SANTA CRUZ BIOTECHNOLOGY, INC.

P-cadherin (D-6): sc-514481

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cadherins comprise a family of Ca^{2+}-dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of tissue structure and morphogenesis. The classical cadherins, E-, N- and P-cadherin, consist of large extracellular domains characterized by a series of five homologous NH_2 terminal repeats. The most distal of these cadherins is thought to be responsible for binding specificity, transmembrane domains and carboxy-terminal intracellular domains. The relatively short intracellular domains interact with a variety of cytoplasmic proteins, such as β-catenin, to regulate cadherin function. Members of this family of adhesion proteins include rat cadherin K (and its human homolog, cadherin-6), R-cadherin, B-cadherin, E/P cadherin and cadherin-5.

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.
4. Ranscht, B. 1994. Cadherins and catenins: interactions and functions in embryonic development. Curr. Opin. Cell Biol. 6: 740-746.

CHROMOSOMAL LOCATION

Genetic locus: CDH3 (human) mapping to 16q22.1; Cdh3 (mouse) mapping to 8 D3.

SOURCE

P-cadherin (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 607-630 within an extracellular domain of P-cadherin of human origin.

PRODUCT

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

P-cadherin (D-6) is available conjugated to agarose (sc-514481 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514481 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514481 PE), fluorescein (sc-514481 FITC), Alexa Fluor® 488 (sc-514481 AF488), Alexa Fluor® 546 (sc-514481 AF546), Alexa Fluor® 594 (sc-514481 AF594) or Alexa Fluor® 647 (sc-514481 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514481 AF680) or Alexa Fluor® 790 (sc-514481 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514481 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

P-cadherin (D-6) is recommended for detection of P-cadherin 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 P-cadherin siRNA (h): sc-29420, P-cadherin siRNA (m): sc-36135, P-cadherin shRNA Plasmid (h): sc-29420-SH, P-cadherin shRNA Plasmid (m): sc-36135-SH, P-cadherin shRNA (h) Lentiviral Particles: sc-29420-V and P-cadherin shRNA (m) Lentiviral Particles: sc-36135-V.

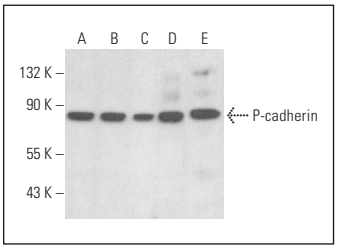
Molecular Weight of P-cadherin: 118 kDa.

Positive Controls: P-cadherin (h2): 293T Lysate: sc-177672, K-562 whole cell lysate: sc-2203 or A-431 whole cell lysate: sc-2201.

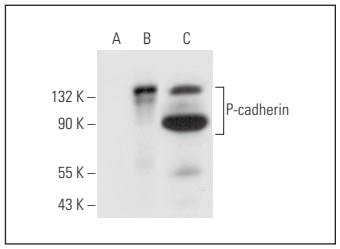
RECOMMENDED SUPPORT REAGENTS

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



P-cadherin (D-6): sc-514481. Western blot analysis of P-cadherin expression in MES-SA/Dx5 (**A**), K-562 (**B**), Hep G2 (**C**), SCC-4 (**D**) and A-431 (**E**) whole cell lysates.



P-cadherin (D-6): sc-514481. Western blot analysis of P-cadherin expression in non-transfected 293T: sc-117752 (**A**), human P-cadherin transfected 293T: sc-177672 (**B**) and A-431 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Urushima, H., et al. 2021. Activation of hepatic stellate cells requires dissociation of E-cadherin-containing adherens junctions with hepatocytes. Am. J. Pathol. 191: 438-453.

STORAGE

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