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Product Information

Monoclonal Anti-Uvomorulin/E-Cadherin antibody produced in rat
clone DECMA-1, purified from hybridoma cell culture

Catalog Number **SAB4200684**

Product Description

Monoclonal Anti-Uvomorulin/E-Cadherin (rat IgG1 isotype) is derived from the DECMA-1 hybridoma produced by the fusion of rat myeloma cells and splenocytes from an immunized Lou rat. Mouse embryonal carcinoma cell line PCC4 Aza RI was used as the immunogen.[1] The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Uvomorulin/E-Cadherin recognizes mouse and dog Uvomorulin/E-Cadherin. The antibody may be used in various immunochemical techniques including immunoblotting (120kDa), immuno-precipitation and immunofluorescent staining of cell membrane on confluent cell layers grown in culture.[1]

Anti-Uvomorulin/E-Cadherin specifically blocks both the aggregation of mouse embryonal carcinoma cells and the compaction of pre-implantation embryos and disrupts confluent monolayers of Madin-Darby canine kidney (MDCK) epithelial cells. It can be used for studies of embryonal development, cell-cell interaction of cells grown in culture, and localization of E-Cadherin. In addition, Monoclonal Anti-Uvomorulin/E-Cadherin is commonly used as an E-cadherin inhibitor/blocking antibody in a study of embryonic stem cells (EMS).[2-3]

Uvomorulin/E-Cadherin (Epithelial cadherin) initially identified in embryonal carcinoma, is also known as CDH1, CAM 120/80, L-CAM (Cell-Adhesion Molecule) or CD324. It belongs to the cadherin transmembrane glycoproteins superfamily and consists a highly conserved cytoplasmic tail. Cadherins mediate cell-cell adhesion thus play a pivotal role in epithelial cell behavior and tissue morphogenesis/remodeling. Most epithelial tumors (gastric, breast, colorectal, thyroid and ovarian cancer) are characterized by reduced E-Cadherin levels, leading to decreased adhesion and enhanced migration/invasion at the epithelial-to-mesenchymal transition (EMT) during cancer progression. E-Cadherin is a subject to proteolytic cleavage by matrix metalloproteinases (MMPs) and cathepsins, in its cytoplasmic domain by enzymes such as secretases, calpain and caspases or alternatively cleavage in its extracellular region result in a soluble 80 kDa E-Cadherin fragment following trypsin digestion in the presence of Ca^{2+}.[1,4]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation.. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1 μg/mL is recommended using whole extract of MDCK cells.

Immunofluorescence: a working concentration of 5-10 μg/mL is recommended using MDCK cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining working concentration by titration test.

References

1. Vestweber D. and Kemler R., *EMBO J.*, **4**, 3393 (1985).
2. Lee EJ., et al., *Mol Ther.*, **20**, 1424-33 (2012).
3. Rosenthal A., et al., *Biomaterials.*, **28**, 3208-16 (2007).
4. Repetto O., et al., *Biomed Res Int.*, **2014**, 408047 (2014).

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