



## E-Cadherin/Cadherin-1 (SEC11)

**CATALOG NUMBER:** MUB0303P  
**CLONE:** SEC11  
**SPECIES / ISOTYPE:** mouse IgG1  
**PRODUCT FORM:** purified monoclonal antibody

### BACKGROUND

Cadherins constitute a family of transmembrane glycoproteins involved in  $\text{Ca}^{2+}$ -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

SEC11 is a mouse monoclonal IgG1 antibody obtained by fusion of NS0 mouse myeloma cells with spleen cells from a mouse immunized with the synthetic peptide corresponding to amino acids 9-21 of mature human E-cadherin coupled to keyhole limpet hemocyanin.

### PRODUCT

Each vial contains 100  $\mu\text{l}$  1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

### SPECIFICITY

SEC11 recognizes both the 120 kD E-cadherin and its 80 kD trypsin-resistant extracellular part. The epitope is present within amino acid residues 9-21 of mature human E-cadherin.

SEC11 is suitable for immunoblotting. Optimal antibody dilution should be determined by titration; recommended range is 1:15 (10 $\mu\text{g}/\text{ml}$ ) – 1:150 (1 $\mu\text{g}/\text{ml}$ ).

### SPECIES REACTIVITY

Human and dog, not mouse and rat.

### STORAGE

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

### REFERENCES

1. Ryniers, F., Stove, C., Goethals, M., Brackenier, L., Noe, V., Bracke, M., Vandekerckhove, J., Mareel, M., and Bruyneel, E. (2002). Plasmin produces an E-cadherin fragment that stimulates cancer cell invasion, *Biol Chem* 383, 159-65.

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### 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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