SANTA CRUZ BIOTECHNOLOGY, INC.

E-cadherin (1.B.54): sc-71009

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.

REFERENCES

1. Hirsch, H.A., et al. 1978. Surgical therapy of breast cancer. Gynakol. Rundsch. 18: 132-141.
2. Takeichi, M. 1988. The cadherins: cell-cell adhesion molecules controlling animal morphogenesis. Development 102: 639-655.
3. Hatta, M., et al. 1991. Genomic organization and chromosomal mapping of the mouse P-cadherin gene. Nucleic Acids Res. 19: 4437-4441.

CHROMOSOMAL LOCATION

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

SOURCE

E-cadherin (1.B.54) 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.

APPLICATIONS

E-cadherin (1.B.54) 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: ZR-75-1 cell lysate: sc-2241, LNCaP cell lysate: sc-2231 or MCF7 whole cell lysate: sc-2206.

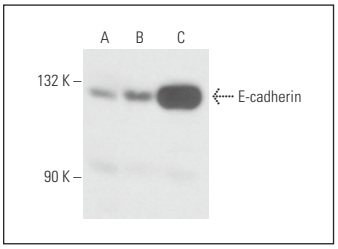
RESEARCH USE

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

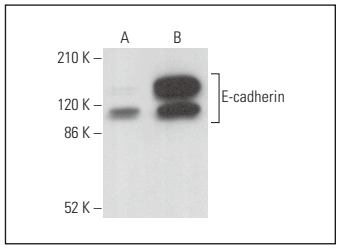
STORAGE

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

DATA



E-cadherin (1.B.54): sc-71009. Western blot analysis of E-cadherin expression in MCF7 (**A**), ZR-75-1 (**B**) and LNCaP (**C**) whole cell lysates.



E-cadherin (1.B.54): sc-71009. Western blot analysis of E-cadherin expression in Caco-2 (**A**) and ZR-75-1 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Alcaraz, A., et al. 2012. Autocrine TGF-β induces epithelial to mesenchymal transition in human amniotic epithelial cells. Cell Transplant. 22: 1351-1367.
2. Dash, A., et al. 2013. Hemodynamic flow improves rat hepatocyte morphology, function, and metabolic activity *in vitro*. Am. J. Physiol., Cell Physiol. 304: C1053-C1063.
3. Lee, J.C., et al. 2014. N-myc downstream-regulated gene 1 downregulates cell proliferation, invasiveness, and tumorigenesis in human oral squamous cell carcinoma. Cancer Lett. 355: 242-252.
4. Tsui, K.H., et al. 2015. Growth differentiation factor-15: a p53- and demethylation-upregulating gene represses cell proliferation, invasion, and tumorigenesis in bladder carcinoma cells. Sci. Rep. 5: 12870.
5. Feaver, R.E., et al. 2016. Development of an *in vitro* human liver system for interrogating nonalcoholic steatohepatitis. JCI Insight 1: e90954.
6. Girolimetti, G., et al. 2017. Platinum-induced mitochondrial DNA mutations confer lower sensitivity to paclitaxel by impairing tubulin cytoskeletal organization. Hum. Mol. Genet. 26: 2961-2974.
7. Li, H., et al. 2018. Centromere protein U facilitates metastasis of ovarian cancer cells by targeting high mobility group box 2 expression. Am. J. Cancer Res. 8: 835-851.
8. Das, A., et al. 2019. A novel triazole NMK-T-057 induces autophagic cell death in breast cancer cells by inhibiting γ-secretase-mediated activation of Notch-signaling. J. Biol. Chem. 294: 6733-6750.
9. Wei, F., et al. 2019. miR-593 inhibits proliferation and invasion and promotes apoptosis in non-small cell lung cancer cells by targeting SLUG-associated signaling pathways. Mol. Med. Rep. 20: 5172-5182.