

E-Cadherin (24E10) Rabbit mAb (PE Conjugate)



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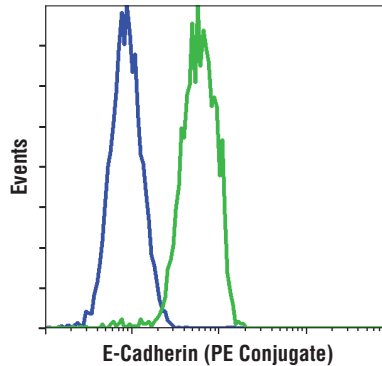
Applications	Species Cross-Reactivity*	Isotype
F Endogenous	H, M, (Dg, Pg)	Rabbit IgG

Description: This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated E-Cadherin (24E10) Rabbit mAb #3195.

Background: Cadherins are a superfamily of trans-membrane glycoproteins that contain cadherin repeats of approximately 100 residues in their extracellular domain. Cadherins mediate calcium-dependent cell-cell adhesion and play critical roles in normal tissue development (1). The classic cadherin subfamily includes N-, P-, R-, B- and E-cadherins as well as about ten other members that are found in adherens junctions, a cellular structure near the apical surface of polarized epithelial cells. The cytoplasmic domain of classical cadherins interacts with β -catenin, γ -catenin (also called plakoglobin), and p120 catenin. β -catenin and γ -catenin associate with α -catenin, which links the cadherin-catenin complex to the actin cytoskeleton (1,2). While β - and γ -catenin play structural roles in the junctional complex, p120 regulates cadherin adhesive activity and trafficking (1-4). E-cadherin is considered an active suppressor of invasion and growth of many epithelial cancers (1-3). Recent studies indicate that cancer cells have up-regulated N-cadherin in addition to loss of E-cadherin. This change in cadherin expression is called the "cadherin switch". N-cadherin cooperates with the FGF receptor, leading to overexpression of MMP-9 and cellular invasion (3). In endothelial cells, VE-cadherin signaling, expression, and localization correlate with vascular permeability and tumor angiogenesis (5,6). Expression of P-cadherin, which is normally present in epithelial cells, is also altered in ovarian and other human cancers (7,8).

Specificity/Sensitivity: E-Cadherin (24E10) Rabbit mAb (PE Conjugate) detects endogenous levels of total E-cadherin protein. This antibody does not cross-react with related family members, such as N-cadherin.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence surrounding Pro780 of human E-cadherin protein.



Flow cytometric analysis of HeLa (blue) and MCF7 (green) cells using E-Cadherin (24E10) Rabbit mAb (PE Conjugate).

Entrez-Gene ID #999
Swiss-Prot Acc. #P12830

Storage: Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. *Protect from light. Do not freeze.*

***Species cross-reactivity other than human is determined by western blot using the unconjugated antibody.**

Recommended Antibody Dilutions:

Flow Cytometry 1:50

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

Background References:

- (1) Wheelock, M.J. and Johnson, K.R. (2003) *Annu. Rev. Cell. Dev. Biol.* 19, 207-235.
- (2) Christofori, G. (2003) *EMBO J.* 22, 2318-2323.
- (3) Hazan, R.B. et al. (2004) *Ann. NY Acad. Sci.* 1014, 155-163.
- (4) Bryant, D.M. and Stow, J.L. (2004) *Trends Cell Biol.* 14, 427-434.
- (5) Rabascio, C. et al. (2004) *Cancer Res.* 64, 4373-4377.
- (6) Yamaoka-Tojo, M. et al. (2006) *Arterioscler. Thromb. Vasc. Biol.* 26, 1991-1997.
- (7) Patel, I.S. et al. (2003) *Int. J. Cancer* 106, 172-177.
- (8) Sanders, D.S. et al. (2000) *J. Pathol.* 190, 526-530.

Rabbit monoclonal antibody is produced under license (granting certain rights including those under U. S. Patents No. 5,675,063 and 7,429,487) from Eptomics, Inc.