SANTA CRUZ BIOTECHNOLOGY, INC.

VE-cadherin (H-72): sc-28644

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The cadherins are a family of Ca^{2+}-dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of tissue structure and morphogenesis. Cadherins each contain a large extracellular domain at the amino-terminus, which is characterized by a series of five homologous repeats, the most distal of which is thought to be responsible for binding specificity. The relatively short carboxy-terminal, intracellular domain interacts with a variety of cytoplasmic proteins, including β-catenin, to regulate cadherin function. VE-cadherin (for vascular endothelial cadherin, also designated cadherin-5) is localized at intercellular junctions of endothelial cells, where it is thought to play a role in the cohesion and organization of intercellular junctions.

REFERENCES

1. Takeichi, M. 1988. The cadherins: cell-cell adhesion molecules controlling animal morphogenesis. Development 102: 639-655.
2. Hatta, M., et al. 1991. Genomic organization and chromosomal mapping of the mouse P-cadherin gene. Nucleic Acids Res. 19: 4437-4441.

CHROMOSOMAL LOCATION

Genetic locus: CDH5 (human) mapping to 16q21; Cdh5 (mouse) mapping to 8 D3.

SOURCE

VE-cadherin (H-72) is a rabbit polyclonal antibody raised against amino acids 651-722 mapping within a C-terminal cytoplasmic domain of VE-cadherin 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

VE-cadherin (H-72) is recommended for detection of VE-cadherin of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VE-cadherin (H-72) is also recommended for detection of VE-cadherin in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for VE-cadherin siRNA (h): sc-36814, VE-cadherin siRNA (m): sc-36813, VE-cadherin shRNA Plasmid (h): sc-36814-SH, VE-cadherin shRNA Plasmid (m): sc-36813-SH, VE-cadherin shRNA (h) Lentiviral Particles: sc-36814-V and VE-cadherin shRNA (m) Lentiviral Particles: sc-36813-V.

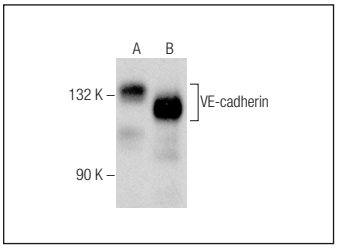
Molecular Weight of VE-cadherin: 130 kDa.

Positive Controls: human lung extract: sc-363767, rat placenta tissue extract: sc-364808 or mouse placenta extract: sc-364247.

STORAGE

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

DATA



VE-cadherin (H-72): sc-28644. Western blot analysis of VE-cadherin expression in human lung (**A**) and mouse placenta (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Takenaga, M., et al. 2007. Regulated Nodal signaling promotes differentiation of the definitive endoderm and mesoderm from ES cells. J. Cell Sci. 120: 2078-2090.
2. Tolstanova, G., et al. 2009. Neutralizing anti-vascular endothelial growth factor (VEGF) antibody reduces severity of experimental ulcerative colitis in rats: direct evidence for the pathogenic role of VEGF. J. Pharmacol. Exp. Ther. 328: 749-757.
3. Cowan, C.E., et al. 2010. Krüppel-like factor-4 transcriptionally regulates VE-cadherin expression and endothelial barrier function. Circ. Res. 107: 959-966.
4. Yu, D.H., et al. 2010. Peptide-conjugated biodegradable nanoparticles as a carrier to target paclitaxel to tumor neovasculature. Biomaterials 31: 2278-2292.
5. Adam, A.P., et al. 2010. Src-induced tyrosine phosphorylation of VE-cadherin is not sufficient to decrease barrier function of endothelial monolayers. J. Biol. Chem. 285: 7045-7055.
6. Cao, H.J., et al. 2015. Src blockage by siRNA inhibits VEGF-induced vascular hyperpemeability and osteoclast activity—an *in vitro* mechanism study for preventing destructive repair of osteonecrosis. Bone 74: 58-68.

RESEARCH USE

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