SANTA CRUZ BIOTECHNOLOGY, INC.

pan-cadherin (E-11): sc-515872

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.

SOURCE

pan-cadherin (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 804-829 within a C-terminal cytoplasmic domain of cadherin of human origin.

PRODUCT

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

pan-cadherin (E-11) is available conjugated to agarose (sc-515872 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515872 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515872 PE), fluorescein (sc-515872 FITC), Alexa Fluor® 488 (sc-515872 AF488), Alexa Fluor® 546 (sc-515872 AF546), Alexa Fluor® 594 (sc-515872 AF594) or Alexa Fluor® 647 (sc-515872 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515872 AF680) or Alexa Fluor® 790 (sc-515872 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

pan-cadherin (E-11) is recommended for detection of P-cadherin, N-cadherin, E-cadherin, K-cadherin, M-cadherin and R-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).

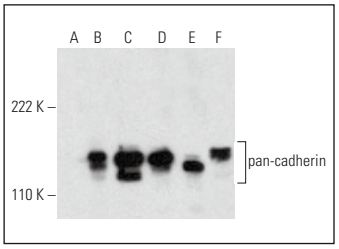
Molecular Weight of pan-cadherin: 120 kDa.

Positive Controls: P-cadherin (h2): 293T Lysate: sc-177672, F9 cell lysate: sc-2245 or mouse brain extract: sc-2253.

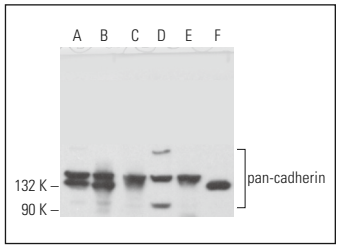
RECOMMENDED SUPPORT REAGENTS

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



pan-cadherin (E-11): sc-515872. Western blot analysis of pan-cadherin expression in non-transfected 293T: sc-117752 (**A**), human P-cadherin transfected 293T: sc-177672 (**B**), LNCaP (**C**) and F9 (**D**) whole cell lysates and mouse brain (**E**) and human testis (**F**) tissue extracts.



pan-cadherin (E-11): sc-515872. Western blot analysis of pan-cadherin expression in F9 (**A**), A-431 (**B**), MCF7 (**C**), Neuro-2A (**D**) and C6 (**E**) whole cell lysates and human colon tissue extract (**F**).

SELECT PRODUCT CITATIONS

1. Awadia, S., et al. 2019. SGEF forms a complex with Scribble and Dlg1 and regulates epithelial junctions and contractility. J. Cell Biol. 218: 2699-2725.
2. Staehlke, S., et al. 2020. ROS dependent Wnt/β-catenin pathway and its regulation on defined micro-pillars-A combined *in vitro* and in silico study. Cells 9: 1784.
3. Yang, H., et al. 2021. Divergent regulation of OCT and MATE drug transporters by cadmium exposure. Pharmaceutics 13: 537.
4. Kim, D.G., et al. 2022. AIMP2-DX2 provides therapeutic interface to control KRAS-driven tumorigenesis. Nat. Commun. 13: 2572.
5. Yoon, I., et al. 2023. EPRS1 controls the TGF-β signaling pathway via interaction with TβRI in hepatic stellate cell. Mol. Cell. Biol. 43: 223-240.

STORAGE

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

PROTOCOLS

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