SANTA CRUZ BIOTECHNOLOGY, INC.

E-cadherin (67A4): sc-21791

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. 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. 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.

CHROMOSOMAL LOCATION

Genetic locus: CDH1 (human) mapping to 16q22.1.

SOURCE

E-cadherin (67A4) is a mouse monoclonal antibody raised against human breast carcinoma cell line T471.

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.

E-cadherin (67A4) is available conjugated to agarose (sc-21791 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-21791 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-21791 PE), fluorescein (sc-21791 FITC), Alexa Fluor® 488 (sc-21791 AF488), Alexa Fluor® 546 (sc-21791 AF546), Alexa Fluor® 594 (sc-21791 AF594) or Alexa Fluor® 647 (sc-21791 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-21791 AF680) or Alexa Fluor® 790 (sc-21791 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

E-cadherin (67A4) is recommended for detection of E-cadherin of 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for E-cadherin siRNA (h): sc-35242, E-cadherin shRNA Plasmid (h): sc-35242-SH and E-cadherin shRNA (h) Lentiviral Particles: sc-35242-V.

Molecular Weight of mature E-cadherin: 120/80 kDa.

Molecular Weight of E-cadherin precursor: 135 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, LNCaP cell lysate: sc-2231 or Caco-2 cell lysate: sc-2262.

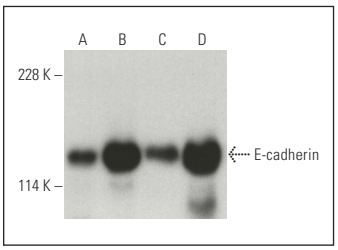
RESEARCH USE

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

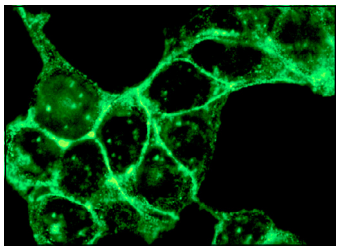
STORAGE

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

DATA



E-cadherin (67A4) HRP: sc-21791 HRP. Direct western blot analysis of E-cadherin expression in A-431 (**A**), LNCaP (**B**), PC-3 (**C**) and Caco-2 (**D**) whole cell lysates.



E-cadherin (67A4): sc-21791. Immunofluorescence staining of methanol-fixed MCF7 cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Trautmann, A., et al. 2001. The differential fate of cadherins during T-cell-induced keratinocyte apoptosis leads to spongiosis in eczematous dermatitis. J. Invest. Dermatol. 117: 927-934.
2. Hurtado-Alvarado, G., et al. 2016. A_{2A} adenosine receptor antagonism reverts the blood-brain barrier dysfunction induced by sleep restriction. PLoS ONE 11: e0167236.
3. Li, J., et al. 2017. The four-transmembrane protein MAL2 and tumor protein D52 (TPD52) are highly expressed in colorectal cancer and correlated with poor prognosis. PLoS ONE 12: e0178515.
4. Wang, H., et al. 2018. Invasiveness-triggered state transition in malignant melanoma cells. J. Cell. Physiol. 234: 5354-5361.
5. Rivero, S., et al. 2019. TBL1 is required for the mesenchymal phenotype of transformed breast cancer cells. Cell Death Dis. 10: 95.
6. Liu, D., et al. 2020. ASPP1 deficiency promotes epithelial-mesenchymal transition, invasion and metastasis in colorectal cancer. Cell Death Dis. 11: 224.
7. Pan, K., et al. 2021. SPARC promotes pancreatic cancer cell proliferation and migration through autocrine secretion into the extracellular milieu. Oncol. Lett. 21: 485.
8. Liu, W., et al. 2022. IL-17A promotes the migration, invasion and the EMT process of lung cancer accompanied by NLRP3 activation. Biomed Res. Int. 2022: 7841279.
9. Estermann, M., et al. 2023. A 3D multi-cellular tissue model of the human omentum to study the formation of ovarian cancer metastasis. Biomaterials 294: 121996.

PROTOCOLS

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