SANTA CRUZ BIOTECHNOLOGY, INC.

E-cadherin (G-10): sc-8426

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 NH2 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; Cdh1 (mouse) mapping to 8 D3.

SOURCE

E-cadherin (G-10) is a mouse monoclonal antibody raised against amino acids 600-707 mapping within an extracellular domain of E-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.

E-cadherin (G-10) is available conjugated to agarose (sc-8426 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-8426 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8426 PE), fluorescein (sc-8426 FITC), Alexa Fluor® 488 (sc-8426 AF488), Alexa Fluor® 546 (sc-8426 AF546), Alexa Fluor® 594 (sc-8426 AF594) or Alexa Fluor® 647 (sc-8426 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8426 AF680) or Alexa Fluor® 790 (sc-8426 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

E-cadherin (G-10) is recommended for detection of E-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), immunohistochemistry (including paraffin-embedded sections) (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 E-cadherin siRNA (h): sc-35242, E-cadherin siRNA (m): sc-35243, E-cadherin shRNA Plasmid (h): sc-35242-SH, E-cadherin shRNA Plasmid (m): sc-35243-SH, E-cadherin shRNA (h) Lentiviral Particles: sc-35242-V and E-cadherin shRNA (m) Lentiviral Particles: sc-35243-V.

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

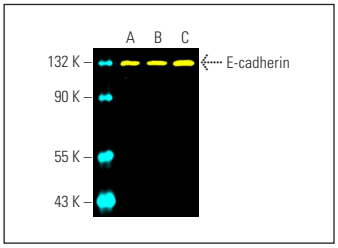
Molecular Weight of E-cadherin precursor: 135 kDa.

Positive Controls: LNCaP cell lysate: sc-2231 or Caco-2 cell lysate: sc-2262.

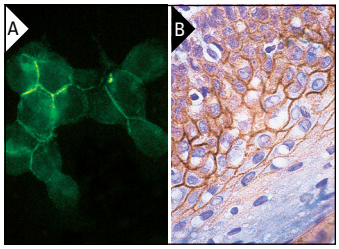
STORAGE

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

DATA



E-cadherin (G-10) Alexa Fluor® 488: sc-8426 AF488. Direct fluorescent western blot analysis of E-cadherin expression in LNCaP (**A**), MCF7 (**B**) and Caco-2 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 647: sc-516791.



E-cadherin (G-10): sc-8426. Immunofluorescence staining of methanol-fixed LNCaP cells showing membrane staining (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human tonsil showing membrane localization (**B**).

SELECT PRODUCT CITATIONS

1. Lipecka, J., et al. 2002. Distribution of CIC-2 chloride channel in rat and human epithelial tissues. Am. J. Physiol., Cell Physiol. 282: C805-C816.
2. Chen, C., et al. 2015. microRNA-99a is downregulated and promotes proliferation, migration and invasion in non-small cell lung cancer A549 and H1299 cells. Oncol. Lett. 9: 1128-1134.
3. Zhang, L., et al. 2016. Placenta growth factor contributes to cell apoptosis and epithelial-to-mesenchymal transition in the hyperoxia-induced acute lung injury. Life Sci. 156: 30-37.
4. Koistinen, V., et al. 2017. EMT induced by EGF and wounding activates hyaluronan synthesis machinery and EV shedding in rat primary mesothelial cells. Matrix Biol. 63: 38-54.
5. Tsogbadrakh, B., et al. 2018. HL156A, a novel pharmacological agent with potent adenosine-monophosphate-activated protein kinase (AMPK) activator activity ameliorates renal fibrosis in a rat unilateral ureteral obstruction model. PLoS ONE 13: e0201692.
6. Sengez, B., et al. 2019. The transcription factor Elf3 is essential for a successful mesenchymal to epithelial transition. Cells 8: 858.
7. Karagonlar, Z.F., et al. 2020. A novel function for KLF4 in modulating the de-differentiation of $EpCAM^-/CD133^-$ nonStem cells into $EpCAM^+/CD133^+$ liver cancer stem cells in HCC cell line HuH7. Cells 9: 1198.
8. Wijshake, T., et al. 2021. Tumor-suppressor function of Beclin 1 in breast cancer cells requires E-cadherin. Proc. Natl. Acad. Sci. USA 118: e2020478118.

RESEARCH USE

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