

## DESCRIPTION

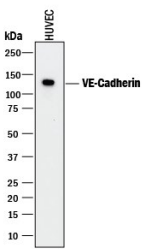
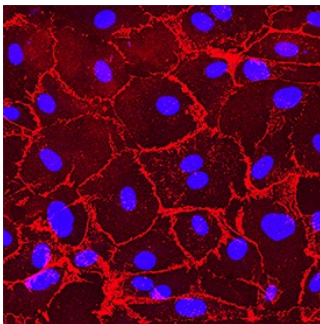
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human VE-Cadherin in Western blots. In Western blots, 25% cross-reactivity with recombinant mouse VE-Cadherin and no cross-reactivity with recombinant human (rh) Cadherin-17 or rhP-Cadherin is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 123413
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human VE-Cadherin Asp48-Gln593 Accession # P33151
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	HUVEC human umbilical vein endothelial cells stained in buffer containing Ca <sup>2+</sup> and Mg <sup>2+</sup>
<b>Immunocytochemistry</b>	0.5-25 µg/mL	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

## DATA

<p><b>Western Blot</b></p> 	<p><b>Detection of Human VE-Cadherin by Western Blot.</b> Western blot shows lysate of HUVEC human umbilical vein endothelial cells. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human VE-Cadherin Monoclonal Antibody (Catalog # MAB9381) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for VE-Cadherin at approximately 125 kDa (as indicated). This experiment was conducted under reducing conditions and using <a href="#">Immunoblot Buffer Group 1</a>.</p>	<p><b>Immunocytochemistry</b></p>  <p><b>VE-Cadherin in HUVEC Cells.</b> VE-Cadherin was detected in immersion fixed HUVEC cells using Mouse Anti-Human VE-Cadherin Monoclonal Antibody (Catalog # MAB9381) at 0.5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to plasma membrane. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Vascular endothelial (VE)-cadherin (VE-CAD), also called 7B4 and cadherin-5 (CDH5), is a member of the cadherin family of cell adhesion molecules. Cadherins are calcium-dependent transmembrane proteins which bind to one another in a homophilic manner. On their cytoplasmic side, they associate with the three catenins,  $\alpha$ ,  $\beta$ , and  $\gamma$  (plakoglobin). This association links the cadherin protein to the cytoskeleton. Without association with the catenins, the cadherins are non-adhesive. Cadherins play a role in development, specifically in tissue formation. They may also help to maintain tissue architecture in the adult. VE-cadherin has been shown to play important roles in vasculogenesis and angiogenesis. VE-cadherin is a classical cadherin molecule. Classical cadherins consist of a large extracellular domain which contains DXD and DXNDN repeats responsible for mediating calcium-dependent adhesion, a single-pass transmembrane domain, and a short carboxy-terminal cytoplasmic domain responsible for interacting with the catenins. Human VE-cadherin is a 784 amino acid (aa) residue protein with a 25 aa signal sequence and a 759 aa propeptide. The mature protein begins at amino acid 48 and has a 546 aa extracellular domain, a 27 aa transmembrane domain, and a 164 aa cytoplasmic domain. The human and mouse mature VE-cadherin proteins share approximately 74% homology.

**References:**

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