SANTA CRUZ BIOTECHNOLOGY, INC.

E-cadherin (MB2): sc-59905

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.
4. Umbas, R., et al. 1992. Expression of the cellular adhesion molecule E-cadherin is reduced or absent in high-grade prostate cancer. Cancer Res. 52: 5104-5109.
5. Koch, P.J., et al. 1994. Desmosomal cadherins: another growing multigene family of adhesion molecules. Curr. Opin. Cell Biol. 6: 682-687.
6. Ranscht, B. 1994. Cadherins and catenins: interactions and functions in embryonic development. Curr. Opin. Cell Biol. 6: 740-746.
7. Hinck, L., et al. 1994. Dynamics of cadherin/catenin complex formation: novel protein interactions and pathways of complex assembly. J. Cell Biol. 125: 1327-1340.
8. Ayalon, O., et al. 1994. Spatial and temporal relationships between cadherins and PECAM-1 in cell-cell junctions of human endothelial cells. J. Cell Biol. 126: 247-258.

CHROMOSOMAL LOCATION

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

SOURCE

E-cadherin (MB2) is a mouse monoclonal antibody raised against MCF-7/AZ cells of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

E-cadherin (MB2) is recommended for detection of both the 120 kDa E-cadherin and the 80 kDa Trypsin-resistant extracellular part 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).

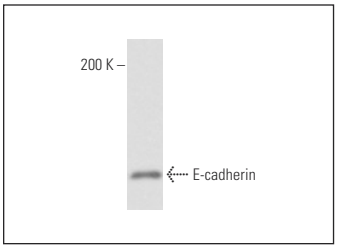
Suitable for use as control antibody for E-cadherin siRNA (h): sc-35242, E-cadherin shRNA Plasmid (h): sc-35242-SH and E-cadherin shRNA (h) Lentiviral Particles: sc-35242-V.

Molecular Weight of E-cadherin precursor: 135 kDa.

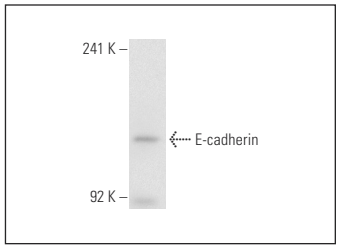
Molecular Weight of mature E-cadherin: 120/80 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, LNCaP cell lysate: sc-2231 or MCF7 whole cell lysate: sc-2206.

DATA



E-cadherin (MB2): sc-59905. Western blot analysis of E-cadherin expression in PC-3 whole cell lysate.



E-cadherin (MB2): sc-59905. Western blot analysis of E-cadherin expression in LNCaP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Hu, H.J., et al. 2016. Curcumin mediates reversion of HGF-induced epithelial-mesenchymal transition via inhibition of c-Met expression in DU145 cells. Oncol. Lett. 11: 1499-1505.
2. Tsai, L.Y., et al. 2016. Biphasic and stage-associated expression of CPEB4 in hepatocellular carcinoma. PLoS ONE 11: e0155025.

RESEARCH USE

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

PROTOCOLS

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

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.