

# Human E-Cadherin / CDH1 / E-cad / CD324 Protein (His Tag)

Catalog Number: 10204-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

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

### Protein Construction:

A DNA sequence encoding the extracellular domain of human E-Cad precursor (NP\_004351.1) (Met 1-Ile 707) was fused with a C-terminal polyhistidine tag.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 90 % 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 cells are added to E-Cad coated plates (5 µg/mL, 100 µL/well), approximately 20%-40% of cells will adhere specifically after 90 minutes 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:** Gln 23 & Asp 155

### Molecular Mass:

The recombinant pro form of human E-Cad consists of 696 amino acids and has a calculated molecular mass of 77 kDa. As a result of glycosylation, the apparent molecular mass of rh E-Cad is approximately 80&95 kDa corresponding to the mature form and pro form respectively in SDS-PAGE under reducing conditions.

### 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:

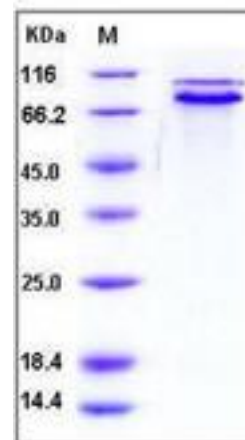
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Cadherins 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.

## References

- 1.Wang HD, *et al.* (2004) CDH1 germline mutation in hereditary gastric carcinoma. *World J Gastroenterol.* 10(21): 3088-93.
- 2.Masterson J, *et al.* (2007) Posttranslational truncation of E-cadherin and significance for tumour progression. *Cells Tissues Organs.* 185(1-3): 175-9.
- 3.Mrgineanu E, *et al.* (2008) Correlation between E-cadherin abnormal expressions in different types of cancer and the process of metastasis. *Rev Med Chir Soc Med Nat Iasi.* 112(2): 432-6.

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