

E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 488 Conjugate)

✓ 100 µl
(50 tests)

New more concentrated formulation

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

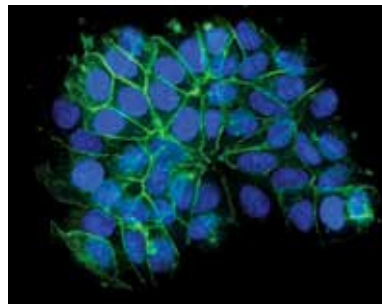
Applications	Species Cross-Reactivity	Source	Isotype
IF-IC, IF-P, F	H, M, (Dg)	Rabbit	IgG

Description: This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometric analysis of human cells. The unconjugated antibody, #3195, reacts with human and mouse E-Cadherin protein. CST expects that E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 488 Conjugate) will also recognize E-Cadherin in these species.

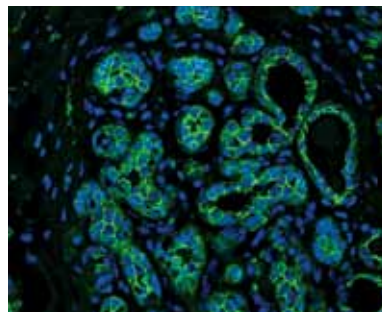
Background: Cadherins are a superfamily of trans-membrane glycoproteins that contain cadherin repeats of approximately 100 residues in their extracellular domain. Cadherins mediate calcium-dependent cell-cell adhesion and play critical roles in normal tissue development (1). The classic cadherin subfamily includes N-, P-, R-, B- and E-cadherins as well as about ten other members which are found in adherens junctions (AJ), 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). Unlike β - and γ -catenin, p120 regulates cadherin adhesive activity and trafficking rather than having a structural role in the junctional complex (1-4). E-cadherin is considered an acting 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 over-expression of MMP-9 and cellular invasion (3). In endothelial cells, VE-cadherin signaling, expression and localization are correlated with vascular permeability and tumor angiogenesis (5,6).

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

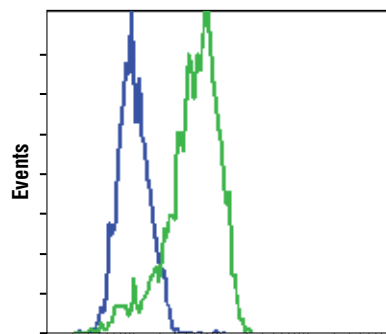
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence surrounding residue 780 of human E-cadherin. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-6.



Confocal immunofluorescent analysis of MCF7 cells using E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 488 Conjugate) (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Confocal immunofluorescent analysis of paraffin-embedded human breast carcinoma using E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 488 Conjugate) (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



E-Cadherin (24E10) (Alexa Fluor® 488 Conjugate)

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

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

Recommended Antibody Dilutions:

Immunofluorescence (IF-IC)	1:800
Immunofluorescence (IF-P)	1:100
Flow Cytometry:	1:50

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

Please visit www.cellsignal.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.

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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 Epitomics, Inc.

◀ Flow cytometric analysis of HeLa (blue) and MCF7 cells (green) using E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 488 Conjugate).