

E-cadherin (DECMA-1): sc-59778

BACKGROUND

Cadherins comprise a family of Ca²⁺-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 (DECMA-1) is a rat monoclonal antibody raised against the embryonal carcinoma cell line PCC4 Aza RI of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

E-cadherin (DECMA-1) is available conjugated to agarose (sc-59778 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59778 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59778 PE), fluorescein (sc-59778 FITC), Alexa Fluor[®] 488 (sc-59778 AF488), Alexa Fluor[®] 546 (sc-59778 AF546), Alexa Fluor[®] 594 (sc-59778 AF594) or Alexa Fluor[®] 647 (sc-59778 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-59778 AF680) or Alexa Fluor[®] 790 (sc-59778 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

E-cadherin (DECMA-1) is recommended for detection of E-cadherin of mouse, rat, human and canine 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

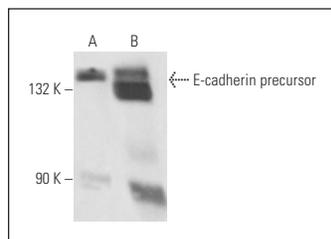
Molecular Weight of E-cadherin precursor: 135 kDa.

Positive Controls: F9 cell lysate: sc-2245, MDCK cell lysate: sc-2252 or LNCaP cell lysate: sc-2231.

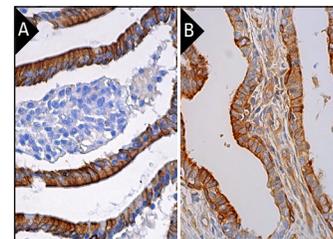
STORAGE

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

DATA



E-cadherin (DECMA-1): sc-59778. Western blot analysis of E-cadherin expression in LNCaP (A) and MDCK (B) whole cell lysates.



E-cadherin (DECMA-1): sc-59778. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing membrane and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Wianny, F. and Zernicka-Goetz, M. 2000. Specific interference with gene function by double-stranded RNA in early mouse development. *Nat. Cell Biol.* 2: 70-75.
- Mahe, M.M., et al. 2013. Establishment of gastrointestinal epithelial organoids. *Curr. Protoc. Mouse Biol.* 3: 217-240.
- Soh, B.S., et al. 2014. N-cadherin prevents the premature differentiation of anterior heart field progenitors in the pharyngeal mesodermal microenvironment. *Cell Res.* 24: 1420-1432.
- Rötzer, V., et al. 2015. E-cadherin and Src associate with extradesmosomal Dsg3 and modulate desmosome assembly and adhesion. *Cell. Mol. Life Sci.* 72: 4885-4897.
- Cano-González, A. and López-Rivas, A. 2016. Opposing roles of TGF-β and EGF in the regulation of TRAIL-induced apoptosis in human breast epithelial cells. *Biochim. Biophys. Acta* 1863: 2104-2114.
- Xiang, Y., et al. 2017. MiR-93-5p inhibits the EMT of breast cancer cells via targeting MKL-1 and STAT3. *Exp. Cell Res.* 357: 135-144.
- Yin, W., et al. 2018. The potassium channel KCNJ13 is essential for smooth muscle cytoskeletal organization during mouse tracheal tubulogenesis. *Nat. Commun.* 9: 2815.
- Sun, P., et al. 2019. Maintenance of primary hepatocyte functions in vitro by inhibiting mechanical tension-induced YAP activation. *Cell Rep.* 29: 3212-3222.e4.
- Luo, C., et al. 2020. lncRNA XIST promotes glioma proliferation and metastasis through miR-133a/SOX4. *Exp. Ther. Med.* 19: 1641-1648.

RESEARCH USE

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

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA