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E-Cadherin/Cadherin-1 (6F9)

CATALOG NUMBER: MUB0302P
CLONE: 6F9
SPECIES / ISOTYPE: mouse IgG1
PRODUCT FORM: purified 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 $\alpha_E\beta_7$. 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 100 µl 1 mg/ml purified antibody in PBS 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 $MgCl_2$. Optimal antibody dilution should be determined by titration; recommended range is 1:25 – 1:100 for immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent, and 1:50 – 1:500 for immunoblotting applications.

SPECIES REACTIVITY

Human.

STORAGE

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

REFERENCES

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