

Recombinant Human CDH1/E-Cadherin/CD324 Protein

Catalog No.: RP01421 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	999	P12830

Tags

C-His

Synonyms

Arc-1;CD324;CDHE;ECAD;LCAM;UVO;CDH1;E-Cadherin; Arc-1; CD324; CDHE; ECAD; LCAM; UVO; cadherin-1;E Cadherin

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Cadherins are calcium-dependent cell adhesion proteins which preferentially interact with themselves in a homophilic manner in connecting cells, and thus may contribute to the sorting of heterogeneous cell type. E-cadherin (E-Cad), also known as CDH1 and CD324, is a calcium-dependent cell adhesion molecule the intact function of which is crucial for the establishment and maintenance of epithelial tissue polarity and structural integrity. Mutations in CDH1 occur in diffuse type gastric cancer, lobular breast cancer, and endometrial cancer. In human cancers, partial or complete loss of E-cadherin expression correlates with malignancy. During apoptosis or with calcium influx, E-Cad is cleaved by the metalloproteinase to produce fragments of about 38 kDa (E-CAD/CTF1), 33 kDa (E-CAD/CTF2) and 29 kDa (E-CAD/CTF3), respectively. E-Cad has been identified as a potent invasive suppressor, as downregulation of E-cadherin expression is involved in dysfunction of the cell-cell adhesion system, and often correlates with strong invasive potential and poor prognosis of human carcinomas.

Basic Information

Description

Recombinant Human CDH1/E-Cadherin/CD324 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp155-Ala709) of human E-Cadherin/Cadherin-1 (Accession #NP_004351.1) fused with a 6×His tag at the C-terminus.

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Human CDH1 at 1 μg/mL (100 μL/well) can bind Human CTNNB1 with a linear range of 0.1-0.78 μg/mL. 2. Measured by the ability of the immobilized protein to support the adhesion of MCF-7 human breast adenocarcinoma cells. When cells are added to E-Cad coated plates (5 μg/mL, 100 μL/well), >12 % will adhere specifically after 90 minutes at 37 °C.

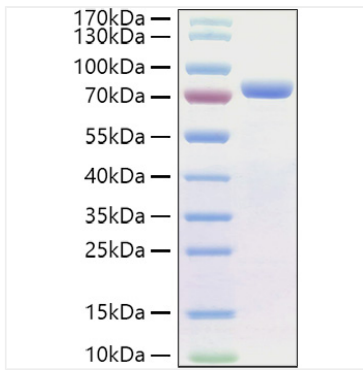
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

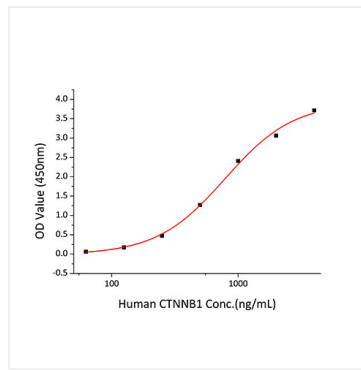
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human CDH1/E-Cadherin/CD324 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 70-85kDa.



Immobilized recombinant Human CDH1 at 1 $\mu\text{g/mL}$ (100 μL /well) can bind Human CTNNB1 with a linear range of 0.1-0.78 $\mu\text{g/mL}$.