

VE-Cadherin (Tyr-685), phospho-specific

Cat. #	CP1981
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 β - or γ -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
 Fainaru, O. et al. (2008) FASEB J. 08-110494:July 7. (WB: H. microvascular ECs)

Immunogen:

Phospho-VE-Cadherin (Tyr-685) synthetic peptide (coupled to carrier protein) corresponding to amino acids surrounding tyrosine 685 in human VE-cadherin. This sequence has significant homology to the conserved site in rat and mouse VE-cadherin, but is not conserved in other cadherins.

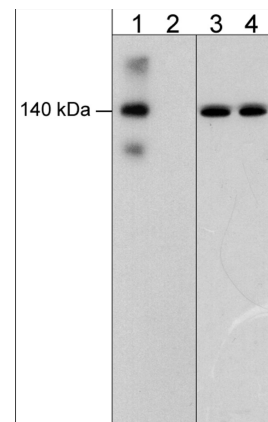
Applications:

WB 1:1000
 ELISA 1:2000

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 1 hour at room temperature.

Related Products:

- CX1985 phospho-VE-Cadherin (Tyr-685) peptide
 CP2231 VE-Cadherin (a.a.770-781) Rabbit Polyclonal
 CP1801 N-Cadherin (Tyr-820), phospho-specific Rabbit Polyclonal
 CP1921 E-Cadherin (a.a. 774-786) Rabbit Polyclonal
 CP1951 N-Cadherin (Tyr-860) [E-cadherin (Tyr-835)], phospho-specific
 CP1901 N-Cadherin (a.a. 853-864) [E-cadherin (a.a. 828-839)]



Western blot image of human umbilical vein endothelial cells stimulated with pervanadate (1 mM) for 30 min. then the blots were untreated (lanes 1 & 3) or treated with alkaline phosphatase (lanes 2 & 4). The blots were probed rabbit polyclonal anti-VE-cadherin (Tyr-685) (lanes 1 & 2) or mouse monoclonal anti-VE-cadherin (lanes 3 & 4).

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.

Specificity:

This antibody was cross-adsorbed to an unrelated phospho-tyrosine peptide and unphosphorylated VE-cadherin (Tyr-685) peptide before affinity purification using phospho-VE-cadherin (Tyr-685) peptide. The purified antibody detects a 140 kDa* band corresponding to VE-cadherin in western blots of human endothelial cells treated with pervanadate, and this band is not detected in untreated cells or after alkaline phosphatase treatment.

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

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