## **PRODUCT** INFORMATION



E-Cadherin Rabbit Monoclonal Antibody (Clone RM244) Item No. 32198

### **Overview and Properties**

Contents:	This vial contains 100 ul of protein A-affinity purified monoclonal antibody
Synonymer	Cadharin 1 CDU1 L CAM Llyamarulin
Synonyms.	Cadhenn-1, CDH1, E-CAW, Ovomorulin
Immunogen:	Peptide corresponding to E-cadherin
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM244
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting
	dilution is 1:500-1:1,000 and 1:1,000-1:2,000, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of MCF-7 cell lysates using E-Cadherin Rabbit Monoclonal Antibody (Clone RM244) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human breast cancer tissue using E-Cadherin Rabbit Monoclonal Antibody (Clone RM244) at a 1:1,000 dilution.

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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#### CAYMAN CHEMICAL

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#### Description

E-cadherin is a calcium-dependent adhesion molecule that mediates the formation of adherens junctions and regulates epithelial cell integrity and tissue formation.<sup>1,2</sup> It is a transmembrane glycoprotein composed of an extracellular cadherin domain that mediates cell-cell interactions, a transmembrane domain, and a cytoplasmic domain that interacts with a variety of adaptor proteins, including β-catenin, to influence cytoskeletal dynamics.<sup>3,4</sup> E-cadherin is expressed by epithelial cells and localizes to the cell surface, where it assembles into *cis*-cadherin dimers that subsequently form *trans*-cadherin dimers with cadherins expressed on adjacent cells, resulting in cell-cell adhesion.<sup>5</sup> E-cadherin cell surface expression is regulated by clathrin-dependent or -independent endocytosis and drives cytoskeletal rearrangements that are necessary for wound closure.<sup>6</sup> Loss of E-cadherin is a key feature of the epithelial-to-mesenchymal transition (EMT), a process that promotes tumorigenesis and cancer metastasis.<sup>1</sup> Cayman's E-Cadherin Rabbit Monoclonal Antibody (Clone RM244) can be used for immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes E-cadherin at approximately 120 kDa from human samples.

#### References

- 1. Yu, W., Yang, L., Li, T., *et al.* Cadherin signaling in cancer: Its functions and role as a therapeutic target. *Front Oncol.* **9**, 989 (2019).
- van Roy, F. and Berx, G. The cell-cell adhesion molecule E-cadherin. Cell. Mol. Life Sci. 65(23), 3756-3788 (2008).
- Canel, M., Serrels, A., Frame, M.C., et al. E-cadherin-integrin crosstalk in cancer invasion and metastasis. J. Cell. Sci. 126(Pt 2), 393-401 (2013).
- 4. Biswas, K.H. and Zaidel-Bar, R. Early events in the assembly of E-cadherin adhesions. *Exp. Cell Res.* **358(1)**, 14-19 (2017).
- 5. Campbell, H.K., Maiers, J.L., and DeMali, K.A. Interplay between tight junctions & adherens junctions. *Exp. Cell Res.* **358(1)**, 39-44 (2017).
- 6. Brüser, L. and Bogdan, S. Adherens junctions on the move-membrane trafficking of E-cadherin. *Cold Spring Harb. Perspect. Biol.* **9(3)**, a029140 (2017).

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