SANTA CRUZ BIOTECHNOLOGY, INC.

PECAM-1 (RM0032-1D12): sc-101454

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.

REFERENCES

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2. Cowen, M.A. and Green, M. 1993. The Kallmann's syndrome variant (KSV) model of the schizophrenias. Schizophr. Res. 9: 1-10.
3. Buck, C.A., et al. 1993. Cell adhesion receptors and early mammalian heart development: an overview. C. R. Acad. Sci. III 316: 838-859.
4. DeLisser, H.M., et al. 1993. Platelet endothelial cell adhesion molecule (CD31). Curr. Top. Microbiol. Immunol. 184: 37-45.

CHROMOSOMAL LOCATION

Genetic locus: Pecam1 (mouse) mapping to 11 E1.

SOURCE

PECAM-1 (RM0032-1D12) is a rat monoclonal antibody raised against endothelial membrane protein of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PECAM-1 (RM0032-1D12) is recommended for detection of PECAM-1 of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

Molecular Weight of PECAM-1: 130 kDa.

STORAGE

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

SELECT PRODUCT CITATIONS

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4. García-Quiroz, J., et al. 2014. Calcitriol reduces thrombospondin-1 and increases vascular endothelial growth factor in breast cancer cells: implications for tumor angiogenesis. J. Steroid Biochem. Mol. Biol. 144A: 215-222.
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6. Kowalewska, P.M., et al. 2016. Syndecan-1 (CD138) deficiency increases *Staphylococcus aureus* infection but has no effect on pathology in a mouse model of peritoneal dialysis. J. Biomed. Sci. 23: 20.
7. Konrad, F.M., et al. 2019. How adhesion molecule patterns change while neutrophils traffic through the lung during inflammation. Mediators Inflamm. 2019: 1208086.
8. McLaughlin, S., et al. 2019. Injectable human recombinant collagen matrices limit adverse remodeling and improve cardiac function after myocardial infarction. Nat. Commun. 10: 4866.
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11. Yu, L., et al. 2022. Combination of apatinib with apo-IDO1 inhibitor for the treatment of colorectal cancer. Int. Immunopharmacol. 112: 109233.
12. Xu, M., et al. 2024. Evaluation of renal microhemodynamics heterogeneity in different strains and sexes of mice. Lab. Invest. 104: 102087.

RESEARCH USE

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