

Human VE-Cadherin / CD144 / CDH5 Protein (His & Fc Tag)

Catalog Number: 10433-H03H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

7B4; CD144; 7B4; AA408225; Cd144; VE-Cad; Vec; VEcad; VECD

Protein Construction:

A DNA sequence encoding the extracellular domain of human CDH5 (NP_001786.2) (Met 1-Gln 593) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

Measured by the ability of the immobilized protein to support the adhesion of MCF-7 human breast adenocarcinoma cells. When 5 x 10⁴ cells/well are added to Recombinant Human Cadherin-5 coated plates (0.8 µg/mL with 100 µL/well), approximately >50% will adhere after 1 hour at 37°C.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ala 26

Molecular Mass:

The recombinant human CDH5/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 815 amino acids after removal of the signal peptide and has a predicted molecular mass of 92 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh CDH5/Fc monomer is approximately 120 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

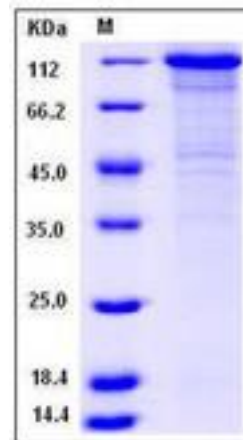
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Cadherins (Calcium dependent adhesion molecules) are a class of transmembrane proteins. Cadherin-5, also known as VE-cadherin, CDH5 and CD144, an endothelial specific cell-cell adhesion molecule, plays a pivotal role in the formation, maturation and remodeling of the vascular wall. VE-Cadherin is widely considered to be specific for vascular endothelia in which it is either the sole or the predominant cadherin, often co-existing with N-cadherin. This specificity of VE-cadherin for vascular endothelial cells is important not only in blood and lymph vessel biology and medicine, but also for cell-type-based diagnoses, notably those of metastatic tumors. As a classical cadherin, VE-Cadherin links endothelial cells together by homophilic interactions mediated by its extracellular part and associates intracellularly with the actin cytoskeleton via catenins. Mechanisms that regulate VE-cadherin-mediated adhesion are important for the control of vascular permeability and leukocyte extravasation. In addition to its adhesive functions, VE-Cadherin regulates various cellular processes such as cell proliferation and apoptosis and modulates vascular endothelial growth factor receptor functions. Consequently, VE-cadherin is essential during embryonic angiogenesis.

References

1. Taveau JC, *et al.* (2008) Structure of artificial and natural VE-cadherin-based adherens junctions. *Biochem Soc Trans.* 36(Pt 2): 189-93.
2. Vestweber D. (2008) VE-cadherin: the major endothelial adhesion molecule controlling cellular junctions and blood vessel formation. *Arterioscler Thromb Vasc Biol.* 28(2): 223-32.
3. Gavard J. (2009) Breaking the VE-cadherin bonds. *FEBS Lett.* 583(1): 1-6.

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