) or fluorescein (sc-71872 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

PECAM-1 (0.N.100) is recommended for detection of PECAM-1 of 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), immunohistochemistry (including paraffin-embedded sections) (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 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, K-562 whole cell lysate: sc-2203 or THP-1 cell lysate: sc-2238.

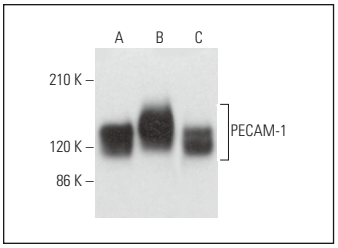
STORAGE

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

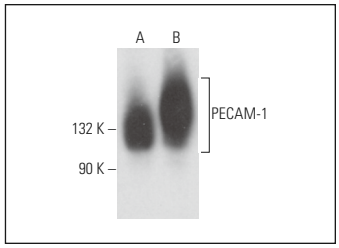
RESEARCH USE

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

DATA



PECAM-1 (0.N.100): sc-71872. Western blot analysis of PECAM-1 expression in Jurkat (**A**), THP-1 (**B**) and Jurkat (**C**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



PECAM-1 (0.N.100): sc-71872. Western blot analysis of PECAM-1 expression in Jurkat (**A**) and THP-1 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Van Handel, B., et al. 2010. The first trimester human placenta is a site for terminal maturation of primitive erythroid cells. Blood 116: 3321-3330.
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3. Duan, B., et al. 2017. HDAC10 promotes angiogenesis in endothelial cells through the PTPN22/ERK axis. Oncotarget 8: 61338-61349.
4. Lv, Q., et al. 2018. Interleukin-17A and heparanase promote angiogenesis and cell proliferation and invasion in cervical cancer. Int. J. Oncol. 53: 1809-1817.
5. Maniati, E., et al. 2020. Mouse ovarian cancer models recapitulate the human tumor microenvironment and patient response to treatment. Cell Rep. 30: 525-540.
6. Gómez-Ferrer, M., et al. 2021. HIF-overexpression and pro-inflammatory priming in human mesenchymal stromal cells improves the healing properties of extracellular vesicles in experimental Crohn's disease. Int. J. Mol. Sci. 22: 11269.
7. Daum, R., et al. 2021. Fibronectin adsorption on oxygen plasma-treated polyurethane surfaces modulates endothelial cell response. J. Mater. Chem. B 9: 1647-1660.
8. Kamaraj, M., et al. 2022. Bioengineering strategies for 3D bioprinting of tubular construct using tissue-specific decellularized extracellular matrix. Int. J. Biol. Macromol. 223: 1405-1419.
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