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ProductInformation

Anti-VE-Cadherin (CD144)
Developed in Rabbit
Affinity Isolated Antibody

Product Number **V1514**

Product Description

Anti-VE-Cadherin (CD144) is developed in rabbits using a synthetic peptide corresponding to amino acids 91-110 of human VE-Cadherin (CD144), conjugated to KLH as the immunogen. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-VE-Cadherin (CD144) recognizes human VE-Cadherin (CD144) by immunoblotting (~130 kDa) and immunohistochemistry. Staining of VE-Cadherin (CD144) by immunoblotting is inhibited by the immunizing peptide.

Cadherins are transmembrane glycoproteins involved in Ca^{2+}-dependent cell-cell adhesion in many vertebrate and invertebrate tissues. The Cadherin superfamily contains more than 50 different classic cadherins and the human protocadherins. Classic cadherins are classified into three types: type I, type II, and non-type I or II. Type I cadherins are similar to E-cadherin and contain a HAV cell adhesion recognition sequence. Members of the other types lack this sequence, whereas those of the third type share little sequence similarity with each other or other cadherin types. Cadherins are involved in many normal and pathological processes including cell recognition, cell adhesion, cell signaling, morphogenesis, cell migration, and sorting, and cytoskeletal organization.[1, 2]

VE-Cadherin (also designated vascular endothelial cadherin, cadherin-5, and CD144) is a non-type I or II cadherin that is expressed on endothelial cells of all blood and lymphatic vessels, where it organizes intercellular adherens junctions. It is involved in homotypic endothelial cell-cell adhesion, vascular permeability, leukocyte and hematopoietic progenitor cell migration, assembly and remodeling during embryonal development, *in vitro* angiogenesis, *in vivo* tumor vascularization, contact inhibition, and apoptosis. In contrast to other cadherins it is connected both to the actin cytoskeleton and to the intermediate filaments.[3]

VE-cadherin (CD144) interacts with β-catenin, plakoglobin (γ-catenin) and $p120^{ctn}$.[4] β-catenin binding allows a link to α-catenin and the actin filament network as well as to the Wnt signaling pathway. Plakoglobin may be important for desmoplakin binding and recruitment to creat linkage to intermediate filaments. Interaction of VE-cadherin with fibrin has been reported.

VE-Cadherin is generally considered to be an endothelial cell-specific molecule. Its expression is reduced in angiosarcomas. During development it is expressed in yolk sac mesenchymal cells. Aberrant expression in perineurial cells, aggressive human melanoma cells capable of forming primitive tubular networks, developing placental cytotrophoblasts, and cultured choriocarcinoma cells has been reported.[5, 6, 7]

Reagent

Anti-VE-Cadherin (CD144) is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.

Antibody concentration: 0.08-1.2 mg/mL

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

For immunoblotting, a minimum working antibody dilution of 1:500 is recommended using a whole extract of human umbilical vein endothelial cells (HUVEC).

For indirect immunohistochemistry, a minimum working dilution of 1:100 is determined by staining of acetone-fixed, frozen-sections of human tonsil.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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