Datasheet for ABIN2191898

anti-Cadherin 5 antibody

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Overview

Quantity:	100 µg
Target:	Cadherin 5 (CDH5)
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Cadherin 5 antibody is un-conjugated
Application:	Western Blotting (WB), Flow Cytometry (FACS), Immunofluorescence (IF), Functional Studies (Func), Immunoassay (IA)

Product Details

Clone:	BV9
Sterility:	0.2 µm filtered

Target Details

Target:	Cadherin 5 (CDH5)
Alternative Name:	Vascular Endothelial Cadherin (CDH5 Products)
Background:	The monoclonal antibody BV9 binds to the extracellular domain (EC3-EC4) of human VE-cadherin (vascular endothelial cadherin). Endothelial cells control the passage of plasma constituents and circulating cells from blood to the underlying tissues. VE-cadherin is of vital importance for the maintenance and control of endothelial cell contacts. Mechanisms that regulate VE-cadherin- mediated adhesion are important for the control of vascular permeability

Target Details

	and leukocyte extravasation. VE-cadherin regulates various cellular processes such as cell proliferation and apoptosis and modulates vascular endothelial growth factor receptor functions. Therefore, VE-cadherin is also essential during embryonic angiogenesis. The specialized function of VE-cadherin is lost or impaired in several pathological conditions - including inflammation, sepsis, ischemia and diabetes - which leads to severe, and sometimes fatal, organ dysfunction. Furthermore, abnormal increase in vascular permeability is often observed in pathological conditions, such as tumor-induced angiogenesis, macular degeneration, allergy, and brain stroke. Endothelial permeability is regulated in part by the dynamic opening and closure of cell-cell adherent junctions. In vascular endothelium, adherent junctions are mainly composed of VE-cadherin, an adhesive receptor that is able to self-associate at endothelial cell-cell contacts. VE-cadherin links endothelial cells together by homophilic interactions mediated by its extracellular part and associates intracellularly with the actin cytoskeleton via catenins. VE-cadherin belongs to the cadherin super- family of cell-cell adhesion molecules, which are encoded by more than 200 genes in the human 2+ genome. Classical cadherins are Ca -dependent, homophilic, cell to cell adhesion molecules expressed in nearly all cells within solid tissues. Cadherins form a core adhesion complex that consists of a cadherin dimer, binding through its extracellular region to another dimer of cadherins expressed in adjacent cells, while its intracellular region is anchored to the plasma membrane and linked to the cytoskeleton. The VE-cadherin extracellular domain consists of five cadherin-type repeats, called EC (extracellular cadherin) domains that are bound together by calcium ions in a rod- like structure. Aliases 7B4 antigen, Cadherin-5, CD144
Pathways:	Cell-Cell Junction Organization, Signaling Events mediated by VEGFR1 and VEGFR2

Application Details

Application Notes:	For immunohistochemistry, flow cytometry and Western blotting, dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50. For functional studies, in vitro dilutions have to be optimized in user's experimental setting. Positive HUVECs grown on coverslips control
Restrictions:	For Research Use only

Handling

Buffer:	PBS, containing 0.1 % bovine serum albumin.
Storage:	4 °C

Handling

Storage Comment:	Product should be stored at 4 °C. Under recommended storage conditions, product is stable for at least one year. The exact expiry date is indicated on the label.

Publications

Product cited in:

Vetrano, Rescigno, Cera, Correale, Rumio, Doni, Fantini, Sturm, Borroni, Repici, Locati, Malesci, Dejana, Danese: "Unique role of junctional adhesion molecule-a in maintaining mucosal homeostasis in inflammatory bowel disease." in: **Gastroenterology**, Vol. 135, Issue 1, pp. 173-84, (2008) (PubMed).

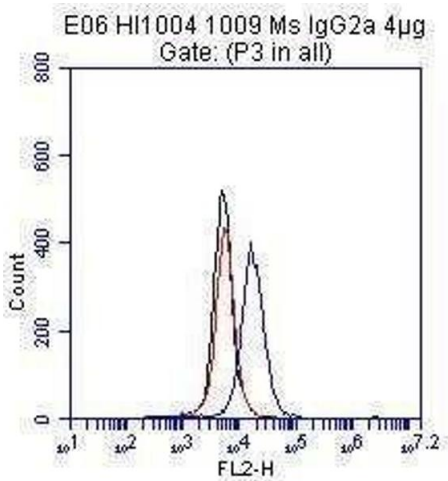
Luo, Zhuo, Fukuhara, Rizzolo: "Effects of culture conditions on heterogeneity and the apical junctional complex of the ARPE-19 cell line." in: **Investigative ophthalmology & visual science**, Vol. 47, Issue 8, pp. 3644-55, (2006) (PubMed).

Faure, Cerini, Paul, Berland, Dignat-George, Brunet: "The uremic solute p-cresol decreases leukocyte transendothelial migration in vitro." in: **International immunology**, Vol. 18, Issue 10, pp. 1453-9, (2006) (PubMed).

Bazzoni, Martinez-Estrada, Orsenigo, Cordenonsi, Citi, Dejana: "Interaction of junctional adhesion molecule with the tight junction components ZO-1, cingulin, and occludin." in: **The Journal of biological chemistry**, Vol. 275, Issue 27, pp. 20520-6, (2000) (PubMed).

There are more publications referencing this product on: Product page

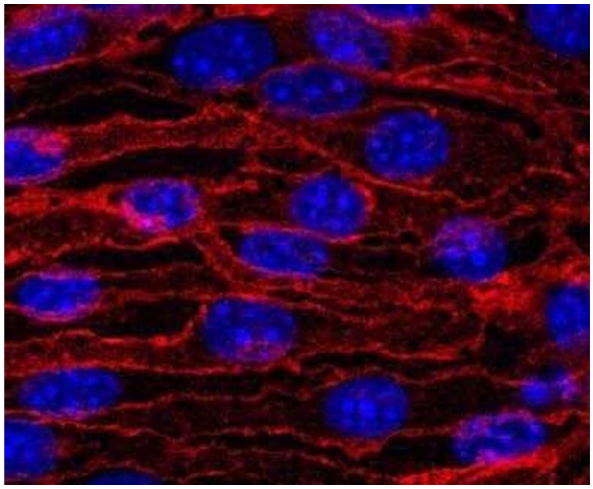
Images



Flow Cytometry

Image 1. Figure 1. Endothelial cells were fixed with 4% PAF (15 min, room temp), and then permeabilized with 0.5% TritionX-100 (3 min, room temperature). Cells were incubated with a final concentration of 10µg/ml BV9. Secondary detection was performed with anti-mouse Alexa-Fluor 647 and counterstained using DAPI.

Figure 2. HUVEC cells were stained with antibody BV9 in PBS/0.1% saponin for 1h at 4°C.(Black- no stain, Red- is otype control, Blue- HM2032–BV9)



Immunofluorescence

Image 2. Figure 1. Endothelial cells were fixed with 4% PAF (15 min, room temp), and then permeabilized with 0.5% TritionX-100 (3 min, room temperature). Cells were incubated with a final concentration of 10µg/ml BV9. Secondary detection was performed with anti-mouse Alexa-Fluor 647 and counterstained using DAPI.

Figure 2. HUVEC cells were stained with antibody BV9 in PBS/0.1% saponin for 1h at 4°C.(Black- no stain, Red- is otype control, Blue- HM2032–BV9)