SANTA CRUZ BIOTECHNOLOGY, INC.

VE-cadherin-2 (F-4): sc-515467

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-caderhin-2, also known as PCDH12 (protocadherin 12), VECAD2 or PCDH12, is a 1,184 amino acid single-pass type I membrane protein that is highly expressed in vascularized tissues, including heart and placenta. VE-caderhin-2 may play an important role in cell-cell interactions and may promote homotypic calcium-dependent aggregation and adhesion at intercellular junctions.

REFERENCES

1. Telo, P., et al. 1998. Identification of a novel cadherin (vascular endothelial cadherin-2) located at intercellular junctions in endothelial cells. J. Biol. Chem. 273: 17565-17572.
2. Ludwig, D., et al. 2000. cDNA cloning, chromosomal mapping, and expression analysis of human VE-Cadherin-2. Mamm. Genome 11: 1030-1033.
3. Rampon, C., et al. 2005. Protocadherin 12 (VE-cadherin 2) is expressed in endothelial, trophoblast, and mesangial cells. Exp. Cell Res. 302: 48-60.
4. Cavallaro, U., et al. 2006. Endothelial cadherins and tumor angiogenesis. Exp. Cell Res. 312: 659-667.
5. Bouillot, S., et al. 2006. Tracing the glycogen cells with protocadherin 12 during mouse placenta development. Placenta 27: 882-888.

CHROMOSOMAL LOCATION

Genetic locus: PCDH12 (human) mapping to 5q31.3; Pcdh12 (mouse) mapping to 18 B3.

SOURCE

VE-cadherin-2 (F-4) is a mouse monoclonal antibody raised against amino acids 452-593 mapping within an internal region of VE-cadherin-2 of mouse 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-2 (F-4) is available conjugated to agarose (sc-515467 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515467 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515467 PE), fluorescein (sc-515467 FITC), Alexa Fluor® 488 (sc-515467 AF488), Alexa Fluor® 546 (sc-515467 AF546), Alexa Fluor® 594 (sc-515467 AF594) or Alexa Fluor® 647 (sc-515467 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515467 AF680) or Alexa Fluor® 790 (sc-515467 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

VE-cadherin-2 (F-4) is recommended for detection of VE-cadherin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for VE-cadherin-2 siRNA (h): sc-76896, VE-cadherin-2 siRNA (m): sc-76897, VE-cadherin-2 shRNA Plasmid (h): sc-76896-SH, VE-cadherin-2 shRNA Plasmid (m): sc-76897-SH, VE-cadherin-2 shRNA (h) Lentiviral Particles: sc-76896-V and VE-cadherin-2 shRNA (m) Lentiviral Particles: sc-76897-V.

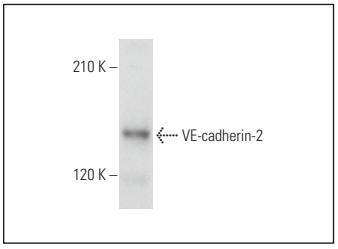
Molecular Weight of VE-cadherin-2: 150 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



VE-cadherin-2 (F-4): sc-515467. Western blot analysis of VE-cadherin-2 expression in mouse brain tissue extract.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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