

# VE-Cadherin (a.a.770-781)

Cat. # CP2231

Host Rabbit Polyclonal

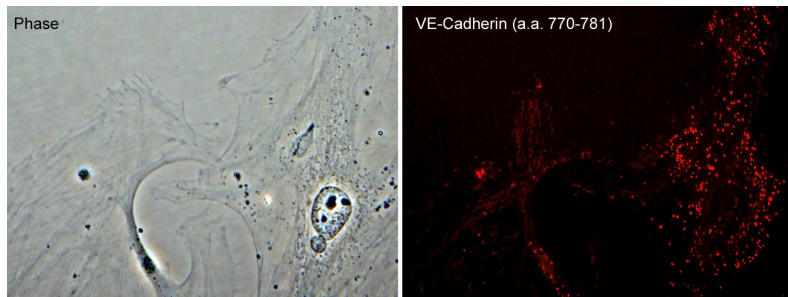
Size 100 µl

## Background:

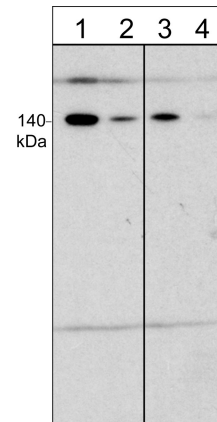
Cadherins are transmembrane glycoproteins vital in calcium-dependent cell-cell adhesion during tissue differentiation. Cadherins cluster to form foci of homophilic binding units. A key determinant to the strength of the cadherin-mediated adhesion may be by the juxtamembrane region in cadherins. VE-cadherin (Cadherin 5) is the major cadherin found in endothelial cells and has important roles during angiogenesis and maintenance of barrier permeability. The cytoplasmic domain of VE-cadherin comprises the juxtamembrane domain that binds to the p120 catenin, and the carboxylterminal domain that interacts with  $\beta$ - or  $\gamma$ -catenins. Modulation of tyrosine phosphorylation on one or more of the nine tyrosine sites in the cytoplasmic domain may be important for regulating both angiogenesis and permeability. Phosphorylation of Tyr-658 and Tyr-731 alters catenin binding, restores cell migration, and decreases barrier permeability. While VEGF-induced phosphorylation of Tyr-685 occurs through c-Src, and regulates endothelial cell migration, but not permeability.

## References

- Potter M.D. et al. (2005) J Biol. Chem. 280(36):31906  
 Baumeister U. et al. (2005) EMBOJ 24:1686  
 Wallez Y. et al. (2007) Oncogene 26:1067



Immunocytochemical labeling of VE-Cadherin in paraformaldehyde-fixed and NP-40-permeabilized human umbilical vein endothelial cells. The cells were labeled with rabbit polyclonal VE-Cadherin (a.a. 770-781), then the antibody was detected using appropriate secondary antibody conjugated to Cy3. Phase image (left) and fluorescent image (right).



Western blot image of human umbilical vein endothelial cells. The blots were probed with rabbit polyclonal anti-VE-cadherin (a.a. 770-781) at 1:1000 (lane 1) and 1:4000 (lane 2). In addition, the antibody was used in the presence (lane 4) or absence (lane 3) of blocking peptide.

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# VE-Cadherin (a.a.770-781)

**Cat. #** CP2231  
**Host** Rabbit Polyclonal  
**Size** 100 µl

## **Immunogen:**

VE-Cadherin synthetic peptide (coupled to carrier protein) corresponds to amino acids 770 to 781 in human VE-cadherin. This sequence has significant homology to the conserved site in rat and mouse, and has less than 50% homology with other cadherins.

## **Buffer and Storage:**

Rabbit polyclonal, affinity-purified antibody is supplied in 100 µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

## **Applications:**

WB 1:1000  
ELISA 1:2000  
ICC 1:200

End user should determine optimal dilution for their particular applications and experiments.  
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

## **Specificity:**

This antibody was affinity purified with VE-cadherin (a.a. 770-781) peptide. The purified antibody detects a 140 kDa\* band corresponding to VE-cadherin in western blots of human endothelial cells, and this reactivity can be specifically blocked using VE-cadherin peptide (CX2235).

\*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

## **Related Products:**

CP1981 VE-Cadherin (Tyr-685), phospho-specific Rabbit Polyclonal  
CP1801 N-Cadherin (Tyr-820), phospho-specific Rabbit Polyclonal  
CM1701 N-Cadherin (Cytoplasmic) Mouse Monoclonal  
CP1951 N-Cadherin (Tyr-860), phospho-specific  
CP1921 E-Cadherin (a.a. 774-786) Rabbit Polyclonal  
CX2235 VE-Cadherin (a.a.770-781) Peptide

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