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R&D SYSTEMS

Human VE-Cadherin Alexa Fluor® 700-conjugated Antibody

Recombinant Monoclonal Rabbit IgG Clone # 3340A
Catalog Number: FAB11726N
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human VE-CAD protein in Direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 3340A
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived human VE-Cadherin
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

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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3. Overduin, M. *et al.* (1995) Science **267**:386.
4. Takeichi, M. (1991) Science **251**:1451.
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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Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 **Canada** | TEL: 855.668.8722 **Europe** | **Middle East** | **Africa** TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475