SANTA CRUZ BIOTECHNOLOGY, INC.

VE-cadherin (F-8): sc-9989

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.
3. Koch, P.J., et al. 1994. Desmosomal cadherins: another growing multigene family of adhesion molecules. Curr. Opin. Cell Biol. 6: 682-687.

CHROMOSOMAL LOCATION

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

SOURCE

VE-cadherin (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 760-784 at the C-terminus of VE-cadherin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VE-cadherin (F-8) is available conjugated to agarose (sc-9989 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-9989 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9989 PE), fluorescein (sc-9989 FITC), Alexa Fluor® 488 (sc-9989 AF488), Alexa Fluor® 546 (sc-9989 AF546), Alexa Fluor® 594 (sc-9989 AF594) or Alexa Fluor® 647 (sc-9989 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-9989 AF680) or Alexa Fluor® 790 (sc-9989 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-9989 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

VE-cadherin (F-8) 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

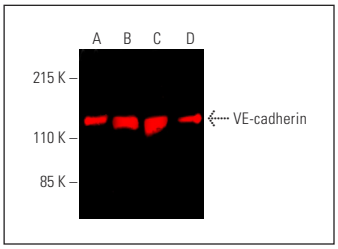
VE-cadherin (F-8) is also recommended for detection of VE-cadherin in additional species, including porcine.

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.

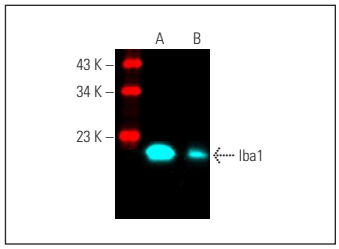
Molecular Weight of VE-cadherin: 130 kDa.

Positive Controls: human placenta extract: sc-363772, HUV-EC-C whole cell lysate: sc-364180 or human heart extract: sc-363763.

DATA



VE-cadherin (F-8) Alexa Fluor® 790: sc-9989 AF790. Direct near-infrared western blot analysis of VE-cadherin expression in HUV-EC-C whole cell lysate (**A**) and human lung (**B**), human heart (**C**) and human placenta (**D**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Iba1 (1022-5) Alexa Fluor® 647: sc-32725 AF647. Direct fluorescent western blot analysis of Iba1 expression in mouse PBL (**A**) and rat PBL (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 790: sc-516731.

SELECT PRODUCT CITATIONS

1. Li, J.M., et al. 2001. Phenotypic properties and characteristics of superoxide production by mouse coronary microvascular endothelial cells. J. Mol. Cell. Cardiol. 40: 1119-1131.
2. Zhang, N., et al. 2021. Actin-binding protein, IQGAP1, regulates LPS-induced RPMVECs hyperpermeability and ICAM-1 upregulation via Rap1/Src signalling pathway. Cell. Signal. 85: 110067.
3. Han, H., et al. 2022. RNA-binding motif 4 promotes angiogenesis in HCC by selectively activating VEGF-A expression. Pharmacol. Res. 187: 106593.
4. Sveeggen, T.M., et al. 2023. Annexin A2 modulates phospholipid membrane composition upstream of Arp2 to control angiogenic sprout initiation. FASEB J. 37: e22715.

RESEARCH USE

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