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Anti-Human VE-Cadherin CDH5 DyLight® 488 conjugated Antibody(monoclonal, 3D4)

Catalog # ABO14929

Product Information

Application	FC
Primary Accession	P33151
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-Human VE-Cadherin CDH5 DyLight® 488 conjugated Antibody (monoclonal, 3D4) . Tested in Flow Cytometry applications. This antibody reacts with Human.

Additional Information

Gene ID	1003
Other Names	Cadherin-5 {ECO:0000312|HGNC:HGNC:1764}, 7B4 antigen, Vascular endothelial cadherin, VE-cadherin, CD144, CDH5 (HGNC:1764)
Calculated MW	87528
Application Details	Flow Cytometry, 1-3 □g/1x10^6 cells, human
Subcellular Localization	Plasma membrane
Source	Eukaryota
Contents	Each vial contains 50% glycerol, 0.9% NaCl, 0.2% Na2HPO4, 0.02% NaN7.
Clone Names	Clone: 3D4
Immunogen	E. coli-derived human VE Cadherin recombinant protein (Position: D48-R272).
Cross Reactivity	No cross-reactivity with other proteins.
Storage	At -20°C for one year from date of receipt. Avoid repeated freezing and thawing. Protect from light.

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 (Cadherin 5), also known as VE-cadherin, is a type of cadherin. It is encoded by the human gene CDH5. This gene is mapped to 16q22.1 using somatic cell hybrid panels. 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. Therefore it was concluded that VE-cadherin serves the purpose of maintaining newly formed vessels.