

PECAM-1 (10G9): sc-13537

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 B2/α1 and B2/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 (10G9) is a mouse monoclonal antibody raised against full length PECAM-1 of human origin.

PRODUCT

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

PECAM-1 (10G9) is available conjugated to agarose (sc-13537 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13537 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13537 PE), fluorescein (sc-13537 FITC), Alexa Fluor® 488 (sc-13537 AF488), Alexa Fluor® 546 (sc-13537 AF546), Alexa Fluor® 594 (sc-13537 AF594) or Alexa Fluor® 647 (sc-13537 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13537 AF680) or Alexa Fluor® 790 (sc-13537 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PECAM-1 (10G9) is recommended for detection of PECAM-1 of human origin by 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

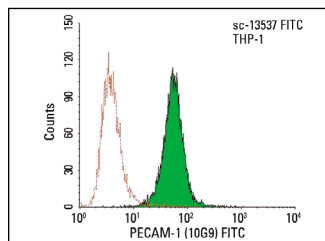
Suitable for use as control antibody for PECAM-1 siRNA (h): sc-29445, PECAM-1 shRNA Plasmid (h): sc-29445-SH and PECAM-1 shRNA (h) Lentiviral Particles: sc-29445-V.

Molecular Weight of PECAM-1: 130 kDa.

STORAGE

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

DATA



PECAM-1 (10G9) FITC: sc-13537 FITC. FCM analysis of THP-1 cells. Black line histogram represents the isotype control, normal mouse IgG₁-FITC: sc-2855.

SELECT PRODUCT CITATIONS

1. Barringhaus, K.G., et al. 2004. α4β1 integrin (VLA-4) blockade attenuates both early and late leukocyte recruitment and neointimal growth following carotid injury in apolipoprotein E^{-/-} mice. *J. Vasc. Res.* 41: 252-260.
2. Li, H., et al. 2012. The characteristic expression of B7-associated proteins in Langerhans cell sarcoma. *Acta Histochem.* 114: 733-743.
3. Zhang, J.C., et al. 2014. Bone marrow mesenchymal stem cells overexpressing human basic fibroblast growth factor increase vasculogenesis in ischemic rats. *Braz. J. Med. Biol. Res.* 47: 886-894.
4. Horváth, L., et al. 2015. Engineering an *in vitro* air-blood barrier by 3D bioprinting. *Sci. Rep.* 5: 7974.
5. Li, B., et al. 2017. TGF-β2-induced ANGPTL4 expression promotes tumor progression and osteoclast differentiation in giant cell tumor of bone. *Oncotarget* 8: 54966-54977.
6. Ye, L., et al. 2018. Truncations of the titin Z-disc predispose to a heart failure with preserved ejection phenotype in the context of pressure overload. *PLoS ONE* 13: e0201498.
7. Chung, J., et al. 2019. Coxsackievirus and adenovirus receptor mediates the responses of endothelial cells to fluid shear stress. *Exp. Mol. Med.* 51: 144.
8. Qin, S.H., et al. 2020. Resveratrol promotes tumor microvessel growth via endoglin and extracellular signal-regulated kinase signaling pathway and enhances the anticancer efficacy of gemcitabine against lung cancer. *Cancers* 12: 974.
9. Feng, X., et al. 2021. Transplantation of encapsulated human Leydig-like cells: a novel option for the treatment of testosterone deficiency. *Mol. Cell. Endocrinol.* 519: 111039.

RESEARCH USE

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