SANTA CRUZ BIOTECHNOLOGY, INC.

PECAM-1 (H-300): sc-8306

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 B2α1 and B2αM 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 (H-300) is a rabbit polyclonal antibody raised against amino acids 28-327 mapping at the N-terminus of PECAM-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PECAM-1 (H-300) 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 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.

Positive Controls: Jurkat whole cell lysate: sc-2204, THP-1 cell lysate: sc-2238 or AML-193 whole cell lysate: sc-364182.

RESEARCH USE

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

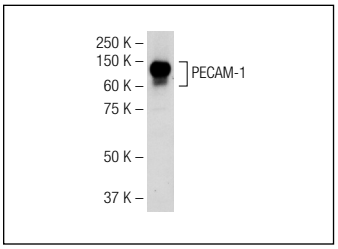
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

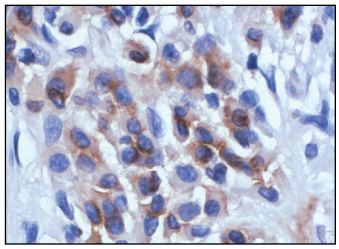
STORAGE

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

DATA



PECAM-1 (H-300): sc-8306. Western blot analysis of PECAM-1 expression in AML-193 whole cell lysate.



PECAM-1 (H-300): sc-8306. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tumor showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Griffiths, J.R., et al. 2002. Metabolic changes detected by *in vivo* magnetic resonance studies of HEPA-1 wild-type tumors and tumors deficient in hypoxia-inducible factor-1β (HIF-1β): evidence of an anabolic role for the HIF-1 pathway. Cancer Res. 62: 688-695.
2. Ling, Y., et al. 2007. Endostar, a novel recombinant human endostatin, exerts antiangiogenic effect via blocking VEGF-induced tyrosine phosphorylation of KDR/Flk-1 of endothelial cells. Biochem. Biophys. Res. Commun. 361: 79-84.
3. Fernandez, M., et al. 2007. Reversal of portal hypertension and hyperdynamic splanchnic circulation by combined vascular endothelial growth factor and platelet-derived growth factor blockade in rats. Hepatology 46: 1208-1217.
4. Lu, N., et al. 2008. Wogonin suppresses tumor growth *in vivo* and VEGF-induced angiogenesis through inhibiting tyrosine phosphorylation of VEGFR2. Life Sci. 82: 956-963.
5. Ezhilarasan, R., et al. 2009. The hemopexin domain of MMP-9 inhibits angiogenesis and retards the growth of intracranial glioblastoma xenograft in nude mice. Int. J. Cancer 124: 306-315.
6. Nakahara, M., et al. 2009. High-efficiency production of subculturable vascular endothelial cells from feeder-free human embryonic stem cells without cell-sorting technique. Cloning Stem Cells 11: 509-522.
7. Wu, G.J., et al. 2011. Enforced expression of METCAM/MUC18 increases tumorigenesis of human prostate cancer LNCaP cells in nude mice. J. Urol. 185: 1504-1512.