VE-Cadherin Antibody

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

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 (AJs), 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: VE-Cadherin Antibody detects endogenous levels of total VE-cadherin protein. The antibody does not cross-react with other cadherin family members.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to the carboxy terminus of human VE-cadherin. Antibodies are purified by protein A and peptide affinity chromatography.

Recommended Antibody Dilutions:
- Western blotting: 1:1000
- Immunofluorescence (IF-IC): 1:100

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

Recommended Companion Products:
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at −20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Entrez-Gene ID: #1003
Swiss-Prot Acc.: #P33151

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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