Store at 4°C

#3199

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

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #999
UniProt ID #P12830

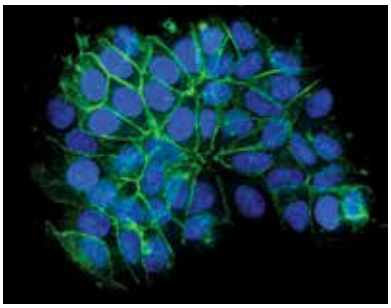
Applications	Species Cross-Reactivity*	Source	Isotype
IF-IC, F	H, M, (Dg)	Rabbit	IgG

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.

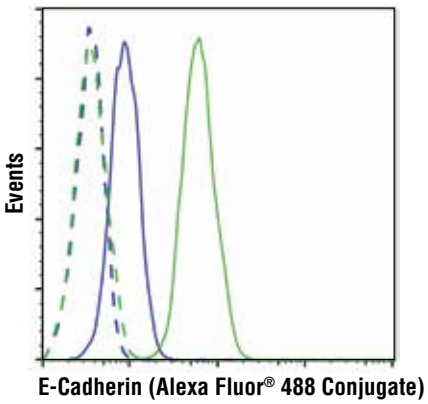
Background: Cadherins are a superfamily of transmembrane glycoproteins that contain cadherin repeats of approximately 100 residues in their extracellular domain. Cadherins mediate calcium-dependent cell-cell adhesion and play critical roles in normal tissue development (1). The classic cadherin subfamily 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).



Flow cytometric analysis of Jurkat cells (blue) and MCF-7 cells (green) using E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 488 Conjugate) (solid lines) or a concentration-matched Rabbit (DA1E) mAb IgG XP® Isotype Control (Alexa Fluor® 488 Conjugate) #2975 (dashed lines).

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

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

Recommended Antibody Dilutions:

Immunofluorescence (IF-IC)	1:200
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.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected