Human VE-Cadherin Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 123413

Catalog Number: FAB9381V

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Monoclonal Mouse IgG_{2B} Clone # 123413
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human VE-Cadherin Asp48-Gln593 Accession # P33151
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Flow Cytometry	0.25-1 µg/10^6 cells	HUVEC human umbilical vein endothelial cells stained in buffer containing Ca^{2+} and Mg^{2+}

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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, α, β, and γ (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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5. Nose, A. *et al.* (1987) EMBO J. **6**:3655.
6. Carmeliet, P. *et al.* (1999) Cell **98**:147.
7. Gory-Faure, S. *et al.* (1999) Development **126**:2093.

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