

## Monoclonal Antibody to CD324 / Cadherin-1 - Purified

<b>Alternate names:</b>	CAM 120/80, CDH1, CDHE, E-cadherin, Epithelial cadherin, UVO, Uvomorulin
<b>Catalog No.:</b>	BM6016P
<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	1.0 mg/ml
<b>Background:</b>	<p>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 <math>\alpha E\beta 7</math>. 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 down-regulated, which is consistent with its function of an invasion suppressor in normal epithelia.</p>
<b>Uniprot ID:</b>	<a href="#">P12830</a>
<b>NCBI:</b>	<a href="#">NP_004351.1</a>
<b>GeneID:</b>	<a href="#">999</a>
<b>Host / Isotype:</b>	Mouse / IgG2b
<b>Clone:</b>	MB2
<b>Immunogen:</b>	MB2 is a mouse monoclonal IgG2b antibody derived by fusion of NS0 mouse myeloma cells with spleen cells from a BABL/c mouse immunized with MCF- 7/AZ cells expressing E-cadherin at their cell surface.
<b>Format:</b>	<b>State:</b> Liquid purified IgG fraction. <b>Buffer System:</b> PBS with 0.09% Sodium Azide as preservative.
<b>Applications:</b>	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> . <b>Recommended dilutions:</b> Flow cytometry 1/100-1/200.

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Immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent: 1/100-1/200.

Immunoblotting: 1/100-1/1000.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**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.

**Species:** Human.

Other species not tested.

**Storage:**

Store the antibody (undiluted) at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freeze-thaw cycles.

Shelf life: One year from despatch.

**General 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). Alkyl-lysophospholipid 1-O-octadecyl-2-Omethyl-glycerophosphocholine 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.

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