



E-Cadherin/Cadherin-1 (6F9)

CATALOG NUMBER: MUB0302S

CLONE: 6F9

SPECIES / ISOTYPE: mouse IgG1

PRODUCT FORM: culture supernatant of monoclonal antibody

BACKGROUND

Cadherins constitute a family of transmembrane glycoproteins involved in Ca^{2+} -dependent cell-cell interactions. The members of this family are differentially expressed in various tissues. They function in the maintenance of tissue integrity and morphogenesis. Cadherins are divided into type I and type II subgroups. Type I cadherins include epithelial cadherin (E-cadherin, cadherin-1 or uvomorulin), neural cadherin (N-cadherin or cadherin-2), placental cadherin (P-cadherin or cadherin-3) and retinal cadherin (R-cadherin or cadherin-4), whereas kidney cadherin (K-cadherin or cadherin-6) and osteoblast cadherin (OB-cadherin or cadherin-11) are type II cadherins. One of the best characterized cadherins is E-cadherin, a 120 kD transmembrane glycoprotein consisting of an 80 kD extracellular and a 40 kD transmembrane and cytoplasmic part. The extracellular domains of E-cadherin are responsible for calcium binding which allows for homophilic interaction with other E-cadherin molecules on the same cell and neighbouring cells. In addition, E-cadherin can interact heterophilically with integrin $\alpha_5\beta_7$. The cytoplasmic domain of E-cadherin is linked to the actin cytoskeleton through the associated cytoplasmic catenin proteins, thus establishing a complex localized to adherens junctions. In carcinomas E-cadherin is frequently downregulated, which is consistent with its function of an invasion suppressor in normal epithelia.

SOURCE

6F9 is a mouse monoclonal IgG1 antibody obtained by fusion of P3-X63-Ag 8,653 mouse myeloma cells with spleen cells from a BABL/c mouse immunized with affinity purified 80 kD extracellular fragments of E-cadherin derived from tryptic digestion of A-431 human vulva carcinoma cells.

PRODUCT

Each vial contains 1 ml of culture supernatant of monoclonal antibody containing 0.09% sodium azide.

SPECIFICITY

6F9 recognizes both the 120 kD E-cadherin and its 80 kD trypsin-resistant extracellular part.

6F9 is suitable for immunoblotting, immunocytochemistry and immunohistochemistry on frozen tissues when using a PBS buffer containing 0.1 mM CaCl_2 and 0.1 mM MgCl_2 and for immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent. Optimal antibody dilution should be determined by titration.

SPECIES REACTIVITY

Human.

STORAGE

Store at 4°C, or in small aliquots at -20°C.

REFERENCES

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3. Mayer, B., Johnson, J. P., Leitl, F., Jauch, K. W., Heiss, M. M., Schildberg, F. W., Birchmeier, W., and Funke, I. (1993). E-cadherin expression in primary and metastatic gastric cancer: down-regulation correlates with cellular dedifferentiation and glandular disintegration. *Cancer Res* 53, 1690-1695.
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5. Bohm, M., Totzeck, B., Birchmeier, W., and Wieland, I. (1994). Differences of E-cadherin

WARNING and CAUTION

This product is intended FOR RESEARCH USE ONLY, and FOR TESTS IN VITRO, not for use in diagnostic or therapeutic procedures involving humans or animals.

This product contains sodium azide. To prevent formation of toxic vapors, do not mix with strong acidic solutions. To prevent formation of potentially explosive metallic azides in metal plumbing, always wash into drain with copious quantities of water.

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 8. Ghadimi, B. M., Behrens, J., Hoffmann, I., Haensch, W., Birchmeier, W., and Schlag, P. M. (1999). Immunohistological analysis of E-cadherin, alpha-, beta- and gamma-catenin expression in colorectal cancer: implications for cell adhesion and signaling. *Eur J Cancer* 35, 60-65.

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