

# 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  $\beta$ -catenin, to regulate cadherin function.

## REFERENCES

- Hirsch, H.A., et al. 1978. Surgical therapy of breast cancer. *Gynakol. Rundsch.* 18: 132-141.
- Takeichi, M. 1988. The cadherins: cell-cell adhesion molecules controlling animal morphogenesis. *Development* 102: 639-655.
- 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  $\mu$ g IgG<sub>1</sub> 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  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.

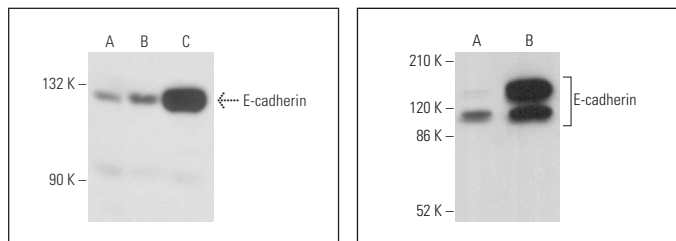
## RESEARCH USE

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

- Alcaraz, A., et al. 2012. Autocrine TGF- $\beta$  induces epithelial to mesenchymal transition in human amniotic epithelial cells. *Cell Transplant.* 22: 1351-1367.
- 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.
- 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.
- 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.
- Feaver, R.E., et al. 2016. Development of an *in vitro* human liver system for interrogating nonalcoholic steatohepatitis. *JCI Insight* 1: e90954.
- 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.
- 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.
- Das, A., et al. 2019. A novel triazole NMK-T-057 induces autophagic cell death in breast cancer cells by inhibiting  $\gamma$ -secretase-mediated activation of Notch-signaling. *J. Biol. Chem.* 294: 6733-6750.
- 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.

## CONJUGATES

See **E-cadherin (G-10): sc-8426** for E-cadherin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.