

# PECAM-1 (JC70): sc-53411

## 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  $\beta 2/\alpha 1$  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 (JC70) is a mouse monoclonal antibody raised against spleen of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PECAM-1 (JC70) is available conjugated to agarose (sc-53411 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53411 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53411 PE), fluorescein (sc-53411 FITC), Alexa Fluor® 488 (sc-53411 AF488), Alexa Fluor® 546 (sc-53411 AF546), Alexa Fluor® 594 (sc-53411 AF594) or Alexa Fluor® 647 (sc-53411 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53411 AF680) or Alexa Fluor® 790 (sc-53411 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

PECAM-1 (JC70) 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  $\mu$ g per 100-500  $\mu$ 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 flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

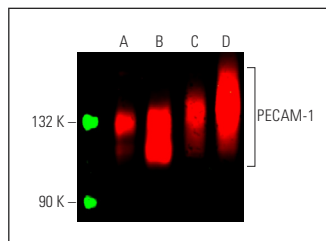
Suitable for use as control antibody for PECAM-1 siRNA (h): sc-29445, PECAM-1 shRNA Plasmid (h): sc-29445-SH and PECAM-1 shRNA (h) Lentiviral Particles: sc-29445-V.

Molecular Weight of PECAM-1: 130 kDa.

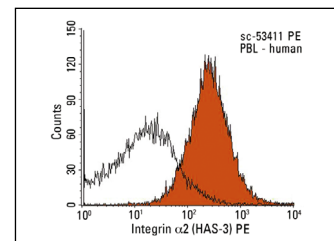
## STORAGE

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

## DATA



PECAM-1 (JC70) Alexa Fluor® 790: sc-53411 AF790. Direct near-infrared western blot analysis of PECAM-1 expression in CCRF-CEM (A), HUV-EC-C (B), HEL 92.1.7 (C) and THP-1 (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 680: sc-516730.



PECAM-1 (JC70) PE: sc-53411 PE. Indirect FCM analysis of human peripheral blood leukocytes stained with PECAM-1 (JC70), followed by PE-conjugated goat anti-mouse IgG<sub>1</sub>-PE: sc-3764. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>: sc-3877.

## SELECT PRODUCT CITATIONS

- Thebaud, N.B., et al. 2010. Human progenitor-derived endothelial cells vs. venous endothelial cells for vascular tissue engineering: an *in vitro* study. *J. Tissue Eng. Regen. Med.* 4: 473-484.
- Mackay, L.S., et al. 2013. Isolation and characterisation of human pulmonary microvascular endothelial cells from patients with severe emphysema. *Respir Res.* 14: 23.
- Dogan, A., et al. 2014. *In vitro* differentiation of human tooth germ stem cells into endothelial- and epithelial-like cells. *Cell Biol. Int.* 39: 94-103.
- Liang, H., et al. 2015. A collagen-binding EGFR single-chain Fv antibody fragment for the targeted cancer therapy. *J. Control. Release* 209: 101-109.
- Liang, H., et al. 2016. A collagen-binding EGFR antibody fragment targeting tumors with a collagen-rich extracellular matrix. *Sci. Rep.* 6: 18205.
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- Briand, N., et al. 2018. The lipodystrophic hotspot Lamin A p.R482W mutation deregulates the mesodermal inducer T/brachyury and early vascular differentiation gene networks. *Hum. Mol. Genet.* 27: 1447-1459.
- Cornett, A., et al. 2019. Serial patient-derived orthotopic xenografting of adenoid cystic carcinomas recapitulates stable expression of phenotypic alterations and innervation. *EBioMedicine* 41: 175-184.
- Horwath, O., et al. 2020. Fiber type-specific hypertrophy and increased capillarization in skeletal muscle following testosterone administration in young women. *J. Appl. Physiol.* 128: 1240-1250.

## RESEARCH USE

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