SANTA CRUZ BIOTECHNOLOGY, INC.

PECAM-1 (D-11): sc-46694

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 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 (mouse) mapping to 11 E1.

SOURCE

PECAM-1 (D-11) is a mouse monoclonal antibody raised aginst amino acids 376-560 of PECAM-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PECAM-1 (D-11) is available conjugated to agarose (sc-46694 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-46694 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46694 PE), fluorescein (sc-46694 FITC), Alexa Fluor® 488 (sc-46694 AF488), Alexa Fluor® 546 (sc-46694 AF546), Alexa Fluor® 594 (sc-46694 AF594) or Alexa Fluor® 647 (sc-46694 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46694 AF680) or Alexa Fluor® 790 (sc-46694 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PECAM-1 (D-11) is recommended for detection of PECAM-1 of mouse and rat origin by Western Blotting (starting dilution 1:1000, dilution range 1:1000-1:10000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

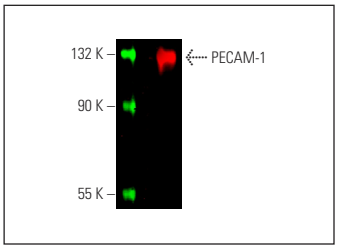
Suitable for use as control antibody for PECAM-1 siRNA (m): sc-29446, PECAM-1 siRNA (r): sc-270626, PECAM-1 shRNA Plasmid (m): sc-29446-SH, PECAM-1 shRNA Plasmid (r): sc-270626-SH, PECAM-1 shRNA (m) Lentiviral Particles: sc-29446-V and PECAM-1 shRNA (r) Lentiviral Particles: sc-270626-V.

Molecular Weight of PECAM-1: 130 kDa.

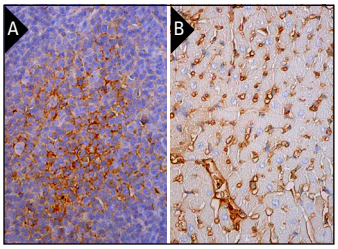
STORAGE

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

DATA



PECAM-1 (D-11) Alexa Fluor® 790: sc-46694 AF790. Direct near-infrared western blot analysis of PECAM-1 expression in CTLL-2 whole cell lysate. 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 (D-11): sc-46694. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat spleen tissue showing membrane staining of cells in white pulp (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat heart muscle tissue showing membrane staining of endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Wu, Y.J., et al. 2009. Cyclophosphamide enhances human tumor growth in nude rat xenografted tumor models. Neoplasia 11: 187-195.
2. Rossini, A., et al. 2012. Surveillance of spontaneous breast cancer metastasis by TRAIL-expressing $CD34^+$ cells in a xenograft model. Breast Cancer Res. Treat. 136: 457-467.
3. Perez-de-Puig, I., et al. 2015. Neutrophil recruitment to the brain in mouse and human ischemic stroke. Acta Neuropathol. 129: 239-257.
4. Singla, D. and Wang, J. 2016. Fibroblast growth factor-9 activates c-Kit progenitor cells and enhances angiogenesis in the infarcted diabetic heart. Oxid. Med. Cell. Longev. 2016: 5810908.
5. Favre, S., et al. 2017. Sildenafil attenuates hypoxic pulmonary remodelling by inhibiting bone marrow progenitor cells. J. Cell. Mol. Med. 21: 871-880.
6. Li, C., et al. 2018. The three branches of the unfolded protein response exhibit differential significance in breast cancer growth and stemness. Exp. Cell Res. 367: 170-185.
7. Belli, R., et al. 2019. Metabolic reprogramming promotes myogenesis during aging. Front. Physiol. 10: 897.
8. Lee, M., et al. 2019. Loss of microRNA-23-27-24 clusters in skeletal muscle is not influential in skeletal muscle development and exercise-induced muscle adaptation. Sci. Rep. 9: 1092.
9. Li, C., et al. 2021. p97/VCP is highly expressed in the stem-like cells of breast cancer and controls cancer stemness partly through the unfolded protein response. Cell Death Dis. 12: 286.

RESEARCH USE

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

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