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## E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 555 Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> IF-IC	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P12830	<b>Entrez-Gene Id:</b> 999
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<b>Product Usage Information</b>	<b>Application</b> Immunofluorescence (Immunocytochemistry)	<b>Dilution</b> 1:50
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
<b>Specificity/Sensitivity</b>	E-Cadherin (24E10) Rabbit mAb (Alexa Fluor® 555 Conjugate) detects endogenous levels of total E-cadherin protein. The antibody does not cross-react with related family members, such as N-cadherin.	
<b>Species predicted to react based on 100% sequence homology</b>	Bovine, Dog, Pig	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro780 of human E-cadherin protein. The antibody was conjugated to Alexa Fluor® 555 under optimal conditions with an F/P ratio of 2-6.	
<b>Description</b>	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 555 fluorescent dye and tested in-house for immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated E-Cadherin (24E10) Rabbit mAb #3195.	
<b>Background</b>	<p>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 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 <math>\beta</math>-catenin, <math>\gamma</math>-catenin (also called plakoglobin), and p120 catenin. <math>\beta</math>-catenin and <math>\gamma</math>-catenin associate with <math>\alpha</math>-catenin, which links the cadherin-catenin complex to the actin cytoskeleton (1,2). While <math>\beta</math>- and <math>\gamma</math>-catenin play structural roles in the junctional complex, p120 regulates cadherin adhesive activity and trafficking (1-4). Investigators consider E-cadherin an active suppressor of invasion and growth of many epithelial cancers (1-3). Research studies indicate that cancer cells have upregulated 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). Research studies have shown that in endothelial cells, VE-cadherin signaling, expression, and localization correlate with vascular permeability and tumor angiogenesis (5,6). Investigators have also demonstrated that expression of P-cadherin, which is normally present in epithelial cells, is also altered in ovarian and other human cancers (7,8).</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Wheelock, M.J. and Johnson, K.R. (2003) <i>Annu Rev Cell Dev Biol</i> 19, 207-35.</li> <li>2. Christofori, G. (2003) <i>EMBO J</i> 22, 2318-23.</li> <li>3. Hazan, R.B. et al. (2004) <i>Ann N Y Acad Sci</i> 1014, 155-63.</li> <li>4. Bryant, D.M. and Stow, J.L. (2004) <i>Trends Cell Biol</i> 14, 427-34.</li> <li>5. Rabascio, C. et al. (2004) <i>Cancer Res</i> 64, 4373-7.</li> <li>6. Yamaoka-Tojo, M. et al. (2006) <i>Arterioscler Thromb Vasc Biol</i> 26, 1991-7.</li> <li>7. Patel, I.S. et al. (2003) <i>Int J Cancer</i> 106, 172-7.</li> <li>8. Sanders, D.S. et al. (2000) <i>J Pathol</i> 190, 526-30.</li> </ol>	
<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
<b>Applications Key</b>	<b>IF-IC:</b> Immunofluorescence (Immunocytochemistry)	
<b>Cross-Reactivity Key</b>	<b>H:</b> Human <b>M:</b> Mouse	

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