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Diagnostik & molekulare Diagnostik



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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



## Mouse anti E-Cadherin / Cadherin-1

Catalogue number: **MUB0300P**

Clone	MB2
Isotype	IgG2b
Product Type	Primary Antibodies
Units	0.1 mg
Host	Mouse
Species reactivity	Human
Application	Flow cytometry Immunoblotting Immunocytochemistry Immunohistochemistry (frozen)

## Distributors

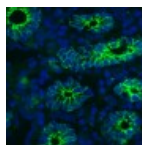
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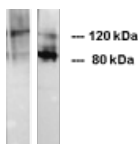
### Background

Cadherins constitute a family of transmembrane glycoproteins involved in Ca<sup>2+</sup>-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

1\_MUB0300 Figure 1  
Immunohistochemistry on frozen sections of small intestine positive staining of the cell-cell adhesion molecules between the epithelial cells of the crypts.



1\_MUB0304 Figure 1  
Western blot moderate reactivity with the 120 kDa full length protein (left lane) and strong reactivity with the 80 kDa extracellular part (right lane) of E-Cadherin



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**

MB2 is a Mouse monoclonal IgG2b antibody derived by fusion of NS0 Mouse myeloma cells with spleen cells from a BALB/c Mouse immunized with MCF-7/AZ cells expressing E-cadherin at their cell surface.

#### **Product**

Each vial contains 100 ul 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

#### **Applications**

MB2 is useful for flow cytometry, immunoblotting, immunocytochemistry on fixed cells (methanol fixation) and immunohistochemistry on frozen tissues when using a PBS buffer containing 0.1 mM CaCl<sub>2</sub> and 0.1 mM MgCl<sub>2</sub>. Optimal antibody dilution should be determined by titration; recommended range is 1:100 – 1:200 for flow cytometry and for immunohistochemistry with avidin-biotinylated Horseradish peroxidase complex (ABC) as detection reagent and 1:100 – 1:1000 for immunoblotting applications.

#### **Specificity**

MB2 recognizes both the 120 kD E-cadherin and its 80 kD trypsin-resistant extracellular part. MB2 is a functional antibody in that it inhibits cell-cell adhesion.

#### **Storage**

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

#### **References**

1. Bracke, M. E., Vyncke, B. M., Bruyneel, E. A., Vermeulen, S. J., De Bruyne, G. K., Van Larebeke, N. A., Vleminckx, K., Van Roy, F. M., and Mareel, M. M. (1993). Insulin-like growth factor I activates the invasion suppressor function of E-cadherin in MCF-7 Human mammary carcinoma cells in vitro, *Br J Cancer* 68, 282-9.
2. Steelant, W. F., Goeman, J. L., Philippe, J., Oomen, L. C., Hilkens, J., Krzewinski-Recchi, M. A., Huet, G., Van der Eycken, J., Delannoy, P., Bruyneel, E. A., and Mareel, M. M. (2001). Alkyllysophospholipid 1-O-octadecyl-2-O-methylglycerophosphocholine induces invasion through episialin-mediated neutralization of E-

cadherin in Human mammary MCF-7 cells in vitro, Int J Cancer 92, 527-36.

3. Rong, H., Boterberg, T., Maubach, J., Stove, C., Depypere, H., Van Slambrouck, S., Serreyn, R., De Keukeleire, D., Mareel, M., and Bracke, M. (2001). 8-Prenylnaringenin, the phytoestrogen in hops and beer, upregulates the function of the E-cadherin/Catenin complex in Human mammary carcinoma cells, Eur J Cell Biol 80, 580-5.

#### **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. This datasheet is as accurate as reasonably achievable, but Nordic-MUbio accepts no liability for any inaccuracies or omissions in this information.