

**#2158** Store at **-20°C**

# VE-Cadherin Antibody

100 µl  
 (10 western blots)



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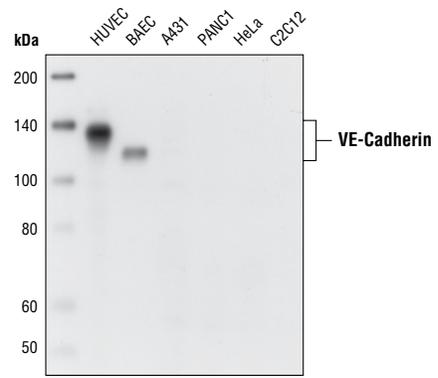
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H, B, Dm	130-140 kDa	Rabbit**

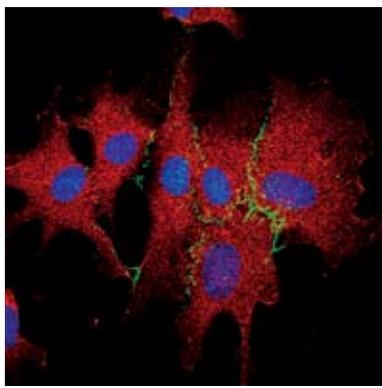
**Background:** Cadherins are a superfamily of trans-membrane glycoproteins that contain cadherin repeats of approximately 100 residues in their extracellular domain. Cadherins mediate calcium-dependent cell-cell adhesion and play critical roles in normal tissue development (1). The classic cadherin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



Western blot analysis of extracts from various cell types, using VE-Cadherin Antibody.



Confocal immunofluorescent analysis of HUVE cells, using VE-Cadherin Antibody (green) and MEK1/2 (L38C12) Mouse mAb #4694 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

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

**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.**

**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](http://www.cellsignal.com).**

**Please visit [www.cellsignal.com](http://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.*, Epub ahead of print.

**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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**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 Species enclosed in parentheses are predicted to react based on 100% homology.