10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

VE Cadherin Antibody (CDH5) (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2724a

Product Information

Application	WB, FC, E
Primary Accession	P33151
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB13659
Calculated MW	87528
Antigen Region	106-134

Additional Information

Gene ID	1003
Other Names	Cadherin-5, 7B4 antigen, Vascular endothelial cadherin, VE-cadherin, CD144, CDH5
Target/Specificity	This VE Cadherin antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 106-134 amino acids from the N-terminal region of human VE Cadherin.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	VE Cadherin Antibody (CDH5) (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDH5 (HGNC:1764)
Function	Cadherins are calcium-dependent cell adhesion proteins (By similarity). They preferentially interact with themselves in a homophilic manner in connecting cells; cadherins may thus contribute to the sorting of heterogeneous cell types (PubMed:21269602). This cadherin may play a

	important role in endothelial cell biology through control of the cohesion and organization of the intercellular junctions (By similarity). It associates with alpha-catenin forming a link to the cytoskeleton (PubMed:10861224). Plays a role in coupling actin fibers to cell junctions in endothelial cells, via acting as a cell junctional complex anchor for AMOTL2 and MAGI1 (By similarity). Acts in concert with KRIT1 and PALS1 to establish and maintain correct endothelial cell polarity and vascular lumen (By similarity). These effects are mediated by recruitment and activation of the Par polarity complex and RAP1B (PubMed:20332120). Positively regulates reorientation of actin stress fibers and endothelial cell reorientation in response to cellular mechantransduction (PubMed:25795300). Required for activation of PRKCZ and for the localization of phosphorylated PRKCZ, PARD3, TIAM1 and RAP1B to the cell junction (PubMed:20332120). Associates with CTNND1/p120-catenin to control CADH5 endocytosis (By similarity).
Cellular Location	Cell junction, adherens junction. Cell membrane; Single-pass type I membrane protein Cytoplasm {ECO:0000250|UniProtKB:P55284}. Note=Found at cell-cell boundaries and probably at cell-matrix boundaries. KRIT1 and CDH5 reciprocally regulate their localization to endothelial cell-cell junctions.
Tissue Location	Expressed in endothelial cells (at protein level) (PubMed:27338829). Expressed in the brain (PubMed:2059658)

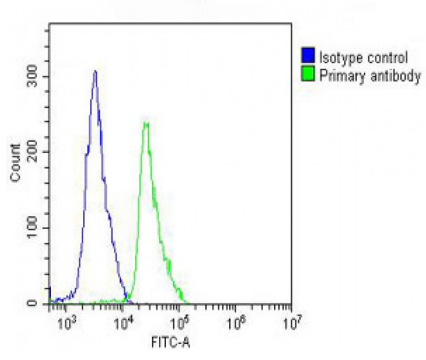
Background

CDH5 is a classical cadherin from the cadherin superfamily and is located in a six-cadherin cluster in a region on the long arm of chromosome 16 that is involved in loss of heterozygosity events in breast and prostate cancer. It is a calcium-dependent cell-cell adhesion glycoprotein comprised of five extracellular cadherin repeats, a transmembrane region and a highly conserved cytoplasmic tail. Functioning as a classic cadherin by imparting to cells the ability to adhere in a homophilic manner, the protein may play an important role in endothelial cell biology through control of the cohesion and organization of the intercellular junctions.

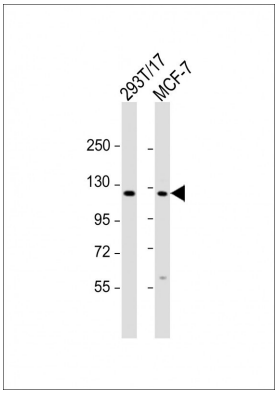
References

Breviario F.,Arterioscler. Thromb. Vasc. Biol. 15:1229-1239(1995)
Ali J.,Microcirculation 4:267-277(1997)
Suzuki S.,Cell Regul. 2:261-270(1991)

Images



Overlay histogram showing Jurkat cells stained with AP2724a (green line). The cells were fixed with 2% paraformaldehyde (10 min). The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP2724a, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-VE Cadherin Antibody (CDH5) (N-term) at 1:2000 dilution Lane 1: 293T/17 whole cell lysate Lane 2: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 88 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Epigallocatechin-3-Gallate Suppresses Vasculogenic Mimicry through Inhibiting the Twist/VE-Cadherin/AKT Pathway in Human Prostate Cancer PC-3 Cells
- Serum promotes vasculogenic mimicry through the EphA2/VE-cadherin/AKT pathway in PC-3 human prostate cancer cells.
- RNA binding protein RNPC1 inhibits breast cancer cells metastasis via activating STARD13-correlated ceRNA network.
- Dewetting of thin liquid films surrounding air bubbles in microchannels.
- SPHK/HIF-1α Signaling Pathway Has a Critical Role in Chrysin-Induced Anticancer Activity in Hypoxia-Induced PC-3 Cells